

# Rendering Bibliography

- [1] E. Abraham, A. Younus, J. C. Delagnes, and P. Mounaix. 2010. Non-Invasive Investigation of Art Paintings by Terahertz Imaging. *Applied Physics A* 100, 3 (2010). <https://doi.org/10/brwk8p>
- [2] Nils Abramson. 1978. Light-in-Flight Recording by Holography. *Opt. Lett.* 3, 4 (1978), 121–123. <https://doi.org/10/c4wkvs>
- [3] Nils Abramson. 1983. Light-in-Flight Recording: High-Speed Holographic Motion Pictures of Ultrafast Phenomena. *Applied Optics* 22, 2 (1983). <https://doi.org/10/b8b7sc>
- [4] A. Adam, C. Dann, O. Yair, S. Mazor, and S. Nowozin. 2016. Bayesian Time-of-Flight for Realtime Shape, Illumination and Albedo. *IEEE Transactions on Pattern Analysis and Machine Intelligence* (2016).
- [5] Martin David Adams and Penny J. Probert. 1996. The Interpretation of Phase and Intensity Data from AMCW Light Detection Sensors for Reliable Ranging. *The International Journal of Robotics Research* 15, 5 (1996). <https://doi.org/10/dcqj7v>
- [6] Sidney Addelman and Oscar Kempthorne. 1961. Some Main-Effect Plans and Orthogonal Arrays of Strength Two. *The Annals of Mathematical Statistics* 32, 4 (Dec. 1961), 1167–1176. <https://doi.org/10/cw6xh3>
- [7] S. J. Adelson and L. F. Hodges. 1995. Generating Exact Ray-Traced Animation Frames by Reprojection. *IEEE Computer Graphics & Applications* 15 (1995), 43–52.
- [8] Attila Áfra, Carsten Benthin, Ingo Wald, and Jacob Munkberg. 2016. Local Shading Coherence Extraction for SIMD-Efficient Path Tracing on CPUs. In *Proceedings of High Performance Graphics*.
- [9] Sameer Agarwal, Ravi Ramamoorthi, Serge Belongie, and Henrik Wann Jensen. 2003. Structured Importance Sampling of Environment Maps. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 22, 3 (July 2003), 605–612. <https://doi.org/10/b4728r>
- [10] S. Agostinelli, J. Allison, K. Amako, J. Apostolakis, H. Araujo, P. Arce, M. Asai, D. Axen, S. Banerjee, G. Barrand, F. Behner, L. Bellagamba, J. Boudreau, L. Broglia, A. Brunengo, H. Burkhardt, S. Chauvie, J. Chuma, R. Chytrcek, G. Cooperman, G. Cosmo, P. Degtyarenko, A. Dell’Acqua, G. Depaola, D. Dietrich, R. Enami, A. Feliciello, C. Ferguson, H. Fesefeldt, G. Folger, F. Foppiano, A. Forti, S. Garelli, S. Giani, R. Giannitrapani, D. Gibin, J. J. Gómez Cadenas, I. González, G. Gracia Abril, G. Greeniaus, W. Greiner, V. Grichine, A. Grossheim, S. Guatelli, P. Gumplinger, R. Hamatsu, K. Hashimoto, H. Hasui, A. Heikkinen, A. Howard, V. Ivanchenko, A. Johnson, F. W. Jones, J. Kallenbach, N. Kanaya, M. Kawabata, Y. Kawabata, M. Kawaguti, S. Kelner, P. Kent, A. Kimura, T. Kodama, R. Kokoulin, M. Kossov, H. Kurashige, E. Lamanna, T. Lampén, V. Lara, V. Lefebvre, F. Lei, M. Liendl, W. Lockman, F. Longo, S. Magni, M. Maire, E. Medernach, K. Minamimoto, P. Mora de Freitas, Y. Morita, K. Murakami, M. Nagamatsu, R. Nartallo, P. Nieminen, T. Nishimura, K. Ohtsubo, M. Okamura, S. O’Neale, Y. Oohata, K. Paech, J. Perl, A. Pfeiffer, M. G. Pia, F. Ranjard, A. Rybin, S. Sadilov, E. Di Salvo, G. Santin, T. Sasaki, N. Savvas, Y. Sawada, S. Scherer, S. Sei, V. Sirotenko, D. Smith, N. Starkov, H. Stoecker, J. Sulkimo, M. Takahata, S. Tanaka, E. Tcherniaev, E. Safai Tehrani, M. Tropeano, P. Truscott, H. Uno, L. Urban, P. Urban, M. Verderi, A. Walkden, W. Wander, H. Weber, J. P. Wellisch, T. Wenaus, D. C. Williams, D. Wright, T. Yamada, H. Yoshida, and D. Zschesche. 2003. Geant4—a Simulation Toolkit. *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment* 506, 3 (July 2003), 250–303. <https://doi.org/10/czv4cm>
- [11] A. G. M. Ahmed, J. Guo, D. M. Yan, J. Y. Franceschia, X. Zhang, and O. Deussen. 2017. A Simple Push-Pull Algorithm for Blue-Noise Sampling. *IEEE Transactions on Visualization and Computer Graphics* 23, 12 (Dec. 2017), 2496–2508. <https://doi.org/10/gcj2v8>
- [12] Abdalla G. M. Ahmed, Hui Huang, and Oliver Deussen. 2015. AA Patterns for Point Sets with Controlled Spectral Properties. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 34, 6 (Oct. 2015), 212:1–212:8. <https://doi.org/10/t7wqhk>
- [13] Abdalla G. M. Ahmed, Till Niese, Hui Huang, and Oliver Deussen. 2017. An Adaptive Point Sampler on a Regular Lattice. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 36, 4 (July 2017), 138:1–138:13. <https://doi.org/10/gbxg5p>
- [14] Abdalla G. M. Ahmed, Hélène Perrier, David Coeurjolly, Victor Ostromoukhov, Jianwei Guo, Dong-Ming Yan, Hui Huang, and Oliver Deussen. 2016. Low-Discrepancy Blue Noise Sampling. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 35, 6 (Nov. 2016), 247:1–247:13. <https://doi.org/10/f9cpt2>
- [15] Mingyao Ai, Xiangshun Kong, and Kang Li. 2016. A General Theory for Orthogonal Array Based Latin Hypercube Sampling. *Statistica Sinica* (2016). <https://doi.org/10/gfznbq>
- [16] Timo Aila and Samuli Laine. 2009. Understanding the Efficiency of Ray Traversal on GPUs. In *Proceedings of High Performance Graphics*. ACM Press, New Orleans, Louisiana, 145. <https://doi.org/10/fg2kfw>
- [17] Timo Aila, Samuli Laine, and Tero Karras. 2012. *Understanding the Efficiency of Ray Traversal on GPUs – Kepler and Fermi Addendum*. NVIDIA Technical Report NVR-2012-02. NVIDIA Corporation.
- [18] John R. Airey. 1938. The Radiation Integrals. *Philos. Mag.* 25, 167 (Feb. 1938), 273–282.
- [19] G. B. Airy. 1838. On the Intensity of Light in the Neighbourhood of a Caustic. *Trans. Cambridge Philos. Soc.* 6 (1838), 379–403.
- [20] George B. Airy. 1838. On the Intensity of Light in the Neighborhood of a Caustic. *Transactions of the Cambridge Philosophical Society* 6 (1838), 379–402.
- [21] Tomas Akenine-Möller, Eric Haines, and Natty Hoffman. 2008. *Real-Time Rendering* (3 ed.). AK Peters, Ltd., Natick, MA, USA.
- [22] O. Akerlund, M. Unger, and R. Wang. 2007. Precomputed Visibility Cuts for Interactive Relighting with Dynamic BRDFs. In *Proceedings of Pacific Graphics*. IEEE Computer Society, 161–170. <https://doi.org/10/cd936w>
- [23] Pierre Alliez, David Cohen-Steiner, Olivier Devillers, Bruno Lévy, and Mathieu Desbrun. 2003. Anisotropic Polygonal Remeshing. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 22, 3 (July 2003), 485–493. <https://doi.org/10/fggmdm>
- [24] John Amanatides. 1984. Ray Tracing with Cones. *Computer Graphics (Proceedings of SIGGRAPH)* 18, 3 (July 1984), 129–135. <https://doi.org/10/b64smh>
- [25] John Amanatides. 1992. Algorithms for the Detection and Elimination of Specular Aliasing. In *Proceedings of Computer Graphics International (CGI)*. 86–93.
- [26] John Amanatides and Andrew Woo. 1987. A Fast Voxel Traversal Algorithm for Ray Tracing. In *Proceedings of Eurographics*. Eurographics Association, 3–10. <https://doi.org/10.2312/egtp.19871000>
- [27] Marco Ament, Christoph Bergmann, and Daniel Weiskopf. 2014. Refractive Radiative Transfer Equation. *ACM Transactions on Graphics* 33, 2 (April 2014), 17:1–17:22. <https://doi.org/10/gbf323>
- [28] Xiaobo An and Fabio Pellacini. 2008. AppProp: All-Pairs Appearance-Space Edit Propagation. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 27, 3 (Aug. 2008), 1. <https://doi.org/10/bj4x5j>
- [29] Xiaobo An, Xin Tong, Jonathan D. Denning, and Fabio Pellacini. 2011. AppWarp: Retargeting Measured Materials by Appearance-Space Warping. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 30, 6 (Dec. 2011), 1. <https://doi.org/10/dts5rb>
- [30] D. Anderson, J. Frankel, J. Marks, A. Agarwala, P. Beardsley, J. Hodgins, D. Leigh, K. Ryall, E. Sullivan, and J. Yedidia. 2000. Tangible Interaction + Graphical Interpretation: A New Approach to 3D Modeling. In *Annual Conference Series (Proceedings of SIGGRAPH)*.
- [31] Alexis Angelidis and Karan Singh. 2007. Kinodynamic Skinning Using Volume-Preserving Deformations. In *Proceedings of the Eurographics/ACM SIGGRAPH Symposium on Computer Animation*. Eurographics Association, Aire-la-Ville, Switzerland, Switzerland, 129–140.
- [32] Thomas Annen, Zhao Dong, Tom Mertens, Philippe Bekaert, Hans-Peter Seidel, and Jan Kautz. 2008. Real-Time, All-Frequency Shadows in Dynamic Scenes. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 27, 3 (2008), 34:1–34:8. <https://doi.org/10/fn7q3j>
- [33] Thomas Annen, Jan Kautz, Frédo Durand, and Hans-Peter Seidel. 2004. Spherical Harmonic Gradients for Mid-Range Illumination. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*, Alexander Keller and Henrik Wann Jensen (Eds.). Eurographics Association, 331–336.
- [34] Thomas Annen, Tom Mertens, Hans-Peter Seidel, Eddy Flerackers, and Jan Kautz. 2008. Exponential Shadow Maps. In *Proceedings of Graphics Interface*.
- [35] Philip M. Anselone. 1958. Integral Equations of the Schwarzschild-Milne Type. *Journal of Mathematics and Mechanics* 7, 4 (July 1958), 557–569.
- [36] Lakulish Antani, Anish Chandak, Micah Taylor, and Dinesh Manocha. 2012. Direct-to-Indirect Acoustic Radiance Transfer. *IEEE Transactions on Visualization and Computer Graphics* 18, 12 (2012), 261–269. <https://doi.org/10/d9t2x7>
- [37] M. Aono and T. L. Kunii. 1982. Botanical Tree Image Generation. *IEEE Computer Graphics & Applications* 2, 5 (1982), 55–64.
- [38] Anthony A. Apodaca and Larry Gritz. 1999. *Advanced RenderMan: Creating CGI for Motion Pictures*. Morgan Kaufmann, San Francisco, CA, USA.
- [39] Arthur Appel. 1968. Some Techniques for Shading Machine Renderings of Solids. In *Proceedings of the Spring Joint Computer Conference*, Vol. 32. ACM Press, 37–45. <https://doi.org/10/ch6p7d>
- [40] Adam Arbree, Bruce Walter, and Kavita Bala. 2008. Single-Pass Scalable Sub-surface Rendering with Lightcuts. *Computer Graphics Forum (Proceedings of Eurographics)* 27, 2 (April 2008), 507–516. <https://doi.org/10/cpvpxz>
- [41] Victor Arellano, Diego Gutierrez, and Adrian Jarabo. 2017. Fast Back-Projection for Non-Line of Sight Reconstruction. *Optics Express* 25, 10 (2017), 11574–11583. <https://doi.org/10/gfz5kt>

- [42] Okan Arıkan, David A. Forsyth, and James F. O'Brien. 2005. Fast and Detailed Approximate Global Illumination by Irradiance Decomposition. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 24, 3 (July 2005), 1108. <https://doi.org/10/b9qbjz>
- [43] James Arvo. 1986. Backward Ray Tracing. In *ACM SIGGRAPH Course Notes: Developments in Ray Tracing*. Vol. 12. 259–263.
- [44] James Arvo. 1990. Ray Tracing with Meta-Hierarchies. In *ACM SIGGRAPH Asia Course Notes: Advanced Topics in Ray Tracing*. Vol. 24.
- [45] James Arvo. 1990. A Simple Method for Box-Sphere Intersection Testing. In *Graphics Gems*, Andrew S. Glassner (Ed.). Academic Press, NY.
- [46] James Arvo (Ed.). 1991. *Graphics Gems II*. Academic Press, NY.
- [47] James Arvo. 1992. Fast Random Rotation Matrices. In *Graphics Gems III*, David Kirk (Ed.). Academic Press, NY, 117–120.
- [48] James Arvo. 1993. Linear Operators and Integral Equations in Global Illumination. In *ACM SIGGRAPH Course Notes: Global Illumination*. Vol. 42. Chapter 2, 1–21.
- [49] James Arvo. 1993. Transfer Equations in Global Illumination. In *Global Illumination*. ACM SIGGRAPH Course Notes, Vol. 42.
- [50] James Arvo. 1994. The Irradiance Jacobian for Partially Occluded Polyhedral Sources. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 343–350. <https://doi.org/10/bkjm2r>
- [51] James Arvo. 1995. The Role of Functional Analysis in Global Illumination. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, P. M. Hanrahan and W. Purgathofer (Eds.). Springer-Verlag, NY, 115–126.
- [52] James Arvo. 1999. Computer Aided Serendipity: The Role of Autonomous Assistants in Problem Solving. In *Proceedings of Computer Graphics International (CGI)*. 183–192.
- [53] James Arvo. 2001. Stratified Sampling of 2-Manifolds. In *State of the Art in Monte Carlo Global Illumination*, Henrik Wann Jensen (Ed.). ACM SIGGRAPH Course Notes, Vol. 29. Chapter 4.
- [54] James Arvo and David Kirk. 1987. Fast Ray Tracing by Ray Classification. *Computer Graphics (Proceedings of SIGGRAPH)* 21, 4 (July 1987), 55–64.
- [55] James Arvo and David Kirk. 1988. Modeling Plants with Environment-Sensitive Automata. In *Proceedings of Ausgraph '88*. 27–33.
- [56] James Arvo and David Kirk. 1989. A Survey of Ray Tracing Acceleration Techniques. In *An Introduction to Ray Tracing*, Andrew S. Glassner (Ed.). Academic Press, NY, Chapter 6.
- [57] James Arvo and David Kirk. 1990. Particle Transport and Image Synthesis. *Computer Graphics (Proceedings of SIGGRAPH)* 24, 4 (Sept. 1990), 63–66. <https://doi.org/10/dtp6gd>
- [58] James Arvo and Kevin Novins. 1994. Iso-Contour Volume Rendering. In *1994 ACM/IEEE Symposium on Volume Visualization*.
- [59] James Arvo and Kevin Novins. 2000. Fluid Sketches: Continuous Recognition and Morphing of Simple Hand-Drawn Shapes. In *UIST-2000*.
- [60] James Arvo and Kevin Novins. 2000. Smart Text: A Synthesis of Recognition and Morphing. In *AAAI Spring Symposium on Smart Graphics*. 140–147.
- [61] James Arvo and Cary Scofield. 1992. The Shader Cache: A Rendering Pipeline Accelerator. In *Graphics Gems III*, David Kirk (Ed.). Academic Press, NY, 383–389.
- [62] James Richard Arvo. 1995. *Analytic Methods for Simulated Light Transport*. Ph.D. Thesis. Yale University, New Haven, Connecticut.
- [63] James R. Arvo. 1995. Applications of Irradiance Tensors to the Simulation of Non-Lambertian Phenomena. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, 335–342. <https://doi.org/10/c2fss9>
- [64] James R. Arvo. 1995. Stratified Sampling of Spherical Triangles. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, 437–438. <https://doi.org/10/bdrqbf>
- [65] James R. Arvo, Kenneth Torrance, and Brian Smits. 1994. A Framework for the Analysis of Error in Global Illumination Algorithms. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, 75–84. <https://doi.org/10/dvmnw7>
- [66] Ian Ashdown. [n. d.]. Near-Field Photometry: A New Approach. *Journal of the Illuminating Engineering Society* 22, 1 ([n. d.]), 163–180. <https://doi.org/10/gfzv7b>
- [67] Michael Ashikhmin and Peter Shirley. 2000. An Anisotropic Phong BRDF Model. *Journal of Graphics Tools* 5, 2 (Jan. 2000), 25–32. <https://doi.org/10/gfzp5m>
- [68] Michael Ashikhmin, Simon Premoze, and Peter Shirley. 2000. A Microfacet-Based BRDF Generator. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press/Addison-Wesley Publishing Co., New York, NY, USA, 65–74. <https://doi.org/10/fw8n5d>
- [69] J. R. Askew. 1971. Numerical Methods Applied to Problems of Neutron Transport. *Journal of Quantitative Spectroscopy and Radiative Transfer* 11 (1971), 905–919. <https://doi.org/10/d6zhkp>
- [70] Olaf Aspelund. 1958. On a New Method for Solving the Boltzmann Equation in Neutron Transport Theory. In *Second International Conference on the Peaceful Uses of Atomic Energy*, Vol. 16. 530–534.
- [71] Adnan A. Aswad and G. R. Dalton. 1966. Integral Transport Theory. *Nuclear Science and Engineering* 24, 1 (Jan. 1966), 49–59.
- [72] Peter R. Atherton, Kevin Weiler, and Donald P. Greenberg. 1978. Polygon Shadow Generation. *Computer Graphics (Proceedings of SIGGRAPH)* 12, 3 (Aug. 1978), 275–281.
- [73] Fabrice Aubert and Dominique Bechmann. 1997. Animation by Deformation of Space-Time Objects. *Computer Graphics Forum (Proceedings of Eurographics)* 16, s3 (1997), C57–C66. <https://doi.org/10/cc3z7p>
- [74] Larry Aupperle. 1993. *Hierarchical Algorithms for Illumination*. Ph.D. Thesis. Department of Computer Science, Princeton University, Princeton, New Jersey.
- [75] Larry Aupperle and Pat Hanrahan. 1993. A Hierarchical Illumination Algorithm for Surfaces with Glossy Reflection. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, 155–162. <https://doi.org/10/cjqs64>
- [76] Larry Aupperle and Pat Hanrahan. 1993. Importance and Discrete Three Point Transport. In *Photorealistic Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*. 85–94.
- [77] F. Aurenhammer. 1987. Power Diagrams: Properties, Algorithms and Applications. *SIAM Journal on Computation* 16 (1987), 78–96.
- [78] Franz Aurenhammer. 1991. Voronoi Diagrams—a Survey of a Fundamental Geometric Data Structure. *Computing Surveys* 23, 3 (Sept. 1991), 345–405. <https://doi.org/10/bgct8t>
- [79] Franz Aurenhammer, F. Hoffmann, and Boris Aronov. 1998. Minkowski-Type Theorems and Least-Squares Clustering. *Algorithmica* 20 (1998), 61–76. <https://doi.org/10/bc6bp4>
- [80] Eugene H. Avrett. 1971. Solution of Non-LTE Transfer Problems. *Journal of Quantitative Spectroscopy and Radiative Transfer* 11 (1971), 511–529. <https://doi.org/10/d673mn>
- [81] Lionel Baboud and Xavier Décoret. 2006. Rendering Geometry with Relief Textures. In *Proceedings of Graphics Interface*. Canadian Information Processing Society, 195–201.
- [82] Didier Badouel, Kadi Bouatouch, and Thierry Priol. 1994. Distributing Data and Control for Ray Tracing in Parallel. *IEEE Computer Graphics & Applications* 14 (July 1994), 69–77.
- [83] Soonmin Bae, Sylvain Paris, and Frédo Durand. 2006. Two-Scale Tone Management for Photographic Look. *ACM Transactions on Graphics* 25, 3 (2006), 637–645. <https://doi.org/10/bjghk2>
- [84] M.M. Bagher, C. Soler, K. Subr, L. Belcour, and N. Holzschuch. 2013. Interactive Rendering of Acquired Materials on Dynamic Geometry Using Frequency Analysis. *IEEE Transactions on Visualization and Computer Graphics* 19, 5 (May 2013), 749–761. <https://doi.org/10/f4s6mj>
- [85] Mahdi M. Bagher, John Snyder, and Derek Nowrouzezahrai. 2016. A Non-Parametric Factor Microfacet Model for Isotropic BRDFs. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 35, 5 (July 2016), 159:1–159:16. <https://doi.org/10/f85ktv>
- [86] Csaba Bálint and Gábor Valasek. 2018. Accelerating Sphere Tracing. *Proceedings of Eurographics – Short Papers* (2018), 4 pages. <https://doi.org/10/gfz542>
- [87] Csaba Bálint, Gábor Valasek, and Lajos Gergő. 2019. Operations on Signed Distance Functions. In *The 11th Conference of PhD Students in Computer Science*.
- [88] Joseph A. Ball. 1975. A Norm Estimate for an Integral Operator. *Transport Theory and Statistical Physics* 4, 2 (1975), 67–69.
- [89] H. P. Baltes. 1976. On the Validity of Kirchhoff's Law of Heat Radiation for a Body in a Nonequilibrium Environment. In *Progress in Optics*, E. Wolf (Ed.). Vol. 13. North Holland, Amst, 3–25.
- [90] Michael Balzer and Daniel Heck. 2008. Capacity-Constrained Voronoi Diagrams in Finite Spaces. In *Proceedings of the 5th Annual International Symposium on Voronoi Diagrams in Science and Engineering*, Vol. 2. 44–56.
- [91] Michael Balzer, Thomas Schlömer, and Oliver Deussen. 2009. Capacity-Constrained Point Distributions: A Variant of Lloyd's Method. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 28, 3 (July 2009), 86:1–86:8. <https://doi.org/10/dcnbwb>
- [92] C. S. Bamji, P. O'Connor, T. Elkhatib, S. Mehta, B. Thompson, L. A. Prather, D. Snow, O. C. Akkaya, A. Daniel, A. D. Payne, T. Perry, M. Fenton, and V. H. Chan. 2015. A 0.13 Mm CMOS System-on-Chip for a 512424 Time-of-Flight Image Sensor with Multi-Frequency Photo-Demodulation up to 130 Mhz and 2 Gs/s Adc. *IEEE Journal of Solid-State Circuits* 50, 1 (Jan. 2015). <https://doi.org/10/gfz5kw>
- [93] Arindam Banerjee, Srujana Merugu, Indrajit S. Dhillon, and Joydeep Ghosh. 2005. Clustering with Bregman Divergences. *Journal of Machine Learning Research* 6, Oct (2005), 1705–1749.
- [94] Hujun Bao and Qunsheng Peng. 1993. A Progressive Radiosity Algorithm for Scenes Containing Curved Surfaces. *Computer Graphics Forum (Proceedings of Eurographics)* 12, 3 (Sept. 1993), 399–408.
- [95] Hujun Bao and Qunsheng Peng. 1993. Shading Models for Linear and Area Light Sources. *Computers & Graphics* 17, 2 (1993), 137–145. <https://doi.org/10/cf4f9p>

- [96] Ilya Baran, Jiawen Chen, Jonathan Ragan-Kelley, Frédo Durand, and Jaakko Lehtinen. 2010. A Hierarchical Volumetric Shadow Algorithm for Single Scattering. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 29, 5 (2010). <https://doi.org/10/dv78tm>
- [97] Ilya Baran, Philipp Keller, Derek Bradley, Stelian Coros, Wojciech Jarosz, Derek Nowrouzezahrai, and Markus Gross. 2012. Manufacturing Layered Attenuators for Multiple Prescribed Shadow Images. *Computer Graphics Forum (Proceedings of Eurographics)* 31, 2pt3 (May 2012), 603–610. <https://doi.org/10/gbbdcg>
- [98] Gladimir V. Guimaraes Baranoski. 1992. The Parametric Differential Method: An Alternative to the Calculation of Form-Factors. *Computer Graphics Forum (Proceedings of Eurographics)* 11, 3 (Sept. 1992), 193–204.
- [99] Gladimir V. G. Baranoski, Randall Bramley, and Peter Shirley. 1995. Fast Radiosity Solutions for Environments with High Average Reflectance. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, P. M. Hanrahan and W. Purgathofer (Eds.). Springer-Verlag, NY, 345–356.
- [100] Gladimir Valerio Guimarães Baranoski and Aravind Krishnaswamy. 2010. *Light & Skin Interactions: Simulations for Computer Graphics Applications*. Morgan Kaufmann, Burlington, MA. OCLC: ocn491935104.
- [101] Erwin H. Bareiss. 1958. A Survey and Classification of Transport Theory Calculation Techniques. In *Second International Conference on the Peaceful Uses of Atomic Energy*, Vol. 16. 503–516.
- [102] Michael F. Barnsley, Robert L. Devaney, Benoit B. Mandelbrot, Heinz-Otto Peitgen, Dietmar Saupe, Richard F. Voss, Yuval Fisher, and Michael McGuire. 1988. *The Science of Fractal Images* (1st ed.). Springer-Verlag. <https://doi.org/10.1007/978-1-4612-3784-6>
- [103] Michael F. Barnsley and Lyman P. Hurd. 1993. *Fractal Image Compression*. AKP, Wellesley.
- [104] Alan H. Barr. 1984. Global and Local Deformations of Solid Primitives. *Computer Graphics (Proceedings of SIGGRAPH)* 18, 3 (July 1984), 21–30. <https://doi.org/10/fcwvvgw>
- [105] Alan H. Barr. 1986. Ray Tracing Deformed Surfaces. *Computer Graphics (Proceedings of SIGGRAPH)* 20, 4 (Aug. 1986), 287–296. <https://doi.org/10/cpqr6g>
- [106] Rasmus Barringer, Carl Johan Gribel, and Tomas Akenine-Möller. 2012. High-Quality Curve Rendering Using Line Sampled Visibility. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 31, 6 (Nov. 2012), 162:1–162:10. <https://doi.org/10/f25qkx>
- [107] Ronen Barzel. 1997. Lighting Controls for Computer Cinematography. *Journal of Graphics Tools* 2, 1 (Jan. 1997), 1–20. <https://doi.org/10/gfz5vb>
- [108] Rui M. Bastos, António A. de Sousa, and Fernando N. Ferreira. 1993. Reconstruction of Illumination Functions Using Hermite Bicubic Interpolation. In *Photorealistic Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*.
- [109] Peter Battaglia, Razvan Pascanu, Matthew Lai, Danilo Jimenez Rezende, et al. 2016. Interaction Networks for Learning about Objects, Relations and Physics. In *Advances in Neural Information Processing Systems (NIPS)*. 4502–4510.
- [110] Daniel R. Baum, Holly E. Rushmeier, and James M. Winget. 1989. Improving Radiosity Solutions through the Use of Analytically Determined Form-Factors. *Computer Graphics (Proceedings of SIGGRAPH)* 23, 3 (July 1989), 325–334. <https://doi.org/10/cqv4k2>
- [111] Pablo Bauszat, Martin Eisemann, Elmar Eisemann, and Marcus Magnor. 2015. General and Robust Error Estimation and Reconstruction for Monte Carlo Rendering. *Computer Graphics Forum* 34, 2 (May 2015), 597–608. <https://doi.org/10/f7mbqz>
- [112] Pablo Bauszat, Martin Eisemann, and Marcus Magnor. 2011. Guided Image Filtering for Interactive High-Quality Global Illumination. *Computer Graphics Forum* 30, 4 (June 2011), 1361–1368. <https://doi.org/10/bwz228>
- [113] Louis Bavoil, Miguel Sainz, and Rouslan Dimitrov. 2008. Image-Space Horizon-Based Ambient Occlusion. In *ACM SIGGRAPH Talks*. <https://doi.org/10/c8mwsx>
- [114] Kenneth V. Beard and Catherine Chuang. 1987. A New Model for the Equilibrium Shape of Raindrops. *Journal of the Atmospheric Sciences* 44, 11 (June 1987), 1509–1524. <https://doi.org/10/fkmvxx>
- [115] Kenneth V. Beard, Rodney J. Kubesh, and Harry T. Ochs, III. 1991. Laboratory Measurements of Small Raindrop Distortion. Part I: Axis Ratios and Fall Behavior. *Journal of the Atmospheric Sciences* 48, 5 (March 1991), 698–710. <https://doi.org/10/bt8h85>
- [116] J. Beckmann, H. N. Mhaskar, and J. Prestin. 2012. Quadrature Formulas for Integration of Multivariate Trigonometric Polynomials on Spherical Triangles. *Int. Journal on Geomathematics* (2012). <https://doi.org/10/gfz5nr>
- [117] J. Beckmann, H. N. Mhaskar, and J. Prestin. 2014. Local Numerical Integration on the Sphere. *Int. Journal on Geomathematics* (2014). <https://doi.org/10/gfz5nq>
- [118] Petr Beckmann and André Spizzichino. 1963. *The Scattering of Electromagnetic Waves from Rough Surfaces*. Pergamon Press, NY.
- [119] J. B. Bednar and Richard Redner (Eds.). 1983. *Conference on Inverse Scattering: Theory and Application*. SIAM, Phil.
- [120] Thabo Beeler, Bernd Bickel, Gioacchino Noris, Paul Beardsley, Steve Marschner, Robert W. Sumner, and Markus Gross. 2012. Coupled 3D Reconstruction of Sparse Facial Hair and Skin. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 31, 4 (July 2012), 117:1–117:10. <https://doi.org/10/gbbwcd>
- [121] A Beer. 1852. Bestimmung Der Absorption Des Rothen Lichts in Farbigen Flüssigkeiten. In *Annalen Der Physik Und Chemie* 86. 78–88.
- [122] Kristof Beets and Dave Barron. 2000. Super-Sampling Anti-Aliasing Analyzed. *Beyond3D* (2000), 1–22.
- [123] Thaddeus Beier and Shawn Neely. 1992. Feature-Based Image Metamorphosis. *Computer Graphics (Proceedings of SIGGRAPH)* 26, 2 (July 1992), 35–42. <https://doi.org/10/crjpph>
- [124] Philippe Bekaert. 1999. *Hierarchical and Stochastic Algorithms for Radiosity*. Ph.D. Thesis. Katholieke Universiteit, Leuven, Belgium.
- [125] Philippe Bekaert and Yves D. Willems. 1994. A Progressive Importance-Driven Rendering Algorithm. In *Proceedings of the Spring Conference on Computer Graphics (SCCG)*. Comenius University Press, 58–67.
- [126] Philippe Bekaert and Yves D. Willems. 1995. Importance-Driven Progressive Refinement Radiosity. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, P. M. Hanrahan and W. Purgathofer (Eds.). Springer-Verlag, 316–325.
- [127] Laurent Belcour, Kavita Bala, and Cyril Soler. 2014. A Local Frequency Analysis of Light Scattering and Absorption. *ACM Transactions on Graphics* 33, 5 (Sept. 2014), 163:1–163:17. <https://doi.org/10/f6kmv5>
- [128] Laurent Belcour, Cyril Soler, Kartic Subr, Nicolas Holzschuch, and Frédo Durand. 2013. 5D Covariance Tracing for Efficient Defocus and Motion Blur. *ACM Transactions on Graphics* 32, 3 (June 2013), 31:1–31:18. <https://doi.org/10/gbdcxp>
- [129] Laurent Belcour, Guofu Xie, Christophe Hery, Mark Meyer, Wojciech Jarosz, and Derek Nowrouzezahrai. 2018. Integrating Clipped Spherical Harmonics Expansions. *ACM Transactions on Graphics* 37, 2 (March 2018), 19:1–19:12. <https://doi.org/10/gd52pf>
- [130] Laurent Belcour, Ling-Qi Yan, Ravi Ramamoorthi, and Derek Nowrouzezahrai. 2015. *Antialiasing Complex Global Illumination Effects in Path-Space*. Technical Report 1375. University of Montreal.
- [131] George I Bell and Samuel Glasstone. 1970. *Nuclear Reactor Theory*. Technical Report. US Atomic Energy Commission, Washington, DC (United States), NY.
- [132] Sean Bell, Paul Upchurch, Noah Snively, and Kavita Bala. 2013. OpenSurfaces: A Richly Annotated Catalog of Surface Appearance. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 32, 4 (July 2013), 111:1–111:17. <https://doi.org/10/gfvm23>
- [133] R. Bellman, G. Birkhoff, and I. Abu-Shumays (Eds.). 1967. *Transport Theory. Proceedings of a Symposium in Applied Mathematics of the American Mathematical Society and the Society for Industrial and Applied Mathematics*. American Mathematical Society, Providence, RI.
- [134] Aner Ben-Artzi, Kevin Egan, Frédo Durand, and Ravi Ramamoorthi. 2008. A Precomputed Polynomial Representation for Interactive BRDF Editing with Global Illumination. *ACM Transactions on Graphics* 27, 2 (May 2008), 13:1–13:13. <https://doi.org/10/cvx85d>
- [135] Aner Ben-Artzi, Ryan Overbeck, and Ravi Ramamoorthi. 2006. Real-Time BRDF Editing in Complex Lighting. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 25, 3 (July 2006), 945. <https://doi.org/10/fdbtmc>
- [136] Yoshua Bengio, Aaron Courville, and Pascal Vincent. 2013. Representation Learning: A Review and New Perspectives. *IEEE Transactions on Pattern Analysis and Machine Intelligence* 35, 8 (2013), 1798–1828. <https://doi.org/10/f42hw4>
- [137] M. O. Benouamer and D. Michelucci. 1997. Bridging the Gap between CSG and Brep via a Triple Ray Representation. In *Proceedings of the Fourth ACM Symposium on Solid Modeling and Applications*. ACM Press, New York, NY, USA, 68–79. <https://doi.org/10/cnjxkf>
- [138] Carsten Benthin, Ingo Wald, and Philipp Slusallek. 2003. A Scalable Approach to Interactive Global Illumination. *Computer Graphics Forum (Proceedings of Eurographics)* 22 (Sept. 2003).
- [139] Jon Louis Bentley. 1975. Multidimensional Binary Search Trees Used for Associative Searching. *Commun. ACM* 18, 9 (Sept. 1975), 509–517. <https://doi.org/10/fnpv3t>
- [140] Jon Louis Bentley. 1979. Multidimensional Binary Search Trees in Database Applications. *IEEE Transactions on Software Engineering* 5, 4 (July 1979), 333–340. <https://doi.org/10/dszg8b>
- [141] Jon Louis Bentley and Jerome H. Friedman. 1979. Data Structures for Range Searching. *Computing Surveys* 11, 4 (Dec. 1979), 397–409. <https://doi.org/10/ddpbmx>
- [142] Jon Louis Bentley, Bruce W. Weide, and Andrew C. Yao. 1980. Optimal Expected-Time Algorithms for Closest Point Problems. *ACM Trans. on Math. Soft.* 6, 4 (Dec. 1980), 563–580. <https://doi.org/10/dcs75s>
- [143] Bryan Beresford-Smith, Derek Y. C. Chan, and D. John Mitchell. 1985. The Electrostatic Interaction in Colloidal Systems with Low Added Electrolyte. *Journal of Colloid and Interface Science* 105, 1 (May 1985), 216–234. <https://doi.org/10/fdzbmd>
- [144] Larry Bergman, Henry Fuchs, and Eric Grant. 1986. Image Rendering by Adaptive Refinement. *Computer Graphics (Proceedings of SIGGRAPH)* 20, 4 (Aug.



- 1986), 29–38.
- [145] H. W. Bertini. 1963. *Monte Carlo Simulations on Intranuclear Cascades*. Technical Report ORNL–3383. Oak Ridge National Laboratory, Oak Ridge, TN, USA. <https://doi.org/10.2172/4692927>
- [146] Martin Bertram, Eduard Deines, Jan Mohring, Jevgenij Jegorovs, and Hans Hagen. 2005. Phonon Tracing for Auralization and Visualization of Sound. In *Proceedings of IEEE Visualization 2005*. 154–158. <https://doi.org/10/czhpnf>
- [147] Joseph L. F. Bertrand. 1889. *Calcul des probabilités*. Gauthier-Villars.
- [148] J. T. Bevans and R. V. Dunkle. 1960. Radiation Interchange within an Enclosure. *ASME Journal of Heat Transfer* 82, 1 (Feb. 1960), 1–7.
- [149] J. T. Bevans and D. K. Edwards. 1965. Radiation Exchange in an Enclosure with Directional Wall Properties. *Transactions of the American Society of Mechanical Engineers* (Aug. 1965), 388–396.
- [150] Ayush Bhandari, Christopher Barsi, and Ramesh Raskar. 2015. Blind and Reference-Free Fluorescence Lifetime Estimation via Consumer Time-of-Flight Sensors. *Optica* 2, 11 (2015). <https://doi.org/10/gfz5kx>
- [151] Ayush Bhandari, Achuta Kadambi, Refael Whyte, Christopher Barsi, Micha Feigin, Adrian Dorrington, and Ramesh Raskar. 2014. Resolving Multipath Interference in Time-of-Flight Imaging via Modulation Frequency Diversity and Sparse Regularization. *Opt. Lett.* 39, 6 (2014). <https://doi.org/10/gfz5k2>
- [152] Ayush Bhandari and Ramesh Raskar. 2016. Signal Processing for Time-of-Flight Imaging Sensors. *IEEE Signal Processing Magazine* 33, 5 (2016). <https://doi.org/10/gfz5k3>
- [153] Neeta Bhate. 1993. Application of Rapid Hierarchical Radiosity to Participating Media. In *Proceedings of ATARV-93: Advanced Techniques in Animation, Rendering, and Visualization*. Bilkent University, 43–53.
- [154] Neeta Bhate and A. Tokuta. 1992. Photorealistic Volume Rendering of Media with Directional Scattering. In *CE\_EGWR93*, Alan Chalmers, Derek Paddon, and François X. Sillion (Eds.). Consolidation Express Bristol, 227–246.
- [155] Niels Billen and Philip Dutré. 2016. Line Sampling for Direct Illumination. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 35, 4 (July 2016), 93–102. <https://doi.org/10/f84z2h>
- [156] Markus Billeter, Erik Sintorn, and Ulf Assarsson. 2010. Real Time Volumetric Shadows Using Polygonal Light Volumes. In *Proceedings of High Performance Graphics*. Eurographics Association, Aire-la-Ville, Switzerland, Switzerland, 39–45.
- [157] R. L. Billings, J. W. Barnes, J. R. Howell, and O. E. Slotboom. 1990. Markov Analysis of Radiative Transfer in Specular Enclosures. In *Radiation Heat Transfer: Fundamentals and Applications*. ASME, NY, 89–100.
- [158] R. Byron Bird, Warren E. Stewart, and Edwin N. Lightfoot. 1960. *Transport Phenomena*. John Wiley & Sons, NY.
- [159] V. Biri, D. Arquès, and S. Michelin. 2006. Real Time Rendering of Atmospheric Scattering and Volumetric Shadows. *Journal of the World Society for Computer Graphics (WSCG)* 14, 1–3 (2006), 65–72.
- [160] Garrett Birkhoff. 1959. Reactor Criticality in Transport Theory. *Proceedings of the National Academy of Sciences* 45 (1959), 567–569. <https://doi.org/10/b4qt7q>
- [161] Garrett Birkhoff. 1960. Some Mathematical Problems of Nuclear Reactor Theory. In *Frontiers of Numerical Mathematics*, R. E. Langer (Ed.). The University of Wisconsin Press, Madison, Wisconsin, 23–42.
- [162] Garrett Birkhoff. 1961. Positivity and Criticality. In *Nuclear Reactor Theory. Proceedings of the Eleventh Symposium in Applied Mathematics*. The Annals of Mathematical Statistics, Prov, 116–126.
- [163] Garrett Birkhoff. 1963. Reactor Criticality in Neutron Transport Theory. *Rendiconti di Matematica* 22 (1963), 102–126.
- [164] Benedikt Bitterli. 2016. Rendering Resources. (2016). <https://benedikt-bitterli.me/resources/>.
- [165] Benedikt Bitterli. 2016. Virtual Femto Photography. (2016). <https://benedikt-bitterli.me/femto.html>.
- [166] Benedikt Bitterli. 2018. Tungsten Renderer. <https://github.com/tunabrain/tungsten>.
- [167] Benedikt Bitterli, Wenzel Jakob, Jan Novák, and Wojciech Jarosz. 2018. Reversible Jump Metropolis Light Transport Using Inverse Mappings. *ACM Transactions on Graphics* 37, 1 (Jan. 2018), 1:1–1:12. <https://doi.org/10/gd52ph>
- [168] Benedikt Bitterli and Wojciech Jarosz. 2017. Beyond Points and Beams: Higher-Dimensional Photon Samples for Volumetric Light Transport. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 36, 4 (July 2017), 1–12. <https://doi.org/10/gfznbr>
- [169] Benedikt Bitterli, Jan Novák, and Wojciech Jarosz. 2015. Portal-Masked Environment Map Sampling. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 34, 4 (July 2015), 13–19. <https://doi.org/10/f7mbx7>
- [170] B. Bitterli, F. Rousselle, B. Moon, J. A. Iglesias-Gutián, D. Adler, K. Mitchell, W. Jarosz, and J. Novák. 2016. Nonlinearly Weighted First-Order Regression for Denoising Monte Carlo Renderings. *Computer Graphics Forum* 35, 4 (2016). <https://doi.org/10/f842kc>
- [171] Miguel A. Blanco, M. Flórez, and M. Bermejo. 1997. Evaluation of the Rotation Matrices in the Basis of Real Spherical Harmonics. *Journal of Molecular Structure: THEOCHEM* 419, 1 (Dec. 1997), 19–27. <https://doi.org/10/d9rwnn>
- [172] Philippe Blasi, Bertrand Le Săec, and Christophe Schlick. 1993. A Rendering Algorithm for Discrete Volume Density Objects. *Computer Graphics Forum (Proceedings of Eurographics)* 12, 3 (Sept. 1993), 201–210. <https://doi.org/10/c27hiz>
- [173] Jim Blinn. 2002. *Jim Blinn’s Corner: Notation, Notation, Notation*. Morgan Kaufmann.
- [174] James F. Blinn. 1977. Models of Light Reflection for Computer Synthesized Pictures. *Computer Graphics (Proceedings of SIGGRAPH)* 11, 2 (July 1977), 192–198. <https://doi.org/10/dg64f5>
- [175] James F. Blinn. 1982. Light Reflection Functions for Simulation of Clouds and Dusty Surfaces. *Computer Graphics (Proceedings of SIGGRAPH)* 16, 3 (July 1982), 21–29. <https://doi.org/10/dz2jzw>
- [176] James F. Blinn and Martin E. Newell. 1976. Texture and Reflection in Computer Generated Images. *Commun. ACM* 19, 10 (Oct. 1976), 542–547. <https://doi.org/10/dct2v6>
- [177] Jules Bloomenthal. 1985. Modeling the Mighty Maple. *Computer Graphics (Proceedings of SIGGRAPH)* 19, 3 (July 1985), 305–311.
- [178] Jules Bloomenthal and Ken Shoemake. 1991. Convolution Surfaces. *Computer Graphics (Proceedings of SIGGRAPH)* 25, 4 (July 1991), 251–256.
- [179] Adrian Blumer, Jan Novák, Ralf Habel, Derek Nowrouzezahrai, and Wojciech Jarosz. 2016. Reduced Aggregate Scattering Operators for Path Tracing. *Computer Graphics Forum* 35, 7 (Oct. 2016), 461–473. <https://doi.org/10/f9c6w6>
- [180] W. B. Boast. 1942. *Illumination Engineering*. McGraw-Hill, NY.
- [181] Wolfgang Boehm. 1982. On Cubics: A Survey. *Computer Graphics and Image Processing* 19 (1982), 201–226.
- [182] Craig Bohren and Donald Huffman. 1983. *Absorption and Scattering of Light by Small Particles*. John Wiley & Sons.
- [183] Mark R. Bolin and Gary W. Meyer. 1998. A Perceptually Based Adaptive Sampling Algorithm. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM, New York, NY, USA, 299–309. <https://doi.org/10/d5rj57>
- [184] R. A. Bolt. 1980. “Put-That-There”: Voice and Gesture at the Graphics Interface. *Computer Graphics (Proceedings of SIGGRAPH)* 14, 3 (July 1980), 262–270.
- [185] Ludwig Boltzmann. 1896. *Vorlesungen über Gastheorie*. Vieweg & Sohn Braunschweig, Wiesbaden. (See Boltzmann-1964 for English translation).
- [186] Ludwig Boltzmann. 1964. *Lectures on Gas Theory*. University of California Press, Berkeley. Translated by S. G. Brush.
- [187] Thomas E. Booth. 1987. Generalized Zero-Variance Solutions and Intelligent Random Numbers. In *Proceedings of the 19th Conference on Winter Simulation*. 445–451. <https://doi.org/10/ctrg5t>
- [188] T. E. Booth. 2007. Unbiased Monte Carlo Estimation of the Reciprocal of an Integral. *Nuclear Science and Engineering* 156, 3 (2007), 403–407. <https://doi.org/10/gfzq76>
- [189] Christoph C. Borel, Siegfried A. W. Gerstl, and Bill J. Powers. 1991. The Radiosity Method in Optical Remote Sensing of Structured 3-D Surfaces. *Remote Sensing of the Environment* 36 (May 1991), 13–44. <https://doi.org/10/fqgqfm>
- [190] Carlos F. Borges. 1990. *Numerical Methods for Illumination Models in Realistic Image Synthesis*. Ph.D. Thesis. University of California, Davis.
- [191] C. F. Borges. 1991. Trichromatic Approximation for Computer Graphics Illumination Models. *Computer Graphics (Proceedings of SIGGRAPH)* 25, 4 (July 1991), 101–104.
- [192] M. Born and E. Wolf. 1999. *Principles of Optics: Electromagnetic Theory of Propagation, Interference and Diffraction of Light*. Cambridge University Press.
- [193] Max Born and Emil Wolf. 2002. *Principles of Optics: Electromagnetic Theory of Propagation, Interference and Diffraction of Light*. Cambridge University Press.
- [194] Anatoli Borovoi. 2002. On the Extinction of Radiation by a Homogeneous but Spatially Correlated Random Medium: Comment. *Journal of the Optical Society of America A* 19, 12 (Dec. 2002), 2517–2520. <https://doi.org/10/dppwnh>
- [195] Carles Bosch and Gustavo Patow. 2010. Real-Time Path-Based Surface Detail. *Computers & Graphics* 34, 4 (Aug. 2010), 430–440. <https://doi.org/10/fw33mm>
- [196] Raj Chandra Bose. 1938. On the Application of the Properties of Galois Fields to the Problem of Construction of Hyper-Graeco-Latin Squares. *Sankhyā: The Indian Journal of Statistics* 3, 4 (1938), 323–338.
- [197] Raj Chandra Bose and K. A. Bush. 1952. Orthogonal Arrays of Strength Two and Three. *The Annals of Mathematical Statistics* 23, 4 (Dec. 1952), 508–524. <https://doi.org/10/dts6th>
- [198] Raj Chandra Bose and K. Rajasekharan Nair. 1941. On Complete Sets of Latin Squares. *Sankhyā: The Indian Journal of Statistics* 5, 4 (1941), 361–382.
- [199] Mario Botsch and Leif Kobbelt. 2005. Real-Time Shape Editing Using Radial Basis Functions. *Computer Graphics Forum (Proceedings of Eurographics)* 24, 3 (2005), 611–621. <https://doi.org/10/dk8xmx>
- [200] Mario Botsch, Mark Pauly, Martin Wicke, and Markus Gross. 2007. Adaptive Space Deformations Based on Rigid Cells. *Computer Graphics Forum (Proceedings of Eurographics)* 26, 3 (2007), 339–347. <https://doi.org/10/ct2hxg>
- [201] Kadi Bouatouch, Sumanta N. Pattanaik, and Eric Zeghers. 1996. Computation of Higher Order Illumination with a Non-Deterministic Approach. *Computer*

- Graphics Forum (Proceedings of Eurographics)* (Aug. 1996), 327–338.
- [202] Tamy Boubekeur, Wolfgang Heidrich, Xavier Granier, and Christophe Schlick. 2006. Volume-Surface Trees. *Computer Graphics Forum (Proceedings of Eurographics)* 25, 3 (2006), 399–406. <https://doi.org/10/bqt4pn>
- [203] Antoine Boudet, Paul Pitot, David Prtmarty, and Mathias Paulin. 2005. Photon Splatting for Participating Media. In *Proceedings of GRAPHITE*. ACM Press, Dunedin, New Zealand, 197–204, 460. <https://doi.org/10/cm8qjq>
- [204] Pierre Bouguer. 1729. *Essai d'Optique sur la gradation de la Lumiere*. Jombert, Paris, reprinted in: *Les matres de la pensee scientifique*, Paris (1729).
- [205] Adrien Bousseau, Emmanuelle Chapoulie, Ravi Ramamoorthi, and Maneesh Agrawala. 2011. Optimizing Environment Maps for Material Depiction. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 30 (2011), 1171–1180. <https://doi.org/10/b88np7>
- [206] Antoine Bouthors. 2008. *Realistic Rendering of Clouds in Real-Time / Rendu Réaliste de Nuages En Temps-Réel*. Ph.D. Thesis. Université Joseph Fourier, Grenoble, France.
- [207] Antoine Bouthors, Fabrice Neyret, Nelson Max, Eric Bruneton, and Cyril Crassin. 2008. Interactive Multiple Anisotropic Scattering in Clouds. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, New York, NY, USA, 173–182. <https://doi.org/10/cfhs5>
- [208] Christian Bouville, Kadi Bouatouch, Pierre Tellier, and Xavier Pueyo. 1990. A Theoretical Analysis of Global Illumination Models. In *Photorealism in Computer Graphics (Proceedings of the Eurographics Workshop on Photosimulation, Realism and Physics in Computer Graphics)*. 53–66.
- [209] John Bowers, Rui Wang, Li-Yi Wei, and David Maletz. 2010. Parallel Poisson Disk Sampling with Spectrum Analysis on Surfaces. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 29, 6 (Dec. 2010), 166:1–166:10. <https://doi.org/10/cgqgnxf>
- [210] George E. P. Box and Mervin E. Muller. 1958. A Note on the Generation of Random Normal Deviates. *AMS* 29, 2 (June 1958), 610–611. <https://doi.org/10/cdbhsb>
- [211] R.N. Bracewell. 2000. *The Fourier Transform and Its Applications*. McGraw-Hill.
- [212] Ronald N. Bracewell. 1995. *Two-Dimensional Imaging*. PH, EngCliffs.
- [213] Matthew Brand and Aaron Hertzmann. 2000. Style Machines. In *Proceedings of ACM SIGGRAPH*. 183–192.
- [214] Luca Brandolini, Leonardo Colzani, and Andrea Torlaschi. 2001. Mean Square Decay of Fourier Transforms in Euclidean and Non Euclidean Spaces. *Tohoku Mathematical Journal* 53, 3 (2001), 467–478. <https://doi.org/10/dhnmng>
- [215] L Brandolini, S Hofmann, and A Iosevich. 2003. Sharp Rate of Average Decay of the Fourier Transform of a Bounded Set. *Geometric & Functional Analysis* GAFA 13, 4 (2003), 671–680. <https://doi.org/10/bd2j6m>
- [216] W. F. Breig and A. L. Crossbie. 1974. Two-Dimensional Radiative Equilibrium. *J. Math. Anal. Appl.* 46, 1 (1974), 104–125.
- [217] Leo Breiman, William Meisel, and Edward Purcell. 1977. Variable Kernel Estimates of Multivariate Densities. *Technometrics* 19, 2 (May 1977), 135–144. <https://doi.org/10/gfzqh3>
- [218] Normand Brière and Pierre Poulin. 1996. Hierarchical View-Dependent Structures for Interactive Scene Manipulation. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 83–90. <https://doi.org/10/dnkk8>
- [219] V.N. Bringi, V. Chandrasekar, and R. Xiao. 1991. Raindrop Axis Ratios and Size Distributions in Florida Rainshafts: An Assessment of Multiparameter Radar Algorithms. *IEEE Transactions on Geoscience and Remote Sensing* 36, 3 (1991), 703–715. <https://doi.org/10/ftqk7k>
- [220] Forrest B Brown and William R Martin. 2001. *Monte Carlo Particle Transport in Media with Exponentially Varying Time-Dependent Cross-Sections*. Technical Report LA-UR-01-0675. Los Alamos National Laboratory.
- [221] Forrest B. Brown and William R. Martin. 2003. Direct Sampling of Monte Carlo Flight Paths in Media with Continuously Varying Cross-Sections. In *Nuclear Mathematical and Computational Sciences: A Century in Review, A Century Anew*. American Nuclear Society.
- [222] P. S. Brown and J. P. Pandolfo. 1969. An Equivalent-Obstacle Model for the Computation of Radiative Flux in Obstructed Layers. *Agricultural and Forest Meteorology* 6 (1969), 407–421.
- [223] Eric Bruneton and Fabrice Neyret. 2012. A Survey of Non-Linear Pre-Filtering Methods for Efficient and Accurate Surface Shading. *IEEE Transactions on Visualization and Computer Graphics* 18, 2 (Feb. 2012), 242–260. <https://doi.org/10/chq5qh>
- [224] Henry Brysk. 1975. Fredholm Equations and Green's Functions. *Transport Theory and Statistical Physics* 4, 2 (1975), 87–95.
- [225] Antoni Buades, Bartomeu Coll, and Jean-Michel Morel. 2005. A Review of Image Denoising Algorithms, with a New One. *Multiscale Modeling & Simulation* 4, 2 (Jan. 2005), 490–530. <https://doi.org/10/d4fhj8>
- [226] Antoni Buades, Bartomeu Coll, and Jean-Michel Morel. 2008. Nonlocal Image and Movie Denoising. *International Journal of Computer Vision* 76, 2 (Feb. 2008), 123–139. <https://doi.org/10/d5frb6>
- [227] Jed Z. Buchwald. 1989. *The Rise of the Wave Theory of Light*. The University of Chicago Press.
- [228] Chris Buckalew and Donald Fussell. 1989. Illumination Networks: Fast Realistic Rendering with General Reflectance Functions. *Computer Graphics (Proceedings of SIGGRAPH)* 23, 3 (July 1989), 89–98.
- [229] R. O. Buckius and M. M. Tseng. 1978. Radiative Heat Transfer in a Planar Medium with Anisotropic Scattering and Directional Boundaries. *Journal of Quantitative Spectroscopy and Radiative Transfer* 20 (1978), 385–402. <https://doi.org/10/fh8dvc>
- [230] H. Buckley. 1927. On the Radiation from the inside of a Circular Cylinder. *Philos. Mag.* 4, 23 (Oct. 1927), 753–762.
- [231] H. Buckley. 1928. Some Problems of Inter-Reflection. In *Proceedings of the International Congress on Illumination*. The Chemical Publishing Company, Easton, PA, 888–911.
- [232] G. Buffon. 1733. Editor's Note Concerning a Lecture given 1733 by Mr. Le Clerc de Buffon to the Royal Academy of Sciences in Paris. *Histoire de l'Acad. Roy. des Sci.* (1733), 43–45.
- [233] Michael Bunnell. 2005. Dynamic Ambient Occlusion and Indirect Lighting. In *GPU Gems 2*, Matt Pharr (Ed.). Addison-Wesley, 223–233.
- [234] David Burke, Abhijeet Ghosh, and Wolfgang Heidrich. 2005. Bidirectional Importance Sampling for Direct Illumination. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. Eurographics Association, 147–156. <https://doi.org/10/gfzsmz>
- [235] Brent Burley. 2012. Physically-Based Shading at Disney. In *Practical Physically-Based Shading in Film and Game Production*. 10:1–10:7.
- [236] Brent Burley. 2015. Extending the Disney BRDF to a BSDF with Integrated Subsurface Scattering. In *Physically Based Shading in Theory and Practice (ACM SIGGRAPH Course Notes)*.
- [237] J. P. Burman and Robin L. Plackett. 1946. The Design of Optimum Multifactorial Experiments. *Biometrika* 33, 4 (June 1946), 305–325. <https://doi.org/10/fmhkrj>
- [238] Geoffrey J Burton and Ian R Moorhead. 1987. Color and Spatial Structure in Natural Scenes. *Applied Optics* 26, 1 (1987), 157–170. <https://doi.org/10/cxmdtz>
- [239] I. W. Busbridge. 1960. *The Mathematics of Radiative Transfer*. Cambridge University Press, Bristol, UK.
- [240] Jens Busck. 2005. Underwater 3-D Optical Imaging with a Gated Viewing Laser Radar. *Optical Engineering* 44, 11 (2005), 44–44 – 7. <https://doi.org/10/cc8kv6>
- [241] Jens Busck and Henning Heiselberg. 2004. Gated Viewing and High-Accuracy Three-Dimensional Laser Radar. *Applied Optics* 43, 24 (2004), 4705–4710. <https://doi.org/10/cxvzm2>
- [242] K. A. Bush. 1952. Orthogonal Arrays of Index Unity. *The Annals of Mathematical Statistics* 23, 3 (1952), 426–434. <https://doi.org/10/fgm6b8>
- [243] J. C. Butcher and H. Messel. 1958. Electron Number Distribution in Electron-Photon Showers. *Phys. Rev.* 112, 6 (Dec. 1958), 2096–2106. <https://doi.org/10/dmbvs8>
- [244] J. C. Butcher and H. Messel. 1960. Electron Number Distribution in Electron-Photon Showers in Air and Aluminium Absorbers. *Nuclear Physics* 20 (1960), 15–128. <https://doi.org/10/bqxd9g>
- [245] Mauro Buttafava, Jessica Zeman, Alberto Tosi, Kevin Eliceiri, and Andreas Velten. 2015. Non-Line-of-Sight Imaging Using a Time-Gated Single Photon Avalanche Diode. *Opt. Express* 23, 16 (2015). <https://doi.org/10/gfz5k4>
- [246] William Buxton, Eugene Fiume, Ralph Hill, and Carson Woo. 1983. Continuous Hand-Gesture Input. In *Proceedings of Computer Graphics International (CGI)*. 191–195.
- [247] Wright C. E. 1929. Note on a Geometrical Radiation Theorem. *Philos. Mag.* 7 (1929), 946–950.
- [248] Brian Cabral and Leith Leedom. 1993. Imaging Vector Fields Using Line Integral Convolution. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 263–270.
- [249] Brian Cabral, Nelson Max, and Rebecca Springmeyer. 1987. Bidirectional Reflection Functions from Surface Bump Maps. *Computer Graphics (Proceedings of SIGGRAPH)* 21, 4 (Aug. 1987), 273–281. <https://doi.org/10/fc27w8>
- [250] Brian Cabral, Marc Olano, and Philip Nemecek. 1999. Reflection Space Image Based Rendering. In *Annual Conference Series (Proceedings of SIGGRAPH)*. Allyn Rockwood (Ed.). Addison Wesley Longman, 165–170.
- [251] Martin Čadik, Robert Herzog, Rafał Mantiuk, Karol Myszkowski, and Hans-Peter Seidel. 2012. New Measurements Reveal Weaknesses of Image Quality Metrics in Evaluating Graphics Artifacts. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 31, 6 (Nov. 2012), 147:1–147:10. <https://doi.org/10/gfz6mv>
- [252] Francis E. Cady and Henry B. Dates (Eds.). 1925. *Illuminating Engineering*. John Wiley & Sons, NY.
- [253] Mike Cammarano and Henrik Wann Jensen. 2002. Time Dependent Photon Mapping. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Paul Debevec and Simon Gibson (Eds.). Eurographics Association, 135–144.
- [254] Thomas Camminady, Martin Frank, and Edward W. Larsen. 2017. Nonclassical Particle Transport in Heterogeneous Materials. In *International Conference on Mathematics & Computational Methods Applied to Nuclear Science & Engineering*.



- [255] Emmanuel J Candès and David L Donoho. 1999. Ridgelets: A Key to Higher-Dimensional Intermittency? *Philosophical Transactions of the Royal Society of London. Series A: Mathematical, Physical and Engineering Sciences* 357, 1760 (1999), 2495–2509. <https://doi.org/10/fwvzbv>
- [256] Emmanuel J Candès and David L Donoho. 2000. *Curvelets: A Surprisingly Effective Nonadaptive Representation for Objects with Edges*. Technical Report. DTIC Document.
- [257] Bengt Carlson. 1961. Numerical Solution of Neutron Transport Problems. In *Nuclear Reactor Theory. Proceedings of the Eleventh Symposium in Applied Mathematics*. The Annals of Mathematical Statistics, Prov, 219–232.
- [258] B. G. Carlson and G. I. Bell. 1958. Solution of the Transport Equation by the  $S_N$  Method. In *Second International Conference on the Peaceful Uses of Atomic Energy*, Vol. 16. 535–549.
- [259] B. G. Carlson and K. D. Lathrop. 1968. Transport Theory – the Method of Discrete Ordinates. In *Computing Methods in Reactor Physics*, H. Greenspan, C. N. Kelber, and D. Okrent (Eds.). Gordon and Breach, NY, 171–266.
- [260] Nathan A. Carr, Jared Hoberock, Keenan Crane, and John C. Hart. 2006. Fast GPU Ray Tracing of Dynamic Meshes Using Geometry Images. In *Proceedings of Graphics Interface*. Canadian Information Processing Society, 203–209.
- [261] Leland L. Carter. 1971. MCNA: A Computer Program to Solve the Adjoint Neutron Transport Equation by Coupled Sampling with the Monte Carlo Method. Technical Report LA-4488. Los Alamos Scientific Laboratory of the University of California, Los Alamos, New Mexico.
- [262] L. L. Carter, E. D. Cashwell, and W. M. Taylor. 1972. Monte Carlo Sampling with Continuously Varying Cross Sections along Flight Paths. *Nuclear Science and Engineering* 48, 4 (Aug. 1972), 403–411. <https://doi.org/10/gfzngg>
- [263] Michael Brannon Carter. 1993. *Parallel Hierarchical Radiosity Rendering*. Ph.D. Thesis. Iowa State University, Ames, Iowa.
- [264] Michael B. Carter and John L. Gustafson. 1993. *An Improved Hierarchical Radiosity Method*. Technical Report IS-J 4881. Ames Laboratory.
- [265] Michael B. Carter and John L. Gustafson. 1993. *The Symmetric Radiosity Formulation*. Technical Report IS-J 4880. Ames Laboratory.
- [266] Kenneth M. Case. 1957. Transfer Problems and the Reciprocity Principle. *Reviews of Modern Physics* 29, 4 (Oct. 1957), 651–663. <https://doi.org/10/fpvc9>
- [267] Kenneth M. Case. 1960. Elementary Solutions of the Transport Equation and Their Applications. *Annals of Physics* 9 (1960), 1–23.
- [268] Kenneth M. Case, F. de Hoffmann, and G. Placzek. 1953. *Introduction to the Theory of Neutron Diffusion*. Vol. 1. Los Alamos Scientific Laboratory, Los Alamos, New Mexico.
- [269] Kenneth M Case, George Placzek, and Frederic Hoffmann. 1953. Introduction to the Theory of Neutron Diffusion, v. 1. (1953).
- [270] Kenneth M. Case and Paul F. Zweifel. 1967. *Linear Transport Theory*. Addison-Wesley, NY.
- [271] Edwin E. Catmull. 1974. *A Subdivision Algorithm for Computer Display of Curved Surfaces*. Ph.D. Thesis. Dept. of CS, U. of Utah.
- [272] Z. J. Cendes and S. H. Wong. 1987.  $C^1$  Quadratic Interpolation over Arbitrary Point Sets. *IEEE Computer Graphics & Applications* 7, 11 (Nov. 1987), 8–16.
- [273] Carlo Cercignani. 1988. *The Boltzman Equation and Its Applications*. Springer-Verlag, NY.
- [274] Eva Cerezo, Frederic Pérez, Xavier Pueyo, Francisco J. Seron, and François X. Sillion. 2005. A Survey on Participating Media Rendering Techniques. *The Visual Computer* 21, 5 (June 2005), 303–328. <https://doi.org/10/cjxqdt>
- [275] A. O. Chahdi, A. Halli, A. Ragragui, and K. Satori. 2017. Per-Pixel Displacement Mapping Using Hybrid Cone Approach. In *2017 International Conference on Advanced Technologies for Signal and Image Processing (ATSIP)*. 1–4. <https://doi.org/10/gfz56g>
- [276] Jin-Xiang Chai, Xin Tong, Shing-Chow Chan, and Heung-Yeung Shum. 2000. Plenoptic Sampling. In *Proc. 27th Annual Conf. on Computer Graphics and Interactive Techniques (SIGGRAPH '00)*. ACM, 307–318. <https://doi.org/10/d7rpjt>
- [277] Anish Chandak, Christian Lauterbach, Micah T. Taylor, Zhimin Ren, and Dinesh Manocha. 2008. AD-Frustum: Adaptive Frustum Tracing for Interactive Sound Propagation. *IEEE Transactions on Visualization and Computer Graphics* 14, 6 (2008), 1707–1722. <https://doi.org/10/fn2wn7>
- [278] Subrahmanyan Chandrasekhar. 1947. On the Radiative Equilibrium of a Stellar Atmosphere. *XIV. Astrophysical Journal* 105 (1947), 164.
- [279] Subrahmanyan Chandrasekhar. 1960. *Radiative Transfer*. Dover Publications, NY.
- [280] Bay-Wei Chang, Jock D. Mackinlay, and Polle T. Zellweger. 2000. Fluidly Revealing Information in Fluid Documents. In *AAAI Spring Symposium on Smart Graphics*. 178–181.
- [281] S. Chapman and T. G. Cowling. 1960. *The Mathematical Theory of Non-Uniform Gases*. Cambridge University Press, NY.
- [282] Edoardo Charbon. 2007. Will Avalanche Photodiode Arrays Ever Reach 1 Megapixel. In *International Image Sensor Workshop*.
- [283] Stéphane Chatty. 1994. Extending a Graphical Toolkit for Two-Handed Interaction. In *UIST-1994*. 195–204.
- [284] Huawei Chen, Jürgen Hesser, and Reinhard Männer. 2001. Fast Volume Deformation Using Inverse-Ray-Deformation and FFD. In *GraphiCon*.
- [285] Jiawen Chen, Ilya Baran, Frédo Durand, and Wojciech Jarosz. 2011. Real-Time Volumetric Shadows Using 1D Min-Max Mipmaps. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, San Francisco, California, 39. <https://doi.org/10/fbtdp>
- [286] Jiating Chen, Xiaoyin Ge, Li-Yi Wei, Bin Wang, Yusu Wang, Huamin Wang, Yun Fei, Kang-Lai Qian, Jun-Hai Yong, and Wenping Wang. 2013. Bilateral Blue Noise Sampling. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 32, 6 (Nov. 2013), 216:1–216:11. <https://doi.org/10/gbd538>
- [287] Jiajie Chen and Peter Z.G. Qian. 2014. Latin Hypercube Designs with Controlled Correlations and Multi-Dimensional Stratification. *Biometrika* 101, 2 (Feb. 2014), 319–332. <https://doi.org/10/f5549t>
- [288] Jiating Chen, Bin Wang, Yuxiang Wang, Ryan S. Overbeck, Jun-Hai Yong, and Wenping Wang. 2011. Efficient Depth-of-Field Rendering with Adaptive Sampling and Multiscale Reconstruction. *Computer Graphics Forum* 30, 6 (2011), 1667–1680. <https://doi.org/10/fmc3zx>
- [289] Lieu-Hen Chen, Tsung-Chih Tsai, and Yu-Sheng Chen. 2010. Grouped Photon Mapping. *The Visual Computer* 26, 3 (March 2010), 217–226. <https://doi.org/10/c7c5jk>
- [290] Min Chen. 1999. *Perturbation Methods for Image Synthesis*. Ph.D. Thesis. California Institute of Technology, Pasadena, California. CS-TR-99-05.
- [291] Min Chen. 2001. *Mathematical Methods for Image Synthesis*. Ph.D. Thesis. California Institute of Technology, Pasadena, California.
- [292] Min Chen and James Arvo. 2000. *Closed-Form Expressions for Irradiance from Non-Uniform Lambertian Luminaires Part I: Linearly-Varying Radiant Exitance*. Technical Report CS-TR-00-01. California Institute of Technology, Pasadena, California. <https://doi.org/10.7907/Z92805MQ>
- [293] Min Chen and James Arvo. 2000. *Closed-Form Expressions for Irradiance from Non-Uniform Lambertian Luminaires Part II: Polynomially-Varying Radiant Exitance*. Technical Report CS-TR-00-04. California Institute of Technology, Pasadena, California. <https://doi.org/10.7907/Z9XG9P5B>
- [294] Min Chen and James Arvo. 2000. A Closed-Form Solution for the Irradiance Due to Linearly-Varying Luminaires. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, W. Hansmann, W. Purgathofer, François X. Sillion, Bernard Péroche, and Holly Rushmeier (Eds.). Springer-Verlag, Vienna, 137–148. [https://doi.org/10.1007/978-3-7091-6303-0\\_13](https://doi.org/10.1007/978-3-7091-6303-0_13)
- [295] Min Chen and James Arvo. 2000. Theory and Application of Specular Path Perturbation. *ACM Transactions on Graphics* 19, 4 (Oct. 2000), 246–278. <https://doi.org/10/fpdwnc>
- [296] Min Chen and James Arvo. 2001. Simulating Non-Lambertian Phenomena Involving Linearly-Varying Luminaires. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Steven J. Gortler and Karol Myszkowski (Eds.). Springer-Verlag, 25–38. <https://doi.org/10/chb4qg>
- [297] Min Chen and James Arvo. July-September 2000. Perturbation Methods for Interactive Specular Reflections. *IEEE Transactions on Visualization and Computer Graphics* 6, 3 (July-September 2000), 253–264.
- [298] M. Chen, D. Silver, A. S. Winter, V. Singh, and N. Cornea. 2003. Spatial Transfer Functions: A Unified Approach to Specifying Deformation in Volume Modeling and Animation. In *Proceedings of the 2003 Eurographics/IEEE TVCG Workshop on Volume Graphics (VG '03)*. ACM Press, New York, NY, USA, 35–44. <https://doi.org/10/b69pr4>
- [299] Shenchang Eric Chen, Holly E. Rushmeier, Gavin Miller, and Douglass Turner. 1991. A Progressive Multi-Pass Method for Global Illumination. *Computer Graphics (Proceedings of SIGGRAPH)* 25, 4 (July 1991), 165–174. <https://doi.org/10/dzvdmf>
- [300] Shenchang Eric Chen and Lance Williams. 1993. View Interpolation for Image Synthesis. In *Annual Conference Series (Proceedings of SIGGRAPH)*, James T. Kajiya (Ed.), Vol. 27. 279–288.
- [301] Wei Chen, Liu Ren, Matthias Zwicker, and Hanspeter Pfister. 2004. Hardware-Accelerated Adaptive EWA Volume Splatting. In *Proceedings of IEEE Visualization 2004*.
- [302] Ying-Chieh Chen and Chun-Fa Chang. 2008. A Prism-Free Method for Silhouette Rendering in Inverse Displacement Mapping. *Computer Graphics Forum (Proceedings of Pacific Graphics)* 27, 7 (2008), 1929–1936. <https://doi.org/10/ddwxdx>
- [303] Zhonggui Chen, Zhan Yuan, Yi-King Choi, Ligang Liu, and Wenping Wang. 2012. Variational Blue Noise Sampling. *IEEE Transactions on Visualization and Computer Graphics* 18, 10 (Oct. 2012), 1784–1796. <https://doi.org/10/f38g82>
- [304] Ewen Cheslack-Postava, Rui Wang, Oskar Akerlund, and Fabio Pellacini. 2008. Fast, Realistic Lighting and Material Design Using Nonlinear Cut Approximation. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 27, 5 (Dec. 2008), 1. <https://doi.org/10/d2998k>
- [305] Matt Jen-Yuan Chiang, Benedikt Bitterli, Chuck Tappan, and Brent Burley. 2016. A Practical and Controllable Hair and Fur Model for Production Rendering. *Computer Graphics Forum (Proceedings of Eurographics)* 35, 2 (2016), 275–283. <https://doi.org/10/gfz5ss>

- [306] Matt Jen-Yuan Chiang, Peter Kutz, and Brent Burley. 2016. Practical and Controllable Subsurface Scattering for Production Path Tracing. In *ACM SIGGRAPH Talks*. ACM Press, Article 49, 2 pages. <https://doi.org/10/gfzq7h>
- [307] Kenneth Chiu, Peter Shirley, and Changyaw Wang. 1994. Multi-Jittered Sampling. In *Graphics Gems IV*, Paul S. Heckbert (Ed.). Academic Press, San Diego, CA, USA, Chapter Multi-jittered Sampling, 370–374.
- [308] Patrick Chiu and Lynn Wilcox. 1998. A Dynamic Grouping Technique for Ink and Audio Notes. In *UIST-1998*, 195–202.
- [309] Soon K. Cho. 1990. *Electromagnetic Scattering*. Springer-Verlag, NY.
- [310] Byn Choi, Rakesh Komuravelli, Victor Lu, Hyojin Sung, Robert L. Bocchino, Sarita V. Adve, and John C. Hart. 2010. Parallel SAH K-D Tree Construction. In *Proceedings of High Performance Graphics*. Eurographics Association, 77–86.
- [311] Cheol Ho Choi, Joseph Ivanic, Mark S. Gordon, and Klaus Ruedenberg. 1999. Rapid and Stable Determination of Rotation Matrices between Spherical Harmonics by Direct Recursion. *The Journal of Chemical Physics* 111, 19 (Nov. 1999), 8825–8831. <https://doi.org/10/d54d9s>
- [312] P. A. Chou. 1989. Recognition of Equations Using a Two-Dimensional Stochastic Context-Free Grammar. In *Proceedings of SPIE Visual Communications and Image Processing IV*, Vol. 1199, 852–863.
- [313] Per Christensen. 2018. *Progressive Sampling Strategies for Disk Light Sources*. Technical Report 18-02. Pixar Animation Studios. 6 pages.
- [314] Per Christensen and Brent Burley. 2015. *Approximate Reflectance Profiles for Efficient Subsurface Scattering*. Technical Report 15-04. Pixar Animation Studios.
- [315] Per Christensen, Julian Fong, Jonathan Shade, Wayne Wooten, Brenden Schubert, Andrew Kensler, Stephen Friedman, Charlie Kilpatrick, Cliff Ramshaw, Marc Bannister, Brenton Rayner, Jonathan Brouillat, and Max Liani. 2018. RenderMan: An Advanced Path-Tracing Architecture for Movie Rendering. *ACM Transactions on Graphics* 37, 3 (Aug. 2018), 30:1–30:21. <https://doi.org/10/gfznbz>
- [316] Per Christensen, George Harker, Jonathan Shade, Brenden Schubert, and Dana Batali. 2012. Multiresolution Radiosity Caching for Global Illumination in Movies. In *ACM SIGGRAPH Talks*. <https://doi.org/10/gfz5nv>
- [317] P.H. Christensen and W. Jarosz. 2016. The Path to Path-Traced Movies. *Foundations and Trends in Computer Graphics and Vision* 10, 2 (Oct. 2016), 103–175. <https://doi.org/10/gfjwjc>
- [318] Per Christensen, Andrew Kensler, and Charlie Kilpatrick. 2018. Progressive Multi-Jittered Sample Sequences. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 37, 4 (July 2018), 21–33. <https://doi.org/10/gdvj4n>
- [319] Per Christensen, Andrew Kensler, and Charlie Kilpatrick. 2018. Progressive Multi-Jittered Sample Sequences. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 37, 4 (June 2018). <https://doi.org/10/gdvj4n>
- [320] Per H. Christensen. 1995. *Hierarchical Techniques for Glossy Global Illumination*. Ph.D. Thesis. Department of Computer Science and Engineering, University of Washington, Seattle, Washington.
- [321] Per H. Christensen. 1999. Faster Photon Map Global Illumination. *Journal of Graphics Tools* 4, 3 (Jan. 1999), 1–10. <https://doi.org/10/gfznc4>
- [322] Per H. Christensen. 1999. Importance for Ray Tracing. *Ray Tracing News* 12, 2 (Dec. 1999). ([www.acm.org/tog/resources/RTNews/html/rtnv12n2.html](http://www.acm.org/tog/resources/RTNews/html/rtnv12n2.html)).
- [323] Per H. Christensen. 2003. Adjoints and Importance in Rendering: An Overview. *IEEE Transactions on Visualization and Computer Graphics* 9, 3 (July 2003), 329–340. <https://doi.org/10/d3gj5s>
- [324] Per H. Christensen. 2008. *Point-Based Approximate Color Bleeding*. Technical Report 08-01. Pixar Animation Studios, Emeryville, CA.
- [325] Per H. Christensen and Dana Batali. 2004. An Irradiance Atlas for Global Illumination in Complex Production Scenes. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*, A. Keller and H. W. Jensen (Eds.). 133–141.
- [326] Per H Christensen, Julian Fong, David M Laur, and Dana Batali. 2006. Ray Tracing for the Movie 'Cars'. In *Proceedings of IEEE Symposium on Interactive Ray Tracing*. IEEE, 1–6. <https://doi.org/10/bmph7q>
- [327] Per H. Christensen, David M. Laur, Julian Fong, Wayne L. Wooten, and Dana Batali. 2003. Ray Differentials and Multiresolution Geometry Caching for Distribution Ray Tracing in Complex Scenes. *Computer Graphics Forum (Proceedings of Eurographics)* 22, 3 (2003), 543–552.
- [328] Per H. Christensen, Dani Lischinski, Eric J. Stollnitz, and David H. Salesin. 1997. Clustering for Glossy Global Illumination. *Computer Graphics Forum* 16, 1 (Jan. 1997), 3–33. <https://doi.org/10/dd37mg>
- [329] Per H. Christensen, David H. Salesin, and Tony D. DeRose. 1993. A Continuous Adjoint Formulation for Radiance Transport. In *Photorealistic Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*. 95–104.
- [330] Per H. Christensen, Eric J. Stollnitz, David H. Salesin, and Tony D. DeRose. 1994. Wavelet Radiance. In *Photorealistic Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*. 287–302.
- [331] Per H. Christensen, Eric J. Stollnitz, David H. Salesin, and Tony D. DeRose. 1996. Global Illumination of Glossy Environments Using Wavelets and Importance. *ACM Transactions on Graphics* 15, 1 (Jan. 1996), 37–71. <https://doi.org/10/bkb7z8>
- [332] John P. Church. 1963. Homogeneous-Medium Green's Functions Applied to the Transport Equation in Heterogeneous Media. *Transactions of the American Nuclear Society* 6, 2 (Nov. 1963), 231.
- [333] John P. Church. 1965. Solving the Transport Equation in Heterogeneous Media Using First-Flight Green's Functions for Homogeneous Media. *Nuclear Science and Engineering* 21, 1 (Jan. 1965), 49–61.
- [334] O. Chwolson. 1890. Grundzüge einer mathematischen Theorie der inneren Diffusion des Lichtes. *L'académie Impériale des Sciences de St.-Petersbourg, Nouvelle Series* 33, 1 (1890), 221–256.
- [335] CIE. 1987. *CIE International Lighting Vocabulary: IEC International Electrotechnical Vocabulary* (4th ed.). Commission Internationale de l'Eclairage.
- [336] Petrik Clarberg and Tomas Akenine-Möller. 2008. Exploiting Visibility Correlation in Direct Illumination. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 27, 4 (2008), 1125–1136. <https://doi.org/10/d2gd6k>
- [337] Petrik Clarberg and Tomas Akenine-Möller. 2008. Practical Product Importance Sampling for Direct Illumination. *Computer Graphics Forum (Proceedings of Eurographics)* 27, 2 (2008), 681–690. <https://doi.org/10/ccwrhc>
- [338] Petrik Clarberg, Wojciech Jarosz, Tomas Akenine-Möller, and Henrik Wann Jensen. 2005. Wavelet Importance Sampling: Efficiently Evaluating Products of Complex Functions. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 24, 3 (July 2005), 1166–1175. <https://doi.org/10/c79g6q>
- [339] Francis H. Clark. 1971. Methods and Data for Reactor Shield Calculations. In *Advances in Nuclear Science and Technology*, E. J. Henley and J. Lewins (Eds.). Vol. 5. Plenum, NY, 95–183.
- [340] James H. Clark. 1976. Hierarchical Geometric Models for Visible Surface Algorithms. *Commun. ACM* 19, 10 (Oct. 1976), 547–554. <https://doi.org/10/fh2sqx>
- [341] Melville Clark, Jr. and Kent F. Hanson. 1964. *Numerical Methods of Reactor Analysis*. Academic Press, NY.
- [342] John G. Cleary, Brian M. Wyrwyl, Graham M. Birtwistle, and Reddy Vatti. 1986. Multiprocessor Ray Tracing. *Computer Graphics Forum* 5, 1 (March 1986), 3–12. <https://doi.org/10/dbsj9g>
- [343] David Cline, Parris K. Egbert, Justin F. Talbot, and David L. Cardon. 2006. Two Stage Importance Sampling for Direct Lighting. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. Eurographics Association, 103–113. <https://doi.org/10/gfzsm6>
- [344] David Cline, Justin Talbot, and Parris Egbert. 2005. Energy Redistribution Path Tracing. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 24, 3 (2005), 1186–1195. <https://doi.org/10/b3xtrn>
- [345] Andrew Clinton and Mark Elendt. 2009. Rendering Volumes with Microvoxels. In *ACM SIGGRAPH Talks*. Article 47, 1 pages. <https://doi.org/10/ddhnvr>
- [346] William G. Cochran. 1963. *Sampling Techniques* (2 ed.). John Wiley & Sons.
- [347] Michael F. Cohen, Shenchang Eric Chen, John R. Wallace, and Donald P. Greenberg. 1988. A Progressive Refinement Approach to Fast Radiosity Image Generation. *Computer Graphics (Proceedings of SIGGRAPH)* 22, 4 (Aug. 1988), 75–84.
- [348] Michael F. Cohen and Donald P. Greenberg. 1985. The Hemi-Cube: a Radiosity Solution for Complex Environments. *Computer Graphics (Proceedings of SIGGRAPH)* 19, 3 (Aug. 1985), 31–40. <https://doi.org/10/b6rxmn>
- [349] Michael F. Cohen, Donald P. Greenberg, David S. Immel, and P. J. Brack. 1986. An Efficient Radiosity Approach for Realistic Image Synthesis. *IEEE Computer Graphics & Applications* 6, 2 (March 1986), 26–35. <https://doi.org/10/c3mmt4>
- [350] Michael F. Cohen, Jonathan Shade, Stefan Hiller, and Oliver Deussen. 2003. Wang Tiles for Image and Texture Generation. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 22, 3 (July 2003), 287–294. <https://doi.org/10/ffwtmk>
- [351] Michael F. Cohen and John R. Wallace. 1993. *Radiosity and Realistic Image Synthesis*. Academic Press, NY.
- [352] D. Cohen-Or, Y. L. Chrysanthou, C. T. Silva, and F. Durand. 2003. A Survey of Visibility for Walkthrough Applications. *IEEE Transactions on Visualization and Computer Graphics* 9, 3 (July 2003), 412–431. <https://doi.org/10/fksr6t>
- [353] Mark Colbert, Sumanta Pattanaik, and Jaroslav Krivánek. 2006. BRDF-Shop: Creating Physically Correct Bidirectional Reflectance Distribution Functions. *IEEE Computer Graphics & Applications* 26, 1 (2006), 30–36. <https://doi.org/10/ddvm35>
- [354] Mark Colbert, Erik Reinhard, and C. E. Hughes. 2007. Painting in High Dynamic Range. *Journal of Visual Communication and Image Representation* 18, 5 (2007), 387–396. <https://doi.org/10/fpw5pc>
- [355] Mark Christopher Colbert. 2008. *Appearance-Driven Material Design*. Ph.D. Thesis. School of Electrical Engineering and Computer Science, University of Central Florida.
- [356] W. A. Coleman. 1968. Mathematical Verification of a Certain Monte Carlo Sampling Technique and Applications of the Technique to Radiation Transport Problems. *Nuclear Science and Engineering* 32, 1 (April 1968), 76–81. <https://doi.org/10/gfzndg>
- [357] Steven Collins. 1992. Adaptive Splatting for Specular to Diffuse Light Transport. In *CE\_EGWR93*. 119–135.



- [358] Steven Collins. 1995. Adaptive Splatting for Specular to Diffuse Light Transport. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Georgios Sakas, Stefan Müller, and Peter Shirley (Eds.). Springer-Verlag, 121–135.
- [359] Steven Collins. 1995. Reconstruction of Illumination from Area Luminaires. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, P. M. Hanrahan and W. Purgathofer (Eds.). Springer-Verlag, NY, 274–283.
- [360] Steven Collins. 1996. *Wavefront Tracking for Global Illumination Solutions*. Ph.D. Thesis. Trinity College, Dublin, Ireland.
- [361] Edward Uhler Condon and George Shortley. 1951. *The Theory of Atomic Spectra*. Cambridge University Press.
- [362] Richard M Conroy, Adrian A Dorrington, Rainer Künemeyer, and Michael J Cree. 2009. Range Imager Performance Comparison in Homodyne and Heterodyne Operating Modes. In *IS&T/SPIE Electronic Imaging*. <https://doi.org/10/bqxc4n>
- [363] Damian M. Conway and Marion S. Cottingham. 1988. The Isoluminance Contour Model. In *Proceedings of Ausgraph '88*, 43–50.
- [364] J. M. Cook. 1968. Mathematical Foundations. In *Computing Methods in Reactor Physics*, H. Greenspan, C. N. Kelber, and D. Okrent (Eds.). Gordon and Breach, NY, 542–579.
- [365] Robert L. Cook. 1986. Stochastic Sampling in Computer Graphics. *ACM Transactions on Graphics* 5, 1 (Jan. 1986), 51–72. <https://doi.org/10/cqwhcc>
- [366] Robert L. Cook, Loren Carpenter, and Edwin Catmull. 1987. The Reyes Image Rendering Architecture. *Computer Graphics (Proceedings of SIGGRAPH)* 21, 4 (1987), 95–102. <https://doi.org/10/bk6dpr>
- [367] Robert L. Cook, Thomas Porter, and Loren Carpenter. 1984. Distributed Ray Tracing. *Computer Graphics (Proceedings of SIGGRAPH)* 18, 3 (July 1984), 137–145. <https://doi.org/10/c9thc3>
- [368] Robert L. Cook and Kenneth E. Torrance. 1981. A Reflectance Model for Computer Graphics. *Computer Graphics (Proceedings of SIGGRAPH)* 15, 3 (Aug. 1981), 307–316. <https://doi.org/10.1145/965161.806819>
- [369] Ronald Cools and Philip Rabinowitz. 1993. Monomial Cubature Rules since “Stroud”: A Compilation. *Journal of Computational & Applied Mathematics* (1993). <https://doi.org/10/cvwx4v>
- [370] K. Cooper, J. A. Smith, and D. Pitts. 1982. Reflectance of a Vegetation Canopy Using the Adding Method. *Applied Optics* 21, 22 (Nov. 1982), 4112–4118.
- [371] António Cardoso Costa, António Augusto Sousa, and Fernando Nunes Ferreira. 1999. Lighting Design: A Goal Based Approach Using Optimisation. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Dani Lischinski and Greg Ward Larson (Eds.). Springer-Verlag, 317–328. <https://doi.org/10/dk99px>
- [372] R. R. Coveyou, V. R. Cain, and K. J. Yost. 1967. Adjoint and Importance in Monte Carlo Application. *Nuclear Science and Engineering* 27, 2 (1967), 219–234. <https://doi.org/10/gfzq75>
- [373] R. R. Coveyou and R. D. Macpherson. 1967. Fourier Analysis of Uniform Random Number Generators. *J. ACM* 14, 1 (Jan. 1967), 100–119. <https://doi.org/10/fd4br8>
- [374] Radu V. Craiu and Christiane Lemieux. 2007. Acceleration of the Multiple-Try Metropolis Algorithm Using Antithetic and Stratified Sampling. *Statistics and Computing* 17, 2 (Jan. 2007), 109. <https://doi.org/10/fq3ksx>
- [375] L. E. Cram. 1978. Inversion Problems in Radiative Transfer Theory: The Backus-Gilbert Formalism. *Journal of Quantitative Spectroscopy and Radiative Transfer* 20 (1978), 305–315. <https://doi.org/10/czhz9t>
- [376] H. Cramer. 1946. Methods of Mathematical Statistics. (1946).
- [377] S. N. Cramer. 1978. Application of the Fictitious Scattering Radiation Transport Model for Deep-Penetration Monte Carlo Calculations. *Nuclear Science and Engineering* 65, 2 (1978), 237–253. <https://doi.org/10/gfzq74>
- [378] R. Cranley and T. N. L. Patterson. 1976. Randomization of Number Theoretic Methods for Multiple Integration. *SIAM J. Numer. Anal.* 13, 6 (1976), 904–914. <https://doi.org/10/ds968q>
- [379] Cyril Crassin. 2011. *GigaVoxels: A Voxel-Based Rendering Pipeline for Efficient Exploration of Large and Detailed Scenes*. Ph.D. Thesis. Université de Grenoble.
- [380] Cyril Crassin, Fabrice Neyret, Sylvain Lefebvre, and Elmar Eisemann. 2009. GigaVoxels: Ray-Guided Streaming for Efficient and Detailed Voxel Rendering. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, 15–22.
- [381] Cyril Crassin, Fabrice Neyret, Miguel Sainz, Simon Green, and Elmar Eisemann. 2011. Interactive Indirect Illumination Using Voxel Cone Tracing. *Computer Graphics Forum (Proceedings of Pacific Graphics)* 30, 7 (Sept. 2011), 207–207. <https://doi.org/10/fqnc9v>
- [382] Franklin C. Crow. 1977. The Aliasing Problem in Computer-Generated Shaded Images. *Commun. ACM* 20, 11 (1977), 799–805. <https://doi.org/10/bscx9p>
- [383] Franklin C. Crow. 1977. Shadow Algorithms for Computer Graphics. *Computer Graphics (Proceedings of SIGGRAPH)* 11, 2 (1977), 242–248. <https://doi.org/10/fs5f2k>
- [384] Franklin C. Crow. 1984. Summed-Area Tables for Texture Mapping. *Computer Graphics (Proceedings of SIGGRAPH)* 18, 3 (1984), 207–212. <https://doi.org/10/bbtrvf>
- [385] Luis M. Cruz-Orive. 1989. On the Precision of Systematic Sampling: A Review of Matheron’s Transitive Methods. *Journal of Microscopy* 153, 3 (1989), 315–333. <https://doi.org/10/bjbgwr>
- [386] Luis M Cruz-Orive. 1989. On the Precision of Systematic Sampling: A Review of Matheron’s Transitive Methods. *Journal of Microscopy* 153, 3 (1989), 315–333. <https://doi.org/10/bjbgwr>
- [387] Brian Curless and Marc Levoy. 1996. A Volumetric Method for Building Complex Models from Range Images. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 303–312. <https://doi.org/10/crn3vr>
- [388] Elizabeth Cuthill. 1964. Digital Computers in Nuclear Reactor Design. In *Advances in Computers*, F. L. Alt and M. Rubinoff (Eds.). Vol. 5. Academic Press, NY, 289–348.
- [389] Lawrence D. Cutler, Bernd Fröhlich, and Pat Hanrahan. 1997. Two-Handed Direct Manipulation on the Responsive Workbench. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*, 107–114.
- [390] C. Cuttle. 1971. Lighting Patterns and the Flow of Light. *Lighting Research and Technology* 3, 3 (1971), 171–189. <https://doi.org/10/gfz2bh>
- [391] Tom Cuyppers, Tom Haber, Philippe Bekaert, Se Baek Oh, and Ramesh Raskar. 2012. Reflectance Model for Diffraction. *ACM Transactions on Graphics* 31, 5 (2012). <https://doi.org/10/gbbrp4>
- [392] Leonardo Da Vinci. 1651. *A Treatise on Painting*.
- [393] K. Dabov, A. Foi, V. Katkovnik, and K. Egiazarian. 2007. Image Denoising by Sparse 3-D Transform-Domain Collaborative Filtering. *IEEE Transactions on Image Processing* 16, 8 (2007), 2080–2095. <https://doi.org/10/fv7528>
- [394] Carsten Dachsbacher. 2010. Analyzing Visibility Configurations. *IEEE Transactions on Visualization and Computer Graphics* 17, 4 (2010), 475–486.
- [395] Carsten Dachsbacher and Jan Kautz. 2009. Real-Time Global Illumination for Dynamic Scenes. In *ACM SIGGRAPH Course Notes*. <https://doi.org/10/blmg55>
- [396] Carsten Dachsbacher, Jaroslav Křivánek, Miloš Hašan, Adam Arbree, Bruce Walter, and Jan Novák. 2014. Scalable Realistic Rendering with Many-Light Methods. *Computer Graphics Forum* 33, 1 (Feb. 2014), 88–104. <https://doi.org/10/f5twgd>
- [397] Carsten Dachsbacher and Marc Stamminger. 2003. Translucent Shadow Maps. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. Eurographics Association, Aire-la-Ville, Switzerland, Switzerland, 197–201.
- [398] Carsten Dachsbacher and Marc Stamminger. 2005. Reflective Shadow Maps. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, 203–208. <https://doi.org/10/c83rvs>
- [399] Carsten Dachsbacher and Marc Stamminger. 2006. Splatting Indirect Illumination. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, 93–100. <https://doi.org/10/cvg7d8>
- [400] Ken Dahm and Alexander Keller. 2017. Learning Light Transport the Reinforced Way. In *ACM SIGGRAPH Talks*. ACM Press, Article 73, 2 pages. <https://doi.org/10/gfzsm4>
- [401] Huidong Dai, Weiji He, Zhuang Miao, Yunfei Chen, and Guohua Gu. 2013. Three-Dimensional Active Imaging Using Compressed Gating. In *International Symposium on Photoelectronic Detection and Imaging*. <https://doi.org/10/gfz5k5>
- [402] Holger Dammertz, Johannes Hanika, and Alexander Keller. 2008. Shallow Bounding Volume Hierarchies for Fast SIMD Ray Tracing of Incoherent Rays. *Computer Graphics Forum (Proceedings of Eurographics)* 27, 2 (2008), 1225–1233. <https://doi.org/10/dtj26n>
- [403] Holger Dammertz and Alexander Keller. 2008. Edge Volume Heuristic - Robust Triangle Subdivision for Improved BVH Performance. In *Proceedings of IEEE Symposium on Interactive Ray Tracing*, 155–158.
- [404] H. Dammertz and A. Keller. 2008. The Edge Volume Heuristic - Robust Triangle Subdivision for Improved BVH Performance. In *Proceedings of IEEE Symposium on Interactive Ray Tracing*, 155–158. <https://doi.org/10/c3pnzv>
- [405] H. Dammertz, A. Keller, and H. P. A. Lensch. 2010. Progressive Point-Light-Based Global Illumination. *Computer Graphics Forum* 29, 8 (Dec. 2010), 2504–2515. <https://doi.org/10.1111/j.1467-8659.2010.01786.x>
- [406] Holger Dammertz, Daniel Sewtz, Johannes Hanika, and Hendrik P. A. Lensch. 2010. Edge-Avoiding À-Trous Wavelet Transform for Fast Global Illumination Filtering. In *Proceedings of High Performance Graphics*. Eurographics Association, Aire-la-Ville, Switzerland, Switzerland, 67–75.
- [407] Sabrina Dammertz and Alexander Keller. 2008. Image Synthesis by Rank-1 Lattices. In *Monte Carlo and Quasi-Monte Carlo Methods*, Alexander Keller, Stefan Heinrich, and Harald Niederreiter (Eds.). Springer-Verlag, 217–236.
- [408] John Danskin and Pat Hanrahan. 1992. Fast Algorithms for Volume Ray Tracing. In *Proceedings of the 1992 Workshop on Volume Visualization (VVS '92)*. ACM Press, New York, NY, USA, 91–98. <https://doi.org/10/dqddkv>
- [409] J. V. Dave. 1964. Meaning of the Successive Iteration of the Auxiliary Equation in the Theory of Radiative Transfer. *Astrophysical Journal* 140, 3 (Oct. 1964), 1292–1303.
- [410] Tomáš Davidovič, Iliyan Georgiev, and Philipp Slusallek. 2012. Progressive Lightcuts for GPU. In *ACM SIGGRAPH Talks*. ACM Press, 1. <https://doi.org/10/>



- gfzq7w
- [411] Tomáš Davidovič, Jaroslav Křivánek, Miloš Hašan, Philipp Slusallek, and Kavita Bala. 2010. Combining Global and Local Virtual Lights for Detailed Glossy Illumination. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 29, 6 (Dec. 2010), 143:1–143:8. <https://doi.org/10/bmktxb>
  - [412] Anthony B. Davis and Alexander Marshak. 2004. Photon Propagation in Heterogeneous Optical Media with Spatial Correlations: Enhanced Mean-Free-Paths and Wider-than-Exponential Free-Path Distributions. *Journal of Quantitative Spectroscopy and Radiative Transfer* 84, 1 (2004), 3–34. [https://doi.org/10.1016/S0022-4073\(03\)00114-6](https://doi.org/10.1016/S0022-4073(03)00114-6)
  - [413] Anthony B. Davis, Alexander Marshak, H. Gerber, and Warren J. Wiscombe. 1999. Horizontal Structure of Marine Boundary Layer Clouds from Centimeter to Kilometer Scales. *Journal of Geophysical Research: Atmospheres* 104, D6 (1999), 6123–6144. <https://doi.org/10/fd2bcz>
  - [414] Anthony B. Davis and Mark B. Mineev-Weinstein. 2011. Radiation Propagation in Random Media: From Positive to Negative Correlations in High-Frequency Fluctuations. *Journal of Quantitative Spectroscopy and Radiative Transfer* 112, 4 (March 2011), 632–645. <https://doi.org/10.1016/j.jqsrt.2010.10.001>
  - [415] Anthony B. Davis and Feng Xu. 2014. A Generalized Linear Transport Model for Spatially Correlated Stochastic Media. *Journal of Computational and Theoretical Transport* 43, 1–7 (2014), 474–514. <https://doi.org/10.1080/23324309.2014.978083>
  - [416] James Davis, Bernd Jähne, Andreas Kolb, Ramesh Raskar, and Christian Theobalt. 2012. Time-of-Flight Imaging: Algorithms, Sensors and Applications. *Dagstuhl Reports* 2, 10 (2012).
  - [417] B. Davison. 1957. *Neutron Transport Theory*. Oxford, NY.
  - [418] Leila De Floriani, Daniela Mirra, and Enrico Puppo. 1993. Extracting Contour Lines from a Hierarchical Surface Model. *Computer Graphics Forum (Proceedings of Eurographics)* (1993), 249–260.
  - [419] Fernando De Goes, Katherine Breeden, Victor Ostromoukhov, and Mathieu Desbrun. 2012. Blue Noise through Optimal Transport. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 31, 6 (Nov. 2012), 171:1–171:11. <https://doi.org/10/gbb6n9>
  - [420] Fernando De Goes and Doug L. James. 2017. Regularized Kelvinlets: Sculpting Brushes Based on Fundamental Solutions of Elasticity. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 36, 4 (July 2017), 40:1–40:11. <https://doi.org/10/gfz56k>
  - [421] H. C. Van de Hulst. 1981. *Light Scattering by Small Particles*. Dover Publications, NY.
  - [422] Rodrigo de Toledo, Bin Wang, and Bruno Lévy. 2008. Geometry Textures and Applications. *Computer Graphics Forum* 27, 8 (2008), 2053–2065.
  - [423] Paul Debevec. 1998. Rendering Synthetic Objects into Real Scenes: Bridging Traditional and Image-Based Graphics with Global Illumination and High Dynamic Range Photography. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 189–198. <https://doi.org/10/b9hzrf>
  - [424] Paul Debevec. 2006. A Median Cut Algorithm for Light Probe Sampling. In *ACM SIGGRAPH Course Notes*. ACM Press, Article 6. <https://doi.org/10/bxc6bk>
  - [425] Paul Debevec, Tim Hawkins, Chris Tchou, Haarm-Pieter Duiker, Westley Sarokin, and Mark Sagar. 2000. Acquiring the Reflectance Field of a Human Face. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press/Addison-Wesley Publishing Co., New York, NY, USA, 145–156. <https://doi.org/10/d329r5>
  - [426] Christopher DeCoro, Forrester Cole, Adam Finkelstein, and Szymon Rusinkiewicz. 2007. Stylized Shadows. In *Proceedings of Non-Photorealistic Animation and Rendering*. ACM Press, New York, NY, USA, 77–83. <https://doi.org/10/gfz5wh>
  - [427] Christopher DeCoro, Tim Weyrich, and Szymon Rusinkiewicz. 2010. Density-Based Outlier Rejection in Monte Carlo Rendering. *Computer Graphics Forum (Proceedings of Pacific Graphics)* 29, 7 (2010), 2120–2125.
  - [428] Michael Deering, Stephanie Winner, Bic Schediwy, Chris Duffy, and Neil Hunt. 1988. The Triangle Processor and Normal Vector Shader: A VLSI System for High Performance Graphics. *Computer Graphics (Proceedings of SIGGRAPH)* 22, 4 (June 1988), 21–30. <https://doi.org/10/dw5g9h>
  - [429] Cyril Delalandre, Pascal Gautron, Jean-Eudes Marvie, and Guillaume François. 2011. Transmittance Function Mapping. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, New York, NY, USA, 31–38. <https://doi.org/10/dcgkp7>
  - [430] Mauricio Delbracio, Pablo Musé, Antoni Buades, Julien Chauvier, Nicholas Phelps, and Jean-Michel Morel. 2014. Boosting Monte Carlo Rendering by Ray Histogram Fusion. *ACM Transactions on Graphics* 33, 1 (Feb. 2014), 8:1–8:15. <https://doi.org/10/gbfr98>
  - [431] A. P. Dempster, N. M. Laird, and D. B. Rubin. 1977. Maximum Likelihood from Incomplete Data via the EM Algorithm. *Journal of the Royal Statistical Society. Series B (Methodological)* 39, 1 (Sept. 1977), 1–22. <https://doi.org/10/gfzrzv>
  - [432] Aaron Van den Oord, Nal Kalchbrenner, and Koray Kavukcuoglu. 2016. Pixel Recurrent Neural Networks. In *Proceedings of The 33rd International Conference on Machine Learning*. 1747–1756.
  - [433] Eugene d'Eon. 2013. Rigorous Asymptotic and Moment-Preserving Diffusion Approximations for Generalized Linear Boltzmann Transport in Arbitrary Dimension. *CoRR* abs/1312.1412 (Dec. 2013). <https://doi.org/10/gfzp5x>
  - [434] Eugene d'Eon. 2014. A Dual-Beam 3D Searchlight BSSRDF. In *ACM SIGGRAPH Talks*. ACM Press, New York, NY, USA, 65:1–65:1. <https://doi.org/10/gfzq7p>
  - [435] Eugene d'Eon. 2016. *A Hitchhiker's Guide to Multiple Scattering*. Self-published.
  - [436] Eugene d'Eon. 2018. A Reciprocal Formulation of Non-Exponential Radiative Transfer. 1: Sketch and Motivation. *ArXiv e-prints* abs/1803.03259 (March 2018).
  - [437] Eugene d'Eon, Guillaume Francois, Martin Hill, Joe Letteri, and Jean-Marie Aubry. 2011. An Energy-Conserving Hair Reflectance Model. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 30, 4 (June 2011), 1181–1187. <https://doi.org/10/cbnfjq>
  - [438] Eugene d'Eon and Geoffrey Irving. 2011. A Quantized-Diffusion Model for Rendering Translucent Materials. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 30, 4 (July 2011), 56:1–56:14. <https://doi.org/10/df9dtd>
  - [439] Eugene d'Eon, David Luebke, and Eric Enderton. 2007. Efficient Rendering of Human Skin. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. Eurographics Association, Aire-la-Ville, Switzerland, Switzerland, 147–157. <https://doi.org/10/gfzrc9>
  - [440] Eugene d'Eon, Steven Marschner, and Johannes Hanika. 2013. Importance Sampling for Physically-Based Hair Fiber Models. In *ACM SIGGRAPH Asia Technical Briefs*. <https://doi.org/10/gfz5nw>
  - [441] Eugene d'Eon, Steven Marschner, and Johannes Hanika. 2014. A Fiber Scattering Model with Non-Separable Lobes. In *ACM SIGGRAPH Talks*. <https://doi.org/10/gfz5nx>
  - [442] C. V. M. Van der Mee. 1981. *Semigroup and Factorization Methods in Transport Theory*. Mathematisch Centrum, Amsterdam.
  - [443] Oliver Deussen, Jörg Hamel, Andreas Raab, Stefan Schlechtweg, and Thomas Strothotte. 1999. An Illustration Technique Using Hardware-Based Intersections and Skeletons. In *Proceedings of Computer Graphics International (CGI)*. 175–182.
  - [444] Alok Dey and Deepayan Sarkar. 2014. A Note on the Construction of Orthogonal Latin Hypercube Designs. *Journal of Combinatorial Designs* 24, 3 (Aug. 2014), 105–111. <https://doi.org/10/gfznbv>
  - [445] Jesús Díaz-García, Pere Brunet, Isabel Navazo, Frederic Perez, and Pere-Pau Vázquez. 2016. Adaptive Transfer Functions. *The Visual Computer* 32, 6 (June 2016), 835–845. <https://doi.org/10/f8vjkl>
  - [446] Christian Dick, Jens Krüger, and Rüdiger Westermann. 2009. GPU Ray-Casting for Scalable Terrain Rendering. *Computer Graphics Forum (Proceedings of Eurographics)* (2009), 8 pages. <https://doi.org/10/gfz553>
  - [447] Josef Dick and Friedrich Pillichshammer. 2010. *Digital Nets and Sequences: Discrepancy Theory and Quasi-Monte Carlo Integration*. Cambridge University Press.
  - [448] Robert E. Dickinson, Piers J. Sellers, and Daniel S. Kimes. 1987. Integration Errors in a Three-Dimensional Model for Canopy Albedos. *Agricultural and Forest Meteorology* 40 (1987), 177–190.
  - [449] Robert R. Dickinson. 1989. The Interactive Editing and Contouring of Empirical Fields. *IEEE Computer Graphics & Applications* 9, 3 (May 1989), 34–43.
  - [450] Paul J. Diefenbach. 1996. *Pipeline Rendering: Interaction and Realism through Hardware-Based Multi-Pass Rendering*. Ph.D. Thesis. University of Pennsylvania.
  - [451] David L. DiLaura. [n. d.]. On the Development of a Recursive Method for the Solution of Radiative Transfer Problems. *Journal of the Illuminating Engineering Society* 21, 2 ([n. d.]), 108–112. <https://doi.org/10/gfzv78>
  - [452] David L. DiLaura. 1995. Non-Diffuse Radiative Transfer II: Planar Area Sources and Receivers. In *Illumination Engineering Society of North America, Annual Conference Technical Papers*. Illuminating Engineering Society.
  - [453] David L. DiLaura and Jeffrey Quinlan. [n. d.]. Non-Diffuse Radiative Transfer I: Planar Area Sources and Point Receivers. *Journal of the Illuminating Engineering Society* 24, 2 ([n. d.]), 102–112. <https://doi.org/10/gfzv8h>
  - [454] Mark A. Z. Dippé and Erling Henry Wold. 1985. Antialiasing through Stochastic Sampling. *Computer Graphics (Proceedings of SIGGRAPH)* 19, 3 (July 1985), 69–78. <https://doi.org/10/cmtt4s>
  - [455] Mark A. Z. Dippé and Erling Henry Wold. 1992. Progress in Computer Graphics (Vol. 1). Ablex Publishing Corp., Norwood, NJ, USA, Chapter Stochastic Sampling: Theory and Application, 1–54.
  - [456] Yoshinori Dobashi, Kazufumi Kaneda, Hideo Yamashita, Tsuyoshi Okita, and Tomoyuki Nishita. 2000. A Simple, Efficient Method for Realistic Animation of Clouds. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press/Addison-Wesley Publishing Co., New York, NY, USA, 19–28. <https://doi.org/10/df9b7r>
  - [457] Yoshinori Dobashi and Tomoyuki Nishita. 2004. Radiosity for Point-Sampled Geometry. In *Proceedings of Pacific Graphics*. IEEE Computer Society, 152–159.
  - [458] David P. Dobkin, David Eppstein, and Don P. Mitchell. 1996. Computing the Discrepancy with Applications to Supersampling Patterns. *ACM Transactions on Graphics* 15, 4 (Oct. 1996), 354–376. <https://doi.org/10/d4cwr6>
  - [459] David P. Dobkin, Silvio V. F. Levy, and William P. Thurston. 1990. Contour Tracing by Piecewise Linear Approximations. *ACM Transactions on Graphics* 9,

- 4 (Oct. 1990), 389–423. <https://doi.org/10/bhrzwt>
- [460] Yue Dong, Xin Tong, Fabio Pellacini, and Baining Guo. 2011. AppGen: Interactive Material Modeling from a Single Image. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 30, 6 (Dec. 2011), 1. <https://doi.org/10/dqftbg>
- [461] Yue Dong, Jiaping Wang, Fabio Pellacini, Xin Tong, and Baining Guo. 2010. Fabricating Spatially-Varying Subsurface Scattering. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 29, 4 (July 2010), 62:1–62:10. <https://doi.org/10/dfht5h>
- [462] Zhao Dong, Thorsten Grosch, Tobias K. S. Ritschel, Jan Kautz, and Hans-Peter Seidel. 2009. Real-Time Indirect Illumination with Clustered Visibility. In *Proceedings of Vision, Modeling and Visualization*. 187–196.
- [463] William Donnelly and Andrew Lauritzen. 2006. Variance Shadow Maps. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, 161–165.
- [464] Craig Donner and Henrik Wann Jensen. 2005. Light Diffusion in Multi-Layered Translucent Materials. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 24, 3 (July 2005), 1032–1039. <https://doi.org/10/chbmjw>
- [465] Craig Donner and Henrik Wann Jensen. 2006. A Spectral BSSRDF for Shading Human Skin. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. Eurographics Association, Aire-la-Ville, Switzerland, 409–417. <https://doi.org/10/gfz5tx>
- [466] Craig Donner and Henrik Wann Jensen. 2007. Rendering Translucent Materials Using Photon Diffusion. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. 243–252.
- [467] Craig Donner, Jason Lawrence, Ravi Ramamoorthi, Toshiya Hachisuka, Henrik Wann Jensen, and Shree Nayar. 2009. An Empirical BSSRDF Model. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 28, 3 (July 2009), 30:1–30:10. <https://doi.org/10/d2vdgk>
- [468] Craig Donner, Tim Weyrich, Eugene d'Eon, Ravi Ramamoorthi, and Szymon Rusinkiewicz. 2008. A Layered, Heterogeneous Reflectance Model for Acquiring and Rendering Human Skin. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 27, 5 (2008), 140:1–140:12. <https://doi.org/10/gfz5ts>
- [469] David L Donoho. 1995. De-Noising by Soft-Thresholding. *IEEE Transactions on Information Theory* 41, 3 (May 1995), 613–627. <https://doi.org/10/fmpzhh>
- [470] David L Donoho. 1999. Wedgelets: Nearly Minimax Estimation of Edges. *The Annals of Statistics* 27, 3 (1999), 859–897. <https://doi.org/10/cvzghn>
- [471] David L Donoho. 2006. Compressed Sensing. *IEEE Transactions on information theory* 52, 4 (2006). <https://doi.org/10/chcp27>
- [472] David L. Donoho and Iain M. Johnstone. 1994. Ideal Spatial Adaptation by Wavelet Shrinkage. *Biometrika* 81, 3 (1994), 425–455. <https://doi.org/10/c94k2z>
- [473] David L Donoho and Iain M Johnstone. 1995. Adapting to Unknown Smoothness via Wavelet Shrinkage. *J. Amer. Statist. Assoc.* 90, 432 (1995), 1200–1224. <https://doi.org/10/gfkpgp>
- [474] Adrian A Dorrington, Michael J Cree, Andrew D Payne, Richard M Conroy, and Dale A Carnegie. 2007. Achieving Sub-Millimetre Precision with a Solid-State Full-Field Heterodyning Range Imaging Camera. *Measurement Science and Technology* 18, 9 (2007). <https://doi.org/10/ctrvvg>
- [475] Adrian A Dorrington, John Peter Godbaz, Michael J Cree, Andrew D Payne, and Lee V Streeter. 2011. Separating True Range Measurements from Multi-Path and Scattering Interference in Commercial Range Cameras. In *IS&T/SPIE Electronic Imaging*. <https://doi.org/10/bd4sps>
- [476] Julie Dorsey, Alan Edelman, Henrik Wann Jensen, Justin Legakis, and Hans Köhling Pedersen. 1999. Modeling and Rendering of Weathered Stone. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press/Addison-Wesley Publishing Co., New York, NY, USA, 225–234. <https://doi.org/10/djxbhn>
- [477] Julie Dorsey and Pat Hanrahan. 1996. Modeling and Rendering of Metallic Patinas. In *Annual Conference Series (Proceedings of SIGGRAPH)*. Addison-Wesley, 387–396.
- [478] Julie Dorsey, Hans Köhling Pedersen, and Pat Hanrahan. 1996. Flow and Changes in Appearance. In *Annual Conference Series (Proceedings of SIGGRAPH)*. Addison-Wesley, 411–420.
- [479] Julie Dorsey, Holly Rushmeier, and François Sillion. 2008. *Digital Modeling of Material Appearance*. Morgan Kaufmann, San Francisco, CA, USA.
- [480] Julie O'B. Dorsey. 1993. *Computer Graphics Techniques for Opera Lighting Design and Simulation*. Ph.D. Thesis. Cornell University, Ithaca, NY.
- [481] Julie O'B. Dorsey, James Arvo, and Donald P. Greenberg. 1995. Interactive Design of Complex Time-Dependent Lighting. *IEEE Computer Graphics & Applications* 15, 2 (March 1995), 26–36. <https://doi.org/10/bgr4z9>
- [482] Julie O'B. Dorsey, François X. Sillion, and Donald P. Greenberg. 1991. Design and Simulation of Opera Lighting and Projection Effects. *Computer Graphics (Proceedings of SIGGRAPH)* 25, 4 (Aug. 1991), 41–50.
- [483] Edward R. Dougherty. 1992. *An Introduction to Morphological Image Processing*. SPIE Optical Engineering Press, Bellingham, Washington.
- [484] Robert A. Drebin, Loren Carpenter, and Pat Hanrahan. 1988. Volume Rendering. *Computer Graphics (Proceedings of SIGGRAPH)* 22, 4 (Aug. 1988), 65–74.
- [485] Arnold Dresden. 1920. The Fourteenth Western Meeting of the American Mathematical Society. *Bull. Amer. Math. Soc.* 26, 9 (1920), 385–396. <https://doi.org/10/fsmnb5>
- [486] George Drettakis and Eugene Fiume. 1992. Concrete Computation of Global Illumination Using Structured Sampling. In *CE\_EGWR93*. 189–202.
- [487] George Drettakis and Eugene Fiume. 1994. A Fast Shadow Algorithm for Area Light Sources Using Backprojection. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 223–230.
- [488] A.A. D'Souza. [n. d.]. Using EM to Estimate a Probability Density with a Mixture of Gaussians. [n. d.]. Technical note.
- [489] A. Dubi, T. Elperin, and H. Rief. 1982. On Confidence Limits and Statistical Convergence of Monte Carlo Point-Flux Estimators with Unbounded Variance. *Annals of Nuclear Energy* 9 (1982), 675–682. <https://doi.org/10/fp998p>
- [490] James J. Duderstadt. 1971. Transport Equations for Dense, Many-Particle Systems. In *Second Conference on Transport Theory*. Department of Nuclear Energy, 2. CONF-710107.
- [491] James J. Duderstadt and William R. Martin. 1979. *Transport Theory*. John Wiley & Sons, NY.
- [492] Tom Duff. 1992. Interval Arithmetic and Recursive Subdivision for Implicit Functions and Constructive Solid Geometry. *Computer Graphics (Proceedings of SIGGRAPH)* 26, 2 (July 1992), 131–138.
- [493] Tom Duff. 1992. Interval Arithmetic Recursive Subdivision for Implicit Functions and Constructive Solid Geometry. *Computer Graphics (Proceedings of SIGGRAPH)* 26, 2 (July 1992), 131–138. <https://doi.org/10/bcbj5x>
- [494] Daniel Dunbar and Greg Humphreys. 2006. A Spatial Data Structure for Fast Poisson-Disk Sample Generation. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 25, 3 (July 2006), 503–508. <https://doi.org/10/dcwhm6>
- [495] R. V. Dunkle. 1963. Thermal Radiation Characteristics of Surfaces. In *Theory and Fundamental Research in Heat Transfer*, J. A. Clark (Ed.). Pergamon Press, NY, 1–31.
- [496] Seibert Q. Duntley. 1942. The Optical Properties of Diffusing Materials. *Journal of the Optical Society of America* 32, 2 (1942), 61–70. <https://doi.org/10/dks8t2>
- [497] Seibert Q. Duntley. 1943. The Mathematics of Turbid Media. *Journal of the Optical Society of America* 33, 5 (1943), 252–257. <https://doi.org/10/b3m39j>
- [498] Jonathan Dupuy, Eric Heitz, and Eugene d'Eon. 2016. Additional Progress towards the Unification of Microfacet and Microflake Theories. In *Proceedings of EGSR (Experimental Ideas & Implementations)*. Eurographics Association, 55–63. <https://doi.org/10.2312/sre.20161210>
- [499] Frédo Durand. 2011. *A Frequency Analysis of Monte-Carlo and Other Numerical Integration Schemes*. Technical Report TR-2011-052. MIT CSAIL.
- [500] Frédo Durand and Julie Dorsey. 2002. Fast Bilateral Filtering for the Display of High-Dynamic-Range Images. 21, 3 (2002), 257–266.
- [501] Frédo Durand, Nicolas Holzschuch, Cyril Soler, Eric Chan, and François X. Sillion. 2005. A Frequency Analysis of Light Transport. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 24, 3 (July 2005), 1115–1126. <https://doi.org/10/cdqv3w>
- [502] James W. Durkin and John F. Hughes. 1994. Nonpolygonal Isosurface Rendering for Large Datasets. In *Proceedings of Visualization '94*. IEEE Computer Society, 293–300.
- [503] Philip Dutré. 1996. *Mathematical Frameworks and Monte Carlo Algorithms for Global Illumination in Compute Graphics*. Ph.D. Thesis. University of Leuven, Leuven, Belgium.
- [504] Philip Dutré. 2003. Global Illumination Compendium: The Concise Guide to Global Illumination Algorithms. (Sept. 2003).
- [505] Philip Dutré, Philippe Baekert, Frank Suykens, and Yves D. Willems. 1997. Bidirectional Radiosity. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Julie Dorsey and Philipp Slusallek (Eds.). Springer-Verlag, 205–216. ISBN 3-211-83001-4.
- [506] Philip Dutré, Philippe Bekaert, and Kavita Bala. 2003. *Advanced Global Illumination*. AK Peters, Ltd.
- [507] Philip Dutré, Philippe Bekaert, and Kavita Bala. 2006. *Advanced Global Illumination* (2 ed.). AK Peters, Ltd.
- [508] Philip Dutré, Eric P. Lafortune, and Yves D. Willems. 1994. A Mathematical Framework for Global Illumination Algorithms. In *Journal of the World Society for Computer Graphics (WSCG)*. University of West Bohemia, 75–84.
- [509] Philip Dutré and Yves D. Willems. 1995. Importance-Driven Monte Carlo Light Tracing. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Georgios Sakas, Stefan Müller, and Peter Shirley (Eds.). Springer-Verlag, 188–197.
- [510] Philip Dutré and Yves D. Willems. 1995. Potential-Driven Monte Carlo Particle Tracing for Diffuse Environments with Adaptive Probability Density Functions. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, P. M. Hanrahan and W. Purgathofer (Eds.). Springer-Verlag, 306–315.
- [511] V. Duval, J. Aujol, and Y. Gousseau. 2011. A Bias-Variance Approach for the Nonlocal Means. *SIAM Journal on Imaging Sciences* 4, 2 (2011), 760–788. <https://doi.org/10/fm94rf>



- [512] S. R. Dwivedi. 1982. A New Importance Biasing Scheme for Deep-Penetration Monte Carlo. *Annals of Nuclear Energy* 9, 7 (Jan. 1982), 359–368. <https://doi.org/10/czbz26>
- [513] S. R. Dwivedi. 1982. Zero Variance Biasing Schemes for Monte Carlo Calculations of Neutron and Radiation Transport Problems. *Nuclear Science and Engineering* 80, 1 (Jan. 1982), 172–178. <https://doi.org/10/gfzq73>
- [514] Mohamed S. Ebeida, Andrew A. Davidson, Anjul Patney, Patrick M. Knupp, Scott A. Mitchell, and John D. Owens. 2011. Efficient Maximal Poisson-Disk Sampling. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 30, 4 (July 2011), 49:1–49:12. <https://doi.org/10/dzpmks>
- [515] Mohamed S. Ebeida, Scott A. Mitchell, Anjul Patney, Andrew A. Davidson, and John D. Owens. 2012. A Simple Algorithm for Maximal Poisson-Disk Sampling in High Dimensions. *Computer Graphics Forum* 31, 2pt4 (2012), 785–794. <https://doi.org/10/gfzncz>
- [516] Mohamed S. Ebeida, Anjul Patney, Scott A. Mitchell, Keith R. Dalbey, Andrew A. Davidson, and John D. Owens. 2014. K-d Darts: Sampling by k-Dimensional Flat Searches. *ACM Transactions on Graphics* 33, 1 (Feb. 2014), 3:1–3:16. <https://doi.org/10/gfzsm3>
- [517] David S. Ebert, F. Kenton Musgrave, Darwyn Peachey, Kenneth Perlin, and Steven Worley. 2003. *Texturing and modeling: a procedural approach* (3 ed.). Elsevier, San Francisco, CA, USA.
- [518] Roger Eckhardt. 1987. Stan Ulam, John von Neumann, and the Monte Carlo Method. *Los Alamos Science, Special Issue* (1987), 131–137.
- [519] Pieter Thijs Eendebak and Alan Roberto Vazquez. 2019. OAPackage: A Python Package for Generation and Analysis of Orthogonal Arrays, Optimal Designs and Conference Designs. *Journal of Open Source Software* 34, 4 (2019), 1097. <https://doi.org/10/gfznbw>
- [520] A.A. Efros and T.K. Leung. 1999. Texture Synthesis by Non-Parametric Sampling. In *Computer Vision, 1999. The Proc. Seventh IEEE International Conf. On*, Vol. 2. 1033–1038 vol.2. <https://doi.org/10/fhh6r7>
- [521] Kevin Egan, Frédo Durand, and Ravi Ramamoorthi. 2011. Practical Filtering for Efficient Ray-Traced Directional Occlusion. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 30, 6, Article 180 (Dec. 2011), 10 pages. <https://doi.org/10.1145/2070781.2024214>
- [522] Kevin Egan, Florian Hecht, Frédo Durand, and Ravi Ramamoorthi. 2011. Frequency Analysis and Sheared Filtering for Shadow Light Fields of Complex Occluders. *ACM Transactions on Graphics* 30, 2 (April 2011), 9:1–9:13. <https://doi.org/10/bx26qb>
- [523] Kevin Egan, Yu-Ting Tseng, Nicolas Holzschuch, Frédo Durand, and Ravi Ramamoorthi. 2009. Frequency Analysis and Sheared Reconstruction for Rendering Motion Blur. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 28, 3 (July 2009), 93:1–93:13. <https://doi.org/10/dn2gqc>
- [524] Elmar Eisemann and Frédo Durand. 2004. Flash Photography Enhancement via Intrinsic Relighting. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 23, 3 (Aug. 2004), 673. <https://doi.org/10/frbxcz>
- [525] Christian Eisenacher, Gregory Nichols, Andrew Selle, and Brent Burley. 2013. Sorted Deferred Shading for Production Path Tracing. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 32, 4 (2013), 125–132. <https://doi.org/10/gfzv8r>
- [526] Kamal A-R. M. El-Sheikh. 1974. *Effectiveness of the Russian Roulette-Splitting Technique in Reactor Shielding Analysis*. Ph.D. Thesis. The University of Michigan.
- [527] M. Elad. 2002. On the Origin of the Bilateral Filter and Ways to Improve It. *IEEE Transactions on Image Processing* 11, 10 (Oct. 2002), 1141–1151. <https://doi.org/10/d58wtv>
- [528] M. Elad and M. Aharon. 2006. Image Denoising via Sparse and Redundant Representations over Learned Dictionaries. *IEEE Transactions on Image Processing* 15, 12 (Dec. 2006), 3736–3745. <https://doi.org/10/bfzb3f>
- [529] Oskar Elek, Tobias Ritschel, Carsten Dachsbacher, and Hans-Peter Seidel. 2014. Principal-Ordinates Propagation for Real-Time Rendering of Participating Media. *Computers & Graphics* 45 (Dec. 2014), 28–39. <https://doi.org/10/gfzq7q>
- [530] Oskar Elek, Tobias Ritschel, Alexander Wilkie, and Hans-Peter Seidel. 2012. Interactive Cloud Rendering Using Temporally Coherent Photon Mapping. *Computers & Graphics* 36, 8 (Dec. 2012), 1109–1118. <https://doi.org/10/gfzq7v>
- [531] Thomas Engelhardt and Carsten Dachsbacher. 2010. Epipolar Sampling for Shadows and Crepuscular Rays in Participating Media with Single Scattering. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, Washington, D.C., 119–125. <https://doi.org/10/ddp33t>
- [532] Thomas Engelhardt, Jan Novák, and Carsten Dachsbacher. 2010. *Instant Multiple Scattering for Interactive Rendering of Heterogeneous Participating Media*. Technical Report. Karlsruhe Institute of Technology.
- [533] Thomas Engelhardt, Jan Novák, Thorsten-W. Schmidt, and Carsten Dachsbacher. 2012. Approximate Bias Compensation for Rendering Scenes with Heterogeneous Participating Media. *Computer Graphics Forum (Proceedings of Pacific Graphics)* 31, 7 (Sept. 2012), 2145–2154.
- [534] Manfred Ernst, Tomas Akenine-Möller, and Henrik Wann Jensen. 2005. Interactive Rendering of Caustics Using Interpolated Warped Volumes. In *Proceedings of Graphics Interface*. Canadian Human-Computer Communications Society, 87–96.
- [535] Manfred Ernst and Gunther Greiner. 2007. Early Split Clipping for Bounding Volume Hierarchies. In *Proceedings of IEEE Symposium on Interactive Ray Tracing*. IEEE Computer Society, 73–78. <https://doi.org/10/dcxhvw>
- [536] Manfred Ernst, Marc Stamminger, and Günther Greiner. 2006. Filter Importance Sampling. In *Proceedings of IEEE Symposium on Interactive Ray Tracing*. 125–132. <https://doi.org/10/c2q6gj>
- [537] V. Eymet, D. Poitou, M. Galtier, M. El Hafi, G. Terrée, and R. Fournier. 2013. Null-Collision Meshless Monte-Carlo—Application to the Validation of Fast Radiative Transfer Solvers Embedded in Combustion Simulators. *Journal of Quantitative Spectroscopy and Radiative Transfer* 129 (April 2013), 145–157. <https://doi.org/10/f5dxkb>
- [538] B. Fabianowski and J. Dingliana. 2009. Interactive Global Photon Mapping. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 28, 4 (June 2009), 1151–1159. <https://doi.org/10/bx926k>
- [539] D Falie. 2009. Improvements of the 3D Images Captured with Time-of-Flight Cameras. *arXiv preprint arXiv:0909.5656* (2009).
- [540] Shaohua Fan, Stephen Chenney, Bo Hu, Kam-Wah Tsui, and Yu-Chi Lai. 2006. Optimizing Control Variate Estimators for Rendering. *Computer Graphics Forum (Proceedings of Eurographics)* (2006). <https://doi.org/10/fb9fmz>
- [541] G. E. Farin. 1990. *Curves and Surfaces for Computer Aided Geometric Design: A Practical Guide* (3 ed.). Academic Press, NY.
- [542] Jean-Philippe Farrugia and Bernard Péroche. 2004. A Progressive Rendering Algorithm Using an Adaptive Perceptually Based Image Metric. *Computer Graphics Forum (Proceedings of Eurographics)* 23, 3 (Sept. 2004), 605–614.
- [543] Luca Fascione, Johannes Hanika, Marcos Fajardo, Per Christensen, Brent Burley, Brian Green, Rob Pieké, Christopher Kulla, Christophe Hery, Ryusuke Villemin, Daniel Heckenberg, and André Mazzone. 2017. Path Tracing in Production (Parts 1 and 2). In *ACM SIGGRAPH Course Notes*.
- [544] Luca Fascione, Johannes Hanika, Mark Leone, Marc Droske, Jorge Schwarzhaupt, Tomáš Davidovič, Andrea Weidlich, and Johannes Meng. 2018. Manuka: A Batch-Shading Architecture for Spectral Path Tracing in Movie Production. *ACM Transactions on Graphics* 37, 3 (Aug. 2018), 31:1–31:18. <https://doi.org/10/gfznbt>
- [545] Naan Fattal. 2011. Blue-Noise Point Sampling Using Kernel Density Model. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 30, 4 (July 2011), 48:1–48:12. <https://doi.org/10/dwz6nk>
- [546] Ronald Fedkiw, Jos Stam, and Henrik Wann Jensen. 2001. Visual Simulation of Smoke. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 15–22. <https://doi.org/10/dgzhb8>
- [547] Micha Feigin, Ayush Bhandari, Shahram Izadi, Christoph Rhemann, Mirko Schmidt, and Ramesh Raskar. 2015. Resolving Multipath Interference in Kinect: An Inverse Problem Approach. *IEEE Sensors Journal* 16, 10 (2015). <https://doi.org/10/f8npxn>
- [548] Joseph Felsenstein. 1975. A Pain in the Torus: Some Difficulties with Models of Isolation by Distance. *The American Naturalist* 109, 967 (May 1975), 359–368. <https://doi.org/10/fvj2nd>
- [549] Louis Feng, Ingrid Hotz, Bernd Hamann, and Kenneth I Joy. 2008. Anisotropic Noise Samples. *IEEE Transactions on Visualization and Computer Graphics* 14, 2 (2008), 342–354. <https://doi.org/10/dtpzvp>
- [550] Joel H. Ferziger and Hans G. Kaper. 1972. *Mathematical Theory of Transport Processes in Gases*. North Holland, Amst.
- [551] Bruce H. Fetz. 1970. *The Linearized Boltzman Operator as the Generator of a Semi-Group*. Ph.D. Thesis. Cornell University.
- [552] R.P. Feynman and A.R. Hibbs. 1965. *Quantum Mechanics and Path Integrals*. McGraw-Hill.
- [553] Adolf Fick. 1855. Über Diffusion. *Annalen der Physik* 170, 1 (1855), 59–86. <https://doi.org/10/bp5f7g>
- [554] David J Field. 1987. Relations between the Statistics of Natural Images and the Response Properties of Cortical Cells. *Journal of the Optical Society of America A* 4, 12 (1987), 2379–2394. <https://doi.org/10/fr7v9c>
- [555] R.A. Fisher. 1925. *Statistical Methods for Research Workers*. Oliver & Boyd, Edinburgh, Scotland, UK.
- [556] Patrick A. Fitzhorn. 1982. *Realistic Image Synthesis: A Time Complexity Analysis of Ray Tracing*. Ph.D. Thesis. Colorado State University, Fort Collins, Colorado.
- [557] Eugene L. Fiume. 1986. *The Mathematical Structure of Raster Graphics*. Academic Press, New York.
- [558] W. A. Fiveland. 1984. Discrete-Ordinates Solutions of the Radiative Transport Equation for Rectangular Enclosures. *ASME Journal of Heat Transfer* 106 (1984), 699–706. <https://doi.org/10/bsqr6h>
- [559] Piotr J. Flatau and Graeme L. Stephens. 1988. On the Fundamental Solution of the Radiative Transfer Equation. *Journal of Astrophysical Research* 93, ND9 (1988), 11037–11050.



- [560] Roland W. Fleming, Henrik Wann Jensen, and Heinrich H. Bühlhoff. 2004. Perceiving Translucent Materials. In *SAP*. ACM Press, New York, NY, USA, 127–134. <https://doi.org/10/cqk6d3>
- [561] J. K. Fletcher. 1983. The Solution of the Multigroup Neutron Transport Equation Using Spherical Harmonics. *Nuclear Science and Engineering* 84 (1983), 33–46.
- [562] Stephen T. Flock, Michael S. Patterson, Brian C. Wilson, and Douglas R. Wyman. 1989. Monte Carlo Modeling of Light Propagation in Highly Scattering Tissues—I. Model Predictions and Comparison with Diffusion Theory. *IEEE Trans. Biom. Engr.* 36, 12 (1989), 1162–1168. <https://doi.org/10/b36tbt>
- [563] V. A. Fok. 1924. The Illumination from Surfaces of Arbitrary Shape. *Transactions of the Optical Institute, Leningrad* 28 (1924), 1–11. (Russian).
- [564] James D. Foley, Andries van Dam, Steven K. Feiner, and John F. Hughes. 1990. *Computer Graphics Principles and Practice*. Addison-Wesley, NY.
- [565] James D. Foley and Victor L. Wallace. 1974. The Art of Natural Graphic Man-Machine Conversation. *Proc. IEEE* (April 1974).
- [566] Julian Fong, Magnus Wrenninge, Christopher Kulla, and Ralf Habel. 2017. Production Volume Rendering. In *ACM SIGGRAPH Course Notes*. ACM Press, New York, NY, USA, 2:1–2:79. <https://doi.org/10/gfzp5r>
- [567] Julian Fong, Magnus Wrenninge, Christopher Kulla, and Ralf Habel. 2017. Production Volume Rendering: SIGGRAPH 2017 Course. In *ACM SIGGRAPH Course Notes*. ACM Press, Article 2, 79 pages. <https://doi.org/10/gfzp5r>
- [568] A. R. Forrest. 1971. Interactive Interpolation and Approximation by Bézier Polynomials. *Comput. J.* 15, 1 (1971), 71–79.
- [569] Alain Fournier. 1992. Normal Distribution Functions and Multiple Surfaces. In *Graphics Interface '92 Workshop on Local Illumination*. 45–52.
- [570] Alain Fournier. 1995. Separating Reflection Functions for Linear Radiosity. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, P. M. Hanrahan and W. Purgathofer (Eds.). Springer-Verlag, NY, 296–305.
- [571] N. C. Francis, J. C. Stewart, L. S. Bohl, and T. J. Krieger. 1958. Variational Solutions of the Transport Equation. In *Second International Conference on the Peaceful Uses of Atomic Energy*, Vol. 16. 517–529.
- [572] Wm. Randolph Franklin. 1982. Efficient Polyhedron Intersection and Union. In *Proceedings of Computer Graphics International (CGI)*. 73–80.
- [573] Roald Fredericks, Pieterjan Bartels, and Philip Dutré. 2015. Adaptive Light-slice for Virtual Ray Lights. In *Proceedings of Eurographics – Short Papers*. The Eurographics Association, 61–64. <https://doi.org/10/gfzq7m>
- [574] Roald Fredericks and Philip Dutré. 2017. A Forward Scattering Dipole Model from a Functional Integral Approximation. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 36, 4 (July 2017), 109:1–109:13. <https://doi.org/10/gbxhzb>
- [575] Daniel Freedman, Yoni Smolin, Eyal Krupka, Ido Leichter, and Mirko Schmidt. 2014. SRA: Fast Removal of General Multipath for ToF Sensors. In *Proceedings of the European Conference on Computer Vision (ECCV)*. <https://doi.org/10/gfz5k6>
- [576] David H. Fremlin. 2010. *Measure Theory*. Vol. 4.1. Torres Fremlin.
- [577] Sarah F. Frisken, Ronald N. Perry, Allyn P. Rockwood, and Thouis R. Jones. 2000. Adaptively Sampled Distance Fields: A General Representation of Shape for Computer Graphics. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press/Addison-Wesley Publishing Co., New York, NY, USA, 249–254. <https://doi.org/10/bfns72>
- [578] Jeppe Revall Frisvad, Niels Jørgen Christensen, and Peter Falster. 2007. The Aristotelian Rainbow: From Philosophy to Computer Graphics. In *Proceedings of GRAPHITE*. ACM Press, New York, NY, USA, 119–128. <https://doi.org/10/b5ksfr>
- [579] Jeppe Revall Frisvad, Niels Jørgen Christensen, and Henrik Wann Jensen. 2007. Computing the Scattering Properties of Participating Media Using Lorenz-Mie Theory. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 26, 3 (July 2007), 60. <https://doi.org/10/bf3p26>
- [580] Jeppe Revall Frisvad, Toshiya Hachisuka, and Thomas Kim Kjeldsen. 2014. Directional Dipole Model for Subsurface Scattering. *ACM Transactions on Graphics* 34, 1 (Dec. 2014), 5:1–5:12. <https://doi.org/10/f6t5zc>
- [581] Henry Fuchs, Z. M. Kedem, and B. F. Naylor. 1980. On Visible Surface Generation by a Priori Tree Structures. *Computer Graphics (Proceedings of SIGGRAPH)* 14, 3 (July 1980), 124–133.
- [582] Henry Fuchs, Z. M. Kedem, and S. P. Uselton. 1977. Optimal Surface Reconstruction from Planar Contours. *Commun. ACM* 20, 10 (Oct. 1977), 693–702. <https://doi.org/10/d2vknw>
- [583] Martin Fuchs, Ramesh Raskar, Hans-Peter Seidel, and Hendrik P. A. Lensch. 2008. Towards Passive 6D Reflectance Field Displays. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 27, 3 (Aug. 2008), 1. <https://doi.org/10/dsbx38>
- [584] Stefan Fuchs. 2010. Multipath Interference Compensation in Time-of-Flight Camera Images. In *IEEE International Conference on Pattern Recognition*. <https://doi.org/10/bdc735>
- [585] Stefan Fuchs and Gerd Hirzinger. 2008. Extrinsic and Depth Calibration of ToF-Cameras. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. <https://doi.org/10/b2s2s8>
- [586] Akira Fujimoto and Takayuki Tanaka. 1986. ARTS: Accelerated Ray-Tracing System. *IEEE Computer Graphics & Applications* 6, 4 (April 1986), 16–26.
- [587] Thomas Funkhouser, Ingrid Carlborn, Gary Elko, Gopal Pingali, Mohan Sondhi, and Jim West. 1998. A Beam Tracing Approach to Acoustic Modeling for Interactive Virtual Environments. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, 21–32. <https://doi.org/10/dbqj5>
- [588] Thomas Funkhouser, Nicolas Tsingos, and Jean-Marc Jot. 2003. Survey of Methods for Modeling Sound Propagation in Interactive Virtual Environment Systems. *Presence and Teleoperation* (2003).
- [589] Andrea Gabrielli and Salvatore Torquato. 2004. Voronoi and Void Statistics for Superhomogeneous Point Processes. *Physical Review E* 70, 4 (Oct. 2004), 041105. <https://doi.org/10/b5gs5m>
- [590] James Gain and Dominique Bechmann. 2008. A Survey of Spatial Deformation from a User-Centered Perspective. *ACM Transactions on Graphics* 27, 4 (Nov. 2008), 107:1–107:21. <https://doi.org/10/dkgzsa>
- [591] R. Galimberti and U. Montanari. 1969. An Algorithm for Hidden Line Elimination. *Commun. ACM* 12, 4 (April 1969), 206–211. <https://doi.org/10/fw4vwb>
- [592] M. Galtier, S. Blanco, C. Caliot, C. Coustet, J. Dauchet, M. El Hafi, V. Eymet, R. Fournier, J. Gautrais, A. Khuong, B. Piaud, and G. Terrée. 2013. Integral Formulation of Null-Collision Monte Carlo Algorithms. *Journal of Quantitative Spectroscopy and Radiative Transfer* 125 (Aug. 2013), 57–68. <https://doi.org/10/f446pg>
- [593] Mathieu Galtier, Stéphane Blanco, Jérémie Dauchet, Mouna El Hafi, Vincent Eymet, Richard Fournier, Maxime Roger, Christophe Spiesser, and Guillaume Terrée. 2016. Radiative Transfer and Spectroscopic Databases: A Line-Sampling Monte Carlo Approach. *Journal of Quantitative Spectroscopy and Radiative Transfer* 172 (March 2016), 83–97. <https://doi.org/10/gfzq7j>
- [594] Armando Gama Goicochea. 2013. A Model for the Stability of a TiO<sub>2</sub> Dispersion. *ISRN Materials Science* 2013 (2013). <https://doi.org/10.1155/2013/547608>
- [595] Manuel N. Gamito. 2016. Solid Angle Sampling of Disk and Cylinder Lights. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 35, 4 (2016), 25–36. <https://doi.org/10/f842jg>
- [596] Manuel N. Gamito and Steve C. Maddock. 2009. Accurate Multidimensional Poisson-Disk Sampling. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 29, 1 (Dec. 2009), 8:1–8:19. <https://doi.org/10/dr8646>
- [597] Emden R. Gansner and John H. Reppy. 1993. A Multi-Threaded Higher-Order User Interface Toolkit. In *User Interface Software*, Bass and Dewan (Eds.). John Wiley & Sons, NY, Chapter 4.
- [598] Liang Gao, Jinyang Liang, Chiye Li, and Lihong V Wang. 2014. Single-Shot Compressed Ultrafast Photography at One Hundred Billion Frames per Second. *Nature* 516, 7529 (2014). <https://doi.org/10/f6tvws>
- [599] Kirill Garanzha, Jacopo Pantaleoni, and David McAllister. 2011. Simpler and Faster HLBVH with Work Queues. In *Proceedings of High Performance Graphics*. ACM Press, 59–64.
- [600] V. Garcia, F. Nielsen, and R. Nock. 2010. Hierarchical Gaussian Mixture Model. (2010). <https://doi.org/10/cs7chm>
- [601] Vincent Garcia, Frank Nielsen, and Richard Nock. 2010. Levels of Details for Gaussian Mixture Models. In *Computer Vision – ACCV 2009*, Hongbin Zha, Rin-ichi Taniguchi, and Stephen Maybank (Eds.). Lecture Notes in Computer Science, Vol. 5995. Springer Berlin / Heidelberg, 514–525.
- [602] Geoffrey Y. Gardner. 1985. Visual Simulation of Clouds. *Computer Graphics (Proceedings of SIGGRAPH)* 19, 3 (1985), 297–304. <https://doi.org/10/fvfhv7>
- [603] Genevieve Gariépy, Nikola Krstajić, Robert Henderson, Chunyong Li, Robert R Thomson, Gerald S Buller, Barmak Heshmat, Ramesh Raskar, Jonathan Leach, and Daniele Faccio. 2015. Single-Photon Sensitive Light-in-Fight Imaging. *Nature Communications* 6 (2015).
- [604] Pascal Gautron, Cyril Delalandre, Jean-Eudes Marvie, and Pascal Lecocq. 2013. Boundary-Aware Extinction Mapping. *Computer Graphics Forum* 32, 7 (Oct. 2013), 305–314. <https://doi.org/10/gfzq7t>
- [605] Pascal Gautron, Jaroslav Krivánek, Kadi Bouatouch, and Sumanta Pattanaik. 2005. Radiance Cache Splatting: A GPU-Friendly Global Illumination Algorithm. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*, Kavita Bala and Philip Dutré (Eds.). Eurographics Association, 55–64.
- [606] Pascal Gautron, Jaroslav Krivánek, Sumanta N. Pattanaik, and Kadi Bouatouch. 2004. A Novel Hemispherical Basis for Accurate and Efficient Rendering. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*, Alexander Keller and Henrik Wann Jensen (Eds.). Eurographics Association, 321–330.
- [607] Christie J. Geankoplis. 1983. *Transport Processes: Momentum, Heat, and Mass*. Allyn and Bacon, Inc., Boston.
- [608] Stanley David Gedzelman. 2008. Simulating Rainbows in Their Atmospheric Environment. *Applied Optics* 47, 34 (Dec. 2008), 176–181. <https://doi.org/10/fv8gnx>
- [609] Jon Geist. 1976. Trends in the Development of Radiometry. *Optical Engineering* 15 (1976), 537–540.
- [610] E. Gelbard, L. Ondis II, and J. Spanier. 1966. A New Class of Monte Carlo Estimators. *SIAM J. Appl. Math.* 14, 4 (July 1966), 697–701. <https://doi.org/10/>

- dc3c3j
- [611] Asher Gelbart, Brian C. Redman, Robert S. Light, Coreen A. Schwartzlow, and Andrew J. Griffiths. 2002. Flash Lidar Based on Multiple-Slit Streak Tube Imaging Lidar. In *Laser Radar Technology and Applications VII*, Vol. 4723. SPIE, 9–18. Issue 1. <https://doi.org/10/brpj63>
- [612] Izrail Moiseevich Gel'fand, Mark Iosifovich Graev, and N.Ya. Vilenkin (Eds.). 1966. *Integral Geometry and Representation Theory*. Academic Press. <https://doi.org/10/c445>
- [613] Iliyan Georgiev and Marcos Fajardo. 2016. Blue-Noise Dithered Sampling. In *ACM SIGGRAPH Talks*. ACM Press, 35:1–35:1. <https://doi.org/10/gfznbx>
- [614] Iliyan Georgiev, Thiago Ize, Mike Farnsworth, Ramón Montoya-Vozmediano, Alan King, Brecht Van Lommel, Angel Jimenez, Oscar Anson, Shinji Ogaki, Eric Johnston, Adrien Herubel, Declan Russell, Frédéric Servant, and Marcos Fajardo. 2018. Arnold: A Brute-Force Production Path Tracer. *ACM Transactions on Graphics* 37, 3 (Aug. 2018), 32:1–32:12. <https://doi.org/10/gfznb2>
- [615] Iliyan Georgiev, Jaroslav Krivánek, Tomáš Davidovič, and Philipp Slusallek. 2012. Light Transport Simulation with Vertex Connection and Merging. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 31, 6 (Nov. 2012), 192:1–192:10. <https://doi.org/10/gbbq67>
- [616] Iliyan Georgiev, Jaroslav Krivánek, Toshiya Hachisuka, Derek Nowrouzezahrai, and Wojciech Jarosz. 2013. Joint Importance Sampling of Low-Order Volumetric Scattering. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 32, 6 (Nov. 2013). <https://doi.org/10/gbdsqs>
- [617] Iliyan Georgiev, Jaroslav Krivánek, Stefan Popov, and Philipp Slusallek. 2012. Importance Caching for Complex Illumination. *Computer Graphics Forum (Proceedings of Eurographics)* 31, 2 (June 2012), 701–710. <https://doi.org/10/gbbdce>
- [618] Iliyan Georgiev and Philipp Slusallek. 2010. Simple and Robust Iterative Importance Sampling of Virtual Point Lights. In *Proceedings of Eurographics – Short Papers*. Eurographics Association, 57–60.
- [619] T. A. Germogenova. 1968. Convergence of Some Approximate Methods of Solving the Transport Equation. *Soviet Mathematics Doklady* 9, 4 (1968), 855–858.
- [620] Reid Gershbein and Pat Hanrahan. 2000. A Fast Relighting Engine for Interactive Cinematic Lighting Design. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 353–358. <https://doi.org/10/d89r34>
- [621] Reid Gershbein, Peter Schroder, and Pat Hanrahan. 1994. Textures and Radiosity: Controlling Emission and Reflection with Texture Maps. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 51–58.
- [622] A. Gershun. 1928. Light Field Resulting from Luminous Surfaces of Uniform and Non-Uniform Brightness. *Transactions of the Optical Institute, Leningrad* 4, 38 (1928), 10–19. (Russian).
- [623] A. Gershun. 1929. Uniformly-Diffused Light through Two Apertures. *Philos. Mag.* 7 (1929), 419.
- [624] A. Gershun. 1939. The Light Field. *Journal of Mathematics and Physics* 18, 2 (May 1939), 51–151. Translated by P. Moon and G. Timoshenko.
- [625] Q. T. Le Gia and H. N. Mhaskar. 2009. Localized Linear Polynomial Operators and Quadrature Formulas on the Sphere. *SIAM J. Numer. Anal.* 47, 1 (2009). <https://doi.org/10/btgpqj>
- [626] Douglas C. Giancoli. 1989. *Physics for Scientists and Engineers*. Prentice-Hall.
- [627] Mathew G. Gibbons. 1958. Radiation Received by an Uncollimated Receiver from a  $4\pi$  Source. *Journal of the Optical Society of America* 48, 8 (Aug. 1958), 550–555. <https://doi.org/10/csg6wn>
- [628] Simon Gibson and Paul E. Debevec (Eds.). 2002. *EGRW '02: Proceedings of the 13th Eurographics Workshop on Rendering*. Eurographics Association, Pisa, Italy.
- [629] Ziv Gigus and Jitendra Malik. 1990. Computing the Aspect Graph for Line Drawings of Polyhedral Objects. *IEEE Transactions on Pattern Analysis and Machine Intelligence* 12, 2 (Feb. 1990), 113–122. <https://doi.org/10/bwnbqp>
- [630] Wolfgang K. Giloi. 1978. *Interactive Computer Graphics: Data Structures, Algorithms, Languages*. PH. EngCliffs.
- [631] J. Giorla and R. Sentis. 1987. A Random Walk Method for Solving Radiative Transfer Equations. *J. Comput. Phys.* 70 (1987), 145–156. <https://doi.org/10/c6smwx>
- [632] Ioannis Gkioulekas, Anat Levin, Frédo Durand, and Todd Zickler. 2015. Micron-Scale Light Transport Decomposition Using Interferometry. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 34, 4 (2015). <https://doi.org/10/f7mzkt>
- [633] Ioannis Gkioulekas, Bei Xiao, Shuang Zhao, Edward H. Adelson, Todd Zickler, and Kavita Bala. 2013. Understanding the Role of Phase Function in Translucent Appearance. *ACM Transactions on Graphics* 32, 5 (Oct. 2013), 147:1–147:19. <https://doi.org/10/gfzp5h>
- [634] Robert T. Glassey. 1996. *The Cauchy Problem in Kinetic Theory*. SIAM, Phil.
- [635] Andrew S. Glassner. 1984. Space Subdivision for Fast Ray Tracing. *IEEE Computer Graphics & Applications* 4, 10 (Oct. 1984), 15–22. <https://doi.org/10/gfzqjb>
- [636] Andrew S. Glassner. 1989. *An Introduction to Ray Tracing*. Academic Press.
- [637] Andrew S Glassner. 1995. *Principles of Digital Image Synthesis*. Vol. 1. Morgan Kaufmann, NY.
- [638] Samuel Glasstone and Alexander Sesonske. 1955. *Nuclear Reactor Engineering*. Van Nostrand Company.
- [639] Samuel Glasstone and Alexander Sesonske. 1967. *Nuclear Reactor Engineering*. VN, Princeton.
- [640] John P Godbaz, Michael J Cree, and Adrian A Dorrington. 2008. Mixed Pixel Return Separation for a Full-Field Ranger. In *IEEE International Conference Image and Vision Computing New Zealand '08*. <https://doi.org/10/c3cvr8>
- [641] John P Godbaz, Michael J Cree, and Adrian A Dorrington. 2009. Multiple Return Separation for a Full-Field Ranger via Continuous Waveform Modelling. In *IS&T/SPIE Electronic Imaging*. <https://doi.org/10/csxx8n>
- [642] John P Godbaz, Michael J Cree, and Adrian A Dorrington. 2010. Extending Amcw Lidar Depth-of-Field Using a Coded Aperture. In *Asian Conference on Computer Vision 2010*.
- [643] John P Godbaz, Michael J Cree, and Adrian A Dorrington. 2012. Closed-Form Inverses for the Mixed Pixel/Multipath Interference Problem in Amcw Lidar. In *IS&T/SPIE Electronic Imaging*. <https://doi.org/10/fixp3e5>
- [644] Luke Goddard. 2014. Silencing the Noise on Elysium. In *ACM SIGGRAPH 2014 Talks (SIGGRAPH '14)*. ACM, Article 38, 1 pages. <https://doi.org/10/gfz6ms>
- [645] Narendra S. Goel, Ivan Rozehnal, and Richard L. Thompson. 1991. A Computer Graphics Based Model for Scattering from Objects of Arbitrary Shapes in the Optical Region. *Remote Sensing of the Environment* 36, 2 (July 1991), 73–104. <https://doi.org/10/bn7wnq>
- [646] Jacob Goldberger and Sam T. Roweis. 2005. Hierarchical Clustering of a Mixture Model. *Advances in Neural Information Processing Systems (NIPS)* 17 (2005), 505–512.
- [647] Ronald N. Goldman. 1983. An Urnful of Blending Functions. *IEEE Computer Graphics & Applications* 3, 10 (Oct. 1983), 49–54.
- [648] Jeffrey Goldsmith and John Salmon. 1987. Automatic Creation of Object Hierarchies for Ray Tracing. *IEEE Computer Graphics & Applications* 7, 5 (May 1987), 14–20.
- [649] Jay S. Gondek, Gary W. Meyer, and Jonathan G. Newman. 1994. Wavelength Dependent Reflectance Functions. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 213–220. <https://doi.org/10/bt43z6>
- [650] Bruce Gooch and Amy Gooch. 2001. *Non-Photorealistic Rendering*. AK Peters/CRC Press, LOC\_AK.
- [651] R. M. Goody. 1964. *Atmospheric Radiation*. Oxford, NY.
- [652] T. Goorley, M. James, T. Booth, F. Brown, J. Bull, L. J. Cox, J. Durkee, J. Elson, M. Fensin, R. A. Forster, J. Hendricks, H. G. Hughes, R. Johns, B. Kiedrowski, R. Martz, S. Mashnik, G. McKinney, D. Pelowitz, R. Prael, J. Sweezy, L. Waters, T. Wilcox, and T. Zukaitis. 2012. Initial MCNP6 Release Overview. *Nuclear Technology* 180, 3 (Dec. 2012), 298–315. <https://doi.org/10/f4gw2p>
- [653] Cindy M. Goral, Kenneth E. Torrance, Donald P. Greenberg, and Bennett Battaile. 1984. Modeling the Interaction of Light between Diffuse Surfaces. *Computer Graphics (Proceedings of SIGGRAPH)* 18, 3 (July 1984), 213–222. <https://doi.org/10/dxbssb>
- [654] William J. Gordon and Richard F. Riesenfeld. 1974. Bernstein-Bézier Methods for the Computer-Aided Design of Free-Form Curves and Surfaces. *Journal of the Association for Computing Machinery* 21, 2 (April 1974), 293–310. <https://doi.org/10/fn7psv>
- [655] Steven J. Gortler, Michael F. Cohen, and Philipp Slusallek. 1994. Radiosity and Relaxation Methods. *IEEE Computer Graphics & Applications* 14, 6 (Nov. 1994), 48–58. <https://doi.org/10/fjmcxk>
- [656] Steven J. Gortler, Radek Grzeszczuk, Richard Szeliski, and Michael F. Cohen. 1996. The Lumigraph. In *Annual Conference Series (Proceedings of SIGGRAPH)*, Holly Rushmeier (Ed.). Addison-Wesley, 43–54.
- [657] Steven J. Gortler, Peter Schröder, Michael F. Cohen, and Pat Hanrahan. 1993. Wavelet Radiosity. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 221–230. <https://doi.org/10/ffk58p>
- [658] Harold Grad. 1949. On the Kinetic Theory of Rarefied Gases. *Communications on Pure and Applied Mathematics* 2 (1949), 331.
- [659] Harold Grad. 1958. Principles of the Kinetic Theory of Gases. In *Handbuch Der Physik*, S. Flügge (Ed.). Vol. 12. Springer-Verlag, NY, 205–294.
- [660] Harold Grad. 1960. Theory of Rarefied Gases. In *Rarefied Gas Dynamics, First International Symposium*, F. M. Devienne (Ed.). Pergamon Press, NY, 100–138.
- [661] I. S. Gradshteyn and I. M. Ryzhik. 2007. *Table of Integrals, Series, and Products* (7 ed.). Academic Press.
- [662] I. P. Grant and G. E. Hunt. 1969. Discrete Space Theory of Radiative Transfer: I. Fundamentals. *Proceedings of the Royal Society of London. Section A. Mathematical and Physical Sciences* 313 (1969), 183–197.
- [663] I. P. Grant and G. E. Hunt. 1969. Discrete Space Theory of Radiative Transfer: II. Nonnegativity and Stability. *Proceedings of the Royal Society of London. Section A. Mathematical and Physical Sciences* 313 (1969), 199–216.



- [664] Arne Graßmann and Franz Peters. 2004. Size Measurement of Very Small Spherical Particles by Mie Scattering Imaging (MSI). *Particle & Particle Systems Characterization* 21, 5 (2004), 379–389. <https://doi.org/10/c56458>
- [665] Ben T. Gravelly. 1973. Relations of Photometry. Part 1. *Applied Optics* 12, 11 (Nov. 1973), 2537–2539.
- [666] Paul Green, Jan Kautz, Wojciech Matusik, and Frédo Durand. 2006. View-Dependent Precomputed Light Transport Using Nonlinear Gaussian Function Approximations. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM. <https://doi.org/10/d6sb6g>
- [667] Peter J. Green. 1995. Reversible Jump Markov Chain Monte Carlo Computation and Bayesian Model Determination. *Biometrika* 82, 4 (Dec. 1995), 711–732. <https://doi.org/10/bt2s2t>
- [668] Robin Green. 2003. Spherical Harmonic Lighting: The Gritty Details. *Archives of the Game Developers Conference* (March 2003).
- [669] William Greenberg and P. F. Zweifel. 1976. Functional Analytic Treatment of the Transport Equation. *Transport Theory and Statistical Physics* 5, 4 (1976), 219–253.
- [670] Ned Greene. 1986. Environment Mapping and Other Applications of World Projections. *IEEE Computer Graphics & Applications* 6, 11 (Nov. 1986), 21–29. <https://doi.org/10/b7m3gc>
- [671] Ned Greene. 1989. Voxel Space Automata: Modeling with Stochastic Growth Processes in Voxel Space. *Computer Graphics (Proceedings of SIGGRAPH)* 23, 3 (July 1989), 175–184.
- [672] R. Greenler. 1990. *Rainbows, Halos, and Glories*. Cambridge University Press.
- [673] Harold Greenspan, C. N. Kelber, and D. Okrent (Eds.). 1968. *Computing Methods in Reactor Physics*. Gordon and Breach, NY.
- [674] Carl Johan Gribel, Rasmus Barringer, and Tomas Akenine-Möller. 2011. High-Quality Spatio-Temporal Rendering Using Semi-Analytical Visibility. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 30, 4 (July 2011), 1. <https://doi.org/10/fqg7b9>
- [675] Carl Johan Gribel, Michael Doggett, and Tomas Akenine-Möller. 2010. Analytical Motion Blur Rasterization with Compression. In *Proceedings of High Performance Graphics*. Eurographics Association, 163–172. <https://doi.org/10.2312/EGGH/HPG10/163-172>
- [676] David G Grier and Sven H Behrens. 2001. Interactions in Colloidal Suspensions. In *Electrostatic Effects in Soft Matter and Biophysics*. Springer-Verlag, 87–116.
- [677] Cindy M. Grimm and John F. Hughes. 1995. Modeling Surfaces of Arbitrary Topology Using Manifolds. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 359–368.
- [678] Larry Gritz and James K. Hahn. 1996. BMRT: A Global Illumination Implementation of the RenderMan Standard. *Journal of Graphics Tools* 1, 3 (Feb. 1996), 29–48. <https://doi.org/10/gfzq9h>
- [679] Eduard Gröller. 1995. Nonlinear Ray Tracing: Visualizing Strange Worlds. *The Visual Computer* 11, 5 (May 1995), 263–274. <https://doi.org/10/ficq74>
- [680] Markus Gross and Hanspeter Pfister. 2007. *Point-Based Graphics*. Morgan Kaufmann, San Francisco, CA, USA.
- [681] Mark D. Gross and Ellen Yi-Luen Do. 1996. Ambiguous Intentions: A Paper-like Interface for Creative Design. In *UIST-1996*. 183–192.
- [682] Leonhard Grünschloß. 2012. QMC Sampling Source Code. (2012). <http://gruenschloss.org>.
- [683] Adrien Gruson, Mickaël Ribardière, Martin Šik, Jiří Vorba, Rémi Cozot, Kadi Bouatouch, and Jaroslav Křivánek. 2016. A Spatial Target Function for Metropolis Photon Tracing. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 36, 1 (Nov. 2016), 4:1–4:13. <https://doi.org/10/gfz4kh>
- [684] Yongtao Guan. 2008. Variance Estimation for Statistics Computed from Inhomogeneous Spatial Point Processes. *Journal of the Royal Statistical Society: Series B (Methodological)* 70, 1 (2008), 175–190. <https://doi.org/10/ft9vbm>
- [685] Leonidas Guibas and Jorge Stolfi. 1985. Primitives for the Manipulation of General Subdivisions and the Computation of Voronoi Diagrams. *ACM Transactions on Graphics* 4, 2 (April 1985), 74–123. <https://doi.org/10/bc7vmm>
- [686] Ibón Guillén, Carlos Ureña, Alan King, Marcos Fajardo, Iliyan Georgiev, Jorge López-Moreno, and Adrian Jarabo. 2017. Area-Preserving Parameterizations for Spherical Ellipses. *Computer Graphics Forum* 36, 4 (July 2017), 179–187. <https://doi.org/10/gbntcq>
- [687] Baining Guo. 1998. Progressive Radiance Evaluation Using Directional Coherence Maps. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM, 255–266. <https://doi.org/10/dfh7jd>
- [688] Mohit Gupta, Achuta Kadambi, Ayush Bhandari, and Ramesh Raskar. 2015. Computational Time of Flight. In *ICCV Courses*. (2015).
- [689] Mohit Gupta, Shree K Nayar, Matthias B Hullin, and Jaime Martin. 2015. Phasor Imaging: A Generalization of Correlation-Based Time-of-Flight Imaging. *ACM Transactions on Graphics* 34, 5 (2015). <https://doi.org/10/gfz5k7>
- [690] Otkrist Gupta, Thomas Willwacher, Andreas Velten, Ashok Veeraraghavan, and Ramesh Raskar. 2012. Reconstruction of Hidden 3D Shapes Using Diffuse Reflections. *Opt. Express* 20, 17 (2012). <https://doi.org/10/gfz5k8>
- [691] Diego Gutierrez, Wojciech Jarosz, Srinivasa G. Narasimhan, and Craig Donner. 2009. Scattering. In *ACM SIGGRAPH Course Notes*. <https://doi.org/10/dskkwn>
- [692] Diego Gutierrez, Henrik Wann Jensen, Wojciech Jarosz, and Craig Donner. 2009. Scattering. In *ACM SIGGRAPH Asia Course Notes*. ACM Press, Article 15, 620 pages. <https://doi.org/10/b9gsw9>
- [693] Diego Gutierrez, Adolfo Muñoz, Oscar Anson, and Francisco J. Seron. 2005. Non-Linear Volume Photon Mapping. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. Eurographics Association, 291–300. <https://doi.org/10/gfzngk>
- [694] Diego Gutierrez, Srinivasa G. Narasimhan, Henrik Wann Jensen, and Wojciech Jarosz. 2008. Scattering. In *ACM SIGGRAPH Asia Course Notes*. <https://doi.org/10/c8nckn>
- [695] Diego Gutierrez, Francisco Seron, Adolfo Muñoz, and Oscar Anson. 2008. Visualizing Underwater Ocean Optics. *Computer Graphics Forum (Proceedings of Eurographics)* 27, 2 (2008), 547–556. <https://doi.org/10/bftg7r>
- [696] D. Gutierrez, F. J. Seron, O. Anson, and A. Muñoz. 2004. Chasing the Green Flash: A Global Illumination Solution for Inhomogeneous Media. In *Proceedings of the Spring Conference on Computer Graphics (SCCG)*. 97–105. <https://doi.org/10/bmtrmq>
- [697] Stéphane Guy and Cyril Soler. 2004. Graphics Gems Revisited: Fast and Physically-Based Rendering of Gemstones. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* (2004), 231–238. <https://doi.org/10/cd9sv6>
- [698] Chet S. Haase and Gary W. Meyer. 1992. Modeling Pigmented Materials for Realistic Image Synthesis. *ACM Transactions on Graphics* 11, 4 (Oct. 1992), 305–335. <https://doi.org/10/bb2pjm>
- [699] Ralf Habel, Per H. Christensen, and Wojciech Jarosz. 2013. *Classical and Improved Diffusion Theory for Subsurface Scattering*. Technical Report. Disney Research Zürich.
- [700] Ralf Habel, Per H. Christensen, and Wojciech Jarosz. 2013. Photon Beam Diffusion: A Hybrid Monte Carlo Method for Subsurface Scattering. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 32, 4 (June 2013), 27–37. <https://doi.org/10/f445m4>
- [701] Toshiya Hachisuka, Iliyan Georgiev, Wojciech Jarosz, Jaroslav Křivánek, and Derek Nowrouzezahrai. 2017. Extended Path Integral Formulation for Volumetric Transport. In *Proceedings of EGSR (Experimental Ideas & Implementations)*. Eurographics Association. <https://doi.org/10/gfznb3>
- [702] T. Hachisuka, W. Jarosz, G. Bouchard, P. Christensen, J.R. Frisvad, W. Jakob, H.W. Jensen, M. Kaschalk, C. Knaus, A. Selle, and B. Spencer. 2012. State of the Art in Photon Density Estimation. In *ACM SIGGRAPH Course Notes*. <https://doi.org/10/gfzndm>
- [703] Toshiya Hachisuka, Wojciech Jarosz, Iliyan Georgiev, Anton Kaplanyan, and Derek Nowrouzezahrai. 2013. State of the Art in Photon Density Estimation. In *ACM SIGGRAPH Asia Course Notes*. <https://doi.org/10/gfzndj>
- [704] Toshiya Hachisuka, Wojciech Jarosz, and Henrik Wann Jensen. 2010. A Progressive Error Estimation Framework for Photon Density Estimation. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 29, 6 (Dec. 2010), 144:1–144:12. <https://doi.org/10/dmttfq>
- [705] Toshiya Hachisuka, Wojciech Jarosz, Richard Peter Weistroffer, Kevin Dale, Greg Humphreys, Matthias Zwicker, and Henrik Wann Jensen. 2008. Multi-dimensional Adaptive Sampling and Reconstruction for Ray Tracing. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 27, 3 (Aug. 2008), 33:1–33:10. <https://doi.org/10/fm6c2w>
- [706] Toshiya Hachisuka and Henrik Wann Jensen. 2009. Stochastic Progressive Photon Mapping. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 28, 5 (Dec. 2009), 130:1–130:8. <https://doi.org/10/d8xxn3>
- [707] Toshiya Hachisuka and Henrik Wann Jensen. 2011. Robust Adaptive Photon Tracing Using Photon Path Visibility. *ACM Transactions on Graphics* 30, 5 (Oct. 2011), 114:1–114:11. <https://doi.org/10/fpwzq9>
- [708] Toshiya Hachisuka, Anton S. Kaplanyan, and Carsten Dachsbacher. 2014. Multiplexed Metropolis Light Transport. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 33, 4 (July 2014), 100:1–100:10. <https://doi.org/10/f6cswv>
- [709] Toshiya Hachisuka, Shinji Ogaki, and Henrik Wann Jensen. 2008. Progressive Photon Mapping. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 27, 5 (Dec. 2008), 130:1–130:8. <https://doi.org/10/cn8h39>
- [710] Toshiya Hachisuka, Jacopo Pantaleoni, and Henrik Wann Jensen. 2012. A Path Space Extension for Robust Light Transport Simulation. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 31, 6 (Jan. 2012), 191:1–191:10. <https://doi.org/10/gbb6n3>
- [711] Ute Hahn, Eva B. Vedel Jensen, Marie-Colette van Lieshout, and Linda Stougaard Nielsen. 2003. Inhomogeneous Spatial Point Processes by Location-Dependent Scaling. *Advances in Applied Probability* 35, 2 (2003), 319–336. <https://doi.org/10/bcd8jq>
- [712] Roy Labl. 1989. *Illumination and Color in Computer Generated Imagery*. Springer-Verlag, New York. includes C code for radiosity algorithms.
- [713] Roy A. Hall and Donald P. Greenberg. 1983. A Testbed for Realistic Image Synthesis. *IEEE Computer Graphics & Applications* 3, 8 (Nov. 1983), 10–20.



- <https://doi.org/10/cwcp2m>
- [714] Akram Halli, Abderrahim Saadi, Khalid Satori, and Hamid Tairi. 2008. Per-Pixel Displacement Mapping Using Cone Tracing. *International Review on Computers and Software (I. RE. CO. S.)* 3, 5 (2008), 1828–6003.
- [715] John H. Halton. 1964. Algorithm 247: Radical-Inverse Quasi-Random Point Sequence. *Commun. ACM* 7, 12 (Dec. 1964), 701–702. <https://doi.org/10/dd3674>
- [716] Hamamatsu. 2012. Guide to Streak Cameras. [http://sales.hamamatsu.com/assets/pdf/catsandguides/e\\_streakh.pdf](http://sales.hamamatsu.com/assets/pdf/catsandguides/e_streakh.pdf). (2012).
- [717] John Michael Hammersley and David Christopher Handscomb. 1964. *Monte Carlo Methods*. Chapman and Hall, London, New York.
- [718] John Michael Hammersley and Keith William Morton. 1956. A New Monte Carlo Technique: Antithetic Variates. *Mathematical Proceedings of the Cambridge Philosophical Society* 52, 03 (July 1956), 449–475. <https://doi.org/10/dshxdn>
- [719] Charles Han, Bo Sun, Ravi Ramamoorthi, and Eitan Grinspun. 2007. Frequency Domain Normal Map Filtering. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 26, 3 (2007), 28:1–28:12.
- [720] P. Y. Han, G. C. Cho, and X.-C. Zhang. 2000. Time-Domain Transillumination of Biological Tissues with Terahertz Pulses. *Opt. Lett.* 25, 4 (Feb. 2000). <https://doi.org/10/b54t6b>
- [721] R. J. Hangelbroek. 1976. Linear Analysis and Solutions of Neutron Transport Problems. *Transport Theory and Statistical Physics* 5, 1 (1976), 1–85.
- [722] Johannes Hanika and Carsten Dachsbacher. 2014. Efficient Monte Carlo Rendering with Realistic Lenses. *Computer Graphics Forum* 33, 2 (2014), 323–332. <https://doi.org/10/f57czp>
- [723] Johannes Hanika, Marc Droske, and Luca Fascione. 2015. Manifold next Event Estimation. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 34, 4 (2015), 87–97. <https://doi.org/10/7mbxk>
- [724] Johannes Hanika, Anton Kaplanyan, and Carsten Dachsbacher. 2015. Improved Half Vector Space Light Transport. *Computer Graphics Forum* 34, 4 (July 2015), 65–74. <https://doi.org/10/gfzv83>
- [725] Johannes Hanika, Alexander Keller, and Hendrik P. A. Lensch. 2010. Two-Level Ray Tracing with Reordering for Highly Complex Scenes. In *Proceedings of Graphics Interface*. Canadian Information Processing Society, 145–152.
- [726] Pat Hanrahan and Wolfgang Krueger. 1993. Reflection from Layered Surfaces Due to Subsurface Scattering. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 165–174. <https://doi.org/10/b4tw3j>
- [727] Pat Hanrahan, David Salzman, and Larry Aupperle. 1991. A Rapid Hierarchical Radiosity Algorithm. *Computer Graphics (Proceedings of SIGGRAPH)* 25, 4 (July 1991), 197–206. <https://doi.org/10/bhm5zf>
- [728] Miles Hansard, Seungkyu Lee, Ouk Choi, and Radu Patrice Horaud. 2012. *Time-of-Flight Cameras: Principles, Methods and Applications*. Springer-Verlag.
- [729] Mark J. Harris and Anselmo Lastra. 2001. Real-Time Cloud Rendering. *Computer Graphics Forum* 20, 3 (2001), 76–85. <https://doi.org/10/bk8hbr>
- [730] David Hart, Philip Dutré, and Donald P. Greenberg. 1999. Direct Illumination with Lazy Visibility Evaluation. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 147–154.
- [731] J.C. Hart, E. Bachtta, W. Jarosz, and T. Fleury. 2002. Using Particles to Sample and Control More Complex Implicit Surfaces. In *Conf\_smi*. <https://doi.org/10/dfw2ss>
- [732] John C. Hart. 1996. Sphere Tracing: A Geometric Method for the Antialiased Ray Tracing of Implicit Surfaces. *The Visual Computer* 12, 10 (Dec. 1996), 527–545. <https://doi.org/10/b3q2p6>
- [733] Herman Otto Hartley. 1958. Maximum Likelihood Estimation from Incomplete Data. *Biometrics* 14, 2 (1958), 174–194. <https://doi.org/10/cznb6f>
- [734] Bashar Awwad Shiekh Hasan and John Gan. 2009. Sequential EM for Unsupervised Adaptive Gaussian Mixture Model Based Classifier. In *Machine Learning and Data Mining in Pattern Recognition*. Vol. 5632. 96–106.
- [735] Miloš Hašan, Martin Fuchs, Wojciech Matusik, Hanspeter Pfister, and Szymon Rusinkiewicz. 2010. Physical Reproduction of Materials with Specified Subsurface Scattering. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 29, 4 (July 2010), 1. <https://doi.org/10/fswxgn>
- [736] Miloš Hašan, Jaroslav Krivánek, Bruce Walter, and Kavita Bala. 2009. Virtual Spherical Lights for Many-Light Rendering of Glossy Scenes. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 28, 5 (2009), 143:1–143:6. <https://doi.org/10/bb9r45>
- [737] Miloš Hašan, Fabio Pellacini, and Kavita Bala. 2006. Direct-to-Indirect Transfer for Cinematic Relighting. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 25, 3 (July 2006), 1089. <https://doi.org/10/cqgn89>
- [738] Miloš Hašan, Fabio Pellacini, and Kavita Bala. 2007. Matrix Row-Column Sampling for the Many-Light Problem. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 26, 3 (July 2007), 26:1–26:10. <https://doi.org/10/djv68s>
- [739] Miloš Hašan and Ravi Ramamoorthi. 2013. Interactive Albedo Editing in Path-Traced Volumetric Materials. *ACM Transactions on Graphics* 32, 2 (April 2013), 11:1–11:11. <https://doi.org/10/gfz5nk>
- [740] Miloš Hašan, Edgar Velázquez-Armendáriz, Fabio Pellacini, and Kavita Bala. 2008. Tensor Clustering for Rendering Many-Light Animations. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 27, 4 (June 2008), 1105–1114. <https://doi.org/10/cv32ws>
- [741] Jon Hasselgren, Tomas Akenine-Möller, and Samuli Laine. 2005. A Family of Inexpensive Sampling Schemes. *Computer Graphics Forum* 24, 4 (2005), 843–848. <https://doi.org/10/bx62xk>
- [742] Wilfred K. Hastings. 1970. Monte Carlo Sampling Methods Using Markov Chains and Their Applications. *Biometrika* 57, 1 (April 1970), 97–109. <https://doi.org/10/dkbmcf>
- [743] S. Haugo, A. Stahl, and E. Brekke. 2017. Continuous Signed Distance Functions for 3D Vision. In *2017 International Conference on 3D Vision (3DV)*. 116–125. <https://doi.org/10/gfz546>
- [744] Vlastimil Havran. 2001. *Heuristic Ray Shooting Algorithms*. Ph.D. Thesis. Czech Technical University, Praha, Czech Republic.
- [745] Vlastimil Havran, Jiří Bittner, Robert Herzog, and Hans-Peter Seidel. 2005. Ray Maps for Global Illumination. In *RT\_EGSR03*. 43–54. <https://doi.org/10/c2xphk>
- [746] Vlastimil Havran, Robert Herzog, and Hans-Peter Seidel. 2005. Fast Final Gathering via Reverse Photon Mapping. *Computer Graphics Forum* 24, 3 (Sept. 2005), 323–332. <https://doi.org/10/czrgv9>
- [747] Tim Hawkins, Per Einarsson, and Paul Debevec. 2005. Acquisition of Time-Varying Participating Media. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 24, 3 (Aug. 2005), 812–815. <https://doi.org/10/bm7c3c>
- [748] Carole K. Hayakawa, Jerome Spanier, and Vasan Venugopalan. 2014. Comparative Analysis of Discrete and Continuous Absorption Weighting Estimators Used in Monte Carlo Simulations of Radiative Transport in Turbid Media. *Journal of the Optical Society of America A* 31, 2 (Feb. 2014), 301–311. <https://doi.org/10/gfzq7r>
- [749] Kaiming He, Jian Sun, and Xiaoou Tang. 2010. Guided Image Filtering. In *Proceedings of the European Conference on Computer Vision (ECCV)*. Springer-Verlag, 1–14.
- [750] Kaiming He, Xiangyu Zhang, Shaoqing Ren, and Jian Sun. 2016. Deep Residual Learning for Image Recognition. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. <https://doi.org/10/gdcfkn>
- [751] Xu He and Peter Z. G. Qian. 2011. Nested Orthogonal Array-Based Latin Hypercube Designs. *Biometrika* 98, 3 (Aug. 2011), 721–731. <https://doi.org/10/cz9jp6>
- [752] Xiao D. He. 1993. *Physically-Based Models for the Reflection, Transmission and Subsurface Scattering of Light by Smooth and Rough Surfaces, with Applications to Realistic Image Synthesis*. Ph.D. Thesis. Cornell University.
- [753] Xiao D. He, Kenneth E. Torrance, François X. Sillion, and Donald P. Greenberg. 1991. A Comprehensive Physical Model for Light Reflection. *Computer Graphics (Proceedings of SIGGRAPH)* 25, 4 (July 1991), 175–186.
- [754] Yuanzhen He, Ching-Shui Cheng, and Boxin Tang. 2018. Strong Orthogonal Arrays of Strength Two Plus. *The Annals of Statistics* 46, 2 (April 2018), 457–468. <https://doi.org/10/gfznb6>
- [755] Yuanzhen He and Boxin Tang. 2012. Strong Orthogonal Arrays and Associated Latin Hypercubes for Computer Experiments. *Biometrika* 100, 1 (Dec. 2012), 254–260. <https://doi.org/10/gfznb5>
- [756] Yuanzhen He and Boxin Tang. 2014. A Characterization of Strong Orthogonal Arrays of Strength Three. *The Annals of Statistics* 42, 4 (2014), 1347–1360. <https://doi.org/10/gfznb4>
- [757] Marti Hearst. May/June 1998. Trends and Controversies: Sketching Intelligent Systems. *IEEE Intelligent Systems* 13, 3 (May/June 1998), 10–19. <https://doi.org/10/bdh837>
- [758] J.C. Hebden. 1993. Line Scan Acquisition for Time-Resolved Imaging through Scattering Media. *Opt. Eng.* 32, 3 (1993), 626–633. <https://doi.org/10/bw667b>
- [759] Martial Hebert and Eric Krotkov. 1992. 3D Measurements from Imaging Laser Radars: How Good Are They? *Image Vision Comput.* 10, 3 (1992). <https://doi.org/10/dspsb7>
- [760] Daniel Heck, Thomas Schlömer, and Oliver Deussen. 2013. Blue Noise Sampling with Controlled Aliasing. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 32, 3 (July 2013), 25:1–25:12. <https://doi.org/10/gbdxct>
- [761] Paul Heckbert. 1986. *Fundamentals of Texture Mapping and Image Warping*. Ph.D. Dissertation. UC Berkeley.
- [762] Paul S. Heckbert. 1990. Adaptive Radiosity Textures for Bidirectional Ray Tracing. *Computer Graphics (Proceedings of SIGGRAPH)* 24, 4 (Aug. 1990), 145–154. <https://doi.org/10/bxsgp4>
- [763] Paul S. Heckbert. 1991. *Simulating Global Illumination Using Adaptive Meshing*. Ph.D. Thesis. University of California, Berkeley.
- [764] Paul S. Heckbert and Pat Hanrahan. 1984. Beam Tracing Polygonal Objects. *Computer Graphics (Proceedings of SIGGRAPH)* 18, 3 (July 1984), 119–127. <https://doi.org/10/dqs439>
- [765] A Samad Hedayat, Neil James Alexander Sloane, and John Stufken. 1999. *Orthogonal Arrays: Theory and Applications*. Springer-Verlag. <https://doi.org/10.1007/978-1-4612-1478-6>
- [766] B. Heeren, M. Rumpf, P. Schröder, M. Wardetzky, and B. Wirth. 2014. Exploring the Geometry of the Space of Shells. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 33, 2 (June 2014), 111–120. <https://doi.org/10/gfz5nk>

- of the Symposium on Geometry Processing) 33, 5 (Aug. 2014), 247–256. <https://doi.org/10/f3s4dn>
- [767] Felix Heide. 2012. *Waveform Inversion for Lambertian Objects Using Transient Imaging*. Technical Report. University of British Columbia.
- [768] Felix Heide, Wolfgang Heidrich, Matthias Hullin, and Gordon Wetzstein. 2015. Doppler Time-of-Flight Imaging. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 34, 4 (2015). <https://doi.org/10/gfz5k9>
- [769] Felix Heide, Matthias B. Hullin, James Gregson, and Wolfgang Heidrich. 2013. Low-Budget Transient Imaging Using Photonic Mixer Devices. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 32, 4 (July 2013), 45:1–45:10. <https://doi.org/10/gbdg7s>
- [770] Felix Heide, Gordon Wetzstein, Ramesh Raskar, and Wolfgang Heidrich. 2013. Adaptive Image Synthesis for Compressive Displays. *ACM Transactions on Graphics* 32, 4 (July 2013), 132:1–132:12.
- [771] Felix Heide, Lei Xiao, Wolfgang Heidrich, and Matthias B. Hullin. 2014. Diffuse Mirrors: 3D Reconstruction from Diffuse Indirect Illumination Using Inexpensive Time-of-Flight Sensors. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. <https://doi.org/10/gfz5mb>
- [772] Felix Heide, Lei Xiao, Andreas Kolb, Matthias B. Hullin, and Wolfgang Heidrich. 2014. Imaging in Scattering Media Using Correlation Image Sensors and Sparse Convolutional Coding. *Opt. Express* 22, 21 (2014). <https://doi.org/10/gfz5mc>
- [773] Wolfgang Heidrich, Stefan Brabec, and Hans-Peter Seidel. 2000. Soft Shadow Maps for Linear Lights. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, W. Hansmann, W. Purgathofer, François X. Sillion, Bernard Péroche, and Holly Rushmeier (Eds.). Springer-Verlag, Vienna, 269–280. <https://doi.org/10/gfzndc>
- [774] Wolfgang Heidrich and Hans-Peter Seidel. 1999. Realistic, Hardware-Accelerated Shading and Lighting. In *Annual Conference Series (Proceedings of SIGGRAPH)*, Alyn Rockwood (Ed.). 171–178.
- [775] Alan Heirich. 1998. *Analysis of Scalable Algorithms for Dynamic Load Balancing and Mapping with Application to Photo-Realistic Rendering*. Ph.D. Thesis. California Institute of Technology, Pasadena, California. CS-TR-98-10.
- [776] Alan Heirich and James Arvo. 1996. Scalable Photorealistic Rendering of Complex Scenes. In *Proceedings of the Eurographics Workshop on Parallel Graphics and Visualization*. 17–33.
- [777] Alan Heirich and James Arvo. 1997. Parallel Rendering with an Actor Model. In *Proceedings of Eurographics '97, Workshop on Programming Paradigms for Graphics*.
- [778] Alan Heirich and James Arvo. 1997. Scalable Monte Carlo Image Synthesis. *Parallel Comput.* 23, 7 (July 1997), 845–859. <https://doi.org/10/d44ggt>
- [779] Alan Heirich and James Arvo. 1998. A Competitive Analysis of Load Balancing Strategies for Parallel Ray Tracing. *Journal of Supercomputing* 12, 1/2 (1998), 57–68. <https://doi.org/10/cvn37j>
- [780] Alan Heirich and James Arvo. 1998. Parallel Radiometric Image Synthesis. *Advances in Engineering Software* 29, 3–6 (April 1998), 283–287. <https://doi.org/10/c64zzb>
- [781] Eric Heitz. 2018. *Generating Random Segments from Non-Uniform Distributions*. Research Report. Unity Technologies.
- [782] Eric Heitz and Eugene d'Eon. 2014. Importance Sampling Microfacet-Based BSDFs Using the Distribution of Visible Normals. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 33, 4 (2014), 103–112. <https://doi.org/10/f6fgph>
- [783] Eric Heitz, Jonathan Dupuy, Cyril Crassin, and Carsten Dachsbacher. 2015. The SGGX Microflake Distribution. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 34, 4 (July 2015), 48:1–48:11. <https://doi.org/10/f7m2n2>
- [784] Eric Heitz, Jonathan Dupuy, Stephen Hill, and David Neubelt. 2016. Real-Time Polygonal-Light Shading with Linearly Transformed Cosines. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 35, 4 (July 2016), 41:1–41:8. <https://doi.org/10/f89ksk>
- [785] Eric Heitz, Stephen Hill, and Morgan McGuire. 2018. Combining Analytic Direct Illumination and Stochastic Shadows. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, New York, NY, USA, 2:1–2:11. <https://doi.org/10/gfznb7>
- [786] Eric Heitz, Derek Nowrouzezahrai, Pierre Poulin, and Fabrice Neyret. 2013. Filtering Color Mapped Textures and Surfaces. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*, Stephen N. Spencer (Ed.). ACM Press, 129–136. <https://doi.org/10/gfzp5z>
- [787] W. L. Hendry, K. D. Lathrop, S. Vandervoort, and J. Wooten. 1970. *Bibliography on Neutral Particle Transport Theory*. Technical Report LA-4287-MS. United States Atomic Energy Commission.
- [788] Louis George Henyey and Jesse Leonard Greenstein. 1941. Diffuse Radiation in the Galaxy. *Astrophysics* 93 (1941), 70–83. <https://doi.org/10/bb4ffv>
- [789] Sebastian Herholz, Oskar Elek, Jiří Vorba, Hendrik Lensch, and Jaroslav Krivánek. 2016. Product Importance Sampling for Light Transport Path Guiding. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* (2016). <https://doi.org/10/f842dt>
- [790] B. M. Herman and S. R. Browning. 1965. A Numerical Solution to the Equation of Radiative Transfer. *Journal of the Atmospheric Sciences* 22 (1965), 559–566.
- [791] Roger D. Hersch and Claude Betrisey. 1991. Model-Based Matching and Hinting of Fonts. *Computer Graphics (Proceedings of SIGGRAPH)* 25, 4 (July 1991), 71–80.
- [792] Christophe Hery and Ravi Ramamoorthi. 2012. *Importance Sampling of Reflections from Hair Fibers*. Technical Report 12-11. Pixar Animation Studios.
- [793] Christophe Hery and Ryusuke Villemin. 2013. Physically Based Lighting at Pixar. In *Physically Based Shading (ACM SIGGRAPH Course Notes)*.
- [794] Robert Herzog, Vlastimil Havran, Shinichi Kinuwaki, Karol Myszkowski, and Hans-Peter Seidel. 2007. Global Illumination Using Photon Ray Splatting. *Computer Graphics Forum (Proceedings of Eurographics)* 26, 3 (2007), 503–513. <https://doi.org/10/b9k4hd>
- [795] Barmak Heshmat, Guy Satat, Christopher Barsi, and Ramesh Raskar. 2014. Single-Shot Ultrafast Imaging Using Parallax-Free Alignment with a Tilted Lenslet Array. In *CLEO: Science and Innovations*. <https://doi.org/10/gfz5md>
- [796] Kerstin Hesse, Ian H. Sloan, and Robert S. Womersley. 2010. Handbook of Geomathematics. Chapter Numerical Integration on the Sphere.
- [797] Henry H. Higbie. 1934. *Lighting Calculations*. John Wiley & Sons, NY.
- [798] David Hilbert. 1912. Begründung der kinetischen Gastheorie. *Mathematisch Annalen* 72 (1912), 562–577.
- [799] Jared Hoberock and Nathan Bell. 2010. Thrust: A Parallel Template Library. (2010). Version 1.7.0.
- [800] Jared Hoberock and John C. Hart. 2010. Arbitrary Importance Functions for Metropolis Light Transport. *Computer Graphics Forum* 29, 6 (Sept. 2010), 1993–2003. <https://doi.org/10/dttgfv>
- [801] Richard P. Hodges. 2010. *Underwater Acoustics: Analysis, Design and Performance of Sonar*. John Wiley & Sons.
- [802] Tom Höholdt, Helge Elbrønd Jensen, and Frank Nielsen. 1988. *Lineære Differentielle Ligninger*. Matematisk Institut, DTH.
- [803] Matthias Holländer, Tobias Ritschel, Elmar Eisemann, and Tamy Boubekeur. 2011. ManyLoDs: Parallel Many-View Level-of-Detail Selection for Real-Time Global Illumination. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 30, 4 (2011), 1233–1240. <https://doi.org/10/dh788k>
- [804] J. G. Holmes. 1946. A Method of Plotting Isolux Curves. *Light and Lighting* 39 (1946), 158–160.
- [805] Nicolas Holzschuch and François X. Sillion. 1995. Accurate Computation of the Radiosity Gradient with Constant and Linear Emitters. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Patrick M. Hanrahan and Werner Purgathofer (Eds.). Springer-Verlag, 186–195. <https://doi.org/10/gfzqhx>
- [806] Nicolas Holzschuch and François X. Sillion. 1998. An Exhaustive Error-Bounding Algorithm for Hierarchical Radiosity. *Computer Graphics Forum* 17, 4 (Dec. 1998), 197–218. <https://doi.org/10/fj58vb>
- [807] Masaaki Honda, Takeo Igarashi, Hidehiko Tanaka, and Shuichi. 1999. Integrated Manipulation: Context-Aware Manipulation of 2D Diagrams. In *UIST-1999*. 159–160.
- [808] J. E. Hoogenboom. 2008. Zero-Variance Monte Carlo Schemes Revisited. *Nuclear Science and Engineering* 160, 1 (2008), 1–22.
- [809] Eberhard Hopf. 1934. *Mathematical Problems of Radiative Equilibrium*. Cambridge University Press, NY.
- [810] Matthias Hopf and Thomas Ertl. 2003. Hierarchical Splatting of Scattered Data. In *IEEE Visualization, 2003. VIS 2003*. 433–440. <https://doi.org/10/c6d9v4>
- [811] Matthias Hopf, Michael Luttonberger, and Thomas Ertl. 2004. Hierarchical Splatting of Scattered 4D Data. *IEEE Computer Graphics & Applications* 24, 4 (July 2004), 64–72. <https://doi.org/10/cpfpgc>
- [812] Hugues Hoppe. 1996. Progressive Meshes. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 99–108.
- [813] Hugues Hoppe. 1997. View-Dependent Refinement of Progressive Meshes. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press/Addison-Wesley Publishing Co., 189–198. <https://doi.org/10/bgfb6h>
- [814] Hugues Hoppe, Tony DeRose, Tom Duchamp, and Mark Halstead. 1994. Piecewise Smooth Surface Reconstruction. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 295–302.
- [815] Ellis Horowitz, Sartaj Sahni, and Susan Anderson-Freed. 1993. *Fundamentals of Data Structures in C*. Computer Science Press.
- [816] Rafael Hostettler, Ralf Habel, Markus Gross, and Wojciech Jarosz. 2015. Dispersion-Based Color Projection Using Masked Prisms. *Computer Graphics Forum (Proceedings of Pacific Graphics)* 34, 7 (Oct. 2015), 329–338. <https://doi.org/10/f7v22b>
- [817] Hoyt C. Hottel. 1962. Radiation as a Diffusion Process. *International Journal of Heat and Mass Transfer* 5 (1962), 82–83. <https://doi.org/10/dh6grp>
- [818] Hoyt C. Hottel and Adel F. Sarofim. 1967. *Radiative Transfer*. McGraw-Hill, NY.
- [819] John R. Howell. 1982. *A Catalog of Radiation Configuration Factors*. McGraw-Hill, NY.

- [820] John R. Howell, Robert Siegel, and M. Pinar Menguc. 2010. *Thermal Radiation Heat Transfer* (5 ed.). CRC Press.
- [821] Siu-Chi Hsu and Tien-Tsin Wong. 1995. Simulating Dust Accumulation. *IEEE Computer Graphics & Applications* 15, 1 (Jan. 1995), 18–25.
- [822] Wei Hu, Zhao Dong, Ivo Ihrke, Thorsten Grosch, Guodong Yuan, and Hans-Peter Seidel. 2010. Interactive Volume Caustics in Single-Scattering Media. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, Washington, D.C., 109–117. <https://doi.org/10.1145/1730804.1730822>
- [823] Xuemei Hu, Yue Deng, Xing Lin, Jinli Suo, Qionghai Dai, Christopher Barsi, and Ramesh Raskar. 2014. Robust and Accurate Transient Light Transport Decomposition via Convolutional Sparse Coding. *Opt. Lett.* 39, 11 (2014). <https://doi.org/10/gfz5mf>
- [824] David Huang, Eric A Swanson, Charles P Lin, Joel S Schuman, William G Stinson, Warren Chang, Michael R Hee, Thomas Flotte, Kenton Gregory, Carmen A Puliafito, and James G. Fujimoto. 1991. Optical Coherence Tomography. *Science* 254, 5035 (1991). <https://doi.org/10/bw83jd>
- [825] Jonathan Huang, Max Kinatder, Matt J. Dunn, Wojciech Jarosz, Xing-Dong Yang, and Emily A. Cooper. 2019. An Augmented Reality Sign-Reading Assistant for Users with Reduced Vision. *PLOS ONE* 14, 1 (Jan. 2019), e0210630. <https://doi.org/10/gfznd2>
- [826] Vincent Hubert-Tremblay, Louis Archambault, Dragan Tubic, René Roy, and Luc Beaulieu. 2006. Octree Indexing of DICOM Images for Voxel Number Reduction and Improvement of Monte Carlo Simulation Computing Efficiency. *Medical Physics* 33, 8 (2006), 2819–2831. <https://doi.org/10/ddmtmv>
- [827] John F. Hughes. 1992. Scheduled Fourier Volume Morphing. *Computer Graphics (Proceedings of SIGGRAPH)* 26, 2 (July 1992), 43–46.
- [828] Matthias B Hullin. 2014. Computational Imaging of Light in Flight. In *SPIE/COS Photonics Asia*.
- [829] Matthias B. Hullin, Hendrik P. A. Lensch, Ramesh Raskar, Hans-Peter Seidel, and Ivo Ihrke. 2011. Dynamic Display of BRDFs. *Computer Graphics Forum* 30, 2 (April 2011), 475–483. <https://doi.org/10/dcxspz>
- [830] Yuchi Huo, Rui Wang, Tianlei Hu, Wei Hua, and Hujun Bao. 2016. Adaptive Matrix Column Sampling and Completion for Rendering Participating Media. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 35, 6 (Nov. 2016), 167:1–167:11. <https://doi.org/10/f9cm6s>
- [831] Youngdeok Hwang, Xu He, and Peter Z.G. Qian. 2016. Sliced Orthogonal Array-Based Latin Hypercube Designs. *Technometrics* 58, 1 (Jan. 2016), 50–61. <https://doi.org/10/f8cjrj>
- [832] Edward P. Hyde. 1907. Geometrical Theory of Radiating Surfaces with Discussion of Light Tubes. *Bulletin of the Bureau of Standards* 3, 1 (1907), 81–104.
- [833] Joshua M. Hykes and Jeffery D. Densmore. 2009. Non-Analog Monte Carlo Estimators for Radiation Momentum Deposition. *Journal of Quantitative Spectroscopy and Radiative Transfer* 110, 13 (2009), 1097–1110. <https://doi.org/10/ddsk26>
- [834] I. M. Sobol. 1975. *The Monte Carlo Method*. Mir Publishers.
- [835] Takeo Igarashi, Satoshi Matsuoka, and Hidehiko Tanaka. 1999. Teddy: A Sketching Interface for 3D Freeform Design. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 409–416.
- [836] Homan Igely. 1999. Tracing Ray Differentials. In *Annual Conference Series (Proceedings of SIGGRAPH)*, Vol. 33. ACM Press, 179–186. <https://doi.org/10/c2t9t9>
- [837] Ivo Ihrke, Gernot Ziegler, Art Tevs, Christian Theobalt, Marcus Magnor, and Hans-Peter Seidel. 2007. Eikonal Rendering: Efficient Light Transport in Refractive Objects. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 26, 3 (2007). <https://doi.org/10/d2bp9n>
- [838] O. E. Lanford III. 1983. On a Derivation of the Boltzmann Equation. In *Nonequilibrium Phenomena I. The Boltzmann Equation*, J. L. Lebowitz and E. W. Montroll (Eds.). North Holland, Amst., 3–17.
- [839] Janine Illian, Antti Penttinen, Helga Stoyan, and Dietrich Stoyan (Eds.). 2008. *Statistical Analysis and Modelling of Spatial Point Patterns*. John Wiley & Sons.
- [840] David S. Immel, Michael F. Cohen, and Donald P. Greenberg. 1986. A Radiosity Method for Non-Diffuse Environments. *Computer Graphics (Proceedings of SIGGRAPH)* 20, 4 (Aug. 1986), 133–142. <https://doi.org/10/dmj9t>
- [841] Matthias Innmann, Michael Zollhöfer, Matthias Nießner, Christian Theobalt, and Marc Stamminger. 2016. VolumeDeform: Real-Time Volumetric Non-Rigid Reconstruction. In *Proceedings of the European Conference on Computer Vision (ECCV) (Lecture Notes in Computer Science)*, Bastian Leibe, Jiri Matas, Nicu Sebe, and Max Welling (Eds.). Springer-Verlag, 362–379. <https://doi.org/10/gfz54z>
- [842] Erdal İnönü. 1973. A Theorem on Anisotropic Scattering. *Transport Theory and Statistical Physics* 3, 2 (1973), 137–146.
- [843] Erdal İnönü and P. F. Zweifel (Eds.). 1967. *Developments in Transport Theory*. Academic Press, NY.
- [844] American National Standard Institute. 1986. *Nomenclature and Definitions for Illumination Engineering*. ANSI report, ANSI/IES RP-16-1986.
- [845] Akira Ishimaru. 1978. *Wave Propagation and Scattering in Random Media*. Oxford University Press.
- [846] Joseph Ivanic and Klaus Ruedenberg. 1996. Rotation Matrices for Real Spherical Harmonics. Direct Determination by Recursion. *Journal of Physical Chemistry* 100, 15 (Jan. 1996), 6342–6347. <https://doi.org/10/bvn59d>
- [847] Joseph Ivanic and Klaus Ruedenberg. 1998. Additions and Corrections: Rotation Matrices for Real Spherical Harmonics. *J. Phys. Chem. A* 102, 45 (1998), 9099–9100. <https://doi.org/10/dcgw39>
- [848] Kei Iwasaki, Yoshinori Dobashi, and Tomoyuki Nishita. 2001. Efficient Rendering of Optical Effects within Water Using Graphics Hardware. In *Proceedings of Pacific Graphics*. IEEE Computer Society, Tokyo, Japan, 374–383. <https://doi.org/10/b2jkbz>
- [849] Kei Iwasaki, Yoshinori Dobashi, and Tomoyuki Nishita. 2012. Interactive Bi-Scale Editing of Highly Glossy Materials. *ACM Transactions on Graphics* 31, 6 (Nov. 2012), 144:1–144:7. <https://doi.org/10/f96zzf>
- [850] Szymon Jabłoński and Tomasz Martyn. 2017. Unlimited Object Instancing in Real-Time. *Journal of the World Society for Computer Graphics (WSCG)* (2017).
- [851] D. Jackel and B. Walter. 1997. Modeling and Rendering of the Atmosphere Using Mie-Scattering. *Computer Graphics Forum* 16, 4 (1997), 201–210. <https://doi.org/10/c9545s>
- [852] W. H. Jackson. 1910. The Solution of an Integral Equation Occuring in the Theory of Radiation. *Bull. Amer. Math. Soc.* 16 (June 1910), 473–475. <https://doi.org/10/dv6mg7>
- [853] Charles E. Jacobs, Adam Finkelstein, and David H. Salesin. 1995. Fast Multiresolution Image Querying. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 277–286.
- [854] Max Jakob. 1957. *Heat Transfer*. John Wiley & Sons, NY.
- [855] Wenzel Jakob. 2010. Mitsuba Renderer. <http://www.mitsuba-renderer.org>.
- [856] Wenzel Jakob, Adam Arbree, Jonathan T. Moon, Kavita Bala, and Steve Marschner. 2010. A Radiative Transfer Framework for Rendering Materials with Anisotropic Structure. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 29, 4 (July 2010), 53:1–53:13. <https://doi.org/10/ft7st>
- [857] Wenzel Jakob and Steve Marschner. 2012. Manifold Exploration: A Markov Chain Monte Carlo Technique for Rendering Scenes with Difficult Specular Transport. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 31, 4 (July 2012), 58:1–58:13. <https://doi.org/10/gfzq4p>
- [858] Wenzel Jakob, Christian Regg, and Wojciech Jarosz. 2011. Progressive Expectation–Maximization for Hierarchical Volumetric Photon Mapping. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 30, 4 (June 2011), 1287–1297. <https://doi.org/10/dtwcjj>
- [859] Wenzel Alban Jakob. 2013. *Light Transport on Path-Space Manifolds*. Ph.D. Thesis. Cornell University, United States – New York.
- [860] Yogesh Jaluria and Kenneth E. Torrance. 1986. *Computational Heat Transfer*. Hemisphere Publishing Corporation, NY.
- [861] Safa Jamali. 2015. *Rheology of Colloidal Suspensions: A Computational Study*. Ph.D. Thesis. Case Western Reserve University.
- [862] R. W. James. 1969. Transformation of Spherical Harmonics under Change of Reference Frame. *Geophysical J. of the Royal Astronomical Society* (1969). <https://doi.org/10/fjtkdm>
- [863] Sonam Jamtsho and Derek D Lichti. 2010. Modelling Scattering Distortion in 3D Range Camera. *International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences* 38, 5 (2010).
- [864] Frederik W. Jansen. 1986. Data Structures for Ray Tracing. In *Data Structures for Raster Graphics*, Laurens R. A. Kessener, Frans J. Peters, and Marloes L. P. van Lierop (Eds.). Springer-Verlag, 57–73.
- [865] Jon Jansen and Louis Bavoil. 2010. Fourier Opacity Mapping. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, 165–172. <https://doi.org/10/b6tns9>
- [866] Adrian Jarabo. 2012. *Femto-Photography: Visualizing Light in Motion*. M.Sc. Thesis. Universidad de Zaragoza.
- [867] Adrian Jarabo, Carlos Aliaga, and Diego Gutierrez. 2018. A Radiative Transfer Framework for Spatially-Correlated Materials. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 37, 4 (July 2018), 83:1–83:13. <https://doi.org/10/gd52qq>
- [868] Adrian Jarabo and Victor Arellano. 2018. Bidirectional Rendering of Vector Light Transport. *Computer Graphics Forum* 37, 6 (Sept. 2018), 96–105. <https://doi.org/10/gdyk6m>
- [869] Adrian Jarabo, Julio Marco, Adolfo Munoz, Raul Buisan, Wojciech Jarosz, and Diego Gutierrez. 2014. A Framework for Transient Rendering. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 33, 6 (Nov. 2014), 177:1–177:10. <https://doi.org/10/gfznb8>
- [870] Adrian Jarabo, Belen Masia, Adrien Bousseau, Fabio Pellacini, and Diego Gutierrez. 2014. How Do People Edit Light Fields? *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 33, 4 (July 2014), 146:1–146:10. <https://doi.org/10/gfz5vh>
- [871] Adrian Jarabo, Belen Masia, Julio Marco, and Diego Gutierrez. 2017. Recent Advances in Transient Imaging: A Computer Graphics and Vision Perspective. *Visual Informatics* 1, 1 (2017), 65–79. <https://doi.org/10/gfz5mh>



- [872] Adrian Jarabo, Belen Masia, Andreas Velten, Christopher Barsi, Ramesh Raskar, and Diego Gutierrez. 2013. Rendering Relativistic Effects in Transient Imaging. In *Congreso Espanol de Informatica Grafica*.
- [873] Adrian Jarabo, Belen Masia, Andreas Velten, Christopher Barsi, Ramesh Raskar, and Diego Gutierrez. 2015. Relativistic Effects for Time-Resolved Light Transport. *Computer Graphics Forum* 34, 8 (2015), 1–12. <https://doi.org/10/f767kz>
- [874] Wojciech Jarosz. 2008. *Efficient Monte Carlo Methods for Light Transport in Scattering Media*. Ph.D. Thesis. University of California, San Diego, United States – California.
- [875] Wojciech Jarosz and Benedikt Bitterli. 2017. Beyond Points and Beams: Higher-Dimensional Photon Samples for Volumetric Light Transport. In *International Conference on Transport Theory*.
- [876] Wojciech Jarosz, Nathan A. Carr, and Henrik Wann Jensen. 2009. Importance Sampling Spherical Harmonics. *Computer Graphics Forum (Proceedings of Eurographics)* 28, 2 (April 2009), 577–586. <https://doi.org/10/b523xg>
- [877] Wojciech Jarosz, Craig Donner, Matthias Zwicker, and Henrik Wann Jensen. 2008. Radiance Caching for Participating Media. *ACM Transactions on Graphics* 27, 1 (March 2008), 1–11. <https://doi.org/10/cwnw78>
- [878] Wojciech Jarosz, Henrik Wann Jensen, and Craig Donner. 2008. Advanced Global Illumination Using Photon Mapping. In *ACM SIGGRAPH Course Notes*. <https://doi.org/10/fwvxzd>
- [879] Wojciech Jarosz, Derek Nowrouzezahrai, Iman Sadeghi, and Henrik Wann Jensen. 2011. A Comprehensive Theory of Volumetric Radiance Estimation Using Photon Points and Beams. *ACM Transactions on Graphics* 30, 1 (Jan. 2011), 5:1–5:19. <https://doi.org/10/fcdh2f>
- [880] Wojciech Jarosz, Derek Nowrouzezahrai, Robert Thomas, Peter-Pike Sloan, and Matthias Zwicker. 2011. Progressive Photon Beams. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 30, 6 (Dec. 2011), 181:1–181:12. <https://doi.org/10/fn5xjz>
- [881] Wojciech Jarosz, Volker Schönefeld, Leif Kobbelt, and Henrik Wann Jensen. 2012. Theory, Analysis and Applications of 2D Global Illumination. *ACM Transactions on Graphics* 31, 5 (Aug. 2012), 125:1–125:21. <https://doi.org/10/gbbrkb>
- [882] Wojciech Jarosz, Matthias Zwicker, and Henrik Wann Jensen. 2008. The Beam Radiance Estimate for Volumetric Photon Mapping. *Computer Graphics Forum (Proceedings of Eurographics)* 27, 2 (April 2008), 557–566. <https://doi.org/10/bjsfsx>
- [883] Wojciech Jarosz, Matthias Zwicker, and Henrik Wann Jensen. 2008. *The Beam Radiance Estimate for Volumetric Photon Mapping*. Technical Report CS2008-0914. University of California, San Diego.
- [884] Wojciech Jarosz, Matthias Zwicker, and Henrik Wann Jensen. 2008. Irradiance Gradients in the Presence of Participating Media and Occlusions. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 27, 4 (June 2008), 1087–1096. <https://doi.org/10/bg8nww>
- [885] Suren Jayasuriya, Adithya Pediredla, Sriram Sivaramakrishnan, Alyosha Molnar, and Ashok Veeraraghavan. 2015. Depth Fields: Extending Light Field Techniques to Time-of-Flight Imaging. In *International Conference on 3D Vision*. <https://doi.org/10/gfz5mg>
- [886] James Hopwood Jeans. 1917. The Equations of Radiative Transfer of Energy. *Monthly Notices of the Royal Astronomical Society* 78, 1 (1917), 28–36. <https://doi.org/10/gfzqh5>
- [887] J. M. Jeans. 1917. The Equation of Radiative Transfer of Energy. *Monthly notices of the Royal Astronomical Society* 78, 1 (Nov. 1917), 28–36. <https://doi.org/10/gfzqh5>
- [888] Henrik Wann Jensen. 1993. *Global Illumination via Bidirektional Monte Carlo Ray Tracing*. M.Sc. Thesis. Technical University of Denmark.
- [889] Henrik Wann Jensen. 1995. Importance Driven Path Tracing Using the Photon Map. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Patrick M. Hanrahan and Werner Purgathofer (Eds.). Springer-Verlag, 326–335.
- [890] Henrik Wann Jensen. 1996. Global Illumination Using Photon Maps. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, W. Hansmann, W. T. Hewitt, W. Purgathofer, Xavier Pueyo, and Peter Schröder (Eds.). Springer-Verlag, Vienna, 21–30. <https://doi.org/10/fzc6t9>
- [891] Henrik Wann Jensen. 1996. *The Photon Map in Global Illumination*. Ph.D. Thesis. Technical University of Denmark.
- [892] Henrik Wann Jensen. 1997. Rendering Caustics on Non-Lambertian Surfaces. *Computer Graphics Forum* 16, 1 (March 1997), 57–64. <https://doi.org/10/dj4sxt>
- [893] Henrik Wann Jensen. 2001. *Realistic Image Synthesis Using Photon Mapping*. AK Peters, Ltd., Natick, MA, USA.
- [894] Henrik Wann Jensen. 2004. A Practical Guide to Global Illumination Using Ray Tracing and Photon Mapping. In *ACM SIGGRAPH Course Notes*. ACM Press, New York, NY, USA. <https://doi.org/10/b4c26m>
- [895] Henrik Wann Jensen and Juan Buhler. 2002. A Rapid Hierarchical Rendering Technique for Translucent Materials. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 21, 3 (July 2002), 576–581. <https://doi.org/10/fdhw4b>
- [896] Henrik Wann Jensen and Niels J. Christensen. 1995. Efficiently Rendering Shadows Using the Photon Map. In *Proceedings of the International Conference on Computational Graphics and Visualization Techniques (Compugraphics)*, Harold P. Santo (Ed.). 285–291.
- [897] Henrik Wann Jensen and Niels Jorgen Christensen. 1995. Optimizing Path Tracing Using Noise Reduction Filters. *Journal of the World Society for Computer Graphics (WSCG)* 3, 1–2 (Feb. 1995).
- [898] Henrik Wann Jensen and Niels Jorgen Christensen. 1995. Photon Maps in Bidirectional Monte Carlo Ray Tracing of Complex Objects. *Computers & Graphics* 19, 2 (March 1995), 215–224. <https://doi.org/10/d9xr6q>
- [899] Henrik Wann Jensen, Per Christensen, Toshi Kato, and Frank Suykens. 2002. A Practical Guide to Global Illumination Using Photon Mapping. In *ACM SIGGRAPH Course Notes*.
- [900] Henrik Wann Jensen and Per H Christensen. 1998. Efficient Simulation of Light Transport in Scenes with Participating Media Using Photon Maps. In *Annual Conference Series (Proceedings of SIGGRAPH)*, Vol. 32. ACM Press, 311–320. <https://doi.org/10/b64p36>
- [901] Henrik Wann Jensen and Stephen Duck. 2000. The Light of Mies van Der Rohe. Animation in SIGGRAPH'2000 Electronic Theater.
- [902] Henrik Wann Jensen, Justin Legakis, and Julie Dorsey. 1999. Rendering of Wet Materials. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, D. Lischinski and G. W. Larson (Eds.). Springer-Verlag. <https://doi.org/10/d9g736>
- [903] Henrik Wann Jensen, Stephen R. Marschner, Marc Levoy, and Pat Hanrahan. 2001. A Practical Model for Subsurface Light Transport. In *Annual Conference Series (Proceedings of SIGGRAPH)*, Vol. 35. ACM Press, 511–518. <https://doi.org/10/chdvp7>
- [904] Henrik W. Jensen, Frank Suykens, and Per H. Christensen. 2001. A Practical Guide to Global Illumination Using Photon Mapping. In *ACM SIGGRAPH Course Notes*. ACM Press.
- [905] J. L. W. V. Jensen. 1906. Sur Les Fonctions Convexes et Les Inégalités Entre Les Valeurs Moyennes. *Acta Mathematica* 30 (1906), 175–193. <https://doi.org/10/cm24qd>
- [906] Stefan Jeschke, Stephan Mantler, and Michael Wimmer. 2007. Interactive Smooth and Curved Shell Mapping. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*, Jan Kautz and Sumanta Pattanaik (Eds.). The Eurographics Association, 351–360. <https://doi.org/10/gfz557>
- [907] David Jevans and Brian Wyville. 1989. Adaptive Voxel Subdivision for Ray Tracing. In *Proceedings of Computer Graphics International (CGI)*. 164–172.
- [908] Min Jiang, Yahan Zhou, Rui Wang, Richard Southern, and Jian Jun Zhang. 2015. Blue Noise Sampling Using an SPH-Based Method. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 34, 6 (Oct. 2015), 211:1–211:11. <https://doi.org/10/f7wqde>
- [909] David Jiménez, Daniel Pizarro, Manuel Mazo, and Sira Palazuelos. 2012. Modeling and Correction of Multipath Interference in Time of Flight Cameras. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.
- [910] David Jiménez, Daniel Pizarro, Manuel Mazo, and Sira Palazuelos. 2014. Modeling and Correction of Multipath Interference in Time of Flight Cameras. *Image Vision Comput.* 32, 1 (Jan. 2014), 13. <https://doi.org/10/f5smxm>
- [911] Jorge Jimenez, Veronica Sundstedt, and Diego Gutierrez. 2009. Screen-Space Perceptual Rendering of Human Skin. *ACM Transactions on Applied Perception* 6, 4 (2009), 23:1–23:15.
- [912] Xiaogang Jin, Y. F. Li, and Qunsheng Peng. 1998. General Constrained Deformations Based on Generalized Metaballs. In *Proceedings of Pacific Graphics*. [ieeexplore.ieee.org](https://doi.org/10/fq36tq), 115–124. <https://doi.org/10/fq36tq>
- [913] Stephen Joe and Frances Y Kuo. 2008. Constructing Sobol Sequences with Better Two-Dimensional Projections. *SIAM Journal on Scientific Computing* 30, 5 (2008), 2635–2654. <https://doi.org/10/c8tf9>
- [914] Jared M Johnson, Dylan Laceywell, Andrew Selle, and Wojciech Jarosz. 2011. Gaussian Quadrature for Photon Beams in Tangled. In *ACM SIGGRAPH Talks*. ACM Press, 1. <https://doi.org/10/b7tx5z>
- [915] Bassett Jones, Jr. 1909. The Mathematical Theory of Finite Surface Light Sources. *Transactions of the Illuminating Engineering Society* 4 (1909), 216–239.
- [916] M. C. Jones. 1990. Variable Kernel Density Estimates and Variable Kernel Density Estimates. *Australian Journal of Statistics* 32, 3 (1990), 361–371. <https://doi.org/10/dnxj8h>
- [917] R. Clark Jones. 1941. A New Calculus for the Treatment of Optical Systems. Description and Discussion of the Calculus. *Journal of the Optical Society of America* 31, 7 (July 1941), 488–493. <https://doi.org/10/bwqspj>
- [918] Thouis R Jones. 2006. Efficient Generation of Poisson-Disk Sampling Patterns. *Journal of Graphics, GPU, and Game Tools* 11, 2 (2006), 27–36.
- [919] Thouis R. Jones and Ronald N. Perry. 2000. Antialiasing with Line Samples. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Bernard Péroche and Holly Rushmeier (Eds.). Springer-Verlag, 197–205. <https://doi.org/10/gfznb9>

- [920] Adrian PP Jongenelen, Dale A Carnegie, Andrew D Payne, and Adrian A Dorrington. 2010. Maximizing Precision over Extended Unambiguous Range for TOF Range Imaging Systems. In *Instrumentation and Measurement Technology Conference (I2MTC), 2010 IEEE*. <https://doi.org/10/ctzrwj>
- [921] Jonathan Joseph. 1996. *Direct Volume Rendering of Irregularly Sampled Data Using Voronoi Decomposition*. Ph.D. Thesis. Cornell University, Ithaca, New York.
- [922] Eunjung Ju, Myung Geol Choi, Minji Park, Jhehee Lee, Kang Hoon Lee, and Shigeo Takahashi. 2010. Morphable Crowds. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 29, 6 (Dec. 2010), 140:1–140:10. <https://doi.org/10/bcm3db>
- [923] Tao Ju, Frank Losasso, Scott Schaefer, and Joe Warren. 2002. Dual Contouring of Hermite Data. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 21, 3 (July 2002), 339–346. <https://doi.org/10/bdg3sp>
- [924] Achuta Kadambi, Ayush Bhandari, Refael Whyte, Adrian Dorrington, and Ramesh Raskar. 2014. Demultiplexing Illumination via Low Cost Sensing and Nanosecond Coding. In *IEEE International Conference on Computational Photography*. <https://doi.org/10/gfz5mj>
- [925] Achuta Kadambi, Jamie Schiel, and Ramesh Raskar. 2016. Macroscopic Interferometry: Rethinking Depth Estimation with Frequency-Domain Time-of-Flight. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.
- [926] Achuta Kadambi, Vage Taamazyan, Suren Jayasuriya, and Ramesh Raskar. 2015. Frequency Domain ToF: Encoding Object Depth in Modulation Frequency. *arXiv preprint arXiv:1503.01804* (2015).
- [927] A. Kadambi, R. Whyte, A. Bhandari, L. Streeter, C. Barsi, A. Dorrington, and R. Raskar. 2013. Coded Time of Flight Cameras: Sparse Deconvolution to Address Multipath Interference and Recover Time Profiles. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 32, 6 (2013). <https://doi.org/10/gfz5mk>
- [928] Achuta Kadambi, Hang Zhao, Boxin Shi, and Ramesh Raskar. 2016. Occluded Imaging with Time-of-Flight Sensors. *ACM Transactions on Graphics* 35, 2, Article 15 (March 2016), 12 pages. <https://doi.org/10/f8q5jg>
- [929] B. B. Kadomtsev. 1957. On the Green's Function in the Theory of Radiant Energy Transfer. *Proceedings of the Academy of Science, U.S.S.R.* 2 (1957), 139–142.
- [930] Harriet H. Kagiwada and Robert E. Kalaba. 1967. Initial Value Methods for the Basic Boundary-Value Problem and Integral Equation of Radiative Transfer. *J. Comput. Phys.* 1 (1967), 322–329. <https://doi.org/10/dfk95r>
- [931] Harriet H. Kagiwada, Robert E. Kalaba, and Sueo Ueno. 1975. *Multiple Scattering Processes, Inverse and Direct*. Addison-Wesley, Reading.
- [932] Bhavya Kailkhura, Jayaraman J. Thiagarajan, Peer-Timo Bremer, and Pramod K. Varshney. 2016. Stair Blue Noise Sampling. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 35, 6 (Nov. 2016), 248:1–248:10. <https://doi.org/10/f9cprg>
- [933] James T. Kajiya. 1979. *Toward a Mathematical Theory of Perception*. Ph.D. Thesis. University of Utah.
- [934] James T. Kajiya. 1982. Ray Tracing Parametric Patches. *Computer Graphics (Proceedings of SIGGRAPH)* 16, 3 (July 1982), 245–254.
- [935] James T. Kajiya. 1983. New Techniques for Ray Tracing Procedurally Defined Objects. *ACM Transactions on Graphics* 2, 3 (July 1983), 161–181. <https://doi.org/10/fjprpp>
- [936] James T. Kajiya. 1985. Anisotropic Reflection Models. *Computer Graphics (Proceedings of SIGGRAPH)* 19, 3 (July 1985), 15–21.
- [937] James T. Kajiya. 1986. The Rendering Equation. *Computer Graphics (Proceedings of SIGGRAPH)* 20, 4 (Aug. 1986), 143–150. <https://doi.org/10/cvfv53>
- [938] James T. Kajiya. 1990. Radiometry and Photometry for Computer Graphics. In *ACM SIGGRAPH Course Notes: Advanced Topics in Ray Tracing*, Vol. 24.
- [939] James T. Kajiya and Timothy L. Kay. 1989. Rendering Fur with Three Dimensional Textures. *Computer Graphics (Proceedings of SIGGRAPH)* 23, 3 (July 1989), 271–280.
- [940] James T. Kajiya and Brian P Von Herzen. 1984. Ray Tracing Volume Densities. *Computer Graphics (Proceedings of SIGGRAPH)* 18, 3 (July 1984), 165–174. <https://doi.org/10/cmjk9m>
- [941] Nima Khademi Kalantari, Steve Bako, and Pradeep Sen. 2015. A Machine Learning Approach for Filtering Monte Carlo Noise. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 34, 4 (July 2015), 122:1–122:12. <https://doi.org/10/f7mtzn>
- [942] Nima Khademi Kalantari and Pradeep Sen. 2013. Removing the Noise in Monte Carlo Rendering with General Image Denoising Algorithms. *Computer Graphics Forum (Proceedings of Eurographics)* 32, 2pt1 (May 2013), 93–102. <https://doi.org/10/gfz5n2>
- [943] H. J. Kalli and E. D. Cashwell. 1977. *Evaluation of Three Monte Carlo Estimation Schemes for Flux at a Point*. Technical Report LA-6865-MS. Los Alamos Scientific Lab., N.Mex. (USA). <https://doi.org/10.2172/7280869>
- [944] Simon Kallweit, Thomas Müller, Brian McWilliams, Markus Gross, and Jan Novák. 2017. Deep Scattering: Rendering Atmospheric Clouds with Radiance-Predicting Neural Networks. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 36, 6 (Nov. 2017), 231:1–231:11. <https://doi.org/10/gfzq7g>
- [945] Javor Kalojanov, Markus Billeter, and Philipp Slusallek. 2011. Two-Level Grids for Ray Tracing on GPUs. *Computer Graphics Forum (Proceedings of Eurographics)* 30, 2 (2011), 307–314. <https://doi.org/10/fjs5sg>
- [946] Malvin Kalos and Paula Whitlock. 1986. *Monte Carlo Methods*. John Wiley & Sons.
- [947] Malvin H Kalos. 1963. On the Estimation of Flux at a Point by Monte Carlo. *Nuclear Science and Engineering* 16 (1963), 111–117. <https://doi.org/10/gfznd3>
- [948] Malvin H. Kalos and Paula A. Whitlock. 1986. *Monte Carlo Methods. Vol. 1: Basics*. Wiley-Interscience, New York, NY, USA.
- [949] Henry Kang, Seungyong Lee, and Charles K. Chui. 2007. Coherent Line Drawing. In *Proceedings of Non-Photorealistic Animation and Rendering*. ACM Press, New York, NY, USA, 43–50. <https://doi.org/10/gfzpz7>
- [950] Hans G. Kaper and R. Bruce Kellogg. 1977. Continuity and Differentiability Properties of the Solution of the Linear Transport Equation. *SIAM J. Appl. Math.* 32, 1 (Jan. 1977), 201–214.
- [951] Hans G. Kaper, Gary K. Leaf, and Arthur J. Lindeman. 1974. *Applications of Finite Element Methods in Reactor Mathematics. Numerical Solution of the Neutron Transport Equation*. Technical Report ANL-8126. Argonne National Laboratory.
- [952] Hans G. Kaper, Gary K. Leaf, and Arthur J. Lindeman. 1974. *An Approximation Procedure for the Neutron Transport Equation Based on the Use of Surface Harmonic Tensors*. Technical Report ANL-8081. Argonne National Laboratory.
- [953] Hans G. Kaper, Gary K. Leaf, and Arthur J. Lindeman. 1975. Formulation of a Ritz-Galerkin Type Procedure for the Approximate Solution of the Neutron Transport Equation. *J. Math. Anal. Appl.* 50 (1975), 42–65.
- [954] Hans G. Kaper, C. G. Lekkerkerker, and J. Hejtmánek. 1982. *Spectral Methods in Linear Transport Theory*. Operator Theory: Advances and Applications, Vol. 5. BV, Boston.
- [955] Anton S. Kaplanyan and Carsten Dachsbacher. 2013. Adaptive Progressive Photon Mapping. *ACM Transactions on Graphics* 32, 2 (April 2013), 16:1–16:13. <https://doi.org/10/gbc2fq>
- [956] Anton S. Kaplanyan and Carsten Dachsbacher. 2013. Path Space Regularization for Holistic and Robust Light Transport. *Computer Graphics Forum (Proceedings of Eurographics)* 32, 2 (2013), 63–72. <https://doi.org/10/gbc3p8>
- [957] Anton S. Kaplanyan, Johannes Hanika, and Carsten Dachsbacher. 2014. The Natural-Constraint Representation of the Path Space for Efficient Light Transport Simulation. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 33, 4 (July 2014), 102:1–102:13. <https://doi.org/10/f6cz85>
- [958] Ondřej Karlík, Martin Růžička, Václav Gassenbauer, Fabio Pellacini, and Jaroslav Krivánek. 2014. Toward Evaluating the Usefulness of Global Illumination for Novices in Lighting Design Tasks. *IEEE Transactions on Visualization and Computer Graphics* 21, 6 (June 2014), 944–954. <https://doi.org/10/f58wvq>
- [959] Tero Karras. 2012. Maximizing Parallelism in the Construction of BVHs, Oc-trees, and kd-Trees. In *Proceedings of High Performance Graphics*. Eurographics Association, 33–37.
- [960] Tero Karras and Timo Aila. 2013. Fast Parallel Construction of High-Quality Bounding Volume Hierarchies. In *Proceedings of High Performance Graphics*. ACM Press, 89–99.
- [961] Vladimir Katkovnik. 1999. A New Method for Varying Adaptive Bandwidth Selection. *IEEE Transactions on Signal Processing* 47, 9 (1999), 2567–2571. <https://doi.org/10/frmpt>
- [962] Toshiaki Kato. 2002. Photon Mapping in Kilauea. In *ACM SIGGRAPH Course Notes: A Practical Guide to Global Illumination Using Photon Mapping*, Henrik Wann Jensen (Ed.), 159–191.
- [963] George W. Kattawar, Gilbert N. Plass, and Frances E. Catchings. 1973. Matrix Operator Theory: II. Scattering from Maritime Haze. *Applied Optics* 12 (1973), 1071–1084.
- [964] Jan Kautz, Solomon Boulos, and Frédo Durand. 2007. Interactive Editing and Modeling of Bidirectional Texture Functions. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 26, 3 (July 2007), 53. <https://doi.org/10/csb3wx>
- [965] Jan Kautz, Peter-Pike Sloan, and John Snyder. 2002. Fast, Arbitrary BRDF Shading for Low-Frequency Lighting Using Spherical Harmonics. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*. Eurographics Association, Aire-la-Ville, Switzerland, Switzerland, 291–296. <https://doi.org/10/gfz5v4>
- [966] Tom Kavli, Trine Kirkhus, Jens T Thielemann, and Borys Jagielski. 2008. Modelling and Compensating Measurement Errors Caused by Scattering in Time-of-Flight Cameras. In *Optical Engineering+ Applications*. <https://doi.org/10/c77xfc>
- [967] John K. Kawai, James S. Painter, and Michael F. Cohen. 1993. Radiosity optimization: Goal Based Rendering. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 147–154. <https://doi.org/10/bz4s44>
- [968] Timothy L. Kay. 1992. *From Geometry to Texture: Experiments towards Realism in Computer Graphics*. Ph.D. Thesis. California Institute of Technology.
- [969] Timothy L. Kay and James T. Kajiya. 1986. Ray Tracing Complex Scenes. *Computer Graphics (Proceedings of SIGGRAPH)* 20, 4 (Aug. 1986), 269–278. <https://doi.org/10/fd877p>

- [970] Michael Kazhdan. 2007. An Approximate and Efficient Method for Optimal Rotation Alignment of 3D Models. *IEEE Transactions on Pattern Analysis and Machine Intelligence* 29, 7 (July 2007), 1221–1229. <https://doi.org/10/fd62wg>
- [971] Michael Kazhdan, Thomas Funkhouser, and Szymon Rusinkiewicz. 2003. Rotation Invariant Spherical Harmonic Representation of 3D Shape Descriptors. In *Eurographics Symposium on Geometry Processing*. 156–164.
- [972] Michael Kazhdan, Thomas Funkhouser, and Szymon Rusinkiewicz. 2004. Symmetry Descriptors and 3D Shape Matching. In *Eurographics / ACM SIGGRAPH Symposium on Geometry Processing*. 115–123.
- [973] M. Kazhdan, G. Singh, A. Pilleboue, D. Coeurjolly, and V. Ostromoukhov. 2015. Variance Analysis for Monte Carlo Integration: A Representation-Theoretic Perspective. *ArXiv e-prints* (May 2015). arXiv:cs.GR/1506.00021
- [974] Benjamin Keinert, Henry Schäfer, Johann Korndörfer, Urs Ganse, and Marc Stamminger. 2013. Improved Ray Casting of Procedural Distance Bounds. *Journal of Graphics Tools* 17, 4 (Oct. 2013), 127–138. <https://doi.org/10/gfz54s>
- [975] Benjamin Keinert, Henry Schäfer, Johann Korndörfer, Urs Ganse, and Marc Stamminger. 2014. Enhanced Sphere Tracing. In *STAG: Smart Tools & Apps for Graphics*. 8. <https://doi.org/10/gfz549>
- [976] Csaba Kelemen, László Szirmay-Kalos, György Antal, and Ferenc Csonka. 2002. A Simple and Robust Mutation Strategy for the Metropolis Light Transport Algorithm. *Computer Graphics Forum* 21, 3 (Sept. 2002), 531–540. <https://doi.org/10/bfrsqn>
- [977] Alexander Keller. 1996. Quasi-Monte Carlo Radiosity. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Xavier Pueyo and Peter Schröder (Eds.). Springer-Verlag, 101–110.
- [978] Alexander Keller. 1997. Instant Radiosity. In *Annual Conference Series (Proceedings of SIGGRAPH) (Computer Graphics Proceedings, Annual Conference Series)*. ACM Press, 49–56. <https://doi.org/10/fqch2z>
- [979] Alexander Keller. 1997. *Quasi-Monte Carlo Methods for Photorealistic Image Synthesis*. Ph.D. Thesis. Shaker Verlag Aachen, Kaiserslautern, Germany.
- [980] Alexander Keller. 2003. Strictly Deterministic Sampling Methods in Computer Graphics. In *ACM SIGGRAPH Course Notes: Monte Carlo Ray Tracing*.
- [981] Alexander Keller. 2006. Myths of Computer Graphics. In *Monte Carlo and Quasi-Monte Carlo Methods*, Harald Niederreiter and Denis Talay (Eds.). Springer-Verlag, 217–243.
- [982] Alexander Keller. 2013. Quasi-Monte Carlo Image Synthesis in a Nutshell. In *Monte Carlo and Quasi-Monte Carlo Methods*, Josef Dick, Frances Y. Kuo, Gareth W. Peters, and Ian H. Sloan (Eds.). Springer-Verlag, 213–249. [https://doi.org/10.1007/978-3-642-41095-6\\_8](https://doi.org/10.1007/978-3-642-41095-6_8)
- [983] Alexander Keller, Ken Dahm, and Nikolaus Binder. 2014. Path Space Filtering. In *ACM SIGGRAPH 2014 Talks (SIGGRAPH '14)*. ACM, Article 68, 1 pages. <https://doi.org/10/gfz6mr>
- [984] Alexander Keller, Luca Fascione, Marcos Fajardo, Iliyan Georgiev, Per Christensen, Johannes Hanika, Christian Eisenacher, and Greg Nichols. 2015. The Path-Tracing Revolution in the Movie Industry. In *ACM SIGGRAPH Course Notes*. ACM Press, New York, NY, USA, 24:1–24:7. <https://doi.org/10/gfz5t>
- [985] Alexander Keller and Wolfgang Heidrich. 2001. Interleaved Sampling. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*. Springer-Verlag, 269–276.
- [986] Alexander Keller, Simon Premoze, and Matthias Raab. 2012. Advanced (Quasi) Monte Carlo Methods for Image Synthesis. In *ACM SIGGRAPH Course Notes*. ACM Press, New York, NY, USA, 21:1–21:46. <https://doi.org/10/gfzncb>
- [987] Alexander Keller and Ingo Wald. 2000. Efficient Importance Sampling Techniques for the Photon Map. In *Proceedings of Vision, Modeling and Visualization*. IOS Press, 271–279.
- [988] Joseph B. Keller. 1948. On the Solution of the Boltzmann Equation for Rarefied Gases. *Communications on Pure and Applied Mathematics* 1, 3 (Sept. 1948), 275–285.
- [989] Maik Keller and Andreas Kolb. 2009. Real-Time Simulation of Time-of-Flight Sensors. *Simulation Modelling Practice and Theory* 17, 5 (2009). <https://doi.org/10/b2vrtq>
- [990] Maik Keller, Jens Orthmann, Andreas Kolb, and Valerij Peters. 2007. A Simulation Framework for Time-of-Flight Sensors. In *International Symposium on Signals, Circuits and Systems 2007*. <https://doi.org/10/c9pvm6>
- [991] Renee J. Kelly. 1987. Process for Matching Color of Paint to a Colored Surface.
- [992] Boz Kempfski. 1995. *Extension of the Whittaker-Shannon Sampling Series Aided by Symbolic Computation*. Ph.D. Thesis. Anglia Polytechnic.
- [993] Andrew Kensler. 2013. *Correlated Multi-Jittered Sampling*. Technical Report 13-01. Pixar Animation Studios.
- [994] James R. Kent, Wayne E. Carlson, and Richard E. Parent. 1992. Shape Transformation for Polyhedral Objects. *Computer Graphics (Proceedings of SIGGRAPH)* 26, 2 (July 1992), 47–54.
- [995] F. Kenton Musgrave. 2003. 17 - QAEB Rendering for Procedural Models. In *Texturing and Modeling: A Procedural Approach*, David S. Ebert, F. Kenton Musgrave, Darwyn Peachey, Ken Perlin, Steven Worley, William R. Mark, John C. Hart, F. Kenton Musgrave, Darwyn Peachey, Ken Perlin, and Steven Worley (Eds.). Morgan Kaufmann, San Francisco, 508–526. <https://doi.org/10.1016/B978-155860848-1/50046-2>
- [996] William B. Kerr and Fabio Pellacini. 2009. Toward Evaluating Lighting Design Interface Paradigms for Novice Users. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 28, 3 (July 2009), 26:1–26:9. <https://doi.org/10/c3znz>
- [997] William B. Kerr and Fabio Pellacini. 2010. Toward Evaluating Material Design Interface Paradigms for Novice Users. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 29, 4 (July 2010), 1. <https://doi.org/10/btw8nc>
- [998] William B. Kerr, Fabio Pellacini, and Jonathan D. Denning. 2010. BendyLights: Artistic Control of Direct Illumination by Curving Light Rays. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 29, 4 (June 2010), 1451–1459. <https://doi.org/10/cnf5zk>
- [999] Markus Kettunen, Marco Manzi, Miika Aittala, Jaakko Lehtinen, Frédo Durand, and Matthias Zwicker. 2015. Gradient-Domain Path Tracing. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 34, 4 (July 2015), 123. <https://doi.org/10/gfzrh>
- [1000] Erum Arif Khan, Erik Reinhard, Roland W. Fleming, and Heinrich H. Bühlhoff. 2006. Image-Based Material Editing. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 25, 3 (July 2006), 654. <https://doi.org/10/bgt6hr>
- [1001] A. M. Khounsary, A. C. Cogley, and W. J. Minkowycz. 1988. Invariant Imbedding for the Solution of Vector Radiative Transfer in General Plane-Parallel Media. In *Wave Propagation and Scattering in Varied Media*, V. K. Varadan and V. V. Varadan (Eds.). Vol. 927. SPIE – The International Society for Optical Engineering, Bellingham, Washington, 68–76.
- [1002] Doyub Kim and Hyeon-Seok Ko. 2007. Eulerian Motion Blur. In *Eurographics Workshop on Natural Phenomena*.
- [1003] Dongyeon Kim, Minjung Son, Yunjin Lee, Henry Kang, and Seungyong Lee. 2008. Feature-Guided Image Stippling. *Computer Graphics Forum* 27, 4 (June 2008), 1209–1216. <https://doi.org/10/bpkz5c>
- [1004] D. S. Kimes and J. A. Kirchner. 1982. Radiative Transfer Model for Heterogeneous 3-D Scenes. *Applied Optics* 21, 22 (Nov. 1982), 4119–4129.
- [1005] Max Kinader, Justin Gualtieri, Matt Dunn, Wojciech Jarosz, Xing-Dong Yang, and Emily Cooper. 2018. Using an Augmented Reality Device as a Distance-Based Vision Aid—Promise and Limitations. *Optometry and Vision Science* 95, 9 (Sept. 2018), 727–737. <https://doi.org/10/gd7x2n>
- [1006] Alan King, Christopher Kulla, Alejandro Conty, and Marcos Fajardo. 2013. BSSRDF Importance Sampling. In *ACM SIGGRAPH Talks*. <https://doi.org/10/gfz5nz>
- [1007] Jean I. F. King. 1955. A Potential-Theory Formulation of Radiant-Heat Transfer. *Royal Meteorological Society Quarterly Journal* 81 (1955), 414–417. <https://doi.org/10/fv4t8s>
- [1008] Jean I. F. King. 1955. Radiative Equilibrium in a Line-Absorbing Atmosphere. I. *Astrophysical Journal* 121, 3 (May 1955), 711–719.
- [1009] Louis V. King. 1912. Absorption Problems in Radioactivity. *Philos. Mag.* 134 (Feb. 1912), 242–250.
- [1010] Louis V. King. 1912. Note on the Cosine Law of Radiation. *Philos. Mag.* 134 (Feb. 1912), 237–242.
- [1011] Louis V. King. 1913. On the Scattering and Absorption of Light in Gaseous Media, with Applications to the Intensity of Sky Radiation. *Philosophical Transactions of the Royal Society of London. Series A. Mathematical and Physical Sciences* 212 (1913), 375–433. <https://doi.org/10/c6w498> First expression of radiative transfer equation in general integral form.
- [1012] Diederik Kingma and Jimmy Ba. 2014. Adam: A Method for Stochastic Optimization. *arXiv preprint arXiv:1412.6980* (2014).
- [1013] W. E. Kinney. 1964. The Nucleon Transport Code, NTC. ORNL–3610 (Aug. 1964).
- [1014] David Kirk and James Arvo. 1988. The Ray Tracing Kernel. In *Proceedings of Ausgraph '88*. 75–82. ARVO-URL.
- [1015] David Kirk and James Arvo. 1991. Unbiased Sampling Techniques for Image Synthesis. *Computer Graphics (Proceedings of SIGGRAPH)* 25, 4 (July 1991), 153–156. <https://doi.org/10/d5kchq>
- [1016] David Kirk and James Arvo. 1991. Unbiased Variance Reduction for Global Illumination. In *Photorealistic Rendering in Computer Graphics (Proceedings of the Eurographics Workshop on Rendering)*.
- [1017] Ahmed Kirmani, Arrigo Benedetti, and Philip A Chou. 2013. SPUMIC: Simultaneous Phase Unwrapping and Multipath Interference Cancellation in Time-of-Flight Cameras Using Spectral Methods. In *IEEE International Conference on Multimedia and Expo*. <https://doi.org/10/gfz5mm>
- [1018] Ahmed Kirmani, Tyler Hutchison, James Davis, and Ramesh Raskar. 2009. Looking around the Corner Using Transient Imaging. In *IEEE International Conference on Computer Vision*. <https://doi.org/10/fnx9jz>
- [1019] Ahmed Kirmani, Tyler Hutchison, James Davis, and Ramesh Raskar. 2011. Looking around the Corner Using Ultrafast Transient Imaging. *International Journal of Computer Vision* 95, 1 (2011). <https://doi.org/10/dsk2dt>
- [1020] Ahmed Kirmani, Dheera Venkatraman, Donggeek Shin, Andrea Colaço, Franco NC Wong, Jeffrey H Shapiro, and Vivek K Goyal. 2014. First-Photon



- Imaging. *Science* 343, 6166 (2014). <https://doi.org/10/f5mfqk>
- [1021] Shinya Kitaoka, Yoshifumi Kitamura, and Fumio Kishino. 2009. Replica Exchange Light Transport. *Computer Graphics Forum* 28, 8 (Dec. 2009), 2330–2342. <https://doi.org/10/brnwj2>
- [1022] Oliver Klehm, Ivo Ihrke, Hans-Peter Seidel, and Elmar Eisemann. 2013. Volume Stylizer: Tomography-Based Volume Painting. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, New York, NY, USA, 161–168. <https://doi.org/10/gfz5qd>
- [1023] Oliver Klehm, Fabrice Rousselle, Marios Papas, Derek Bradley, Christophe Hery, Bernd Bickel, Wojciech Jarosz, and Thabo Beeler. 2015. Recent Advances in Facial Appearance Capture. *Computer Graphics Forum* 34, 2 (May 2015), 709–733. <https://doi.org/10/f7mb4b>
- [1024] Jonathan Klein, Christoph Peters, Jaime Martin, Martin Laurenzis, and Matthias B. Hullin. 2016. Tracking Objects Outside the Line of Sight Using 2D Intensity Images. *Scientific Reports* 6 (2016). <https://doi.org/10/f82649>
- [1025] Krzysztof S. Klimaszewski and Thomas W. Sederberg. 1997. Faster Ray Tracing Using Adaptive Grids. *IEEE Computer Graphics & Applications* 17, 1 (Jan. 1997), 42–51. <https://doi.org/10/bfgzkn> ISSN 0272-1716.
- [1026] Claude Knaus and Matthias Zwicker. 2011. Progressive Photon Mapping: A Probabilistic Approach. *ACM Transactions on Graphics* 30, 3 (May 2011), 25:1–25:13. <https://doi.org/10/bcw2ph>
- [1027] A. Knoll, Y. Hijazi, C. Hansen, I. Wald, and H. Hagen. 2007. Interactive Ray Tracing of Arbitrary Implicits with SIMD Interval Arithmetic. In *Proceedings of IEEE Symposium on Interactive Ray Tracing*. 11–18. <https://doi.org/10/fkxrdv>
- [1028] Donald E. Knuth. 1998. *The Art of Computer Programming* (3rd ed.). Vol. 2. Addison-Wesley.
- [1029] Hiroaki Kobayashi, Tadao Nakamura, and Yoshiharu Shigei. 1987. Parallel Processing of an Object Space for Image Synthesis Using Ray Tracing. *The Visual Computer* 3 (1987), 13–22.
- [1030] D. Koerner, J. Portsmouth, F. Sadlo, T. Ertl, and B. Eberhardt. 2014. Flux-Limited Diffusion for Multiple Scattering in Participating Media. *Computer Graphics Forum* 33, 6 (Sept. 2014), 178–189. <https://doi.org/10/f6kmzs>
- [1031] Andreas Kolb, Erhardt Barth, Reinhard Koch, and Rasmus Larsen. 2010. Time-of-Flight Sensors in Computer Graphics. *Computer Graphics Forum* 29, 1 (2010). <https://doi.org/10/cknp2r>
- [1032] Craig Kolb, Don Mitchell, and Pat Hanrahan. 1995. A Realistic Camera Model for Computer Graphics. In *Annual Conference Series (Proceedings of SIGGRAPH)*, Vol. 29. ACM Press, New York, NY, USA, 317–324. <https://doi.org/10/dkgphb>
- [1033] Thomas Kollig and Alexander Keller. 2002. Efficient Multidimensional Sampling. *Computer Graphics Forum (Proceedings of Eurographics)* 21, 3 (Sept. 2002), 557–563. <https://doi.org/10/d2stpx>
- [1034] Thomas Kollig and Alexander Keller. 2003. Efficient Illumination by High Dynamic Range Images. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. Eurographics Association, 45–50.
- [1035] Thomas Kollig and Alexander Keller. 2006. Illumination in the Presence of Weak Singularities. In *Monte Carlo and Quasi-Monte Carlo Methods*, Harald Niederreiter and Denis Talay (Eds.). Springer-Verlag, Berlin/Heidelberg, 245–257. [https://doi.org/10.1007/3-540-31186-6\\_15](https://doi.org/10.1007/3-540-31186-6_15)
- [1036] A. N. Kolmogorov. 1931. Über die analytischen Methoden in der Wahrscheinlichkeitsrechnung. *Mathematische Annalen* 104, 3 (1931), 415–458.
- [1037] K. Ya. Kondrat'yev. 1965. *Radiative Heat Exchange in the Atmosphere*. Pergamon Press, NY.
- [1038] Kongelige Danske videnskabernes selskab, Kongelige Danske videnskabernes selskab. Skrifter, and Kongelige Danske videnskabernes selskab. Afhandlinger. 1824. *Det Kongelige Danske videnskabernes selskabs skrifter*. København.
- [1039] Janne Kontkanen, Eric Tabellion, and Ryan S. Overbeck. 2011. Coherent Out-of-Core Point-Based Global Illumination. *Computer Graphics Forum* 30, 4 (2011), 1353–1360. <https://doi.org/10/d9jqp6>
- [1040] Johannes Kopf, Daniel Cohen-Or, Oliver Deussen, and Dani Lischinski. 2006. Recursive Wang Tiles for Real-Time Blue Noise. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 25, 3 (2006), 509–518. <https://doi.org/10/fp8p4r>
- [1041] Dan Koschier, Crispin Deul, and Jan Bender. 2016. Hierarchical Hp-Adaptive Signed Distance Fields. In *Proceedings of the Eurographics/ACM SIGGRAPH Symposium on Computer Animation*. Eurographics Association, Goslar Germany, Germany, 189–198.
- [1042] Alexander B. Kostinski. 2001. On the Extinction of Radiation by a Homogeneous but Spatially Correlated Random Medium. *Journal of the Optical Society of America A* 18, 8 (Aug. 2001), 1929–1933. <https://doi.org/10.1364/JOSA.A.18.001929>
- [1043] A. B. Kostinski and A. R. Jameson. 2000. On the Spatial Distribution of Cloud Particles. *Journal of the Atmospheric Sciences* 57, 7 (April 2000), 901–915. <https://doi.org/10/fhs4w5>
- [1044] Friedrich Kottler. 1964. The Elements of Radiative Transfer. In *Progress in Optics*, E. Wolf (Ed.). Vol. 3. North Holland, Amst., 3–28.
- [1045] V. Kourganoff. 1952. *Basic Methods in Transfer Problems: Radiative Equilibrium and Neutron Diffusion*. Oxford, NY.
- [1046] V. Kourganoff. 1969. *Introduction to the General Theory of Particle Transfer*. Gordon and Breach, NY.
- [1047] Vladimir Kourganoff. 1952. *Basic Methods in Transfer Problems*. Oxford University Press, London.
- [1048] Martin Kraus and Kai Bürger. 2008. Interpolating and Downsampling RGBA Volume Data. In *Proceedings of Vision, Modeling and Visualization*.
- [1049] Anders Wang Kristensen, Tomas Akenine-Möller, and Henrik Wann Jensen. 2005. Precomputed Local Radiance Transfer for Real-Time Lighting Design. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 24, 3 (July 2005), 1208. <https://doi.org/10/d4hm3d>
- [1050] Jaroslav Krivánek. 2005. *Radiance Caching for Global Illumination Computation on Glossy Surfaces*. Ph.D. Thesis. Université de Rennes 1 and Czech Technical University in Prague.
- [1051] Jaroslav Krivánek, Kadi Bouatouch, Sumanta N. Pattanaik, and Jiří Žára. 2006. Making Radiance and Irradiance Caching Practical: Adaptive Caching and Neighbor Clamping. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*, Tomas Akenine-Möller and Wolfgang Heidrich (Eds.). Eurographics Association, 127–138. <https://doi.org/10/gfzqhz>
- [1052] Jaroslav Krivánek and Eugene d'Eon. 2014. A Zero-Variance-Based Sampling Scheme for Monte Carlo Subsurface Scattering. In *ACM SIGGRAPH Talks*. ACM Press, New York, NY, USA, 66:1–66:1. <https://doi.org/10/gfzq7n>
- [1053] Jaroslav Krivánek, Marcos Fajardo, Per H Christensen, Eric Tabellion, Michael Bunnell, David Larsson, and Anton Kaplanyan. 2010. Global Illumination across Industries. In *ACM SIGGRAPH Course Notes*. ACM Press.
- [1054] Jaroslav Krivánek, James A Ferwerda, and Kavita Bala. 2010. Effects of Global Illumination Approximations on Material Appearance. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 29, 4 (July 2010). <https://doi.org/10/dvqd7t>
- [1055] Jaroslav Krivánek, Pascal Gauthron, Kadi Bouatouch, and Sumanta Pattanaik. 2005. Improved Radiance Gradient Computation. In *Proceedings of the Spring Conference on Computer Graphics (SCCG)*. ACM Press, New York, NY, USA, 155–159. <https://doi.org/10/c8pb3t>
- [1056] Jaroslav Krivánek, Pascal Gauthron, Sumanta Pattanaik, and Kadi Bouatouch. 2005. Radiance Caching for Efficient Global Illumination Computation. *IEEE Transactions on Visualization and Computer Graphics* 11, 5 (2005), 550–561. <https://doi.org/10/csf2sw>
- [1057] Jaroslav Krivánek, Pascal Gauthron, Greg Ward, Henrik Wann Jensen, Eric Tabellion, and Per Christensen. 2008. Practical Global Illumination with Irradiance Caching. In *ACM SIGGRAPH Course Notes*. <https://doi.org/10/bhnsjz>
- [1058] Jaroslav Krivánek, Iliyan Georgiev, Toshiya Hachisuka, Petr Věvoda, Martin Šik, Derek Nowrouzezahrai, and Wojciech Jarosz. 2014. Unifying Points, Beams, and Paths in Volumetric Light Transport Simulation. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 33, 4 (July 2014), 103:1–103:13. <https://doi.org/10/f6cz72>
- [1059] Jaroslav Krivánek, Iliyan Georgiev, Anton Kaplanyan, and Juan Canada. 2013. Recent Advances in Light Transport Simulation: Theory and Practice. In *ACM SIGGRAPH Course Notes*.
- [1060] Jaroslav Krivánek, Iliyan Georgiev, Anton S. Kaplanyan, and Juan Cañada. 2013. Recent Advances in Light Transport Simulation: Theory & Practice. In *ACM SIGGRAPH Course Notes*.
- [1061] Jaroslav Krivánek, Jaakko Konttinen, Kadi Bouatouch, Sumanta Pattanaik, and Jiří Žára. 2005. Fast Approximation to Spherical Harmonic Rotation. In *Proceedings of the Spring Conference on Computer Graphics (SCCG)*. ACM Press. <https://doi.org/10/gfzq4r>
- [1062] U. Krockstadt. 1968. Calculating the Acoustical Room Response by the Use of a Ray Tracing Technique. *J. Sound and Vibrations* 8 (1968).
- [1063] Joel Kronander, Thomas B. Schön, and Jonas Unger. 2015. Pseudo-Marginal Metropolis Light Transport. In *ACM SIGGRAPH Asia Technical Briefs*. <https://doi.org/10/f3nd42>
- [1064] Max Krook. 1955. On the Solution of Equations of Transfer, I. *Astrophysical Journal* 122, 3 (Nov. 1955), 488–497.
- [1065] Wolfgang Krueger. 1990. Volume Rendering and Data Feature Enhancement. *Computer Graphics (Proceedings of SIGGRAPH)* 24, 5 (Nov. 1990), 21–26.
- [1066] Wolfgang Krueger and B. Froehlich. 1994. The Responsive Workbench: Virtual Work Environment. *IEEE Computer Graphics & Applications* 14, 3 (May 1994), 12–15.
- [1067] Jens Krüger, Kai Bürger, and Rüdiger Westermann. 2006. Interactive Screen-Space Accurate Photon Tracing on GPUs. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. 319–330.
- [1068] Lauwerens Kuipers and Harald Niederreiter. 1974. *Uniform Distribution of Sequences*. John Wiley & Sons, New York, USA.
- [1069] Christopher Kulla. 2011. Decoupled Ray-Marching of Heterogeneous Participating Media. In *ACM SIGGRAPH Talks*. ACM Press, Vancouver, British Columbia, Canada, 1. <https://doi.org/10/frjx6f>
- [1070] Christopher Kulla, Alejandro Conty, Clifford Stein, and Larry Gritz. 2018. Sony Pictures Imageworks Arnold. *ACM Transactions on Graphics* 37, 3 (Aug. 2018), 29:1–29:18. <https://doi.org/10/gfjkn7>

- [1071] Christopher Kulla and Marcos Fajardo. 2011. Importance Sampling of Area Lights in Participating Media. In *ACM SIGGRAPH Talks*. ACM Press, Vancouver, British Columbia, Canada, 1. <https://doi.org/10/ccbw9x>
- [1072] Christopher Kulla and Marcos Fajardo. 2012. Importance Sampling Techniques for Path Tracing in Participating Media. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 31, 4 (June 2012), 1519–1528. <https://doi.org/10/f35f4k>
- [1073] Satheesh Kuppura and Jeffrey J. Derby. 1993. Finite-Element Formulations for Accurate Calculation of Radiant Heat Transfer in Diffuse-Gray Enclosures. *Numerical Heat Transfer, Part B* 24 (1993), 431–454.
- [1074] Yair Kurzion and Roni Yagel. 1995. Space Deformation Using Ray Deflectors. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Patrick M. Hanrahan and Werner Purgathofer (Eds.). Springer-Verlag, 21–30. <https://doi.org/10/gfz54w>
- [1075] I. Kuščer. 1973. A Survey of Neutron Transport Theory. *Acta Physica Austriaca Supplementum X* (1973), 491–528. Proceedings of the International Symposium “100 Years Boltzmann Equation”.
- [1076] I. Kuščer and G. C. Summerfield. 1970. Symmetries in Scattering of Slow Neutrons. *PhRev* 188, 3 (Dec. 1970), 1445–1449.
- [1077] Peter Kutz, Ralf Habel, Yining Karl Li, and Jan Novák. 2017. Spectral and Decomposition Tracking for Rendering Heterogeneous Volumes. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 36, 4 (July 2017), 111:1–111:16. <https://doi.org/10/gbxjxg>
- [1078] Jan Eric Kyprianidis, John Collomosse, Tinghui Wang, and Tobias Isenbreg. 2013. State of the “art”: A Taxonomy of Artistic Stylization Techniques for Images and Video. *IEEE Transactions on Visualization and Computer Graphics* 19, 5 (2013), 866–885. <https://doi.org/10/f4s58s>
- [1079] Eric P. Lafortune. 1996. *Mathematical Models and Monte Carlo Algorithms for Physically Based Rendering*. Ph.D. Thesis. Katholieke Universiteit Leuven, Leuven, Belgium.
- [1080] Eric P. Lafortune and Yves D. Willems. 1993. Bi-Directional Path Tracing. In *Proceedings of the International Conference on Computational Graphics and Visualization Techniques (Compugraphics)*, H. P. Santo (Ed.), Vol. 93. Alvor, Portugal, 145–153.
- [1081] Eric P. Lafortune and Yves D. Willems. 1994. The Ambient Term as a Variance Reducing Technique for Monte Carlo Ray Tracing. In *Photorealistic Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, 163–171.
- [1082] Eric P. Lafortune and Yves D. Willems. 1994. A Theoretical Framework for Physically Based Rendering. *Computer Graphics Forum* 13, 2 (June 1994), 97–107. <https://doi.org/10/fq9wq7>
- [1083] Eric P. Lafortune and Yves D. Willems. 1995. A 5D Tree to Reduce the Variance of Monte Carlo Ray Tracing. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Patrick M. Hanrahan and Werner Purgathofer (Eds.). Springer-Verlag, NY, 11–20.
- [1084] Eric P. Lafortune and Yves D. Willems. 1996. Rendering Participating Media with Bidirectional Path Tracing. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, W. Hansmann, W. T. Hewitt, W. Purgathofer, Xavier Pueyo, and Peter Schröder (Eds.). Springer-Verlag, Vienna, 91–100. <https://doi.org/10/fzth2c>
- [1085] Eric P. F. Lafortune, Sing-Choong Foo, Kenneth E. Torrance, and Donald P. Greenberg. 1997. Non-Linear Approximation of Reflectance Functions. In *Annual Conference Series (Proceedings of SIGGRAPH)*, Vol. 31. ACM Press/Addison-Wesley Publishing Co., New York, NY, USA, 117–126. <https://doi.org/10/d5fzft>
- [1086] Ares Lagae and Philip Dutré. 2006. An Alternative for Wang Tiles: Colored Edges versus Colored Corners. *ACM Transactions on Graphics* 25, 4 (Oct. 2006), 1442–1459. <https://doi.org/10/fpwbfr>
- [1087] Ares Lagae and Philip Dutré. 2006. Generating Well-Distributed Point Sets with a Self-Similar Hierarchical Tile. *Report CW 462* (2006).
- [1088] Ares Lagae and Philip Dutré. 2008. A Comparison of Methods for Generating Poisson Disk Distributions. *Computer Graphics Forum* 27, 1 (March 2008), 114–129. <https://doi.org/10/cvqh4r>
- [1089] Samuli Laine and Tero Karras. 2010. Efficient Sparse Voxel Octrees. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, 55–63. <https://doi.org/10/c6n3hz>
- [1090] Samuli Laine, Tero Karras, and Timo Aila. 2013. Megakernels Considered Harmful: Wavefront Path Tracing on GPUs. In *Proceedings of High Performance Graphics*. ACM Press, New York, NY, USA, 137–143. <https://doi.org/10/gfz4kf>
- [1091] Samuli Laine, Hannu Saransaari, Janne Kontkanen, Jaakko Lehtinen, and Timo Aila. 2007. Incremental Instant Radiosity for Real-Time Indirect Illumination. In *RT\_EGSR03*. 10.
- [1092] Martin Lambers, Stefan Hoberg, and Andreas Kolb. 2015. Simulation of Time-of-Flight Sensors for Evaluation of Chip Layout Variants. *IEEE Sensors Journal* 15, 7 (2015). <https://doi.org/10/gfz5mn>
- [1093] Johann Heinrich Lambert. 1760. *Photometria: Sive de Mensura et Gradibus Luminis, Colorum et Umbrae*.
- [1094] Johann Heinrich Lambert. 1892. *Photometria, sive De mensura et gradibus luminis, colorum et umbrae*. Number 31–33 in Ostwald’s Klassiker der exakten Wissenschaften. W. Engelmann, Leipzig.
- [1095] D. G. Lampard. 1954. Generalization of the Wiener-Khinchine Theorem to Nonstationary Processes. *Journal of Applied Physics* 25, 6 (June 1954), 802–803. <https://doi.org/10/czp863>
- [1096] Hayden Landis. 2002. Production-Ready Global Illumination. In *RenderMan in Production (ACM SIGGRAPH Course Notes)*, 87–102.
- [1097] Robert Lange and Peter Seitz. 2001. Solid-State Time-of-Flight Range Camera. *IEEE Journal of quantum electronics* 37, 3 (2001). <https://doi.org/10/bd236w>
- [1098] Robert Lange, Peter Seitz, Alice Biber, and Stefan C. Lauxtermann. 2000. Demodulation Pixels in CCD and CMOS Technologies for Time-of-Flight Ranging. In *Electronic Imaging*.
- [1099] Eric Languénou, Kadi Bouatouch, and Pierre Tellier. 1992. An Adaptive Discretization Method for Radiosity. *Computer Graphics Forum (Proceedings of Eurographics)* 11 (1992), 205–216.
- [1100] Gerhard Larcher and Friedrich Pillichshammer. 2001. Walsh Series Analysis of the  $L_2$ -Discrepancy of Symmetrized Point Sets. *Monatshefte für Mathematik* 132, 1 (01 April 2001), 1–18. <https://doi.org/10/bqkb9p>
- [1101] E. W. Larsen. 1973. A Functional-Analytic Derivation of Case’s Full and Half-Range Formulas. *Communications on Pure and Applied Mathematics* 26 (1973), 525–537.
- [1102] Edward W. Larsen and Richard Vasques. 2011. A Generalized Linear Boltzmann Equation for Non-Classical Particle Transport. *Journal of Quantitative Spectroscopy and Radiative Transfer* 112, 4 (2011), 619–631. <https://doi.org/10.1016/j.jqsrt.2010.07.003>
- [1103] Greg Ward Larson and Rob Shakespeare. 1998. *Rendering with Radiance: The Art and Science of Lighting Visualization*. Morgan Kaufmann, San Francisco, CA, USA.
- [1104] M. Lastra, Carlos Ureña, Montes Revelles, and Rosana Montes. 2002. A Particle-Path Based Method for Monte Carlo Density Estimation. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*. Eurographics Association, 7–14.
- [1105] K. Lathrop and B. Carlson. 1967. Numerical Solution of the Boltzmann Transport Equation. *J. Comput. Phys.* 2 (1967), 173–197.
- [1106] K. D. Lathrop. 1965. Anisotropic Scattering Approximations in the Monoenergetic Boltzmann Equation. *Nuclear Science and Engineering* 21, 4 (April 1965), 498–508.
- [1107] K. D. Lathrop. 1966. Use of Discrete-Ordinate Methods for Solution of Photon Transport Problems. *Nuclear Science and Engineering* 24, 4 (April 1966), 381–388.
- [1108] K. D. Lathrop. 1968. Ray Effects in Discrete Ordinates Equations. *Nuclear Science and Engineering* 32, 3 (June 1968), 357–369. <https://doi.org/10/gfzqh6>
- [1109] K. D. Lathrop. 1969. Spatial Differencing of the Transport Equation: Positivity vs. Accuracy. *J. Comput. Phys.* 4, 4 (Dec. 1969), 475–481. <https://doi.org/10/d4dr4f>
- [1110] Pedro Latorre, Francisco Seron, and Diego Gutierrez. 2012. Birefringency: Calculation of Refracted Ray Paths in Biaxial Crystals. *The Visual Computer* 28, 4 (2012). <https://doi.org/10/fjmtmx>
- [1111] Andy KS Lau, Anson HL Tang, Jingjiang Xu, Xiaoming Wei, Kenneth KY Wong, and Kevin KM Tsia. 2016. Optical Time Stretch for High-Speed and High-Throughput Imaging—from Single-Cell to Tissue-Wide Scales. *IEEE Journal of Selected Topics in Quantum Electronics* 22, 4 (2016). <https://doi.org/10/gfz5mp>
- [1112] David Laur and Pat Hanrahan. 1991. Hierarchical Splatting: A Progressive Refinement Algorithm for Volume Rendering. *Computer Graphics (Proceedings of SIGGRAPH)* 25, 4 (July 1991), 285–288.
- [1113] Martin Laurenzis and Emmanuel Bacher. 2011. Image Coding for Three-Dimensional Range-Gated Imaging. *Applied Optics* 50, 21 (2011). <https://doi.org/10/bbp24g>
- [1114] Martin Laurenzis, Frank Christnacher, and David Monnin. 2007. Long-Range Three-Dimensional Active Imaging with Superresolution Depth Mapping. *Opt. Lett.* 32, 21 (2007). <https://doi.org/10/c4ksr6>
- [1115] Martin Laurenzis, Jonathan Klein, and Emmanuel Bacher. 2016. Relativistic Effects in Imaging of Light in Flight with Arbitrary Paths. *Opt. Lett.* 41, 9 (2016). <https://doi.org/10/gfz5mq>
- [1116] Martin Laurenzis and Andreas Velten. 2014. Nonline-of-Sight Laser Gated Viewing of Scattered Photons. *Opt. Eng.* 53, 2 (2014). <https://doi.org/10/gfz5mr>
- [1117] Martin Laurenzis and Arnaud Woiselle. 2014. Laser Gated-Viewing Advanced Range Imaging Methods Using Compressed Sensing and Coding of Range-Gates. *Opt. Eng.* 53, 5 (2014). <https://doi.org/10/gfz5ms>
- [1118] J. Laurijssen, R. Wang, Ph. Dutré, and B.J. Brown. 2010. Fast Estimation and Rendering of Indirect Highlights. *Computer Graphics Forum* 29, 4 (June 2010), 1305–1313. <https://doi.org/10/ctkmnv>
- [1119] Christian Lauterbach, Anish Chandak, and Dinesh Manocha. 2007. Interactive Sound Rendering in Complex and Dynamic Scenes Using Frustum Tracing. *IEEE Transactions on Visualization and Computer Graphics* 13, 6 (Nov. 2007), 1672–1679. <https://doi.org/10/bjm3dc>

- [1120] Christian Lauterbach, Michael Garland, Shubhabrata Sengupta, David Luebke, and Dinesh Manocha. 2009. Fast BVH Construction on GPUs. *Computer Graphics Forum (Proceedings of Eurographics)* 28, 2 (2009), 375–384. <https://doi.org/10/b3vk7j>
- [1121] Philip Laven. [n. d.]. Mie Scattering. <http://www.philiplaven.com/>.
- [1122] Philip Laven. 2003. Simulation of Rainbows, Coronas, and Glories by Use of Mie Theory. *Applied Optics* 42, 3 (Jan. 2003), 436–444. <https://doi.org/10/chr9th>
- [1123] Philip Laven. 2017. MiePlot. (2017). <http://www.philiplaven.com/mieplot.htm>.
- [1124] Fabien Lavignotte and Mathias Paulin. 2003. Scalable Photon Splatting for Global Illumination. In *Proceedings of GRAPHITE*. ACM SIGGRAPH. <https://doi.org/10/frcj8j>
- [1125] Jason Lawrence, Szymon Rusinkiewicz, Ravi Ramamoorthi, Jason Lawrence, Szymon Rusinkiewicz, and Ravi Ramamoorthi. 2004. Efficient BRDF Importance Sampling Using a Factored Representation. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 23, 3 (Aug. 2004), 496–505. <https://doi.org/10/b3hhkw>
- [1126] K. Mark Lawrence. 1996. A Combinatorial Characterization of (t,m,s)-Nets in Base b. *Journal of Combinatorial Designs* 4, 4 (1996), 275–293. <https://doi.org/10/c9hhmz>
- [1127] Pascal Lecocq, Arthur Dufay, Gaël Sourimant, and Jean-Eudes Marvie. 2016. Accurate Analytic Approximations for Real-Time Specular Area Lighting. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, New York, NY, USA, 113–120. <https://doi.org/10/gfz5nt>
- [1128] P. Lecocq, A. Kemeny, S. Michelin, and D. Arquès. 2000. Mathematical Approximation for Real-Time Lighting Rendering through Participating Media. In *Proceedings of Pacific Graphics*. IEEE Computer Society. <https://doi.org/10/cfj84x>
- [1129] Yann LeCun, Yoshua Bengio, and Geoffrey Hinton. 2015. Deep Learning. *Nature* 521, 7553 (May 2015), 436–444. <https://doi.org/10/bmqp>
- [1130] Clarence E. Lee. 1962. *The Discrete  $S_n$  Approximation to Transport Theory*. Ph.D. Thesis. Cornell University.
- [1131] H.D.P. Lee. 1975. *Aristotle: Meteorologica*. Loeb Classical Library.
- [1132] M.E. Lee and R.A. Redner. 1990. A Note on the Use of Nonlinear Filtering in Computer Graphics. *IEEE Computer Graphics & Applications* 10, 3 (1990), 23–29. <https://doi.org/10/dkfv4k>
- [1133] Mark E. Lee, Richard A. Redner, and Samuel P. Uzelton. 1985. Statistically Optimized Sampling for Distributed Ray Tracing. *Computer Graphics (Proceedings of SIGGRAPH)* 19, 3 (July 1985), 61–68. <https://doi.org/10/b7nj5h>
- [1134] Raymond L. Lee. 1998. Mie Theory, Airy Theory, and the Natural Rainbow. *Applied Optics* 37, 9 (March 1998), 1506–1519. <https://doi.org/10/d3fxsc>
- [1135] Raymond L. Lee and Alistair B. Fraser. 2001. *The Rainbow Bridge: Rainbows in Art, Myth, and Science*. Pennsylvania State University Press.
- [1136] Richard T. Lee and Carol O’Sullivan. 2007. Accelerated Light Propagation through Participating Media. In *Proc. Eurographics / IEEE VGTC Conference on Volume Graphics*. The Eurographics Association, 17–23. <https://doi.org/10/gfzq7x>
- [1137] Seungkyu Lee and Hyunjung Shim. 2015. Skewed Stereo Time-of-Flight Camera for Translucent Object Imaging. *Image Vision Comput.* 43 (2015). <https://doi.org/10/f73xvg>
- [1138] Seung-Yong Lee, Kyung-Yong Chwa, Sung Yong Shin, and George Wolberg. 1995. Image Metamorphosis Using Snakes and Free-Form Deformations. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 439–448.
- [1139] Sylvain Lefebvre and Carsten Dachscher. 2007. TileTrees. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, 25–31.
- [1140] Jaakko Lehtinen, Timo Aila, Jiawen Chen, Samuli Laine, and Frédo Durand. 2011. Temporal Light Field Reconstruction for Rendering Distribution Effects. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 30, 4 (2011), 55:1–55:12. <https://doi.org/10/bpthww>
- [1141] Jaakko Lehtinen, Timo Aila, Samuli Laine, and Frédo Durand. 2012. Reconstructing the Indirect Light Field for Global Illumination. *ACM Transactions on Graphics* 31, 4, Article 51 (July 2012), 10 pages. <https://doi.org/10/gfzv9n>
- [1142] Jaakko Lehtinen, Tero Karras, Samuli Laine, Miika Aittala, Frédo Durand, and Timo Aila. 2013. Gradient-Domain Metropolis Light Transport. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 32, 4 (July 2013), 95:1–95:12. <https://doi.org/10/gbdghd>
- [1143] Jaakko Lehtinen, Matthias Zwicker, Emmanuel Turquin, Janne Kontkanen, Frédo Durand, François X. Sillion, and Timo Aila. 2008. A Meshless Hierarchical Representation for Light Transport. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 27, 3 (Aug. 2008), 37:1–37:9. <https://doi.org/10/cbpkvv>
- [1144] Oscar AZ Leneman. 1966. Random Sampling of Random Processes: Impulse Processes. *Information and Control* 9, 4 (1966), 347–363. <https://doi.org/10/bqgvkr>
- [1145] Jerome Lengyel, Emil Praun, Adam Finkelstein, and Hugues Hoppe. 2001. Real-Time Fur over Arbitrary Surfaces. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, New York, NY, USA, 227–232. <https://doi.org/10/dfzrw2>
- [1146] Jacqueline Lenoble (Ed.). 1977. *Standard Procedures to Compute Atmospheric Radiative Transfer in a Scattering Atmosphere*. National Center for Atmospheric Research, Boulder, Colorado.
- [1147] Jacqueline Lenoble (Ed.). 1985. *Radiative Transfer in Scattering and Absorbing Atmospheres: Standard Computational Procedures*. A. Deepak, Hampton, Virginia.
- [1148] Jaakko Leppänen. 2010. Performance of Woodcock Delta-Tracking in Lattice Physics Applications Using the Serpent Monte Carlo Reactor Physics Burnup Calculation Code. *Annals of Nuclear Energy* 37, 5 (2010), 715–722. <https://doi.org/10/d3fg8p>
- [1149] Christian Lessig, Tyler de Witt, and Eugene Fiume. 2012. Efficient and Accurate Rotation of Finite Spherical Harmonics Expansions. *J. Comput. Phys.* 231, 2 (2012), 243–250. <https://doi.org/10/fbdv88>
- [1150] Anat Levin, Samuel W. Hasinoff, Paul Green, Frédo Durand, and William T. Freeman. 2009. 4D Frequency Analysis of Computational Cameras for Depth of Field Extension. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 28, 3, Article 97 (July 2009), 14 pages. <https://doi.org/10/bqtnvj>
- [1151] David Levinthal. 2009. Performance Analysis Guide for Intel Core i7 Processor and Intel Xeon 5500 Processors. (2009).
- [1152] Marc Levy. 1988. Display of Surfaces from Volume Data. *IEEE Computer Graphics & Applications* 8, 3 (May 1988), 29–37.
- [1153] Marc Levy. 1990. Efficient Ray Tracing of Volume Data. *ACM Transactions on Graphics* 9, 3 (July 1990), 245–261. <https://doi.org/10/cp7p9b>
- [1154] Marc Levy. 1990. Volume Rendering by Adaptive Refinement. *The Visual Computer* 6, 1 (Feb. 1990), 2–7.
- [1155] Marc Levy and Pat Hanrahan. 1996. Light Field Rendering. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, 31–42. <https://doi.org/10/c528qk>
- [1156] Marc Levy, Kari Pulli, Brian Curless, Szymon Rusinkiewicz, David Koller, Lucas Pereira, Matt Ginzton, Sean Anderson, James Davis, Jeremy Ginsberg, Jonathan Shade, and Duane Fulk. 2000. The Digital Michelangelo Project: 3D Scanning of Large Statues. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press/Addison-Wesley Publishing Co., New York, NY, USA, 131–144. <https://doi.org/10/bxh89s>
- [1157] Bruno Lévy and Yang Liu. 2010.  $L_p$  Centroidal Voronoi Tessellation and Its Applications. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 29, 4, Article 119 (July 2010), 11 pages. <https://doi.org/10/cq4fnr>
- [1158] J. Lewins. 1960. Surface Perturbation Theory. *Nuclear Science and Engineering* 7 (1960), 481–486.
- [1159] Jeffery Lewins. 1965. *Importance, the Adjoint Function: The Physical Basis of Variational and Perturbation Theory in Transport and Diffusion Problems*. Pergamon Press, NY.
- [1160] E. E. Lewis. 1977. Progress in Multidimensional Neutron Transport Computation. *Nuclear Science and Engineering* 64 (1977), 279–293.
- [1161] E. E. Lewis and Jr. W. F. Miller. 1984. *Computational Methods of Neutron Transport*. John Wiley & Sons, NY.
- [1162] Jason E. Lewis and Alex Weyers. 1999. ActiveText: A Method for Creating Dynamic and Interactive Texts. In *UIST-1999*. 131–140.
- [1163] Robert R. Lewis. 1994. Making Shaders More Physically Plausible. *Computer Graphics Forum* 13, 2 (1994), 109–120. <https://doi.org/10/bc2r6n>
- [1164] Robert R. Lewis and Alain Fournier. 1996. Light-Driven Global Illumination with a Wavelet Representation of Light Transport. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Xavier Pueyo and Peter Schröder (Eds.). Eurographics, Springer-Verlag, 11–20.
- [1165] Hongwei Li, Diego Nehab, Li-Yi Wei, Pedro V. Sander, and Chi-Wing Fu. 2010. Fast Capacity Constrained Voronoi Tessellation. In *Proceedings of the 2010 ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games (I3D '10)*. ACM, Article 13, 1 pages. <https://doi.org/10.1145/1730971.1730985>
- [1166] Hongwei Li, Li-Yi Wei, Pedro V. Sander, and Chi-Wing Fu. 2010. Anisotropic Blue Noise Sampling. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 29, 6 (Dec. 2010), 167:1–167:12. <https://doi.org/10/c8npd7>
- [1167] Li Li, Lei Wu, Xingbin Wang, and Ersheng Dang. 2012. Gated Viewing Laser Imaging with Compressive Sensing. *Applied Optics* 51, 14 (2012). <https://doi.org/10/gfz5mt>
- [1168] Tzu-Mao Li, Jaakko Lehtinen, Ravi Ramamoorthi, Wenzel Jakob, and Frédo Durand. 2015. Anisotropic Gaussian Mutations for Metropolis Light Transport through Hessian-Hamiltonian Dynamics. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 34, 6 (Oct. 2015), 209:1–209:13. <https://doi.org/10/f7wrcs>
- [1169] Tzu-Mao Li, Yu-Ting Wu, and Yung-Yu Chuang. 2012. SURE-Based Optimization for Adaptive Sampling and Reconstruction. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 31, 6 (Nov. 2012), 194:1–194:9. <https://doi.org/10/f96zxx>
- [1170] Yiyi Liao, Simon Donne, and Andreas Geiger. 2018. Deep Marching Cubes: Learning Explicit Surface Representations. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. IEEE Computer Society, 2916–2925.



- <https://doi.org/10/gfz547>
- [1171] Richard L. Liboff. 1956. Funk-Hecke Theorem in Relation to the Transport Equation. *Journal of Applied Physics* 27 (1956), 662–663.
- [1172] Richard L. Liboff. 1969. *Introduction to the Theory of Kinetic Equations*. John Wiley & Sons, NY.
- [1173] Allan J. Lichtenberg. 1969. *Phase-Space Dynamics of Particles*. John Wiley & Sons, NY.
- [1174] Sheue-ling Lien and James T. Kajiya. 1984. A Symbolic Method for Calculating the Integral Properties of Arbitrary Nonconvex Polyhedra. *IEEE Computer Graphics & Applications* 4, 10 (Oct. 1984), 35–41.
- [1175] Gábor Liktó and Carsten Dachsbacher. 2011. Real-Time Volume Caustics with Adaptive Beam Tracing. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, San Francisco, California, 47. <https://doi.org/10/dwkvsvb>
- [1176] Ivan T. Lima, Anshul Kalra, and Sherif S. Sherif. 2011. Improved Importance Sampling for Monte Carlo Simulation of Time-Domain Optical Coherence Tomography. *Biomedical optics express* 2, 5 (2011). <https://doi.org/10/bv83k6>
- [1177] Jingyu Lin, Yebin Liu, Matthias B. Hullin, and Qionghai Dai. 2014. Fourier Analysis on Transient Imaging with a Multifrequency Time-of-Flight Camera. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. <https://doi.org/10/gfz5mv>
- [1178] Jingyu Lin, Yebin Liu, Jinli Suo, and Qionghai Dai. 2016. Frequency-Domain Transient Imaging. *IEEE Transactions on Pattern Analysis and Machine Intelligence* PP, 99 (2016). <https://doi.org/10/f95dvd>
- [1179] S. H. Lin and E. M. Sparrow. 1965. Radiant Interchange among Curved Specularly Reflecting Surfaces – Application to Cylindrical and Conical Cavities. *ASME Journal of Heat Transfer* 87, 2 (May 1965), 299–307.
- [1180] S. L. Lin and J. N. Bardsley. 1978. The Null-Event Method in Computer Simulation. *Computer Physics Communications* 15, 3 (Oct. 1978), 161–163. <https://doi.org/10/bxv5zt>
- [1181] Marvin Lindner, Ingo Schiller, Andreas Kolb, and Reinhard Koch. 2010. Time-of-Flight Sensor Calibration for Accurate Range Sensing. *Comput. Vis. Image Underst.* 114, 12 (2010). <https://doi.org/10/ftdrcj>
- [1182] R. T. Liner, Jr. 1969. Moment and Discrete Ordinate Methods in Radiative Transfer Problems. *Journal of Quantitative Spectroscopy and Radiative Transfer* 9 (1969), 721–732. <https://doi.org/10/bftwzn>
- [1183] S.G. Lipson, B. Lipson, and D.S. Tanhauser. 1995. *Optical Physics* (third edition ed.). Cambridge.
- [1184] Dani Lischinski. 1994. *Accurate and Reliable Algorithms for Global Illumination*. Ph.D. Thesis. Cornell University, Ithaca, NY.
- [1185] Dani Lischinski and Ari Rappoport. 1998. Image-Based Rendering for Non-Diffuse Synthetic Scenes. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*.
- [1186] Dani Lischinski, Brian Smits, and Donald P. Greenberg. 1994. Bounds and Error Estimates for Radiosity. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 67–74.
- [1187] Daniel Lischinski, Filippo Tampieri, and Donald P. Greenberg. 1992. Discontinuity Meshing for Accurate Radiosity. *IEEE Computer Graphics & Applications* 12, 6 (Nov. 1992), 25–39. <https://doi.org/10/c7wr23>
- [1188] Daniel Lischinski, Filippo Tampieri, and Donald P. Greenberg. 1993. Combining Hierarchical Radiosity and Discontinuity Meshing. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 199–208.
- [1189] B. Liu, G. J. Clapworthy, and F. Dong. 2009. Fast Isosurface Rendering on a GPU by Cell Rasterization. *Computer Graphics Forum* 28, 8 (Dec. 2009), 2151–2164. <https://doi.org/10/fw6b7c>
- [1190] Fuchang Liu, Tobias Martin, Sai-Kit Yeung, and Markus Gross. 2015. Efficient Direct Rendering of Deforming Surfaces via Shared Subdivision Trees. *Computer Aided Design* 58 (Jan. 2015), 132–140. <https://doi.org/10/gfz54x>
- [1191] Haiyan Liu and Min-Qian Liu. 2015. Column-Orthogonal Strong Orthogonal Arrays and Sliced Strong Orthogonal Arrays. *Statistica Sinica* (2015). <https://doi.org/10/f7z56h>
- [1192] Jun S. Liu, Faming Liang, and Wing Hung Wong. 2000. The Multiple-Try Method and Local Optimization in Metropolis Sampling. *J. Amer. Statist. Assoc.* 95, 449 (March 2000), 121–134. <https://doi.org/10/gfkqj>
- [1193] Y.L. Liu, J. Wang, X. Chen, Y.W. Guo, and Q.S. Peng. 2008. A Robust and Fast Non-Local Means Algorithm for Image Denoising. *Journal of Computer Science and Technology* 23, 2 (2008), 270–279. <https://doi.org/10/fwcm4m>
- [1194] Stuart Lloyd. 1982. Least Squares Quantization in PCM. *IEEE Transactions on Information Theory* 28, 2 (March 1982), 129–137. <https://doi.org/10/cfzm28>
- [1195] M. Lobo and A. F. Emery. 1990. Development of Special Radiation Elements to Improve the Performance of Finite Element Methods for Thermal Radiation Analysis. In *Radiation Heat Transfer: Fundamentals and Applications*. ASME, NY, 53–64.
- [1196] D. O. Loftsgaarden and C. P. Quesenberry. 1965. A Nonparametric Estimate of a Multivariate Density Function. *The Annals of Mathematical Statistics* 36, 3 (June 1965), 1049–1051. <https://doi.org/10/cp569f>
- [1197] Tom Lokovic and Eric Veach. 2000. Deep Shadow Maps. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, 385–392. <https://doi.org/10/cz2sdj>
- [1198] E. Lommel. 1889. Die Photometrie der Diffusen Zurückwerfung. *Annalen der Physik* 36 (1889), 473–502. <https://doi.org/10/bq5bmq> First derivation of radiosity equation.
- [1199] Charles Loop. 1994. Smooth Spline Surfaces over Irregular Meshes. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 303–310.
- [1200] B. Loos, L. Antani, K. Mitchell, D. Nowrouzezahrai, W. Jarosz, and P.-P. Sloan. 2011. Runtime Implementation of Modular Radiance Transfer. In *ACM SIGGRAPH Talks*. <https://doi.org/10/cbv8rm>
- [1201] Bradford J. Loos, Lakulish Antani, Kenny Mitchell, Derek Nowrouzezahrai, Wojciech Jarosz, and Peter-Pike Sloan. 2011. Modular Radiance Transfer. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 30, 6 (Dec. 2011), 178:1–178:10. <https://doi.org/10/gfzndt>
- [1202] Bradford James Loos, Derek Nowrouzezahrai, Wojciech Jarosz, and Peter-Pike Sloan. 2012. Delta Radiance Transfer. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, 191. <https://doi.org/10/gfzndh>
- [1203] William E. Lorensen and Harvey E. Cline. 1987. Marching Cubes: A High Resolution 3D Surface Construction Algorithm. *Computer Graphics (Proceedings of SIGGRAPH)* 21, 4 (Aug. 1987), 163–169. <https://doi.org/10/ft9gsh>
- [1204] Ludwig Lorenz. 1890. Lysbevægelsen i og uden for en af plane Lysbølger belyst Kugle. *Det Kongelige Danske Videnskaberne Selskabs Skrifter (trykt utg.): Naturvidenskabelig og Matematisk Afdeling* 6 (1890), 2–62.
- [1205] Guillaume Loubet and Fabrice Neyret. 2018. A New Microflake Model with Microscopic Self-Shadowing for Accurate Volume Downsampling. *Computer Graphics Forum (Proceedings of Eurographics)* 37, 2 (May 2018), 111–121. <https://doi.org/10/gd2h6w>
- [1206] T. J. Love and R. J. Grosh. 1965. Radiative Heat Transfer in Absorbing, Emitting, and Scattering Media. *ASME Journal of Heat Transfer* 87, 2 (May 1965), 161–166.
- [1207] Shaun Lovejoy, Anthony Davis, Philip Gabriel, Daniel Schertzer, and Geoffrey L. Austin. 1990. Discrete Angle Radiative-Transfer 1: Scaling and Similarity, Universality and Diffusion. *Journal of Geophysical Research* 95, D8 (July 1990), 11699–11715. <https://doi.org/10/d8dczd>
- [1208] Jianxin Luo, Guyu Hu, and Guiqiang Ni. 2014. Dual-Space Ray Casting for Height Field Rendering. *Computer Animation and Virtual Worlds* 25, 1 (2014), 45–56. <https://doi.org/10/f5r5q3>
- [1209] I. Lux and L. Koblinger. 1991. *Monte Carlo Particle Transport Methods: Neutron and Photon Calculations*. CRC Press.
- [1210] D. Lynch and W. Livingston. 2001. *Color and Light in Nature* (2 ed.). Cambridge University Press.
- [1211] J. A. Lynes. 1968. *Principles of Natural Lighting*. Elsevier, NY.
- [1212] K. A. Lyons, H. Meijer, and D. Rappaport. 1998. Algorithms for Cluster Busting in Anchored Graph Drawing. *Journal of Graph Algorithms and Applications* 2, 1 (1998), 1–24. <https://doi.org/10/gfz2k3>
- [1213] Chongyang Ma, Li-Yi Wei, Sylvain Lefebvre, and Xin Tong. 2013. Dynamic Element Textures. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 32, 4 (July 2013), 90:1–90:10. <https://doi.org/10/gfvd6w>
- [1214] Chongyang Ma, Li-Yi Wei, and Xin Tong. 2011. Discrete Element Textures. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 30, 4 (July 2011), 62:1–62:10. <https://doi.org/10/dng43z>
- [1215] David J. MacDonald and Kellogg S. Booth. 1990. Heuristics for Ray Tracing Using Space Subdivision. *The Visual Computer* 6, 3 (1990), 153–166. <https://doi.org/10/bbw6pb>
- [1216] Paulo W. C. Maciel and Peter Shirley. 1995. Visual Navigation of Large Environments Using Textured Clusters. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*, Pat Hanrahan and Jim Winget (Eds.). ACM SIGGRAPH, 95–102.
- [1217] I. Scott MacKenzie. 1992. Movement Time Prediction in Human-Computer Interfaces. In *Proceedings of Computer Graphics International (CGI)*. 140–150.
- [1218] I. Scott MacKenzie and Shawn X. Zhang. 1997. The Immediate Usability of Graffiti. In *Proceedings of Computer Graphics International (CGI)*. 129–137.
- [1219] Thomas Murray MacRobert and Ian Naismith Sneddon. 1967. *Spherical Harmonics: An Elementary Treatise on Harmonic Functions, with Applications* (3 ed.). Pergamon Press, Oxford, England.
- [1220] A. Majumdar and C. L. Tien. 1990. Reflection of Radiation by Rough Fractal Surfaces. In *Radiation Heat Transfer: Fundamentals and Applications*. ASME, NY, 27–35.
- [1221] F. Malvagi and G. C. Pomraning. 1991. Initial and Boundary-Conditions for Diffusive Linear Transport Problems. *J. Math. Phys.* 32, 3 (1991), 805–820.
- [1222] Benoit B. Mandelbrot and John W. Van Ness. 1968. Fractional Brownian Motions, Fractional Noises and Applications. *SIAM Rev.* 10, 4 (Oct. 1968), 422–437. <https://doi.org/10.1137/1010093>
- [1223] Marco Manzi, Markus Kettunen, Miika Aittala, Jaakko Lehtinen, Frédo Durand, and Matthias Zwicker. 2015. Gradient-Domain Bidirectional Path Tracing. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)*

- 34 (2015).
- [1224] Marco Manzi, Fabrice Rousselle, Markus Kettunen, Jaakko Lehtinen, and Matthias Zwicker. 2014. Improved Sampling for Gradient-Domain Metropolis Light Transport. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 33, 6 (2014). <https://doi.org/10/f6r2hp>
- [1225] Marco Manzi, Delio Vicini, and Matthias Zwicker. 2016. Regularizing Image Reconstruction for Gradient-Domain Rendering with Feature Patches. *Computer Graphics Forum (Proceedings of Eurographics)* 35, 2 (2016), 263–273. <https://doi.org/10/f8q6rb>
- [1226] Michael Mara, Morgan McGuire, Benedikt Bitterli, and Wojciech Jarosz. 2017. An Efficient Denoising Algorithm for Global Illumination. In *Proceedings of High Performance Graphics*. ACM Press, 3. <https://doi.org/10/gfzndq>
- [1227] G. I. Marchuk and V. V. Orlov. 1963. The Theory of Adjoint Functions. In *Soviet Progress in Neutron Physics*, P. A. Krupchitskii (Ed.). Consultants Bureau, NY.
- [1228] Julio Marco. 2013. *Transient Light Transport in Participating Media*. Ph.D. Thesis. Universidad de Zaragoza.
- [1229] Julio Marco, Ibón Guillén, Wojciech Jarosz, Diego Gutierrez, and Adrian Jarabo. 2019. Progressive Transient Photon Beams. *Computer Graphics Forum* 38, 1 (March 2019). <https://doi.org/10/gfvr9w>
- [1230] Julio Marco, Quercus Hernandez, Adolfo Muñoz, Yue Dong, Adrian Jarabo, Min Kim, Xin Tong, and Diego Gutierrez. 2017. DeepToF: Off-the-Shelf Real-Time Correction of Multipath Interference in Time-of-Flight Imaging. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 36, 6 (2017).
- [1231] Julio Marco, Adrian Jarabo, Wojciech Jarosz, and Diego Gutierrez. 2018. Second-Order Occlusion-Aware Volumetric Radiance Caching. *ACM Transactions on Graphics* 37, 2 (July 2018), 1–14. <https://doi.org/10/gdv86k>
- [1232] Julio Marco, Wojciech Jarosz, Diego Gutierrez, and Adrian Jarabo. 2017. Transient Photon Beams. In *Congreso Espanol de Informatica Grafica*. Eurographics Association. <https://doi.org/10.2312/ceig.20171216>
- [1233] E. Marinari and G. Parisi. 1992. Simulated Tempering: A New Monte Carlo Scheme. *Europhysics Letters (EPL)* 19, 6 (July 1992), 451–458. <https://doi.org/10/bvn22s>
- [1234] Stephen R. Marschner, Henrik Wann Jensen, Mike Cammarano, Steve Worley, and Pat Hanrahan. 2003. Light Scattering from Human Hair Fibers. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 22, 3 (July 2003), 780. <https://doi.org/10/b4cprd>
- [1235] William R. Martin and James J. Duderstadt. 1977. Finite Element Solutions of the Neutron Transport Equation with Applications to Strong Heterogeneities. *Nuclear Science and Engineering* 62 (1977), 371–390.
- [1236] D. Mason and G. Wyvill. 2001. Blendeforming: Ray Traceable Localized Foldover-Free Space Deformation. In *Proceedings of Computer Graphics International (CGI)*. 183–190. <https://doi.org/10/cg6z86>
- [1237] Masatoshi Matsumiya, Haruo Takemura, and Naokazu Yokoya. 2000. An Immersive Modeling System for 3D Free-Form Design Using Implicit Surfaces. In *Proceedings of the ACM Symposium on Virtual Reality Software and Technology (VRST '00)*. ACM Press, New York, NY, USA, 67–74. <https://doi.org/10/drcg8f>
- [1238] Makoto Matsumoto and Takuji Nishimura. 1998. Mersenne Twister: A 623-Dimensionally Equidistributed Uniform Pseudo-Random Number Generator. *ACM Transactions on Modeling and Computer Simulation* 8, 1 (1998), 3–30. <https://doi.org/10/b68zmp>
- [1239] Oliver Mattausch, Takeo Igarashi, and Michael Wimmer. 2013. Freeform Shadow Boundary Editing. *Computer Graphics Forum (Proceedings of Eurographics)* 32, 2 (2013), 175–184. <https://doi.org/10/gbczxc>
- [1240] Wojciech Matusik, Boris Ajdin, Jinwei Gu, Jason Lawrence, Hendrik P. A. Lensch, Fabio Pellacini, and Szymon Rusinkiewicz. 2009. Printing Spatially-Varying Reflectance. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 28, 5 (Dec. 2009), 128:1–128:9. <https://doi.org/10/b7367c>
- [1241] Wojciech Matusik, Hanspeter Pfister, Matt Brand, and Leonard McMillan. 2003. A Data-Driven Reflectance Model. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 22, 3 (July 2003), 759–769. <https://doi.org/10.1145/882262.882343>
- [1242] Nelson Max. 1994. Efficient Light Propagation for Multiple Anisotropic Volume Scattering. In *Photorealistic Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Georgios Sakas, Peter Shirley, and Stefan Müller (Eds.). Springer-Verlag, 87–104.
- [1243] Nelson Max, Pat Hanrahan, and Roger Crawfis. 1990. Area and Volume Coherence for Efficient Visualization of 3D Scalar Functions. *Computer Graphics (Proceedings of SIGGRAPH)* 24, 5 (Nov. 1990), 27–33.
- [1244] Nelson Max, Curtis Mobley, Brett Keating, and En-Hua Wu. 1997. Plane-Parallel Radiance Transport for Global Illumination in Vegetation. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Julie Dorsey and Philipp Slusallek (Eds.). Springer-Verlag, 239–250. ISBN 3-211-83001-4.
- [1245] Nelson L. Max. 1986. Atmospheric Illumination and Shadows. *Computer Graphics (Proceedings of SIGGRAPH)* 20, 4 (Aug. 1986), 117–124. <https://doi.org/10/djr6wm>
- [1246] Nelson L. Max. 1990. Antialiasing Scan-Line Data. *IEEE Computer Graphics & Applications* 10, 1 (Jan. 1990), 18–30. <https://doi.org/10/dswxdv>
- [1247] Nelson L. Max and Michael J. Allison. 1992. Linear Radiosity Approximation Using Vertex-to-Vertex Form Factors. In *Graphics Gems III*, David Kirk (Ed.). Academic Press, NY, 318–323.
- [1248] Gregory M. Maxwell, Michael J. Bailey, and Victor W. Goldschmidt. 1986. Calculation of the Radiation Configuration Factor Using Ray Casting. *Computer Aided Design* 18, 7 (Sept. 1986), 371–379.
- [1249] William H. McAdams. 1954. *Heat Transmission*. McGraw-Hill, NY.
- [1250] A. S. McAllister. 1911. The Law of Conservation as Applied to Illumination Calculations. *Transactions of the Illuminating Engineering Society* 6 (1911), 703–721.
- [1251] Stephen McAuley, Stephen Hill, Adam Martinez, Ryusuke Villemin, Matt Pettineo, Dimitar Lazarov, David Neubelt, Brian Karis, Christophe Hery, Naty Hoffman, and Hakan Zap Andersson. 2013. Physically Based Shading in Theory and Practice. In *ACM SIGGRAPH Course Notes*. ACM Press, 22:1–22:8.
- [1252] Michael McCool and Eugene Fiume. 1992. Hierarchical Poisson Disk Sampling Distributions. In *Proceedings of Graphics Interface*. Morgan Kaufmann, 94–105.
- [1253] Michael D. McCool. 1999. Anisotropic Diffusion for Monte Carlo Noise Reduction. *ACM Transactions on Graphics* 18, 2 (April 1999), 171–194. <https://doi.org/10/b8rr7g>
- [1254] N. J. McCormick and I. Kušćer. 1973. Singular Eigenfunction Expansions in Neutron Transport Theory. In *Advances in Nuclear Science and Technology*, Ernest J. Henley and Jeffery Lewins (Eds.). Vol. 7. Academic Press, NY, 181–282. <https://doi.org/10.1016/B978-0-12-029307-0.50010-X>
- [1255] Morgan McGuire and David Luebke. 2009. Hardware-Accelerated Global Illumination by Image Space Photon Mapping. In *Proceedings of High Performance Graphics*. ACM Press, New Orleans, Louisiana, 77. <https://doi.org/10/b5pjmm>
- [1256] Michael D. McKay, Richard J. Beckman, and William Jay Conover. 1979. A Comparison of Three Methods for Selecting Values of Input Variables in the Analysis of Output from a Computer Code. *Technometrics* 21, 2 (1979), 239–245. <https://doi.org/10/gfzncd>
- [1257] G.J. McLachlan and T. Krishnan. 2008. *The EM Algorithm and Extensions* (second ed.). Wiley-Interscience.
- [1258] Leonard McMillan and Gary Bishop. 1995. Plenoptic Modeling: An Image-Based Rendering System. In *Annual Conference Series (Proceedings of SIGGRAPH)*, Robert Cook (Ed.). Addison-Wesley, 39–46.
- [1259] H. J. McNicholas. 1928. Absolute Methods of Reflectometry. *J. Res. Nat. Bur. Standards* 1 (1928), 29–73.
- [1260] Robert V. Meghrebian and David K. Holmes. 1960. *Reactor Analysis*. McGraw-Hill, NY.
- [1261] Ravish Mehra, Nikunj Raghuvanshi, Lakulish Antani, Anish Chandak, Sean Curtis, and Dinesh Manocha. 2013. Wave-Based Sound Propagation in Large Open Scenes Using an Equivalent Source Formulation. *ACM Transactions on Graphics* 32, 2, Article 19 (April 2013), 13 pages. <https://doi.org/10/gbc2kh>
- [1262] Soham Mehta, Ravi Ramamoorthi, Mark Meyer, and Christophe Hery. 2012. Analytic Tangent Irradiance Environment Maps for Anisotropic Surfaces. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* (2012).
- [1263] Soham Uday Mehta, Brandon Wang, and Ravi Ramamoorthi. 2012. Axis-Aligned Filtering for Interactive Sampled Soft Shadows. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 31, 6 (Nov. 2012), 163:1–163:10. <https://doi.org/10/f96zxx>
- [1264] Soham Uday Mehta, Brandon Wang, Ravi Ramamoorthi, and Frédo Durand. 2013. Axis-Aligned Filtering for Interactive Physically-Based Diffuse Indirect Lighting. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 32, 4 (July 2013), 96:1–96:12. <https://doi.org/10/gbdg8g>
- [1265] Soham Uday Mehta, JiaXian Yao, Ravi Ramamoorthi, and Frédo Durand. 2014. Factored Axis-Aligned Filtering for Rendering Multiple Distribution Effects. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 33, 4, Article 57 (July 2014), 12 pages. <https://doi.org/10/f6cz7q>
- [1266] Stephan Meister, Rahul Nair, Bernd Jähne, and Daniel Kondermann. 2013. *Photon Mapping Based Simulation of Multi-Path Reflection Artifacts in Time-of-Flight Sensors*. Technical Report. Heidelberg Collaboratory for Image Processing.
- [1267] Stephan Meister, Rahul Nair, and Daniel Kondermann. 2013. Simulation of Time-of-Flight Sensors Using Global Illumination. In *Proceedings of Vision, Modeling and Visualization*.
- [1268] Johannes Meng, Johannes Hanika, and Carsten Dachsbacher. 2016. Improving the Dwivedi Sampling Scheme. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 35, 4 (July 2016), 37–44. <https://doi.org/10/f84272>
- [1269] Johannes Meng, Marios Papas, Ralf Habel, Carsten Dachsbacher, Steve Marschner, Markus Gross, and Wojciech Jarosz. 2015. Multi-Scale Modeling and Rendering of Granular Materials. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 34, 4 (July 2015), 49:1–49:13. <https://doi.org/10/gfzndr>
- [1270] Donald H. Menzel (Ed.). 1966. *Selected Papers on the Transfer of Radiation*. Dover Publications, NY.

- [1271] Nicholas Metropolis. 1987. The Beginning of the Monte Carlo Method. *Los Alamos Science* 15 (1987), 125–130.
- [1272] Nick Metropolis, Arianna Rosenbluth, Marshall Rosenbluth, Augusta Teller, and Edward Teller. 1953. Equations of State Calculations by Fast Computing Machines. *Journal of Chemical Physics* 21 (1953), 1087–1091. <https://doi.org/10/ds736f>
- [1273] Nicholas Metropolis, Arianna W. Rosenbluth, Marshall N. Rosenbluth, Augusta H. Teller, and Edward Teller. 1953. Equation of State Calculations by Fast Computing Machines. *Journal of Chemical Physics* 21, 6 (June 1953), 1087–1092. <https://doi.org/10/ds736f>
- [1274] Nicholas Metropolis and Stanislaw M. Ulam. 1949. The Monte Carlo Method. *J. Amer. Statist. Assoc.* 44, 247 (Sept. 1949), 335–341. <https://doi.org/10/dvn2n8>
- [1275] Alexandre Meyer and Fabrice Neyret. 1998. Interactive Volumetric Textures. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, George Drettakis and Nelson Max (Eds.). Springer-Verlag, 157–168. <https://doi.org/10/fbgxqj>
- [1276] Mark Meyer and John Anderson. 2006. Statistical Acceleration for Animated Global Illumination. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 25, 3 (2006), 1075–1080. <https://doi.org/10/d9twms>
- [1277] Jurgen R. Meyer-Arendt. 1968. Radiometry and Photometry: Units and Conversion Factors. *Applied Optics* 7, 10 (Oct. 1968), 2081–2084.
- [1278] Gustav Mie. 1908. Beiträge zur Optik trüber Medien, speziell kolloidaler Metallösungen. *Annalen der Physik* 330, 3 (Jan. 1908), 377–445. <https://doi.org/10/frvnpg>
- [1279] Dimitri Mihalas and Barbara Weibel Mihalas. 1984. *Foundations of Radiation Hydrodynamics*. Oxford, NY.
- [1280] Gavin Miller and Marc Mondesir. 1998. Rendering Hyper-Sprites in Real Time. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, George Drettakis and Nelson Max (Eds.). Eurographics, 193–198.
- [1281] Laurence B. Miller. 1967. *Monte Carlo Analysis of Reactivity Coefficients in Fast Reactors; General Theory and Applications*. Technical Report ANL-7307. Argonne National Laboratory, Argonne, IL, USA. <https://doi.org/10.2172/4500721>
- [1282] Edward A. Milne. 1930. Thermodynamics of the Stars. In *Handbuch Der Astrophysik, Volume 3, Part I*, E. A. Milne, A. Pannekoek, S. Rosseland, and W. Westphal (Eds.). Springer-Verlag, Berlin, Chapter 2, 65–255.
- [1283] M. Minnaert. 1941. The Reciprocity Principle in Lunar Photometry. *Astrophysical Journal* 93 (1941), 403–410.
- [1284] Marcel Minnaert. 1993. *Light and Color in the Outdoors*. Springer-Verlag, New York.
- [1285] M. I. Mishchenko, J. W. Hovenier, and L. D. Travis. 2000. *Light Scattering by Nonspherical Particles: Theory, Measurements, and Applications*.
- [1286] Subhash C. Mishra and Manohar Prasad. 1998. Radiative Heat Transfer in Participating Media — A Review. *Sadhana* 23, 2 (April 1998), 213. <https://doi.org/10/c7rc7q>
- [1287] Richard G. Mistrick and David L. DiLaura. [n. d.]. A New Finite Orthogonal Transform Applied to Radiative Transfer Calculations. *Journal of the Illuminating Engineering Society* 16, 2 ([n. d.]), 120–126. <https://doi.org/10/gfzv92>
- [1288] Kazuo Misue, Peter Eades, Wei Lai, and Kozo Sugiyama. 1995. Layout Adjustment and the Mental Map. *Journal of Visual Languages and Computing* 6 (June 1995), 183–210. <https://doi.org/10/fp8b8w>
- [1289] Don Mitchell. 1990. Robust Ray Intersection with Interval Arithmetic. In *Proceedings of Graphics Interface*, Vol. Halifax. 68–74. <https://doi.org/10/gfz56m>
- [1290] Don Mitchell and Pat Hanrahan. 1992. Illumination from Curved Reflectors. *Computer Graphics (Proceedings of SIGGRAPH)* 26, 2 (July 1992), 283–291. <https://doi.org/10/fsh6zf>
- [1291] Don P. Mitchell. 1987. Generating Antialiased Images at Low Sampling Densities. *Computer Graphics (Proceedings of SIGGRAPH)* 21, 4 (Aug. 1987), 65–72. <https://doi.org/10/c6fdp8>
- [1292] Don P. Mitchell. 1991. Spectrally Optimal Sampling for Distribution Ray Tracing. *Computer Graphics (Proceedings of SIGGRAPH)* 25, 4 (July 1991), 157–164. <https://doi.org/10/btwnm3>
- [1293] Don P. Mitchell. 1992. Ray Tracing and Irregularities of Distribution. In *CE\_EGWR93*. 61–69.
- [1294] Don P. Mitchell. 1996. Consequences of Stratified Sampling in Graphics. In *Annual Conference Series (Proceedings of SIGGRAPH)*, Holly Rushmeier (Ed.). ACM\_SIGGRAPH, Addison-Wesley, 277–280. <https://doi.org/10/dkw86x>
- [1295] Don P. Mitchell and Arun N. Netravali. 1988. Reconstruction Filters in Computer-Graphics. *SIGGRAPH Comput. Graph.* 22, 4 (June 1988), 221–228. <https://doi.org/10/fggxbg>
- [1296] Joseph S. B. Mitchell. 1988. On Maximal Flows in Polyhedral Domains. In *Proceedings of the Fourth Annual Symposium on Computational Geometry*. 341–351.
- [1297] K. Mitchell. 1940. Tables of a Function with an Account of Some Properties of This and Related Functions. *Philos. Mag.* 40, 302 (March 1940), 351–368.
- [1298] K. Mitra and S. Kumar. 1999. Development and Comparison of Models for Light-Pulse Transport through Scattering-Absorbing Media. *Applied Optics* 38, 1 (1999), 188–196. <https://doi.org/10/fpc98c>
- [1299] T. Mitsunaga and S.K. Nayar. 1999. Radiometric Self Calibration. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Vol. 1. 374–380. <https://doi.org/10/d5frcb>
- [1300] Michael F. Modest. 1993. *Radiative Heat Transfer*. McGraw-Hill, NY.
- [1301] A. Mohan, J. Tumblin, and P. Choudhury. 2007. Editing Soft Shadows in a Digital Photograph. *IEEE Computer Graphics & Applications* 27, 2 (March 2007), 23–31. <https://doi.org/10/b43fng>
- [1302] Michal Mojžík, Tomáš Skřivan, Alexander Wilkie, and Jaroslav Krivánek. 2016. Bi-Directional Polarised Light Transport. In *Proceedings of EGSR (Experimental Ideas & Implementations)*, Elmar Eisemann and Eugene Fiume (Eds.). The Eurographics Association. <https://doi.org/10/gfzsmx>
- [1303] Jesper Möller and Rasmus Plenge Waagepetersen. 2004. *Statistical Inference and Simulation for Spatial Point Processes*. Chapman & Hall/CRC.
- [1304] George S. Monk. 1937. *Light: Principles and Experiments*. McGraw-Hill, NY.
- [1305] B. Montagnini. 1979. The Eigenvalue Spectrum of the Linear Boltzmann Operator in  $L^1(\mathbb{R}^6)$  and  $L^2(\mathbb{R}^6)$ . *Meccanica* 14 (1979), 134–144. <https://doi.org/10/fn24fd>
- [1306] Bochang Moon, Nathan Carr, and Sung-Eui Yoon. 2014. Adaptive Rendering Based on Weighted Local Regression. *ACM Transactions on Graphics* 33, 5 (Sept. 2014), 170:1–170:14. <https://doi.org/10/f6km7m>
- [1307] Bochang Moon, Jose A. Iglesias-Guitian, Sung-Eui Yoon, and Kenny Mitchell. 2015. Adaptive Rendering with Linear Predictions. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 34, 4 (July 2015), 121:1–121:11. <https://doi.org/10/f7m2hp>
- [1308] Bochang Moon, Jong Yun Jun, JongHyeob Lee, Kunho Kim, Toshiya Hachisuka, and Sung-Eui Yoon. 2013. Robust Image Denoising Using a Virtual Flash Image for Monte Carlo Ray Tracing. *Computer Graphics Forum* 32, 1 (2013), 139–151. <https://doi.org/10/f4pzxk>
- [1309] Bochang Moon, Steven McDonagh, Kenny Mitchell, and Markus Gross. 2016. Adaptive Polynomial Rendering. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 35, 4 (July 2016), 40:1–40:10. <https://doi.org/10/f89mx6>
- [1310] Jonathan T. Moon and Stephen R. Marschner. 2006. Simulating Multiple Scattering in Hair Using a Photon Mapping Approach. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 25, 3 (July 2006). <https://doi.org/10/cd4qf5>
- [1311] Jonathan T. Moon, Bruce Walter, and Steve Marschner. 2008. Efficient Multiple Scattering in Hair Using Spherical Harmonics. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 27, 3 (2008), 31:1–31:7. <https://doi.org/10/d6r3zt>
- [1312] Jonathan T. Moon, Bruce Walter, and Stephen R. Marschner. 2007. Rendering Discrete Random Media Using Precomputed Scattering Solutions. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. Eurographics Association, Aire-la-Ville, Switzerland, Switzerland, 231–242. <https://doi.org/10/gfzp5n>
- [1313] Parry Moon. 1936. *The Scientific Basis of Illuminating Engineering*. McGraw-Hill, NY.
- [1314] Parry Moon. 1939. Basic Principles in Illumination Calculations. *Journal of the Optical Society of America* 29, 3 (1939), 108–116. <https://doi.org/10/fib6x2>
- [1315] Parry Moon. 1940. On Interreflections. *Journal of the Optical Society of America* 30, 5 (May 1940), 195–205. <https://doi.org/10/d8n8px>
- [1316] Parry Moon. 1941. Interreflections in Rooms. *Journal of the Optical Society of America* 31, 5 (1941), 374–382. <https://doi.org/10/dg78pn>
- [1317] Parry Moon. 1942. Reflection Factors of Floor Materials. *Journal of the Optical Society of America* 32, 4 (1942), 238–242.
- [1318] Parry Moon. 1942. A System of Photometric Concepts. *Journal of the Optical Society of America* 32, 6 (1942), 348–362. <https://doi.org/10/bm2hpb4>
- [1319] Parry Moon. 1943. New Methods of Calculating Illumination. *Journal of the Optical Society of America* 33, 2 (1943), 115–122. <https://doi.org/10/brkrk3>
- [1320] Parry Moon and Domina E. Spencer. 1944. Brightness and Helios. *Illuminating Engineering* 39, 8 (Sept. 1944), 507–520.
- [1321] Parry Moon and Domina E. Spencer. 1945. Polynomial Representation of Reflectance Curves. *Journal of the Optical Society of America* 35, 9 (Sept. 1945), 597–600. <https://doi.org/10/dnwq33>
- [1322] Parry Moon and Domina E. Spencer. 1946. Analytic Expressions in Photometry and Colorimetry. *Journal of Mathematics and Physics* 25 (1946), 111–190.
- [1323] Parry Moon and Domina E. Spencer. 1948. *Lighting Design*. Addison-Wesley, CambMass.
- [1324] Parry Moon and Domina Eberle Spencer. 1981. *The Photoc Field*. MIT Press, Cambridge, MA.
- [1325] A. D. Moore. 1929. Inter-Reflection by the Incremental Method as Applied to a Light Court. *Transactions of the Illuminating Engineering Society* 24 (1929), 629–670.
- [1326] Eliakim Hastings Moore. 1920. On the Reciprocal of the General Algebraic Matrix. *Bull. Amer. Math. Soc.* 26, 9 (June 1920), 385–396. <https://doi.org/10/fsmnb5>



- [1327] Hans P. Moravec. 1981. 3D Graphics and the Wave Theory. *Computer Graphics (Proceedings of SIGGRAPH)* 15, 3 (1981), 289–296. <https://doi.org/10/bgtm3p>
- [1328] L. W. G. Morgan and D. Kotlyar. 2015. Weighted-Delta-Tracking for Monte Carlo Particle Transport. *Annals of Nuclear Energy* 85 (Nov. 2015), 1184–1188. <https://doi.org/10/gfzq7k>
- [1329] R. Keith Morley, Solomon Boulos, Jared Johnson, David Edwards, Peter Shirley, Michael Ashikhmin, and Simon Premoze. 2006. Image Synthesis Using Adjoint Photons. In *Proceedings of Graphics Interface*. Canadian Information Processing Society, Toronto, Ont., Canada, Canada, 179–186.
- [1330] Eric N. Mortensen and William A. Barrett. 1995. Intelligent Scissors for Image Composition. In *Annual Conference Series (Proceedings of SIGGRAPH)*, 191–198.
- [1331] Adolfo Muñoz. 2014. Higher Order Ray Marching. *Computer Graphics Forum* 33, 8 (2014), 167–176. <https://doi.org/10/f6q4sf>
- [1332] Stefan Müller, Wolfram Kresse, Neil Gatenby, and Frank Schöffel. 1995. A Radiosity Approach for the Simulation of Daylight. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, P. M. Hanrahan and W. Purgathofer (Eds.). Springer-Verlag, NY, 137–146.
- [1333] Thomas Müller, Markus Gross, and Jan Novák. 2017. Practical Path Guiding for Efficient Light-Transport Simulation. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 36, 4 (June 2017), 91–100. <https://doi.org/10/gbnvrs>
- [1334] Thomas Müller, Marios Papas, Markus Gross, Wojciech Jarosz, and Jan Novák. 2016. Efficient Rendering of Heterogeneous Polydisperse Granular Media. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 35, 6 (Nov. 2016), 168:1–168:14. <https://doi.org/10/f9cm65>
- [1335] T. W. Mullikin. 1961. Principles of Invariance in Transport Theory. *J. Math. Anal. Appl.* 3, 3 (Dec. 1961), 441–454.
- [1336] Jacob Munkberg, Karthik Vaidyanathan, Jon Hasselgren, Petrik Clarberg, and Tomas Akenine-Möller. 2014. Layered Reconstruction for Defocus and Motion Blur. *Computer Graphics Forum* 33, 4 (2014), 81–92. <https://doi.org/10/f23s4s>
- [1337] Adolfo Muñoz, Jose I. Echevarria, Francisco J. Seron, Jorge Lopez-Moreno, Mashhuda Glencross, and Diego Gutierrez. 2011. BSSRDF Estimation from Single Images. *Computer Graphics Forum (Proceedings of Eurographics)* 30, 2 (April 2011), 455–464. <https://doi.org/10/dbrk57>
- [1338] Shigeru Muraki. 1992. Approximation and Rendering of Volume Data Using Wavelet Transforms. In *Proceedings of Visualization '92*, 19–23.
- [1339] J. F. Murray-Coleman and A. M. Smith. 1990. The Automated Measurement of BRDFs and Their Application to Luminaire Modeling. *Journal of the Illuminating Engineering Society* 19, 1 (1990), 87–99.
- [1340] S. S. R. Murty. 1965. Approximations on Angular Distribution of Intensity of Thermal Radiation. *International Journal of Heat and Mass Transfer* 8 (1965), 1203–1208. <https://doi.org/10/b3mcpce>
- [1341] A. Musbach, G. W. Meyer, F. Reitich, and S. H. Oh. 2013. Full Wave Modelling of Light Propagation and Reflection. *Computer Graphics Forum* 32, 6 (2013). <https://doi.org/10/f5znmr>
- [1342] Ken Museth. 2013. VDB: High-Resolution Sparse Volumes with Dynamic Topology. *ACM Transactions on Graphics* 32, 3 (July 2013), 27:1–27:22. <https://doi.org/10/gfzq7s>
- [1343] F. Kenton Musgrave. 1989. Prisms and Rainbows: A Dispersion Model for Computer Graphics. In *Proceedings of Graphics Interface*. Morgan Kaufmann, 227–234.
- [1344] Ranga B. Myneni, G. Asrar, and E. T. Kanemasu. 1987. Light Scattering in Plant Canopies: The Method of Successive Orders of Scattering Approximations (SOSA). *Agricultural and Forest Meteorology* 39 (1987), 1–12.
- [1345] Ranga B. Myneni and Juhan Ross (Eds.). 1991. *Photon-Vegetation Interactions*. Springer-Verlag, NY.
- [1346] Ranga B. Myneni, Juhan Ross, and Ghassem Asrar. 1989. A Review on the Theory of Photon Transport in Leaf Canopies. *Agricultural and Forest Meteorology* 45, 1–2 (Feb. 1989), 1–153.
- [1347] Karol Myszkowski. 1997. Lighting Reconstruction Using Fast and Adaptive Density Estimation Techniques. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*. Springer-Verlag, Berlin, Heidelberg, 251–262.
- [1348] Nikhil Naik, Christopher Barsi, Andreas Velten, and Ramesh Raskar. 2014. Estimating Wide-Angle, Spatially Varying Reflectance Using Time-Resolved Inversion of Backscattered Light. *Journal of the Optical Society of America A* 31, 5 (2014). <https://doi.org/10/gfz5mw>
- [1349] Nikhil Naik, Achuta Kadambi, Christoph Rhemann, Shahram Izadi, Ramesh Raskar, and Sing Bing Kang. 2015. A Light Transport Model for Mitigating Multipath Interference in Time-of-Flight Sensors. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. <https://doi.org/10/gfz5mx>
- [1350] Nikhil Naik, Shuang Zhao, Andreas Velten, Ramesh Raskar, and Kavita Bala. 2011. Single View Reflectance Capture Using Multiplexed Scattering and Time-of-Flight Imaging. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 30, 6 (Dec. 2011), 1. <https://doi.org/10/dj58zp>
- [1351] Rahul Nair, Stephan Meister, Martin Lambers, Michael Balda, Hannes Hofmann, Andreas Kolb, Daniel Kondermann, and Bernd Jähne. 2013. Ground Truth for Evaluating Time of Flight Imaging. In *Time-of-Flight and Depth Imaging. Sensors, Algorithms, and Applications*.
- [1352] Keiichi Nakagawa, Atsushi Iwasaki, Yu Oishi, Ryoichi Horisaki, Akira Tsukamoto, Aoi Nakamura, Kenichi Hirose, Hongen Liao, Takashi Ushida, Keisuke Goda, et al. 2014. Sequentially Timed All-Optical Mapping Photography (STAMP). *Nature Photonics* 8, 9 (2014). <https://doi.org/10/gfz5mz>
- [1353] Koji Nakamaru and Yoshio Ohno. 2002. Ray Tracing for Curves Primitive. In *Journal of the World Society for Computer Graphics (WSCG)*, Vol. 10, 311–316.
- [1354] M. H. N. Naraghi and B. T. F. Chung. 1984. A Stochastic Approach for Radiative Exchange in Enclosures with Nonparticipating Medium. *Transactions of the American Society of Mechanical Engineers* 106 (Nov. 1984), 690–698. <https://doi.org/10/cxpvjs>
- [1355] M. H. N. Naraghi and B. T. F. Chung. 1985. A New Approach for Radiative Interchange in Enclosures with Anisotropic Media and Directional Surfaces. In *Radiation Heat Transfer*. ASME, NY, 103–110.
- [1356] M. H. N. Naraghi and J. Huan. 1990. An N-Bounce Method for Analysis of Radiative Transfer in Enclosures with Anisotropically Scattering Media. In *Radiation Heat Transfer: Fundamentals and Applications*. ASME, NY, 107–115.
- [1357] Srinivasa G. Narasimhan, Mohit Gupta, Craig Donner, Ravi Ramamoorthi, Shree K. Nayar, and Henrik Wann Jensen. 2006. Acquiring Scattering Properties of Participating Media by Dilution. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 25, 3 (July 2006), 1003–1012. <https://doi.org/10/b6nt9p>
- [1358] Srinivasa G. Narasimhan and Shree K. Nayar. 2003. Shedding Light on the Weather. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 665–672. <https://doi.org/10/b46thc>
- [1359] Fernando Navarro, Francisco J. Seron, and Diego Gutierrez. 2011. Motion Blur Rendering: State of the Art. *Computer Graphics Forum* 30, 1 (2011). <https://doi.org/10/b574px>
- [1360] Shree K. Nayar. 1991. Surface Reflection: Physical and Geometrical Perspectives. *PAMI* 13, 7 (July 1991), 611–634. <https://doi.org/10/b3hrqz>
- [1361] Shree K. Nayar, Gurunandan Krishnan, Michael D. Grossberg, and Ramesh Raskar. 2006. Fast Separation of Direct and Global Components of a Scene Using High Frequency Illumination. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 25, 3 (2006). <https://doi.org/10/fw3cpp>
- [1362] Radford M. Neal. 2011. MCMC Using Hamiltonian Dynamics. In *Handbook of Markov Chain Monte Carlo*, Steve Brooks, Andrew Gelman, Galin L. Jones, and Xiao-Li Meng (Eds.). Vol. 2. Chapman & Hall/CRC, 113–162.
- [1363] Radford M. Neal and Geoffrey E. Hinton. 1998. A View of the EM Algorithm That Justifies Incremental, Sparse, and Other Variants. In *Learning in Graphical Models (NATO ASI Series)*, Michael I. Jordan (Ed.), Vol. 89. Springer-Verlag, Dordrecht, 355–368. <https://doi.org/10/gfzndk>
- [1364] Eric Neufeld, Anthony J. Kusalik, and Michael Dobrohocski. 1997. Visual Metaphors for Understanding Logic Program Execution. In *Proceedings of Computer Graphics International (CGI)*, 114–120.
- [1365] Attila Neumann, László Neumann, Philippe Bekaert, Yves D. Willems, and Werner Purgathofer. 1996. Importance-Driven Stochastic Ray Radiosity. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*. Springer-Verlag, 111–122.
- [1366] Laszlo Neumann, Martin Feda, Manfred Kopp, and Werner Purgathofer. 1994. A New Stochastic Radiosity Method for Highly Complex Scenes. In *Photorealistic Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, 195–206.
- [1367] Laszlo Neumann and Attila Neumann. 1989. Photosimulation: Interreflection with Arbitrary Reflectance Models and Illumination. *Computer Graphics Forum* 8 (1989), 21–34. <https://doi.org/10/dpps98>
- [1368] Laszlo Neumann, Werner Purgathofer, Robert F. Tobler, Attila Neumann, Pavol Elias, Martin Feda, and Xavier Pueyo. 1995. The Stochastic Ray Method for Radiosity. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, P. M. Hanrahan and W. Purgathofer (Eds.). Springer-Verlag, 206–218.
- [1369] Jerzy Neyman. 1934. On the Two Different Aspects of the Representative Method: The Method of Stratified Sampling and the Method of Purposive Selection. *Journal of the Royal Statistical Society* 97, 4 (1934), 558–625. <https://doi.org/10/bxjn9g>
- [1370] Fabrice Neyret. 1995. A General and Multiscale Model for Volumetric Textures. In *Proceedings of Graphics Interface*, Wayne A. Davis and Przemyslaw Prusinkiewicz (Eds.). Canadian Human-Computer Communications Society, 83–91.
- [1371] Fabrice Neyret. 1996. *Local Illumination in Deformed Space*. Technical Report RR-2856. INRIA.
- [1372] Fabrice Neyret. 1998. Modeling, Animating, and Rendering Complex Scenes Using Volumetric Textures. *IEEE Transactions on Visualization and Computer Graphics* 4, 1 (Jan. 1998), 55–70. <https://doi.org/10/bc72j4>

- [1373] Ren Ng, Ravi Ramamoorthi, and Pat Hanrahan. 2003. All-Frequency Shadows Using Non-Linear Wavelet Lighting Approximation. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 22, 3 (July 2003), 376. <https://doi.org/10/fmz579>
- [1374] Ren Ng, Ravi Ramamoorthi, and Pat Hanrahan. 2004. Triple Product Wavelet Integrals for All-Frequency Relighting. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 23, 3 (2004), 477–487. <https://doi.org/10/bgq9sw>
- [1375] Greg Nichols, Jeremy Shopf, and Chris Wyman. 2009. Hierarchical Image-Space Radiosity for Interactive Global Illumination. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 28, 4 (2009), 1141–1149. <https://doi.org/10/d9897>
- [1376] Greg Nichols and Chris Wyman. 2009. Multiresolution Splatting for Indirect Illumination. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, New York, NY, USA, 83–90. <https://doi.org/10/fbs59q>
- [1377] Greg Nichols and Chris Wyman. 2010. Interactive Indirect Illumination Using Adaptive Multiresolution Splatting. *IEEE Transactions on Visualization and Computer Graphics* 16, 5 (Sept. 2010), 729–741.
- [1378] Fred E. Nicodemus. 1963. Radiance. *American Journal of Physics* 31 (1963), 368–377.
- [1379] Fred E. Nicodemus. 1973. Normalization in Radiometry. *Applied Optics* 12, 12 (Dec. 1973), 2960–2973.
- [1380] Fred E. Nicodemus, J. C. Richmond, J. J. Hsia, I. W. Ginsberg, and T. Limperis. 1977. *Geometrical Considerations and Nomenclature for Reflectance*. Number 160 in Monograph. National Bureau of Standards, WashDC.
- [1381] F. E. Nicodemus, J. C. Richmond, J. J. Hsia, I. W. Ginsberg, and T. Limperis. 1977. *Geometric Considerations and Nomenclature for Reflectance*. Monograph 161. National Bureau of Standards (US).
- [1382] Harald Niederreiter. 1987. Point Sets and Sequences with Small Discrepancy. *Monatshefte für Mathematik* 104, 4 (Dec. 1987), 273–337. <https://doi.org/10/b3hqkg>
- [1383] Harald Niederreiter. 1992. *Quasi-Monte Carlo Methods*. Wiley Online Library.
- [1384] Harald Niederreiter. 1992. *Random Number Generation and Quasi-Monte Carlo Methods*. SIAM.
- [1385] Harald Niederreiter. 1995. New Developments in Uniform Pseudorandom Number and Vector Generation. In *Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing*, Harald Niederreiter and Peter Jau-Shyong Shiue (Eds.). Springer-Verlag, 87–120.
- [1386] Harald Niederreiter. 2006. *Monte Carlo and Quasi-Monte Carlo Methods 2004*. Springer-Verlag, Berlin. OCLC: 636180032.
- [1387] Jeffery S. Nimeroff, Eero Simoncelli, and Julie Dorsey. 1994. Efficient Rendering of Naturally Illuminated Environments. In *Photorealistic Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Georgios Sakas, Stefan Müller, and Peter Shirley (Eds.). Springer-Verlag, 359–373.
- [1388] Tomoyuki Nishita, Yoshinori Dobashi, and Eihachiro Nakamae. 1996. Display of Clouds Taking into Account Multiple Anisotropic Scattering and Sky Light. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, 379–386. <https://doi.org/10/dw4xr9>
- [1389] Tomoyuki Nishita, Yasuhiro Miyawaki, and Eihachiro Nakamae. 1987. A Shading Model for Atmospheric Scattering Considering Luminous Intensity Distribution of Light Sources. *Computer Graphics (Proceedings of SIGGRAPH)* 21, 4 (1987), 303–310. <https://doi.org/10/d2ppwm>
- [1390] Tomoyuki Nishita and Eihachiro Nakamae. 1983. Half-Tone Representation of 3-D Objects Illuminated by Area Sources or Polyhedron Sources. In *Proceedings of the IEEE Computer Software and Applications Conference*. 237–242.
- [1391] Tomoyuki Nishita and Eihachiro Nakamae. 1985. Continuous Tone Representation of 3-D Objects Taking Account of Shadows and Interreflection. *Computer Graphics (Proceedings of SIGGRAPH)* 19, 3 (July 1985), 23–30.
- [1392] Tomoyuki Nishita and Eihachiro Nakamae. 1985. Continuous Tone Representation of Three-Dimensional Objects Taking Account of Shadows and Interreflection. *Computer Graphics (Proceedings of SIGGRAPH)* 19, 3 (1985), 23–30. <https://doi.org/10/ch35j9>
- [1393] Tomoyuki Nishita and Eihachiro Nakamae. 1986. Continuous Tone Representation of Three-Dimensional Objects Illuminated by Sky Light. *Computer Graphics (Proceedings of SIGGRAPH)* 20, 4 (Aug. 1986), 125–132.
- [1394] Tomoyuki Nishita and Eihachiro Nakamae. 1993. A New Radiosity Approach Using Area Sampling for Parametric Patches. *Computer Graphics Forum (Proceedings of Eurographics)* 12, 3 (Sept. 1993), 385–398.
- [1395] Tomoyuki Nishita and Eihachiro Nakamae. 1994. Method of Displaying Optical Effects within Water Using Accumulation Buffer. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM New York, NY, USA, 373–379. <https://doi.org/10/fjxgf5>
- [1396] Tomoyuki Nishita, Isao Okamura, and Eihachiro Nakamae. 1985. Shading Models for Point and Linear Sources. *ACM Transactions on Graphics* 4, 2 (April 1985), 124–146. <https://doi.org/10/cvms9>
- [1397] A. Michael Noll. 1967. A Computer Technique for Displaying N-Dimensional Hyperobjects. *Commun. ACM* 10, 8 (Aug. 1967), 469–473. <https://doi.org/10/dp3wpp>
- [1398] Jan Novák and Carsten Dachsbacher. 2012. Rasterized Bounding Volume Hierarchies. *Computer Graphics Forum (Proceedings of Eurographics)* 31, 3 (May 2012), 403–412. <https://doi.org/10/gbbcm3>
- [1399] Jan Novák, Thomas Engelhardt, and Carsten Dachsbacher. 2011. Screen-Space Bias Compensation for Interactive High-Quality Global Illumination with Virtual Point Lights. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, New York, NY, USA, 119–124. <https://doi.org/10/fmsmbp>
- [1400] Jan Novák, Iliyan Georgiev, Johannes Hanika, and Wojciech Jarosz. 2018. Monte Carlo Methods for Volumetric Light Transport Simulation. *Computer Graphics Forum (Proceedings of Eurographics – State of the Art Reports)* 37, 2 (May 2018), 551–576. <https://doi.org/10/gd2jqj>
- [1401] Jan Novák, Vlastimil Havran, and Carsten Dachsbacher. 2010. Path Regeneration for Interactive Path Tracing. In *Proceedings of Eurographics – Short Papers*. Eurographics Association, 61–64.
- [1402] Jan Novák, Vlastimil Havran, and Carsten Dachsbacher. 2011. Path Regeneration for Random Walks. In *GPU Computing Gems*, Wen-mei W. Hwu (Ed.). Morgan Kaufmann, 401–411.
- [1403] Jan Novák, Derek Nowrouzezahrai, Carsten Dachsbacher, and Wojciech Jarosz. 2012. Progressive Virtual Beam Lights. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 31, 4 (June 2012), 1407–1413. <https://doi.org/10/gfzndw>
- [1404] Jan Novák, Derek Nowrouzezahrai, Carsten Dachsbacher, and Wojciech Jarosz. 2012. Virtual Ray Lights for Rendering Scenes with Participating Media. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 31, 4 (July 2012), 60:1–60:11. <https://doi.org/10/gbbwk2>
- [1405] Jan Novák, Andrew Selle, and Wojciech Jarosz. 2014. Residual Ratio Tracking for Estimating Attenuation in Participating Media. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 33, 6 (Nov. 2014), 179:1–179:11. <https://doi.org/10/f6r2nq>
- [1406] Kevin Novins and James Arvo. 1992. Controlled Precision Volume Integration. In *1992 Workshop on Volume Visualization*. 83–89.
- [1407] Kevin Novins, James Arvo, and David Salesin. 1992. *Adaptive Error Bracketing for Controlled-Precision Volume Rendering*. Technical Report 92-1312. Department of Computer Science, Cornell University.
- [1408] Kevin L. Novins. 1994. *Towards Accurate and Efficient Volume Rendering*. Ph.D. Thesis. Cornell University.
- [1409] Kevin L. Novins, François X. Sillion, and Donald P. Greenberg. 1990. An Efficient Method for Volume Rendering Using Perspective Projection. *Computer Graphics (Proceedings of SIGGRAPH)* 24, 5 (Nov. 1990), 95–102.
- [1410] Derek Nowrouzezahrai, Ilya Baran, Kenny Mitchell, and Wojciech Jarosz. 2014. Visibility Silhouettes for Semi-Analytic Spherical Integration. *Computer Graphics Forum* 33, 1 (Feb. 2014), 105–117. <https://doi.org/10/f5t6tf>
- [1411] Derek Nowrouzezahrai, Stefan Geiger, Kenny Mitchell, Robert Sumner, Wojciech Jarosz, and Markus Gross. 2011. Light Factorization for Mixed-Frequency Shadows in Augmented Reality. In *IEEE International Symposium on Mixed and Augmented Reality (ISMAR)*. IEEE Computer Society, 173–179. <https://doi.org/10/ccdrz4>
- [1412] Derek Nowrouzezahrai, Jared Johnson, Andrew Selle, Dylan Lacewell, Michael Kaschak, and Wojciech Jarosz. 2011. A Programmable System for Artistic Volumetric Lighting. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 30, 4 (July 2011), 29:1–29:8. <https://doi.org/10/fpvjt2>
- [1413] Derek Nowrouzezahrai, Patricio Simari, and Eugene Fiume. 2012. Sparse Zonal Harmonic Factorization for Efficient SH Rotation. *ACM Transactions on Graphics* 31, 3 (June 2012), 23:1–23:9. <https://doi.org/10/f9959q>
- [1414] P. G. Nutting. 1908. The Luminous Equivalent of Radiation. *Bulletin of the Bureau of Standards* 5, 2 (1908), 261–308.
- [1415] nVIDIA. 2004. *Rainbows and Fogbows: Adding Natural Phenomena*. SDK White Paper.
- [1416] Scott Nykl, Chad Mourning, and David Chelberg. 2013. Interactive Mesosstructures. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, New York, NY, USA, 37–44. <https://doi.org/10/gfz556>
- [1417] Juraj Obert. 2010. *Real-Time Cinematic Design of Visual Aspects in Computer Generated Images*. Ph.D. Thesis. School of Electrical Engineering and Computer Science, University of Central Florida.
- [1418] Juraj Obert, Jaroslav Krivánek, Fabio Pellacini, Daniel Šykora, and Sumanta Pattanaik. 2008. iCheat, a Representation for Artistic Control of Indirect Cinematic Lighting. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 27, 4 (2008), 1217–1223. <https://doi.org/10/fghzrf>
- [1419] Juraj Obert, Fabio Pellacini, and Sumanta Pattanaik. 2010. Visual Editing for All Frequency Shadow Design. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 29, 4 (2010), 1441–1449. <https://doi.org/10/fc8x7w>
- [1420] Upul Obeyesekere, Chas Williams, Jim Durbin, and Larry Rosenblum. 1996. Virtual Workbench – a Non-Immersive Virtual Environment for Visualizing and Interacting with 3D Objects for Scientific Visualization. In *Proceedings of*



- Visualization '96, 345–349.
- [1421] Philip F. O'Brien. 1955. Interreflections in Rooms by a Network Method. *Journal of the Optical Society of America* 45, 6 (June 1955), 419–424. <https://doi.org/10/bmt5vv>
- [1422] Eyal Ofek and Ari Rappoport. 1998. Interactive Reflections on Curved Objects. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 333–342.
- [1423] J. A. Ogilvy. 1991. *Theory of Wave Scattering from Random Rough Surfaces*. Adam Hilger, NY.
- [1424] M. Ohta and M. Maekawa. 1987. Ray Coherence Theorem and Constant Time Ray Tracing Algorithm. In *Proceedings of Computer Graphics International (CGI)*, T. Kunii (Ed.). Springer-Verlag, NY, 303–314. *Proceedings of CG International '87*.
- [1425] Makoto Okabe, Yasuyuki Matsushita, Li Shen, and Takeo Igarashi. 2007. Illumination Brush: Interactive Design of All-Frequency Lighting. In *Proceedings of Pacific Graphics*. IEEE Computer Society, 171–180. <https://doi.org/10/bdkf26>
- [1426] Ola Olsson and Ulf Assarsson. 2011. Tiled Shading. *Journal of Graphics, GPU, and Game Tools* 15, 4 (2011), 235–251. <https://doi.org/10/bbfdms>
- [1427] Ola Olsson, Markus Billeter, and Ulf Assarsson. 2012. Clustered Deferred and Forward Shading. In *Proceedings of High Performance Graphics*. Eurographics Association, 87–96.
- [1428] A. K. Oppenheim and J. T. Bevens. 1960. Geometric Factors for Radiative Heat Transfer through an Absorbing Medium in Cartesian Co-Ordinates. *ASME Journal of Heat Transfer* 82, 4 (Nov. 1960), 360–368.
- [1429] Alan V. Oppenheim and Ronald W. Schaffer. 2009. *Discrete-Time Signal Processing* (3rd ed.). Prentice Hall.
- [1430] Michael Oren and Shree K. Nayar. 1994. Generalization of Lambert's Reflectance Model. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 239–246. <https://doi.org/10/dxrtcv>
- [1431] Richard K. Osborn and Sidney Yip. 1966. *The Foundations of Neutron Transport*. Gordon and Breach, NY.
- [1432] Victor Ostromoukhov. 1993. Pseudo-Random Halftone Screening for Color and Black&White Printing. In *Proceedings of the 9th Congress on Advances in Non-Impact Printing Technologies*. 579–581.
- [1433] Victor Ostromoukhov. 2007. Sampling with Polyominoes. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 26, 3 (July 2007). <https://doi.org/10/c4pkjf>
- [1434] Victor Ostromoukhov, Charles Donohue, and Pierre-Marc Jodoin. 2004. Fast Hierarchical Importance Sampling with Blue Noise Properties. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 23, 3 (Aug. 2004), 488–495. <https://doi.org/10/cshenp>
- [1435] Matthew O'Toole, Felix Heide, Lei Xiao, Matthias B. Hullin, Wolfgang Heidrich, and Kiriakos N. Kutulakos. 2014. Temporal Frequency Probing for 5D Transient Analysis of Global Light Transport. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 33, 4 (2014), 87:1–87:11. <https://doi.org/10/gfz5m2>
- [1436] Matthew O'Toole, David B. Lindell, and Gordon Wetzstein. 2018. Confocal Non-Line-of-Sight Imaging Based on the Light-Cone Transform. *Nature* 555, 7696 (March 2018), 338–341. <https://doi.org/10/gc3gs5>
- [1437] Matthew O'Toole, Ramesh Raskar, and Kiriakos N. Kutulakos. 2012. Primal-Dual Coding to Probe Light Transport. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 31, 4 (2012). <https://doi.org/10/gbbwnx>
- [1438] Hisanari Otsu, Anton S. Kaplanyan, Johannes Hanika, Carsten Dachsbacher, and Toshiya Hachisuka. 2017. Fusing State Spaces for Markov Chain Monte Carlo Rendering. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 36, 4 (July 2017), 74:1–74:10. <https://doi.org/10/gbxjs9>
- [1439] Hisanari Otsu, Shinichi Kinuwaki, and Toshiya Hachisuka. 2017. Supervised Learning of How to Blend Light Transport Simulations. In *The Proceedings of the MCQMC*.
- [1440] Jiawei Ou, Ondřej Karlík, Jaroslav Krivánek, and Fabio Pellacini. 2012. Toward Evaluating Progressive Rendering Methods in Appearance Design Tasks. *IEEE Computer Graphics & Applications* 33, 99 (2012), 1–1. <https://doi.org/10/gfz5vg>
- [1441] Jiawei Ou and Fabio Pellacini. 2011. LightSlice: Matrix Slice Sampling for the Many-Lights Problem. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 30, 6 (Dec. 2011), 179:1–179:8. <https://doi.org/10/gfzm95>
- [1442] Ryan S. Overbeck, Craig Donner, and Ravi Ramamoorthi. 2009. Adaptive Wavelet Rendering. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 28, 5 (Dec. 2009), 140:1–140:12. <https://doi.org/10/bk4qgk>
- [1443] Art Owen. 1994. Lattice Sampling Revisited: Monte Carlo Variance of Means over Randomized Orthogonal Arrays. *The Annals of Statistics* 22, 2 (June 1994), 930–945. <https://doi.org/10/d5pc5x>
- [1444] Art Owen. 2003. Quasi-Monte Carlo Sampling. In *Monte Carlo Ray Tracing*.
- [1445] Art B. Owen. 1992. Orthogonal Arrays for Computer Experiments, Integration and Visualization. *Statistica Sinica* 2, 2 (1992), 439–452.
- [1446] Art B. Owen. 1994. Controlling Correlations in Latin Hypercube Samples. *J. Amer. Statist. Assoc.* 89, 428 (Dec. 1994), 1517–1522. <https://doi.org/10/gfzncf>
- [1447] Art B. Owen. 1997. Monte Carlo Variance of Scrambled Net Quadrature. *SIAM J. Numer. Anal.* 34, 5 (Oct. 1997), 1884–1910. <https://doi.org/10/bs8mtq>
- [1448] Art B. Owen. 2008. Local Antithetic Sampling with Scrambled Nets. *The Annals of Statistics* 36, 5 (Oct. 2008), 2319–2343. <https://doi.org/10/cmns93>
- [1449] Art B. Owen. 2013. Advanced Variance Reduction. In *Monte Carlo Theory, Methods and Examples*.
- [1450] Art B. Owen. 2013. *Monte Carlo Theory, Methods and Examples*. To be published.
- [1451] M. Necati Özisik. 1973. *Radiative Transfer and Interactions with Conduction and Convection*. John Wiley & Sons, NY.
- [1452] A. Cengiz Öztireli. 2016. Integration with Stochastic Point Processes. *ACM Transactions on Graphics* 35, 5 (Aug. 2016), 160:1–160:16. <https://doi.org/10/f85k3g>
- [1453] A. Cengiz Öztireli, Marc Alexa, and Markus Gross. 2010. Spectral Sampling of Manifolds. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 29, 6 (Dec. 2010), 168:1–168:8. <https://doi.org/10/c7p252>
- [1454] A. Cengiz Öztireli and Markus Gross. 2012. Analysis and Synthesis of Point Distributions Based on Pair Correlation. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 31, 6 (Nov. 2012), 170:1–170:10. <https://doi.org/10/gbb6qr>
- [1455] Cengiz Öztireli and Gurprit Singh. 2018. Sampling Analysis Using Correlations for Monte Carlo Rendering. In *ACM SIGGRAPH Asia Course Notes*. ACM Press. <https://doi.org/10/gfzncg>
- [1456] Shih-i Pai. 1966. *Radiation Gas Dynamics*. Springer-Verlag, NY.
- [1457] James Painter and Kenneth R. Sloan. 1989. Antialiased Ray Tracing by Adaptive Progressive Refinement. *Computer Graphics (Proceedings of SIGGRAPH)* 23, 3 (July 1989), 281–288. <https://doi.org/10/bgj7hd>
- [1458] Andrzej Palczewski. 1984. The Cauchy Problem for the Boltzmann Equation. A Survey of Recent Results. In *Kinetic Theories and the Boltzmann Equation*, C. Cercignani (Ed.). Springer-Verlag, NY, 419–424.
- [1459] G. W. Paltridge and C. M. R. Platt. 1979. *Radiative Processes in Meteorology and Climatology*. Elsevier, NY.
- [1460] Rohit Pandharkar. 2011. *Hidden Object Doppler: Estimating Motion, Size and Material Properties of Moving Non-Line-of-Sight Objects in Cluttered Environments*. Ph.D. Thesis. Massachusetts Institute of Technology.
- [1461] Rohit Pandharkar, Andreas Velten, Andrew Bardagjy, Everett Lawson, Mounji Bawendi, and Ramesh Raskar. 2011. Estimating Motion and Size of Moving Non-Line-of-Sight Objects in Cluttered Environments. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. <https://doi.org/10/dcqhtj>
- [1462] R. Pandharkar, A. Velten, and R. Raskar. 2012. Methods and Apparatus for Estimation of Motion and Size of Non-Line-of-Sight Objects. (2012). US Patent App. 13/479,185.
- [1463] E. S. Panduranga. 1987. *Reflections in Curved Surfaces*. Ph.D. Thesis. Princeton University. Technical Report CS-TR-122-87.
- [1464] Fang Pang, Min-Qian Liu, and Dennis K. J. Lin. 2009. A Construction Method for Orthogonal Latin Hypercube Designs with Prime Power Levels. *Statistica Sinica* 19, 4 (2009), 1721–1728.
- [1465] Jacopo Pantaleoni. 2017. Charted Metropolis Light Transport. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 36, 4 (July 2017), 75:1–75:14. <https://doi.org/10/gfzq78>
- [1466] Jacopo Pantaleoni, Luca Fascione, Martin Hill, and Timo Aila. 2010. PantaRay: Fast Ray-Traced Occlusion Caching of Massive Scenes. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 29, 4 (July 2010), 1. <https://doi.org/10/cfgnc8>
- [1467] J. Pantaleoni and D. Luebke. 2010. HLBVH: Hierarchical LBVH Construction for Real-Time Ray Tracing of Dynamic Geometry. In *Proceedings of High Performance Graphics*. Eurographics Association, 87–95.
- [1468] Marios Papas, Thomas Houit, Derek Nowrouzezahrai, Markus Gross, and Wojciech Jarosz. 2012. The Magic Lens: Refractive Steganography. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 31, 6 (Nov. 2012), 1. <https://doi.org/10/kdc>
- [1469] Marios Papas, Wojciech Jarosz, Wenzel Jakob, Szymon Rusinkiewicz, Wojciech Matusik, and Tim Weyrich. 2011. Goal-Based Caustics. *Computer Graphics Forum (Proceedings of Eurographics)* 30, 2 (April 2011), 503–511. <https://doi.org/10/cqjmhv>
- [1470] Marios Papas, Christian Regg, Wojciech Jarosz, Bernd Bickel, Philip Jackson, Wojciech Matusik, Steve Marschner, and Markus Gross. 2013. Fabricating Translucent Materials Using Continuous Pigment Mixtures. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 32, 4 (July 2013), 1. <https://doi.org/10/gbdg3p>
- [1471] Sylvain Paris, Will Chang, Oleg I Kozhushnyan, Wojciech Jarosz, Wojciech Matusik, Matthias Zwicker, and Frédo Durand. 2008. Hair Photobooth: Geometric and Photometric Acquisition of Real Hairstyles. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 27, 3 (Aug. 2008), 1. <https://doi.org/10/df2r3s>
- [1472] Sylvain Paris, Pierre Kornprobst, Jack Tumblin, and Frédo Durand. 2009. Bilateral Filtering: Theory and Applications. *Foundations and Trends® in Computer Graphics and Vision* 4, 1 (Aug. 2009), 1–73. <https://doi.org/10/fbq7d4>
- [1473] Hyosub Park, Bochang Moon, Soomin Kim, and Sung-Eui Yoon. 2013. P-RPF: Pixel-Based Random Parameter Filtering for Monte Carlo Rendering. In



- Computer-Aided Design and Computer Graphics (CAD/Graphics)*, 2013 *International Conf. On*. 123–130. <https://doi.org/10/gfz6mt>
- [1474] Jong-Il Park, Moon-Hyun Lee, Michael D. Grossberg, and Shree K. Nayar. 2007. Multispectral Imaging Using Multiplexed Illumination. In *IEEE International Conference on Computer Vision (ICCV)*. 1–8.
- [1475] Steven G Parker, James Bigler, Andreas Dietrich, Heiko Friedrich, Jared Hoberock, David Luebke, David McAllister, Morgan McGuire, Keith Morley, Austin Robison, and Martin Stich. 2010. OptiX: A General Purpose Ray Tracing Engine. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 29, 4 (July 2010), 66:1–66:13. <https://doi.org/10/frf4mq>
- [1476] Julius Parulek and Ivan Viola. 2012. Implicit Representation of Molecular Surfaces. In *2012 IEEE Pacific Visualization Symposium*. [ieeexplore.ieee.org / IEEE](http://ieeexplore.ieee.org/IEEE), 217–224. <https://doi.org/10/gfz54v>
- [1477] Sumanta N. Pattanaik. 1993. *Computational Methods for Global Illumination and Visualization of Complex 3D Environments*. Ph.D. Thesis. Birla Institute of Technology and Science, Pilani, India.
- [1478] Sumanta N. Pattanaik. 1993. The Mathematical Framework of Adjoint Equations for Illumination Computations. In *Graphics, Design and Visualization (Proceedings of the International Conference on Computer Graphics, ICCG93)*, S. P. Mudur and Sumanta N. Pattanaik (Eds.). North Holland, 123–137.
- [1479] Sumanta N. Pattanaik and Kadi Bouatouch. 1994. Harr Wavelet: A Solution to Global Illumination with General Surface Properties. In *Photorealistic Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*. 273–286.
- [1480] Sumanta N. Pattanaik and Kadi Bouatouch. 1995. Interactive Walk-through Using Particle Tracing. In *Computer Graphics Developments in Virtual Environments (Proceedings of Computer Graphics International '95)*. Academic Press. <https://doi.org/10/gfzv54>
- [1481] Sumanta N. Pattanaik and S. P. Mudur. 1993. Efficient Potential Equation Solutions for Global Illumination Computation. *Computers & Graphics* 17, 4 (1993), 387–396. <https://doi.org/10/b9vqs4>
- [1482] Sumanta N. Pattanaik and S. P. Mudur. 1993. The Potential Equation and Importance in Illumination Computations. *Computer Graphics Forum* 12, 2 (June 1993), 131–136. <https://doi.org/10/bjc5j2>
- [1483] Sumanta N. Pattanaik and S. P. Mudur. 1995. Adjoint Equations and Random Walks for Illumination Computation. *ACM Transactions on Graphics* 14, 1 (Jan. 1995), 77–102. <https://doi.org/10/fk88j3>
- [1484] Sumanta N. Pattanaik and Sudhir P. Mudur. July - September 1993. Computation of Global Illumination in a Participating Medium by Monte Carlo Simulation. *The Journal of Visualization and Computer Animation* 4, 3 (July - September 1993), 133–152. <https://doi.org/10/b64265>
- [1485] H. D. Patterson. 1954. The Errors of Lattice Sampling. *Journal of the Royal Statistical Society. Series B (Methodological)* 16, 1 (1954), 140–149. <https://doi.org/10/gfzncv>
- [1486] Mathias Paulin. 2011. *GigaVoxels: A Voxel-Based Rendering Pipeline for Efficient Exploration of Large and Detailed Scenes*. Ph.D. Thesis. Karlsruhe Institute of Technology.
- [1487] Mark Pauly, Thomas Kollig, and Alexander Keller. 2000. Metropolis Light Transport for Participating Media. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, W. Hansmann, W. Purgathofer, François X. Sillion, Bernard Péroche, and Holly Rushmeier (Eds.). Springer-Verlag, Vienna, 11–22. <https://doi.org/10/gfzm93>
- [1488] Mark J. Pavicic. 1990. Convenient Anti-Aliasing Filters That Minimize "Bumpy" Sampling. In *Graphics Gems I*, Andrew S. Glassner (Ed.). Academic Press, 144–146.
- [1489] Leno Pedrotti and Frank Pedrotti. 1998. *Optics and Vision*. Prentice-Hall.
- [1490] Vincent Pegoraro. 2009. *Efficient Physically-Based Simulation of Light Transport in Participating Media*. Ph.D. Thesis. The University of Utah, United States – Utah.
- [1491] V. Pegoraro. 2016. *Handbook of Digital Image Synthesis: Scientific Foundations of Rendering*. CRC Press.
- [1492] Vincent Pegoraro and Steven G. Parker. 2009. An Analytical Solution to Single Scattering in Homogeneous Participating Media. *Computer Graphics Forum (Proceedings of Eurographics)* 28, 2 (2009), 329–335. <https://doi.org/10/c9zhxn>
- [1493] Vincent Pegoraro, Mathias Schott, and Steven G. Parker. 2009. An Analytical Approach to Single Scattering for Anisotropic Media and Light Distributions. In *Proceedings of Graphics Interface*. Canadian Information Processing Society, 71–77.
- [1494] Vincent Pegoraro, Mathias Schott, and Steven G. Parker. 2010. A Closed-Form Solution to Single Scattering for General Phase Functions and Light Distributions. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 29, 4 (2010), 1365–1374. <https://doi.org/10/cdm26d>
- [1495] Vincent Pegoraro, Mathias Schott, and Philipp Slusallek. 2011. A Mathematical Framework for Efficient Closed-Form Single Scattering. In *Proceedings of Graphics Interface*. 151–158.
- [1496] Leonid Pekelis, Christophe Hery, Ryusuke Villemin, and Junyi Ling. 2015. *A Data-Driven Light Scattering Model for Hair*. Technical Report 15-02. Pixar Animation Studios.
- [1497] Fabio Pellacini. 2010. envyLight: An Interface for Editing Natural Illumination. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 29, 4 (July 2010), 1. <https://doi.org/10/bqd8fq>
- [1498] Fabio Pellacini, Frank Battaglia, R. Keith Morley, and Adam Finkelstein. 2007. Lighting with Paint. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 26, 2 (June 2007), 9:1–9:14. <https://doi.org/10/dvr97n>
- [1499] Fabio Pellacini and Jason Lawrence. 2007. AppWand: Editing Measured Materials Using Appearance-Driven Optimization. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 26, 3 (July 2007), 54. <https://doi.org/10/b6j9vr>
- [1500] Fabio Pellacini, Parag Tole, and Donald P. Greenberg. 2002. A User Interface for Interactive Cinematic Shadow Design. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 21, 3 (July 2002), 563–566. <https://doi.org/10/cqzvtx>
- [1501] Fabio Pellacini, Kiril Vidimčev, Aaron Lefohn, Alex Mohr, Mark Leone, and John Warren. 2005. Lpics: A Hybrid Hardware-Accelerated Relighting Engine for Computer Cinematography. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 24, 3 (July 2005), 464–470. <https://doi.org/10/bws9t5>
- [1502] M. Pellegrini. 1990. Stabbing and Ray Shooting in 3-Dimensional Space. In *Proceedings of the Sixth Annual Symposium on Computational Geometry*. 177–186.
- [1503] Frederic Pérez, Xavier Pueyo, and François X. Sillion. 1997. Global Illumination Techniques for the Simulation of Participating Media. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Julie Dorsey and Philipp Slusallek (Eds.). Springer-Verlag, 309–320. <https://doi.org/10/fmz8m6>
- [1504] Vijitha Periyasamy and Manojit Pramanik. 2016. Importance Sampling-Based Monte Carlo Simulation of Time-Domain Optical Coherence Tomography with Embedded Objects. *Applied Optics* 55, 11 (2016). <https://doi.org/10/gfz5m3>
- [1505] Ken Perlin. 1985. An Image Synthesizer. *Computer Graphics (Proceedings of SIGGRAPH)* 19, 3 (July 1985), 287–296. <https://doi.org/10/bbsdjx>
- [1506] Ken Perlin and David Fox. 1993. Pad, an Alternative Approach to the Computer Interface. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 57–64.
- [1507] Ken Perlin and Eric Hoffert. 1989. Hypertexture. *Computer Graphics (Proceedings of SIGGRAPH)* 23, 3 (July 1989), 253–262. <https://doi.org/10/fdmsxd>
- [1508] Bernard Péroche and Holly Rushmeier (Eds.). 2000. *Rendering Techniques 2000: Proceedings of the 11th Eurographics Workshop*. Springer-Verlag, Wien.
- [1509] Pietro Perona and Jitendra Malik. 1990. Scale-Space and Edge Detection Using Anisotropic Diffusion. *Pattern Analysis and Machine Intelligence, IEEE Transactions on* 12, 7 (1990), 629–639. <https://doi.org/10/gd2j2d>
- [1510] Hélène Perrier, David Coeurjolly, and Victor Ostromoukhov. 2017. The Uni{corn}form Tool Kit. (2017).
- [1511] Hélène Perrier, David Coeurjolly, Feng Xie, Matt Pharr, Pat Hanrahan, and Victor Ostromoukhov. 2018. Sequences with Low-Discrepancy Blue-Noise 2-d Projections. *Computer Graphics Forum (Proceedings of Eurographics)* 37, 2 (2018), 339–353. <https://doi.org/10/gd2j2d>
- [1512] D. Perrone and P. Favaro. 2014. Total Variation Blind Deconvolution: The Devil Is in the Details. In *Computer Vision and Pattern Recognition (CVPR), 2014 IEEE Conf. On*. 2909–2916.
- [1513] Per-Olof Persson and Gilbert Strang. 2004. A Simple Mesh Generator in Matlab. *SIAM Rev.* 46, 2 (2004), 329–345.
- [1514] Ingmar Peter and Georg Pietrek. 1998. Importance Driven Construction of Photon Maps. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, G. Drettakis and N. Max (Eds.). Springer-Verlag, 269–280.
- [1515] Christoph Peters, Jonathan Klein, Matthias B. Hullin, and Reinhard Klein. 2015. Solving Trigonometric Moment Problems for Fast Transient Imaging. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 34, 6 (2015). <https://doi.org/10/f7wqfq>
- [1516] Christoph Peters and Reinhard Klein. 2015. Moment Shadow Mapping. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, New York, NY, USA, 7–14. <https://doi.org/10/gfzqhv>
- [1517] Georg Petschnigg, Richard Szeliski, Maneesh Agrawala, Michael Cohen, Hugues Hoppe, and Kentaro Toyama. 2004. Digital Photography with Flash and No-Flash Image Pairs. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 23, 3 (Aug. 2004), 664–672. <https://doi.org/10/fncb7>
- [1518] Matt Pharr and Pat Hanrahan. 1996. Geometry Caching for Ray-Tracing Displacement Maps. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*. Springer-Verlag, London, UK, UK, 31–40.
- [1519] Matt Pharr and Pat Hanrahan. 2000. Monte Carlo Evaluation of Non-Linear Scattering Equations for Subsurface Reflection. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press/Addison-Wesley Publishing Co., New York, NY, USA, 75–84. <https://doi.org/10/c475r2>
- [1520] Matt Pharr and Greg Humphreys. 2004. *Physically Based Rendering: From Theory to Implementation* (1 ed.). Morgan Kaufmann, San Francisco, CA, USA.
- [1521] Matt Pharr and Greg Humphreys. 2010. *Physically Based Rendering: From Theory to Implementation* (2 ed.). Morgan Kaufmann, San Francisco, USA.
- [1522] Matt Pharr, Wenzel Jakob, and Greg Humphreys. 2016. *Physically Based Rendering: From Theory to Implementation* (3 ed.). Morgan Kaufmann, San Francisco,

- CA, USA.
- [1523] Matt Pharr, Craig Kolb, Reid Gershbein, and Pat Hanrahan. 1997. Rendering Complex Scenes with Memory-Coherent Ray Tracing. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM, 101–108.
- [1524] Bui Tuong Phong. 1975. Illumination for Computer Generated Pictures. *Commun. ACM* 18, 6 (Jan. 1975), 311–317. <https://doi.org/10/bkfrm9>
- [1525] Kevin P. Picott. 1992. Extensions of the Linear and Area Lighting Models. *IEEE Computer Graphics & Applications* 12, 2 (March 1992), 31–38. <https://doi.org/10/drm4j5>
- [1526] Adrien Pilleboue, Gurprit Singh, David Coeurjolly, Michael Kazhdan, and Victor Ostromoukhov. 2015. Variance Analysis for Monte Carlo Integration. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 34, 4 (July 2015), 124:1–124:14. <https://doi.org/10/f7m28c>
- [1527] Didier Pinchon and Philip E. Hoggan. 2007. Rotation Matrices for Real Spherical Harmonics: General Rotations of Atomic Orbitals in Space-Fixed Axes. *Journal of Physics A: Mathematical and Theoretical* 40, 7 (Jan. 2007), 1597–1610. <https://doi.org/10/bk87k3>
- [1528] Phil Pitts, Arrigo Benedetti, Malcolm Slaney, and Phil Chou. 2014. *Time of Flight Tracer*. Technical Report. Microsoft.
- [1529] Max Planck. 1988. *The Theory of Heat Radiation*. Dover Publications, NY.
- [1530] Harry Plantinga and Charles R. Dyer. 1990. Visibility, Occlusion, and the Aspect Graph. *International Journal of Computer Vision* 5, 2 (1990), 137–160. <https://doi.org/10/c67jff>
- [1531] John C. Platt and Alan H. Barr. 1988. Constraint Methods for Flexible Models. *Computer Graphics (Proceedings of SIGGRAPH)* 22, 4 (Aug. 1988), 279–288.
- [1532] Leslie G. Polgar and John R. Howell. 1965. *Directional Thermal-Radiative Properties of Conical Cavities*. Technical Report TN D-2904. NASA, WashDC.
- [1533] G. L. Polyak. 1960. Radiative Transfer between Surfaces of Arbitrary Spatial Distribution of Reflection. In *Convective and Radiative Heat Transfer*. Publishing House of the Academy of Sciences of the USSR, Moscow.
- [1534] G. C. Pomraning. 1964. An Improved Free-Surface Boundary Condition for the P-3 Approximation. *Nuclear Science and Engineering* 18 (1964), 528–530.
- [1535] G. C. Pomraning. 1967. Complementary Variational Principles and Their Application to Neutron Transport Problems. *J. Math. Phys.* 8, 10 (1967), 2096–2108.
- [1536] G. C. Pomraning. 1969. The Description of Scattering in the Equation of Radiative Transfer. In *Proceedings of Neutron Transport Theory Conference*. United States Atomic Energy Commission, 434.
- [1537] G. C. Pomraning. 1971. Grey Radiative Transfer. *Journal of Quantitative Spectroscopy and Radiative Transfer* 11 (1971), 597–615. <https://doi.org/10/bh2k8v>
- [1538] G. C. Pomraning. 1973. *The Equations of Radiation Hydrodynamics*. Pergamon Press, NY.
- [1539] G. C. Pomraning and M. Clark, Jr. 1963. The Variational Method Applied to the Monoenergetic Boltzmann Equation. Part I. *Nuclear Science and Engineering* 16 (1963), 147–154.
- [1540] Robin M. Pope and Edward S. Fry. 1997. Absorption Spectrum (380–700 Nm) of Pure Water. II. Integrating Cavity Measurements. *Applied Optics* 36, 33 (Nov. 1997), 8710–8723. <https://doi.org/10/d8rwcd>
- [1541] Stefan Popov, Iliyan Georgiev, Rossen Dimov, and Philipp Slusallek. 2009. Object Partitioning Considered Harmful: Space Subdivision for BVHs. In *Proceedings of High Performance Graphics*. ACM Press, 15–22.
- [1542] Thomas Porter and Tom Duff. 1984. Compositing Digital Images. *Computer Graphics (Proceedings of SIGGRAPH)* 18, 3 (July 1984), 253–259. <https://doi.org/10/dzsnj2>
- [1543] Javier Portilla, Vasily Strela, Martin J Wainwright, and Eero P Simoncelli. 2003. Image Denoising Using Scale Mixtures of Gaussians in the Wavelet Domain. *IEEE Transactions on Image Processing* 12, 11 (2003), 1338–1351.
- [1544] Serban D. Porumbescu, Brian Budge, Louis Feng, and Kenneth I. Joy. 2005. Shell Maps. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 24, 3 (July 2005), 626. <https://doi.org/10/d4bh4g>
- [1545] Pierre Poulin and John Amanatides. 1991. Shading and Shadowing with Linear Light Sources. *Computers & Graphics* 15, 2 (1991), 259–265. <https://doi.org/10/fvfgxm>
- [1546] Pierre Poulin and Alain Fournier. 1990. A Model for Anisotropic Reflection. *Computer Graphics (Proceedings of SIGGRAPH)* 24, 4 (Sept. 1990), 273–282. <https://doi.org/10/b72v3z>
- [1547] Pierre Poulin and Alain Fournier. 1992. Lights from Highlights and Shadows. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, New York, NY, USA, 31–38. <https://doi.org/10/brhkn2>
- [1548] Pierre Poulin, Karim Ratib, and Marco Jacques. 1997. Sketching Shadows and Highlights to Position Lights. In *Proceedings of Computer Graphics International (CGI)*, 56–63. <https://doi.org/10/crsn5h>
- [1549] E. O. Powell. 1943. An Integral Related to the Radiation Integrals. *Philos. Mag.* 34, 236 (Sept. 1943), 600–607.
- [1550] Rudolph W. Preisendorfer. 1956. *A Mathematical Foundation for Radiative Transfer Theory*. Ph.D. Thesis. University of California at Los Angeles.
- [1551] Rudolph W. Preisendorfer. 1957. A Mathematical Foundation for Radiative Transfer Theory. *Journal of Mathematics and Mechanics* 6, 6 (Nov. 1957), 685–730.
- [1552] Rudolph W. Preisendorfer. 1957. *Radiative Transfer Axioms*. Technical Report 57–44. Scripps Institution of Oceanography, Visibility Laboratory, University of California, San Diego.
- [1553] Rudolph W. Preisendorfer. 1957. *Unified Radiance Equations*. Technical Report 58–43. Scripps Institution of Oceanography, Visibility Laboratory, University of California, San Diego.
- [1554] Rudolph W. Preisendorfer. 1958. Functional Relations for the R and T Operators on Plane-Parallel Media. *Proceedings of the National Academy of Sciences* 44 (1958), 323–327. <https://doi.org/10/ftb2tq>
- [1555] Rudolph W. Preisendorfer. 1958. Invariant Imbedding Relation for the Principles of Invariance. *Proceedings of the National Academy of Sciences* 44 (1958), 320–323. <https://doi.org/10/bs2wqc>
- [1556] Rudolph W. Preisendorfer. 1959. *The Axiomatic Basis of the Principles of Radiative Transfer Theory*. Technical Report 59–75. Scripps Institution of Oceanography Visibility Laboratory, University of California, San Diego.
- [1557] Rudolph W. Preisendorfer. 1961. *Spatial Semi-Groups in Neutron Transport Theory*. General Atomic Report GA-2057. John Jay Hopkins Laboratory of Pure and Applied Science, San Diego, California.
- [1558] Rudolph W. Preisendorfer. 1965. *Radiative Transfer on Discrete Spaces*. Pergamon Press, NY.
- [1559] Rudolph W. Preisendorfer. 1968. A Survey of Theoretical Hydrologic Optics. *Journal of Quantitative Spectroscopy and Radiative Transfer* 8 (1968), 325–338. <https://doi.org/10/ddt57q>
- [1560] Rudolph W. Preisendorfer. 1971. General Theory of Radiative Transfer across the Random Atmosphere-Ocean Interface. *Journal of Quantitative Spectroscopy and Radiative Transfer* 11 (1971), 723–737. <https://doi.org/10/b2x8b2>
- [1561] Rudolph W. Preisendorfer. 1976. *Hydrologic Optics*. Vol. I–VI. NOAA, Honolulu.
- [1562] Rudolph W. Preisendorfer. 1976. *Hydrologic Optics*. Vol. I, Introduction. NOAA, Honolulu.
- [1563] Rudolph W. Preisendorfer. 1976. *Hydrologic Optics*. Vol. II, Foundations. NOAA, Honolulu.
- [1564] Rudolph W. Preisendorfer. 1976. *Hydrologic Optics*. Vol. III, Solutions. NOAA, Honolulu.
- [1565] Rudolph W. Preisendorfer. 1976. *Hydrologic Optics*. Vol. IV, Imbeddings. NOAA, Honolulu.
- [1566] Rudolph W. Preisendorfer. 1976. *Hydrologic Optics*. Vol. V, Properties. NOAA, Honolulu.
- [1567] Rudolph W. Preisendorfer. 1976. *Hydrologic Optics*. Vol. VI, Surfaces. NOAA, Honolulu.
- [1568] Rudolph W. Preisendorfer and Curtis D. Mobley. 1986. Albedo and Glitter Patterns of a Wind-Roughened Sea Surface. In *Ocean Optics VIII*, M. A. Blizard (Ed.), Vol. 637. SPIE – The International Society for Optical Engineering, Bellingham, Washington, 58–65.
- [1569] Simon Premoze, Michael Ashikhmin, and Peter Shirley. 2003. Path Integration for Light Transport in Volumes. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. Eurographics Association, 52–63.
- [1570] Simon Premoze, Michael Ashikhmin, Ravi Ramamoorthi, and Shree K Nayar. 2004. Practical Rendering of Multiple Scattering Effects in Participating Media. In *RT\_EGSR03*. Eurographics Association, 363–374. <https://doi.org/10/gfzfnf>
- [1571] Franco P. Preparata and Michael Ian Shamos. 1985. *Computational Geometry an Introduction*. Springer-Verlag.
- [1572] William Press, Saul Teukolsky, William Vetterling, and Brian Flannery. 1992. *Numerical Recipes in C* (2nd ed.). Cambridge University Press, Cambridge, UK.
- [1573] Roger Pressman. 2010. *Software Engineering: A Practitioner's Approach* (7 ed.). McGraw-Hill, New York, NY, USA.
- [1574] Romain Prévost, Moritz Bäcker, Wojciech Jarosz, and Olga Sorkine-Hornung. 2016. Balancing 3D Models with Movable Masses. In *Proceedings of Vision, Modeling and Visualization*. The Eurographics Association. <https://doi.org/10/gfznds>
- [1575] Romain Prévost, Alec Jacobson, Wojciech Jarosz, and Olga Sorkine-Hornung. 2016. Large-Scale Painting of Photographs by Interactive Optimization. *Computers & Graphics* 55 (April 2016), 108–117. <https://doi.org/10/f8g49d>
- [1576] Romain Prévost, Wojciech Jarosz, and Olga Sorkine-Hornung. 2015. A Vectorial Framework for Ray Traced Diffusion Curves. *Computer Graphics Forum* 34, 1 (Feb. 2015), 253–264. <https://doi.org/10/f6497s>
- [1577] Jan Prikryl, Philippe Bekaert, and Werner Purgathofer. 2000. Importance-Driven Hierarchical Stochastic Ray Radiosity. In *Journal of the World Society for Computer Graphics (WSCG)*.
- [1578] Anil K. Prinja. 1989. Forward-Backward Transport Theories of Ion-Solid Interactions: Variational Approach. *PhRev-B* 39, 13 (May 1989), 8858–8866.
- [1579] Anil K. Prinja. 1991. A Family of Transport Equations in Neutron Transport Theory. *Annals of Nuclear Energy* 18, 3 (1991), 147–154.

- [1580] Prusinkiewicz Prusinkiewicz and Aristid Lindenmayer. 1990. *The Algorithmic Beauty of Plants*. Springer-Verlag, New York, NY, USA.
- [1581] Roman Prutkin, Anton Kaplanyan, and Carsten Dachsbacher. 2012. Reflective Shadow Map Clustering for Real-Time Global Illumination. In *Proceedings of Eurographics – Short Papers*. Eurographics Association.
- [1582] Xavier Pueyo, Dani Tost, Ignacio Martin, and Blanca Garcia. 1997. Radiosity for Dynamic Environments. *The Journal of Visualization and Computer Animation* 8, 4 (Oct. 1997), 221–231. [https://doi.org/10.1002/\(SICI\)1099-1778\(199710/12\)8:4<221::AID-VIS169>3.0.CO;2-F](https://doi.org/10.1002/(SICI)1099-1778(199710/12)8:4<221::AID-VIS169>3.0.CO;2-F)
- [1583] W. Purgathofer. 1986. A Statistical Method for Adaptive Stochastic Sampling. In *Proceedings of Eurographics*, A.A.G. Requicha (Ed.). Elsevier, North-Holland, 145–152.
- [1584] Peter Z. G. Qian and Mingyao Ai. 2010. Nested Lattice Sampling: A New Sampling Scheme Derived by Randomizing Nested Orthogonal Arrays. *J. Amer. Statist. Assoc.* 105, 491 (2010), 1147–1155. <https://doi.org/10/fwjpb8h>
- [1585] Hui Qiao, Jingyu Lin, Yebin Liu, Matthias B. Hullin, and Qionghai Dai. 2015. Resolving Transient Time Profile in ToF Imaging via Log-Sum Sparse Regularization. *Opt. Lett.* 40, 6 (2015). <https://doi.org/10/gfz5m4>
- [1586] Hongxing Qin, Yi Chen, Jinlong He, and Baoquan Chen. 2017. Wasserstein Blue Noise Sampling. *ACM Transactions on Graphics* 36, 4, Article 137a (Oct. 2017). <https://doi.org/10/gdb9gb>
- [1587] A. Raab and G. Beikert. 1999. Two New Monte Carlo Methods for Point Flux Estimation. *Computer Physics Communications* 123, 1 (Dec. 1999), 27–45. <https://doi.org/10/cmg4gf>
- [1588] Matthias Raab, Daniel Seibert, and Alexander Keller. 2008. Unbiased Global Illumination with Participating Media. In *Monte Carlo and Quasi-Monte Carlo Methods*, Alexander Keller, Stefan Heinrich, and Harald Niederreiter (Eds.). Springer-Verlag, 591–605.
- [1589] Michal Radziszewski, Krzysztof Boryczko, and Witold Alda. 2009. An Improved Technique for Full Spectral Rendering. *Journal of the World Society for Computer Graphics (WSCG)* 17, 1–3 (2009), 9–16.
- [1590] Jonathan Ragan-Kelley, Charlie Kilpatrick, Brian W. Smith, Doug Epps, Paul Green, Christophe Hery, and Frédo Durand. 2007. The Lightspeed Automatic Interactive Lighting Preview System. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 26, 3 (July 2007), 25. <https://doi.org/10/d27dzt>
- [1591] N. Raghuvanshi, R. Narain, and M. C. Lin. 2009. Efficient and Accurate Sound Propagation Using Adaptive Rectangular Decomposition. *IEEE Transactions on Visualization and Computer Graphics* 15, 5 (2009), 789–801. <https://doi.org/10/bbh2x6>
- [1592] Y. Rahmani. 2013. *Micromechanics and Rheology of Hard and Soft-Sphere Colloidal Glasses*. Ph.D. Thesis. Universiteit van Amsterdam.
- [1593] Ravi Ramamoorthi. 1997. *Creating Generative Models from Range Images*. Ph.D. Thesis. California Institute of Technology, Pasadena, California. CS-TR-98-05.
- [1594] Ravi Ramamoorthi. 2002. *A Signal-Processing Framework for Forward and Inverse Rendering*. Ph.D. Thesis. Stanford University.
- [1595] Ravi Ramamoorthi. 2009. Precomputation-Based Rendering. *Foundations and Trends® in Computer Graphics and Vision* 3, 4 (April 2009), 281–369. <https://doi.org/10/c8zq2b>
- [1596] Ravi Ramamoorthi, John Anderson, Mark Meyer, and Derek Nowrouzezahrai. 2012. A Theory of Monte Carlo Visibility Sampling. *ACM Transactions on Graphics* 31, 5 (Sept. 2012), 121:1–121:16. <https://doi.org/10/gbbrnz>
- [1597] Ravi Ramamoorthi and James Arvo. 1999. Creating Generative Models from Range Images. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 195–204.
- [1598] Ravi Ramamoorthi and Pat Hanrahan. 2001. An Efficient Representation for Irradiance Environment Maps. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 497–500. <https://doi.org/10/bj3n3b>
- [1599] Ravi Ramamoorthi and Pat Hanrahan. 2002. Frequency Space Environment Map Rendering. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 21, 3 (July 2002), 517–526. <https://doi.org/10/bmjvtd>
- [1600] Ravi Ramamoorthi and Pat Hanrahan. 2004. A Signal-Processing Framework for Reflection. *ACM Transactions on Graphics* 23, 4 (Oct. 2004), 1004–1042. <https://doi.org/10/fnfbt>
- [1601] Ravi Ramamoorthi, Dhruv Mahajan, and Peter Belhumeur. 2007. A First-Order Analysis of Lighting, Shading, and Shadows. *ACM Transactions on Graphics* 26, 1 (Jan. 2007), 2:1–2:21. <https://doi.org/10/dhkp9c>
- [1602] Mahesh Ramasubramanian, Sumanta N. Pattanaik, and Donald P. Greenberg. 1999. A Perceptually Based Physical Error Metric for Realistic Image Synthesis. In *Annual Conference Series (Proceedings of SIGGRAPH)*, Vol. 33. 73–82. <https://doi.org/10/dwn79k>
- [1603] C. Radhakrishna Rao. 1947. Factorial Experiments Derivable from Combinatorial Arrangements of Arrays. *Supplement to the Journal of the Royal Statistical Society* 9, 1 (1947), 128–139. <https://doi.org/10/cck4gf>
- [1604] Ramesh Raskar and James Davis. 2008. *5D Time-Light Transport Matrix: What Can We Reason about Scene Properties?* Technical Report. MIT.
- [1605] Dan Raviv, Christopher Barsi, Nikhil Naik, Micha Feigin, and Ramesh Raskar. 2014. Pose Estimation Using Time-Resolved Inversion of Diffuse Light. *Opt. Express* 22, 17 (2014). <https://doi.org/10/gfz5m5>
- [1606] John William Strutt Lord Rayleigh. 1871. On the Scattering of Light by Small Particles. *Philos. Mag.* 61 (1871), 447–454.
- [1607] Lord Rayleigh. 1871. On the Light from the Sky, Its Polarization and Colour. *Philos. Mag.* XLI (1871), 107–120, 274–279.
- [1608] Mark S. Rea. 1993. *Lighting Handbook* (eighth ed.). Illuminating Engineering Society of North America, NY.
- [1609] M. S. Rea and I. G. Jeffrey. 1990. A New Luminance and Image Analysis System for Lighting and Vision I. Equipment and Calibration. *Journal of the Illuminating Engineering Society* 19, 1 (1990), 64–72.
- [1610] R. Redheffer. 1962. On the Relation of Transmission Line Theory to Scattering and Transfer. *Journal of Mathematics and Physics* 41, 1 (1962), 1–41.
- [1611] Michael Reed, Brent Burley, Marcos Fajardo, Alexander Keller, Philippe Leprince, Maurice van Swaaij, and Eric Tabellion. 2016. What Makes a Production Renderer in 2016. In *SIGGRAPH Panels*.
- [1612] W. H. Reed. 1971. The Effectiveness of Acceleration Techniques for Iterative Methods in Transport Theory. *Nuclear Science and Engineering* 45, 3 (Sept. 1971), 245–255.
- [1613] William T. Reeves. 1983. Particle Systems – a Technique for Modeling a Class of Fuzzy Objects. *Computer Graphics (Proceedings of SIGGRAPH)* 17, 3 (July 1983), 359–376.
- [1614] William T. Reeves. 1985. Approximate and Probabilistic Algorithms for Shading and Rendering Structured Particle Systems. *Computer Graphics (Proceedings of SIGGRAPH)* 19, 3 (July 1985), 313–322.
- [1615] William T. Reeves, David H. Salesin, and Robert L. Cook. 1987. Rendering Antialiased Shadows with Depth Maps. *Computer Graphics (Proceedings of SIGGRAPH)* (1987), 283–291. <https://doi.org/10/bc4hw2>
- [1616] Mark C. Reichert. 1992. *A Two-Pass Radiosity Method Driven by Lights and Viewer Position*. M.Sc. Thesis. Program of Computer Graphics, Cornell University, Ithaca, NY.
- [1617] Tim Reiner, Anton Kaplanyan, Marcel Reinhard, and Carsten Dachsbacher. 2012. Selective Inspection and Interactive Visualization of Light Transport in Virtual Scenes. *Computer Graphics Forum (Proceedings of Eurographics)* 31, 2pt3 (2012), 711–718. <https://doi.org/10/gfz5vc>
- [1618] Tim Reiner, Gregor Mückl, and Carsten Dachsbacher. 2011. Interactive Modeling of Implicit Surfaces Using a Direct Visualization Approach with Signed Distance Functions. *Computers & Graphics* 35, 3 (June 2011), 596–603. <https://doi.org/10/fsnj24>
- [1619] Bernhard Reinert, Tobias Ritschel, Hans-Peter Seidel, and Iliyan Georgiev. 2016. Projective Blue-Noise Sampling. *Computer Graphics Forum* 35, 1 (Feb. 2016), 285–295. <https://doi.org/10/f8dm4x>
- [1620] Erik Reinhard, Greg Ward, Sumanta Pattanaik, and Paul Debevec. 2006. *High Dynamic Range Imaging: Acquisition, Display, and Image-Based Lighting*. Elsevier.
- [1621] Harris Reinhardt. 1944. Brightness Units. *Illuminating Engineering* 39, 8 (Sept. 1944), 521–533.
- [1622] Fabio Remondino and David Stoppa. 2013. *TOF Range-Imaging Cameras*. Springer-Verlag.
- [1623] Peiran Ren, Jiaping Wang, Minmin Gong, Stephen Lin, Xin Tong, and Baining Guo. 2013. Global Illumination with Radiance Regression Functions. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 32, 4 (July 2013), 130:1–130:12. <https://doi.org/10/gbdf7z>
- [1624] Zhong Ren, Kun Zhou, Stephen Lin, and Baining Guo. 2008. Gradient-Based Interpolation and Sampling for Real-Time Rendering of Inhomogeneous, Single-Scattering Media. *Computer Graphics Forum* 27, 7 (2008), 1945–1953. <https://doi.org/10/dzh62s>
- [1625] Aristides A. G. Requicha and Herbert B. Voelker. 1977. *Constructive Solid Geometry*. Technical Memorandum 25. Production Automation Project, University of Rochester.
- [1626] Craig W. Reynolds. 1987. Flocks, Herds, and Schools: A Distributed Behavioral Model. *Computer Graphics (Proceedings of SIGGRAPH)* 21, 4 (July 1987), 25–34.
- [1627] Herbert Rief, A. Dubi, and Tov Elperin. 1984. Track Length Estimation Applied to Point Detector. *Nuclear Science and Engineering* 87 (1984), 59–71. <https://doi.org/10/gfzsm7>
- [1628] Kirk Riley, David S. Ebert, Martin Kraus, Jerry Tessendorf, and Charles Hansen. 2004. Efficient Rendering of Atmospheric Phenomena. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. Eurographics Association, Aire-la-Ville, Switzerland, 375–386. <https://doi.org/10/gfz2gc>
- [1629] Tobias Ritschel, Carsten Dachsbacher, Thorsten Grosch, and Jan Kautz. 2012. The State of the Art in Interactive Global Illumination. *Computer Graphics Forum* 31, 1 (2012), 160–188. <https://doi.org/10/gfzwbm>
- [1630] Tobias Ritschel, Elmar Eisemann, Inwo Ha, James Kim, and Hans-Peter Seidel. 2011. Making Imperfect Shadow Maps View-Adaptive: High-Quality Global Illumination in Large Dynamic Scenes. *Computer Graphics Forum* 30, 8 (2011), 2258–2269. <https://doi.org/10/bj3bnz>



- [1631] Tobias Ritschel, Thomas Engelhardt, Thorsten Grosch, Hans-Peter Seidel, Jan Kautz, and Carsten Dachsbacher. 2009. Micro-Rendering for Scalable, Parallel Final Gathering. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 28, 5 (Dec. 2009), 132:1–132:8. <https://doi.org/10/d2txh7>
- [1632] Tobias Ritschel, Thorsten Grosch, Min H Kim, Hans-Peter Seidel, Carsten Dachsbacher, and Jan Kautz. 2008. Imperfect Shadow Maps for Efficient Computation of Indirect Illumination. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 27, 5 (2008), 129:1–129:8. <https://doi.org/10/b94956>
- [1633] Tobias Ritschel, Thorsten Grosch, and Hans-Peter Seidel. 2009. Approximating Dynamic Global Illumination in Image Space. In *Proceedings of the Symposium on Interactive 3D Graphics and Games*. ACM Press, 75–82. <https://doi.org/10/bhv9rj>
- [1634] Tobias Ritschel, Makoto Okabe, Thorsten Thormählen, and Hans-Peter Seidel. 2009. Interactive Reflection Editing. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 28, 5 (Dec. 2009), 1. <https://doi.org/10/c42h7z>
- [1635] Tobias Ritschel, Thorsten Thormählen, Carsten Dachsbacher, Jan Kautz, and Hans-Peter Seidel. 2010. Interactive On-Surface Signal Deformation. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 29, 4 (July 2010), 1. <https://doi.org/10/b2r3wc>
- [1636] M. Robkin and M. Clark, Jr. 1960. Integral Reactor Theory; Orthogonality and Impotence. *Nuclear Science and Engineering* 8, 5 (Nov. 1960), 437–442.
- [1637] Juhan Ross. 1981. *The Radiation Regime and Architecture of Plant Stands*. Dr W. Junk Publishers, Boston.
- [1638] S. D. Roth. 1982. Ray Casting for Modeling Solids. *Computer Graphics and Image Processing* 18 (1982), 109–144.
- [1639] Fabrice Rousselle, Petrik Clarberg, Luc Leblanc, Victor Ostromoukhov, and Pierre Poulin. 2008. Efficient Product Sampling Using Hierarchical Thresholding. *The Visual Computer (Proceedings of Computer Graphics International)* 24, 7-9 (2008), 465–474. <https://doi.org/10/cb2rc5>
- [1640] Fabrice Rousselle, Wojciech Jarosz, and Jan Novák. 2016. Image-Space Control Variates for Rendering. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 35, 6 (Nov. 2016), 169:1–169:12. <https://doi.org/10/f9cphw>
- [1641] Fabrice Rousselle, Claude Knaus, and Matthias Zwicker. 2011. Adaptive Sampling and Reconstruction Using Greedy Error Minimization. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 30, 6 (Dec. 2011), 1. <https://doi.org/10/c82v5c>
- [1642] Fabrice Rousselle, Claude Knaus, and Matthias Zwicker. 2012. Adaptive Rendering with Non-Local Means Filtering. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 31, 6 (Nov. 2012), 195:1–195:11. <https://doi.org/10/f96zx3>
- [1643] Fabrice Rousselle, Marco Manzi, and Matthias Zwicker. 2013. Robust Denoising Using Feature and Color Information. *Computer Graphics Forum (Proceedings of Pacific Graphics)* 32, 7 (Oct. 2013), 121–130. <https://doi.org/10/gfzwbw>
- [1644] Riccardo Roveri, A. Cengiz Öztireli, and Markus Gross. 2017. General Point Sampling with Adaptive Density and Correlations. *Computer Graphics Forum* (2017). <https://doi.org/10/gbm2jp>
- [1645] Riccardo Roveri, A. Cengiz Öztireli, Sebastian Martin, Barbara Solenthaler, and Markus Gross. 2015. Example Based Repetitive Structure Synthesis. *Computer Graphics Forum* (2015). <https://doi.org/10/f7s4bn>
- [1646] J. Rovira, P. Wonka, F. Castro, and M. Sbert. 2005. Point sampling with uniformly distributed lines. In *Point-Based Graphics, 2005 - Eurographics/IEEE VGTC Symposium Proceedings*. 109–118.
- [1647] G. Rowlands. 1961. The Application of the Variational Method to Neutron Transport Theory. *Journal of Nuclear Energy, Part A: Reactor Science* 13 (1961), 176–182. <https://doi.org/10/d7tk44>
- [1648] Steve Rubin and Turner Whitted. 1980. A Three-Dimensional Representation for Fast Rendering of Complex Scenes. *Computer Graphics (Proceedings of SIGGRAPH)* 14, 3 (July 1980), 110–116.
- [1649] Dean Rubine. 1991. Specifying Gestures by Example. *Computer Graphics (Proceedings of SIGGRAPH)* 25, 4 (July 1991), 329–337.
- [1650] Dean Rubine. 1992. Combining Gestures and Direct Manipulation. In *Proceedings of CHI '92*. 659–660. <https://doi.org/10/dznpx4>
- [1651] Reuven Y. Rubinstein. 1981. *Simulation and the Monte Carlo Method*. John Wiley & Sons.
- [1652] Holly Rushmeier. 1995. Input for Participating Media. Realistic Input for Realistic Images, ACM SIGGRAPH '95 Course Notes. Also appeared in the ACM SIGGRAPH '98 Course Notes - A Basic Guide to Global Illumination. (1995).
- [1653] Holly Rushmeier. 1995. Rendering Participating Media: Problems and Solutions from Application Areas. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*. Springer-Verlag, 37–59.
- [1654] Holly Edith Rushmeier. 1988. *Realistic Image Synthesis for Scenes with Radiatively Participating Media*. Ph.D. Thesis. Cornell University, Ithaca, NY.
- [1655] Holly E. Rushmeier, Daniel R. Baum, and David E. Hall. 1991. Accelerating the Hemi-Cube Algorithm for Calculating Radiation Form Factors. *ASME Journal of Heat Transfer* 113, 4 (1991), 1044–1047. <https://doi.org/10/b728xg>
- [1656] Holly E. Rushmeier, Charles W. Patterson, and Aravindan Veerasamy. 1993. Geometric Simplification for Indirect Illumination Calculations. In *Proceedings of Graphics Interface*. Morgan Kaufmann, 227–236.
- [1657] Holly E. Rushmeier and Kenneth E. Torrance. 1987. The Zonal Method for Calculating Light Intensities in the Presence of a Participating Medium. *Computer Graphics (Proceedings of SIGGRAPH)* 21, 4 (July 1987), 293–302. <https://doi.org/10/ckbhdj>
- [1658] Holly E. Rushmeier and Kenneth E. Torrance. 1990. Extending the Radiosity Method to Include Specularly Reflecting and Translucent Materials. *ACM Transactions on Graphics* 9, 1 (Jan. 1990), 1–27. <https://doi.org/10/cr5fgj>
- [1659] Holly E. Rushmeier and Gregory J. Ward. 1994. Energy Preserving Non-Linear Filters. In *Proc. 21st Annual Conf. on Computer Graphics and Interactive Techniques (SIGGRAPH '94)*. ACM, 131–138. <https://doi.org/10/c76tjx>
- [1660] Szymon Rusinkiewicz and Marc Levoy. 2000. QSplat: A Multiresolution Point Rendering System for Large Meshes. In *Proceedings of ACM SIGGRAPH*. 343–352.
- [1661] Kathy Ryall, Joe Marks, and Stuart Shieber. 1997. An Interactive Constraint-Based System for Drawing Graphs. In *UIST-1997*. 97–104.
- [1662] George B. Rybicki and Alan P. Lightman. 1979. *Radiative Processes in Astrophysics*. John Wiley & Sons, NY.
- [1663] Paolo Sabella. 1988. A Rendering Algorithm for Visualizing 3D Scalar Fields. *Computer Graphics (Proceedings of SIGGRAPH)* 22, 4 (Aug. 1988), 51–57.
- [1664] Iman Sadeghi, Adolfo Munoz, Philip Laven, Wojciech Jarosz, Francisco J. Seron, Diego Gutierrez, and Henrik Wann Jensen. 2012. Physically-Based Simulation of Rainbows. *ACM Transactions on Graphics* 31, 1 (Jan. 2012), 3:1–3:12. <https://doi.org/10/gfzndf>
- [1665] Iman Sadeghi, Heather Pritchett, Henrik Wann Jensen, and Rasmus Tamstorf. 2010. An Artist Friendly Hair Shading System. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 29, 4 (July 2010), 1. <https://doi.org/10/cxxccd>
- [1666] Bertrand Le Saec and Christopher Schlick. 1990. A Progressive Ray-Tracing Based Radiosity with General Reflectance Functions. In *Photorealism in Computer Graphics (Proceedings of the Eurographics Workshop on Photosimulation, Realism and Physics in Computer Graphics)*.
- [1667] Stephan R. Sain. 2002. Multivariate Locally Adaptive Density Estimation. *Computational Statistics & Data Analysis* 39, 2 (April 2002), 165–186. <https://doi.org/10/cm4vtk>
- [1668] Stephan R. Sain and David W. Scott. 1996. On Locally Adaptive Density Estimation. *J. Amer. Statist. Assoc.* 91, 436 (1996), 1525–1534. <https://doi.org/10/gfzqh8>
- [1669] Takafumi Saito and Tokiichiro Takahashi. 1990. Comprehensible Rendering of 3-D Shapes. *Computer Graphics (Proceedings of SIGGRAPH)* 24, 4 (1990), 197–206. <https://doi.org/10/fp3t53>
- [1670] Bahaa E. A. Saleh and Malvin Carl Teich. 2007. *Fundamentals of Photonics* (2 ed.). Wiley-Interscience.
- [1671] David Salesin, Daniel Lischinski, and Tony DeRose. 1992. Reconstructing Illumination Functions with Selected Discontinuities. In *CE\_EGWR93*. 99–112.
- [1672] Marco Salvi, Kiril Vidimčec, Andrew Lauritzen, and Aaron Lefohn. 2010. Adaptive Volumetric Shadow Maps. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 29, 4 (Aug. 2010), 1289–1296. <https://doi.org/10/bpvfmq>
- [1673] Hanan Samet. 1982. Neighbor Finding Techniques for Images Represented by Quadrees. *Computer Graphics and Image Processing* 18 (1982), 37–57.
- [1674] Hanan Samet. 1988. Hierarchical Representations of Collections of Small Rectangles. *Computing Surveys* 20, 4 (1988), 271–309.
- [1675] Hanan Samet. 1989. Implementing Ray Tracing with Octrees and Neighbor Finding. *Computers & Graphics* 13, 4 (1989), 445–460. <https://doi.org/10/cbx3js>
- [1676] Hanan Samet. 1990. *Applications of Spatial Data Structures*. Addison-Wesley, Reading.
- [1677] Hanan Samet. 1990. *The Design and Analysis of Spatial Data Structures*. Addison-Wesley, Reading.
- [1678] Douglas H. Sampson. 1965. *Radiative Contributions to Energy and Momentum Transport in a Gas*. John Wiley & Sons, NY.
- [1679] L.A. Santaló. 1953. *Introduction to Integral Geometry*. Hermann.
- [1680] Guy Satat, Barmak Heshmat, Christopher Barsi, Dan Raviv, Ou Chen, Mouni G Bawendi, and Ramesh Raskar. 2015. Locating and Classifying Fluorescent Tags behind Turbid Layers Using Time-Resolved Inversion. *Nature Communications* 6 (2015). <https://doi.org/10/f7bqrr>
- [1681] Guy Satat, Barmak Heshmat, Nikhil Naik, Albert Redo-Sanchez, and Ramesh Raskar. 2016. Advances in Ultrafast Optics and Imaging Applications. In *SPIE Defense+ Security*.
- [1682] Guy Satat, Dan Raviv, Barmak Heshmat, and Ramesh Raskar. 2015. Imaging through Thick Turbid Medium Using Time-Resolved Measurement. In *Imaging and Applied Optics 2015*. <https://doi.org/10/gfz5m6>
- [1683] Tetsu R. Satoh. 2003. Symplectic Ray Tracing: A New Approach to Non-Linear Ray Tracing by Using Hamiltonian Dynamics. In *Visualization and Data Analysis*, Vol. 5009. International Society for Optics and Photonics, 277–286. <https://doi.org/10/fr5tg6>
- [1684] Mateu Sbert. 1993. An Integral Geometry Based Method for Fast Form-Factor Computation. *Computer Graphics Forum (Proceedings of Eurographics)* 12, 3 (Sept. 1993), 409–420.

- [1685] Mateu Sbert. 1997. Optimal Source Selection in Shooting Random Walk Monte Carlo Radiosity. *Computer Graphics Forum (Proceedings of Eurographics)* 16, 3 (Aug. 1997), 301–308. C301–C308.
- [1686] Mateu Sbert, Alex Brusi, Robert Tobler, and Werner Purgathofer. 2000. Random Walk Radiosity with Generalized Transition Probabilities. *Graphical Models* 6, 2 (2000), 56–70. <https://doi.org/10/dm9f5z>
- [1687] Mateu Sbert, Jaume Rigau, Miquel Feixas, and Laszlo Neumann. 2006. Systematic Sampling in Image-Synthesis. In *Proceedings of the 6th International Conference on Computational Science and Its Applications - Volume Part I*. Springer-Verlag, 449–458. <https://doi.org/10/cqvzbv>
- [1688] Henrik Schäfer, Frank Lenzen, and Christoph S Garbe. 2014. Model Based Scattering Correction in Time-of-Flight Cameras. *Opt. Express* 22, 24 (2014). <https://doi.org/10/gfz5m7>
- [1689] G. Scharf. 1967. Functional-Analytic Discussion of the Linearized Boltzmann Equation. *Helvetica Physica Acta* 40 (1967), 929–945.
- [1690] Gernot Schaffler and Henrik Wann Jensen. 2000. Ray Tracing Point Sampled Geometry. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, B. Péroche and H. Rushmeier (Eds.). Springer-Verlag. <https://doi.org/10/gfzqjc>
- [1691] Daniel Scherzer, Chuong H. Nguyen, Tobias Ritschel, and Hans-Peter Seidel. 2012. Pre-Convolved Radiance Caching. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 31, 4 (June 2012), 1391–1397. <https://doi.org/10/gfzwbv>
- [1692] D. Schiff and S. Ziering. 1960. Many-Fold Moment Method. *Nuclear Science and Engineering* 7, 2 (Feb. 1960), 172–183.
- [1693] Lars Schjorth. 2009. *Anisotropic Density Estimation in Global Illumination: A Journey through Time and Space*. Ph.D. Thesis. University of Copenhagen.
- [1694] Lars Schjorth, Jeppe Revall Frisvad, Kenny Erleben, and Jon Sporring. 2007. Photon Differentials. In *Proceedings of GRAPHITE*, Vol. 1. ACM Press, Perth, Australia, 179. <https://doi.org/10/fsqfv6>
- [1695] Lars Schjorth, Ole Fogh Olsen, and Jon Sporring. 2006. Diffusion Based Photon Mapping. In *GRAPP 2006: Proceedings of the First International Conference on Computer Graphics Theory and Applications, Setúbal, Portugal, February 25-28, 2006*. 168–175.
- [1696] Lars Schjorth, Jon Sporring, and Ole Fogh Olsen. 2008. Diffusion Based Photon Mapping. *Computer Graphics Forum (Proceedings of Eurographics)* 27, 8 (Dec. 2008), 2114–2127. <https://doi.org/10/cfnfsj>
- [1697] Christophe Schlick. 1993. A Customizable Reflectance Model for Everyday Rendering. In *Photorealistic Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Michael F. Cohen, Claude Puech, and François X. Sillion (Eds.). Eurographics, 73–84. held in Paris, France, 14–16 June 1993.
- [1698] Thomas Schlömer and Oliver Deussen. 2011. Accurate Spectral Analysis of Two-Dimensional Point Sets. *Journal of Graphics, GPU, and Game Tools* 15, 3 (2011), 152–160. <https://doi.org/10/dqmjnk> arXiv:<http://dx.doi.org/10.1080/2151237X.2011.609773>
- [1699] Thomas Schlömer, Daniel Heck, and Oliver Deussen. 2011. Farthest-Point Optimized Point Sets with Maximized Minimum Distance. In *Proceedings of High Performance Graphics*. ACM Press, 135–142. <https://doi.org/10/bpmnsh>
- [1700] Christian Schmaltz, Pascal Gwosdek, Andrés Bruhn, and Joachim Weickert. 2010. Electrostatic Halftoning. *Computer Graphics Forum* 29, 8 (2010), 2313–2327. <https://doi.org/10/fph3j8>
- [1701] Thorsten-Walther Schmidt, Jan Novák, Johannes Meng, Anton S. Kaplanyan, Tim Reiner, Derek Nowrouzezahrai, and Carsten Dachsbacher. 2013. Path-Space Manipulation of Physically-Based Light Transport. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 32, 4 (July 2013), 129:1–129:11. <https://doi.org/10/gbdg7p>
- [1702] Thorsten-Walther Schmidt, Fabio Pellacini, Derek Nowrouzezahrai, Wojciech Jarosz, and Carsten Dachsbacher. 2016. State of the Art in Artistic Editing of Appearance, Lighting and Material. *Computer Graphics Forum* 35, 1 (Feb. 2016), 216–233. <https://doi.org/10/f8c8qv>
- [1703] Philip Schneider and David H Eberly. 2002. *Geometric Tools for Computer Graphics*. Morgan Kaufmann.
- [1704] Eric D. Schoen, Pieter T. Eendebak, and Man V. M. Nguyen. 2010. Complete Enumeration of Pure-Level and Mixed-Level Orthogonal Arrays. *Journal of Combinatorial Designs* 18, 2 (2010), 123–140. <https://doi.org/10/bc4c23>
- [1705] Chris Schoeneman, Julie Dorsey, Brian Smits, James Arvo, and Donald Greenberg. 1993. Painting with Light. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 143–146. <https://doi.org/10/dg66z3>
- [1706] Kai Schröder, Reinhard Klein, and Arno Zinke. 2011. A Volumetric Approach to Predictive Rendering of Fabrics. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 30, 4 (June 2011), 1277–1286. <https://doi.org/10/djq8v5>
- [1707] Peter Schröder and Pat Hanrahan. 1993. On the Form Factor between Two Polygons. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 163–164.
- [1708] Peter Schröder and Pat Hanrahan. 1994. Wavelet Methods for Radiance Computations. In *Photorealistic Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*. Eurographics, 303–311.
- [1709] Peter Schröder and Wim Sweldens. 1995. Spherical Wavelets: Efficiently Representing Functions on the Sphere. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 161–172. <https://doi.org/10/cssmxh>
- [1710] Christian Schumacher, Bernhard Thomaszewski, and Markus Gross. 2016. Stenciling: Designing Structurally-Sound Surfaces with Decorative Patterns. *Computer Graphics Forum* (2016). <https://doi.org/10/f842rb>
- [1711] Vincent Schüssler, Eric Heitz, Johannes Hanika, and Carsten Dachsbacher. 2017. Microfacet-Based Normal Mapping for Robust Monte Carlo Path Tracing. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 36, 6 (Nov. 2017), 205:1–205:12.
- [1712] Arthur Schuster. 1903. The Influence of Radiation on the Transmission of Heat. *Philos. Mag.* 5, 26 (Feb. 1903), 243–257.
- [1713] Arthur Schuster. 1905. Radiation through a Foggy Atmosphere. *Astrophysical Journal* 21, 1 (Jan. 1905), 1–22. First derivation of radiative transfer in participating media.
- [1714] Rudolf Schwarte, Zhanping Xu, Horst-Guenther Heinol, Joachim Olk, Ruediger Klein, Bernd Buxbaum, Helmut Fischer, and Juergen Schulte. 1997. New Electro-Optical Mixing and Correlating Sensor: Facilities and Applications of the Photonic Mixer Device (PMD). In *Lasers and Optics in Manufacturing III*. <https://doi.org/10/fwdj78>
- [1715] Jorge Schwarzhaupt, Henrik Wann Jensen, and Wojciech Jarosz. 2012. Practical Hessian-Based Error Control for Irradiance Caching. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 31, 6 (Nov. 2012), 1. <https://doi.org/10/gbb6n4>
- [1716] K. Schwarzschild. 1906. On the Equilibrium of the Sun's Atmosphere. *Nachrichten von der Königlichen Gesellschaft der Wissenschaften zu Göttingen. Math.-phys. Klasse* 195 (1906), 41–53. (See Menzel Menzel-1966 for English translation).
- [1717] K. Schwarzschild. 1914. Diffusion and Absorption in the Sun's Atmosphere. *Sitzungsberichte der Königlich Preussischen Akademie der Wissenschaften* (1914), 1183–1200. (See Menzel Menzel-1966 for English translation).
- [1718] David W. Scott. 1992. *Multivariate Density Estimation: Theory, Practice, and Visualization* (1 ed.). Wiley-Interscience.
- [1719] Thomas W. Sederberg and D. C. Anderson. 1985. Steiner Surface Patches. *IEEE Computer Graphics & Applications* 5 (May 1985), 23–36.
- [1720] Thomas W. Sederberg and Falai Chen. 1995. Implicitization Using Moving Curves and Surfaces. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 301–308.
- [1721] Thomas W. Sederberg, Peisheng Gao, Guojin Wang, and Hong Mu. 1993. 2-D Shape Blending: An Intrinsic Solution to the Vertex Path Problem. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 15–18.
- [1722] Thomas W. Sederberg and Eugene Greenwood. 1992. A Physically Based Approach to 2-D Shape Blending. *Computer Graphics (Proceedings of SIGGRAPH)* 26, 2 (July 1992), 25–34.
- [1723] Thomas W. Sederberg and Eugene Greenwood. 1995. Shape Blending of 2-D Piecewise Curves. In *Mathematical Methods for Curves and Surfaces*, M. Dæhlen, T. Lynche, and L. Schumaker (Eds.). Vanderbilt University Press, Nashville, 497–506.
- [1724] Thomas W. Sederberg and Scott R. Parry. 1986. Free-Form Deformation of Solid Geometric Models. *Computer Graphics (Proceedings of SIGGRAPH)* 20, 4 (Aug. 1986), 151–160. <https://doi.org/10/cb8rr3>
- [1725] Robert Sedgewick. 1992. *Algorithms in C++*. Addison-Wesley.
- [1726] Benjamin Segovia, Jean Claude Iehl, Richard Mitanchey, and Bernard Péroche. 2006. Bidirectional Instant Radiosity. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. 389–397.
- [1727] B. Segovia, J. C. Iehl, R. Mitanchey, and B. Péroche. 2006. Non-Interleaved Deferred Shading of Interleaved Sample Patterns. In *Proc. of the 21st Symposium on Graphics Hardware*. ACM Press, 53–60. <https://doi.org/10/gfzq7z>
- [1728] Benjamin Segovia, Jean-Claude Iehl, and Bernard Péroche. 2007. *Coherent Metropolis Light Transport with Multiple-Try Mutations*. Technical Report RR-LIRIS-2007-015. Université Lyon, Lyon, France.
- [1729] B Segovia, J C Iehl, and B Péroche. 2007. Metropolis Instant Radiosity. *Computer Graphics Forum (Proceedings of Eurographics)* 26, 3 (2007), 425–434.
- [1730] Steven M. Seitz and Charles R. Dyer. 1996. View Morphing. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 21–30.
- [1731] Zdenek Sekera. 1968. Radiative Transfer and the Scattering Problem. *Journal of Quantitative Spectroscopy and Radiative Transfer* 8 (1968), 17–24. <https://doi.org/10/d8gwxp>
- [1732] D. S. Selengut. 1962. The Construction of Approximate Theories by Variational Methods. *Transactions of the American Nuclear Society* 5, 2 (Nov. 1962), 413–414.
- [1733] D. S. Selengut. 1962. Transport Corrections to Diffusion Theory. *Transactions of the American Nuclear Society* 5, 1 (June 1962), 40–41.
- [1734] Pradeep Sen and Soheil Darabi. 2010. Compressive Estimation for Signal Integration in Rendering. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 29, 4 (2010). <https://doi.org/10/b3jtev>



- [1735] P. Sen and S. Darabi. 2011. Compressive Rendering: A Rendering Application of Compressed Sensing. *IEEE Transactions on Visualization and Computer Graphics* 17, 4 (April 2011), 487–499. <https://doi.org/10/fp9cr5>
- [1736] Pradeep Sen and Soheil Darabi. 2012. On Filtering the Noise from the Random Parameters in Monte Carlo Rendering. *ACM Transactions on Graphics* 31, 3 (May 2012), 18:1–18:15. <https://doi.org/10/gfz5nm>
- [1737] Carlo H. Séquin and Eliot K. Smyrl. 1989. Parameterized Ray-Tracing. *Computer Graphics (Proceedings of SIGGRAPH)* 23, 3 (July 1989), 307–314. <https://doi.org/10/c28vm5>
- [1738] Jonathan Shade, Dani Lischinski, David Salesin, Tony DeRose, and John Snyder. 1996. Hierarchical Image Caching for Accelerated Walkthroughs of Complex Environments. In *Annual Conference Series (Proceedings of SIGGRAPH)*, Holly Rushmeier (Ed.). ACM SIGGRAPH, Addison-Wesley, 75–82.
- [1739] Ariel Shamir and Ari Rappoport. 1996. Extraction of Typographic Elements from Outline Representations of Fonts. *Computer Graphics Forum (Proceedings of Eurographics)* (1996), 259–268.
- [1740] N. Shamsundar, E. M. Sparrow, and R. P. Heinisch. 1973. Monte Carlo Radiation Solutions—Effect of Energy Partitioning and Number of Rays. *International Journal of Heat and Mass Transfer* 16, 3 (1973), 690–694. <https://doi.org/10/frzwvf>
- [1741] C. E. Shannon. 1949. Communication in the Presence of Noise. *Proc. Institute of Radio Engineers* 37, 1 (1949), 10–21.
- [1742] Gaurav Sharma, Wencheng Wu, and Edul N. Dalal. 2005. The CIEDE2000 Color-Difference Formula: Implementation Notes, Supplementary Test Data, and Mathematical Observations. *Color Research & Application* 30, 1 (2005), 21–30. <https://doi.org/10/fqmv29>
- [1743] Erin S. Shaw. 1994. *Hierarchical Radiosity for Dynamic Environments*. M.Sc. Thesis. Cornell University, Ithaca, New York.
- [1744] Raymond A. Shaw, Alexander B. Kostinski, and Daniel D. Lanterman. 2002. Super-Exponential Extinction of Radiation in a Negatively Correlated Random Medium. *Journal of Quantitative Spectroscopy and Radiative Transfer* 75, 1 (Aug. 2002), 13–20. <https://doi.org/10/c4wr3h>
- [1745] David L. Shealy and Donald G. Burkhard. 1973. Caustic Surfaces and Irradiance for Reflection and Refraction from an Ellipsoid, Elliptic Paraboloid, and Elliptic Cone. *Applied Optics* 12, 12 (Dec. 1973), 2955–2959.
- [1746] Charles J. Sherman and Kenneth S. Simone. 1989. Process for Manufacturing Paints.
- [1747] M. P. Sherman. 1967. Moment Methods in Radiative Transfer Problems. *Journal of Quantitative Spectroscopy and Radiative Transfer* 7, 89–109 (1967).
- [1748] H. Shim and S. Lee. 2016. Recovering Translucent Objects Using a Single Time-of-Flight Depth Camera. *IEEE Transactions on Circuits and Systems for Video Technology* 26, 5 (2016). <https://doi.org/10/gfz5m8>
- [1749] Mikio Shinya. 1993. Spatial Anti-Aliasing for Animation Sequences with Spatio-Temporal Filtering. In *Proc. 20th Annual Conf. on Computer Graphics and Interactive Techniques (SIGGRAPH '93)*. ACM, 289–296. <https://doi.org/10/bgtscs>
- [1750] Mikio Shinya, T. Saito, and T. Takahashi. 1989. Rendering Techniques for Transparent Objects. In *Proceedings of Graphics Interface*, Vol. 89. 173–182.
- [1751] Mikio Shinya, Tokiichi Takahashi, and Seiichi Naito. 1987. Principles and Applications of Pencil Tracing. *Computer Graphics (Proceedings of SIGGRAPH)* 21, 4 (July 1987), 45–54. <https://doi.org/10/b657bp>
- [1752] Peter Shirley. 1990. *Physically Based Lighting Calculations for Computer Graphics*. Ph.D. Thesis. University of Illinois, Urbana–Champaign.
- [1753] Peter Shirley. 1990. A Ray Tracing Algorithm for Global Illumination. *Proceedings of Computer Graphics International (CGI)* (May 1990), 205–212.
- [1754] Peter Shirley. 1990. A Ray Tracing Method for Illumination Calculation in Diffuse-Specular Scenes. In *Proceedings of Graphics Interface*. Canadian Man-Computer Communications Society, 205–212. <https://doi.org/10/gfzq4n>
- [1755] Peter Shirley. 1991. Discrepancy as a Quality Measure for Sample Distributions. In *Proceedings of Eurographics*. Eurographics Association, Amsterdam, North-Holland, 183–194. <https://doi.org/10/gfzncn>
- [1756] Peter Shirley. 1992. Nonuniform Random Point Sets via Warping. In *Graphics Gems III*, David Kirk (Ed.). Academic Press, San Francisco, 80–83. <https://doi.org/10.1016/B978-0-08-050755-2.50027-0>
- [1757] Peter Shirley. 1992. Time Complexity of Monte Carlo Radiosity. *Computers & Graphics* 16, 1 (1992), 117–120. <https://doi.org/10/bkjq9>
- [1758] Peter Shirley. 2000. *Realistic Ray Tracing*. AK Peters, Ltd.
- [1759] Peter Shirley and Kenneth Chiu. 1995. *Notes on Adaptive Quadrature on the Hemisphere*. Technical Report 411. Indiana University.
- [1760] Peter Shirley and Kenneth Chiu. 1997. A Low Distortion Map between Disk and Square. *Journal of Graphics Tools* 2, 3 (Jan. 1997), 45–52. <https://doi.org/10/gfzncw>
- [1761] Peter Shirley and R. Keith Morley. 2003. *Realistic Ray Tracing* (2 ed.). AK Peters, Ltd., Natick, MA, USA.
- [1762] Peter Shirley and Allan Tuchman. 1990. A Polygonal Approximation to Direct Scalar Volume Rendering. *Computer Graphics (Proceedings of SIGGRAPH)* 24, 5 (Nov. 1990), 63–70.
- [1763] Peter Shirley, Bretton Wade, Philip M. Hubbard, David Zareski, Bruce Walter, and Donald P. Greenberg. 1995. Global Illumination via Density-Estimation. In *Photorealistic Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Patrick M. Hanrahan and Werner Purgathofer (Eds.). Springer-Verlag, 219–230.
- [1764] Peter Shirley and Changyaw Wang. 1992. Distribution Ray Tracing: Theory and Practice. In *CE\_EGWR93*. 33–43.
- [1765] Peter Shirley, Changyaw Wang, and Kurt Zimmerman. 1996. Monte Carlo Methods for Direct Lighting Calculations. *ACM Transactions on Graphics* 15, 1 (Jan. 1996), 1–36. <https://doi.org/10/ddgbgg>
- [1766] Peter Shirley, Changyaw Wang, and Kurt Zimmerman. 1996. Monte Carlo Techniques for Direct Lighting Calculations. *ACM Transactions on Graphics* 15, 1 (Jan. 1996), 1–36. <https://doi.org/10/ddgbgg>
- [1767] Leon A. Shirman and Salim S. Abi-Ezzi. 1993. The Cone of Normals Technique for Fast Processing of Curved Patches. *Computer Graphics Forum (Proceedings of Eurographics)* 12, 3 (1993), 261–272. <https://doi.org/10/bs2vsv>
- [1768] Ken Shoemake. 1992. Arcball: A User Interface for Specifying Three-Dimensional Orientation Using a Mouse. In *Proceedings of Computer Graphics International (CGI)*. 151–156.
- [1769] Shikhar Shrestha, Felix Heide, Wolfgang Heidrich, and Gordon Wetzstein. 2016. Computational Imaging with Multi-Camera Time-of-Flight Systems. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 35, 4 (2016). <https://doi.org/10/gfz5m9>
- [1770] Robert Siegel and John R. Howell. 1981. *Thermal Radiation Heat Transfer* (2 ed.). Hemisphere Publishing Corp., NY.
- [1771] Robert Siegel and John R. Howell. 2002. *Thermal Radiation Heat Transfer* (4 ed.). Taylor & Francis, New York, NY.
- [1772] J. Sijbers, A.J. Den Dekker, J. Van Audekerke, M. Verhoye, and D. Van Dyck. 1998. Estimation of the Noise in Magnitude MR Images. *Magnetic Resonance Imaging* 16, 1 (1998), 87–90. <https://doi.org/10/bn39wd>
- [1773] Martin Šik, Hisanari Otsu, Toshiya Hachisuka, and Jaroslav Krivánek. 2016. Robust Light Transport Simulation via Metropolis Bidirectional Estimators. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 35, 6 (Nov. 2016), 245:1–245:12. <https://doi.org/10/gfz4kj>
- [1774] François X. Sillion. 1989. *Simulation de l'éclairage Pour La Synthèse d'images : Réalisme et Interactivité*. Ph.D. Thesis. Université Paris XI.
- [1775] François X. Sillion. 1995. A Unified Hierarchical Algorithm for Global Illumination with Scattering Volumes and Object Clusters. *IEEE Transactions on Visualization and Computer Graphics* 1, 3 (Sept. 1995), 240–254. <https://doi.org/10/fhjc65>
- [1776] François X. Sillion, James R. Arvo, Stephen H. Westin, and Donald P. Greenberg. 1991. A Global Illumination Solution for General Reflectance Distributions. *Computer Graphics (Proceedings of SIGGRAPH)* 25, 4 (July 1991), 187–196. <https://doi.org/10/bnxc3q>
- [1777] François X. Sillion and George Drettakis. 1995. Feature-Based Control of Visibility Error: A Multi-Resolution Clustering Algorithm for Global Illumination. In *Annual Conference Series (Proceedings of SIGGRAPH)*. Addison-Wesley, 145–152.
- [1778] François X. Sillion, George Drettakis, and Cyril Soler. 1995. A Clustering Algorithm for Radiance Calculation in General Environments. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, P. M. Hanrahan and W. Purgathofer (Eds.). Springer-Verlag, NY, 196–205.
- [1779] François X. Sillion and Claude Puech. 1989. A General Two-Pass Method Integrating Specular and Diffuse Reflection. *Computer Graphics (Proceedings of SIGGRAPH)* 23, 3 (July 1989), 335–344. <https://doi.org/10/dmd4f3>
- [1780] François X. Sillion and Claude Puech. 1994. *Radiosity and Global Illumination*. Morgan Kaufmann, San Francisco, CA.
- [1781] Samuel Siltanen, Tapio Lokki, Sami Kiminki, and Lauri Savioja. 2007. The Room Acoustic Rendering Equation. *Journal of the Acoustical Society of America* 122, 3 (Sept. 2007), 1624–1635. <https://doi.org/10/frbmz2>
- [1782] Bernard W. Silverman. 1986. *Density Estimation for Statistics and Data Analysis*. Monographs on Statistics and Applied Probability, Vol. 26. Chapman and Hall, New York, NY.
- [1783] Florian Simon, Johannes Hanika, Tobias Zirr, and Carsten Dachsbacher. 2017. Line Integration for Rendering Heterogeneous Emissive Volumes. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 36, 4 (June 2017).
- [1784] Eero P. Simoncelli and William T. Freeman. 1995. The Steerable Pyramid: A Flexible Architecture for Multi-Scale Derivative Computation. In *Image Processing, International Conf. On*, Vol. 3. IEEE Computer Society, 3444–3444.
- [1785] Jeffrey S. Simonoff. 1996. *Smoothing Methods in Statistics*. Springer-Verlag.
- [1786] Karen Simonyan and Andrew Zisserman. 2014. Very Deep Convolutional Networks for Large-Scale Image Recognition. *arXiv preprint arXiv:1409.1556* (2014).
- [1787] Karl Sims. 1991. Artificial Evolution for Computer Graphics. *Computer Graphics (Proceedings of SIGGRAPH)* 25, 4 (July 1991), 319–328.



- [1788] Gurprit Singh and Wojciech Jarosz. 2017. Convergence Analysis for Anisotropic Monte Carlo Sampling Spectra. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 36, 4 (July 2017), 137:1–137:14. <https://doi.org/10/gbxfhj>
- [1789] Gurprit Singh, Bailey Miller, and Wojciech Jarosz. 2017. Variance and Convergence Analysis of Monte Carlo Line and Segment Sampling. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 36, 4 (July 2017), 79–89. <https://doi.org/10/gfzncj>
- [1790] Gurprit Singh, Cengiz Öztireli, Abdalla G.M. Ahmed, David Coeurjolly, Kartic Subr, Oliver Deussen, Victor Ostromoukhov, Ravi Ramamoorthi, and Wojciech Jarosz. 2019. Analysis of Sample Correlations for Monte Carlo Rendering. *Computer Graphics Forum (Proceedings of Eurographics – State of the Art Reports)* 38, 2 (April 2019).
- [1791] Gurprit Singh, Kartic Subr, David Coeurjolly, Victor Ostromoukhov, and Wojciech Jarosz. 2019. Fourier Analysis of Correlated Monte Carlo Importance Sampling. *Computer Graphics Forum* 38, 1 (April 2019). <https://doi.org/10/gfznck>
- [1792] J. M. Singh and P. J. Narayanan. 2010. Real-Time Ray Tracing of Implicit Surfaces on the GPU. *IEEE Transactions on Visualization and Computer Graphics* 16, 2 (March 2010), 261–272. <https://doi.org/10/fdxhd3>
- [1793] Jag Mohan Singh, Pankaj Wasnik, and Raghavendra Ramachandra. 2018. Hessian-Based Robust Ray-Tracing of Implicit Surfaces on GPU. In *ACM SIGGRAPH Asia Technical Briefs*. ACM Press, New York, NY, USA, 16:1–16:4. <https://doi.org/10/gfz54t>
- [1794] Merrill Skolnik. 2002. *Introduction to Radar Systems* (3 ed.). McGraw-Hill.
- [1795] Helge Skullerud. 1968. The Stochastic Computer Simulation of Ion Motion in a Gas Subjected to a Constant Electric Field. *Journal of Physics D: Applied Physics* 1, 11 (1968), 1567–1568. <https://doi.org/10/brdgr7>
- [1796] Sever Slavco. 1991. The Error of Interior Lighting Calculations. In *Illumination Engineering Society of North America, Annual Conference Technical Papers*. 521–527.
- [1797] Peter-Pike Sloan. 2008. Stupid Spherical Harmonics (SH) Tricks. In *Game Developers Conference*.
- [1798] Peter-Pike Sloan, Jan Kautz, and John Snyder. 2002. Precomputed Radiance Transfer for Real-Time Rendering in Dynamic, Low-Frequency Lighting Environments. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 21, 3 (2002), 527–536. <https://doi.org/10/gfg3kn>
- [1799] Peter-Pike Sloan, Ben Luna, and John Snyder. 2005. Local, Deformable Precomputed Radiance Transfer. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 24, 3 (July 2005), 1216–1224. <https://doi.org/10/bvb8qw>
- [1800] Philipp Slusallek, Marc Stamminger, Wolfgang Heidrich, Jan-Christian Popp, and Hans-Peter Seidel. March/April 1998. Composite Lighting Simulations with Lighting Networks. *IEEE Computer Graphics & Applications* 18, 2 (March/April 1998), 22–31. <https://doi.org/10/fsmcwn> ISSN 0272-1716.
- [1801] Adam Smith, James Skorupski, and James Davis. 2008. *Transient Rendering*. Technical Report UCSC-SOE-08-26. School of Engineering, University of California, Santa Cruz.
- [1802] A. M. Smith and T. F. Smith (Eds.). 1987. *Fundamentals and Applications of Radiation Heat Transfer*. ASME, NY. Proceedings of the 24th National Heat Transfer Conference and Exhibition.
- [1803] Alvy Ray Smith. 1984. Plants Fractals and Formal Languages. *Computer Graphics (Proceedings of SIGGRAPH)* 18, 3 (July 1984), 1–10.
- [1804] B. Smith, J. Vasut, T. Hyde, L. Matthews, J. Reay, M. Cook, and J. Schmoke. 2004. Dusty Plasma Correlation Function Experiment. *Advances in Space Research* 34, 11 (Jan. 2004), 2379–2383. <https://doi.org/10/dsg362>
- [1805] T. Smith and J. Guild. 1931. The C.I.E. Colorimetric Standards and Their Use. *Transactions of the Optical Society* 33, 3 (Jan. 1931), 73–134. <https://doi.org/10/fvzpzv>
- [1806] Steve Smithies, Kevin Novins, and James Arvo. 1999. A Handwriting-Based Equation Editor. In *Proceedings of Computer Graphics International (CGI)*. 84–91.
- [1807] Brian Smits, James Arvo, and Donald Greenberg. 1994. A Clustering Algorithm for Radiosity in Complex Environments. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 435–442. <https://doi.org/10/cgn8h6>
- [1808] Brian Smits and Gary W. Meyer. 1990. Newton's Colors: Simulating Interference Phenomena in Realistic Image Synthesis. In *Photorealism in Computer Graphics (Proceedings of the Eurographics Workshop on Photosimulation, Realism and Physics in Computer Graphics)*. 185–194.
- [1809] Brian E. Smits. 1994. *Efficient Hierarchical Radiosity in Complex Environments*. Ph.D. Thesis. Cornell University, Ithaca, NY.
- [1810] Brian E. Smits, James R. Arvo, and David H. Salesin. 1992. An Importance-Driven Radiosity Algorithm. *Computer Graphics (Proceedings of SIGGRAPH)* 26, 2 (July 1992), 273–282. <https://doi.org/10/c6nqbs>
- [1811] Ben Snow. 2010. Terminators and Iron Men. In *Physically Based Shading Models in Film and Game Production (ACM SIGGRAPH Course Notes)*.
- [1812] John M. Snyder. 1991. *Generative Modeling: An Approach to High Level Shape Design for Computer Graphics and CAD*. Ph.D. Thesis. California Institute of Technology.
- [1813] John M. Snyder. 1992. Interval Analysis for Computer Graphics. *Computer Graphics (Proceedings of SIGGRAPH)* 26, 2 (July 1992), 121–130.
- [1814] John M. Snyder and Alan H. Barr. 1987. Ray Tracing Complex Models Containing Surface Tessellations. *Computer Graphics (Proceedings of SIGGRAPH)* 21, 4 (July 1987), 119–128. <https://doi.org/10/fbp6nj>
- [1815] John M. Snyder, Adam R. Woodbury, Kurt Fleischer, Bena Currin, and Alan H. Barr. 1993. Interval Methods for Multi-Point Collisions between Time-Dependent Curved Surfaces. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 321–334.
- [1816] Ilya M. Sobol. 1967. The Distribution of Points in a Cube and the Approximate Evaluation of Integrals. *U. S. S. R. Comput. Math. and Math. Phys.* 7 (1967), 86–112. <https://doi.org/10/crdj6j>
- [1817] V. V. Sobolev. 1963. *A Treatise on Radiative Transfer*. D. Van Nostrand Company, Princeton. Translated from the Russian by S. I. Gaposchkin.
- [1818] Cyril Soler, Mahdi M. Bagher, and Derek Nowrouzezahrai. 2015. Efficient and Accurate Spherical Kernel Integrals Using Isotropic Decomposition. *ACM Transactions on Graphics* 34, 6 (Dec. 2015).
- [1819] Cyril Soler and François X. Sillion. 2000. Hierarchical Instantiation for Radiosity. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, B. Péroche and H. Rushmeier (Eds.). Springer-Verlag, 173–184.
- [1820] Cyril Soler, Kartic Subr, Frédo Durand, Nicolas Holzschuch, and François X. Sillion. 2009. Fourier Depth of Field. *ACM Transactions on Graphics* 28, 2 (May 2009), 18:1–18:12. <https://doi.org/10.1145/1516522.1516529>
- [1821] Ying Song, Xin Tong, Fabio Pellacini, and Pieter Peers. 2009. SubEdit: A Representation for Editing Measured Heterogeneous Subsurface Scattering. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 28, 3 (July 2009), 1. <https://doi.org/10/brwqcn>
- [1822] J. Spanier. 1966. Two Pairs of Families of Estimators for Transport Problems. *SIAM J. Appl. Math.* 14, 4 (July 1966), 702–713. <https://doi.org/10/dg35nt>
- [1823] J. Spanier. 1979. A New Family of Estimators for Random Walk Problems. *IMA Journal of Applied Mathematics* 23, 1 (Jan. 1979), 1–31. <https://doi.org/10/b8jdpn>
- [1824] Jerome Spanier and Ely M. Gelbard. 1969. *Monte Carlo Principles and Neutron Transport Problems*. Addison-Wesley, Reading.
- [1825] E. J. Sparrow, E. R. G. Eckert, and V. K. Jonsson. 1962. An Enclosure Theory for Radiative Exchange between Specularly and Diffusely Reflecting Surfaces. *ASME Journal of Heat Transfer* 84, 4 (Nov. 1962), 294–300.
- [1826] E. M. Sparrow. 1960. Application of Variational Methods to Radiative Heat-Transfer Calculations. *ASME Journal of Heat Transfer* 82, 4 (Nov. 1960), 375–380.
- [1827] E. M. Sparrow. 1963. A New and Simpler Formulation for Radiative Angle Factors. *ASME Journal of Heat Transfer* 85, 2 (May 1963), 81–88. <https://doi.org/10/gfzwbz>
- [1828] Ephraim M. Sparrow and R. D. Cess. 1966. *Radiation Heat Transfer*. Brooks Publishing Company, Belmont, CA.
- [1829] E. M. Sparrow and A. Haji-Sheikh. 1965. A Generalized Variational Method for Calculating Radiant Interchange between Surfaces. *ASME Journal of Heat Transfer* 87, 1 (Feb. 1965), 103–109.
- [1830] E. M. Sparrow and S. L. Lin. 1965. Radiant Heat Transfer at a Surface Having Both Specular and Diffuse Reflectance Components. *International Journal of Heat and Mass Transfer* 8, 5 (May 1965), 769–779. <https://doi.org/10/cnjrh5>
- [1831] L. Richard Speer, Tony D. DeRose, and Brian A. Barsky. 1985. A Theoretical and Empirical Analysis of Coherent Ray-Tracing. In *Proceedings of Graphics Interface*. 1–8.
- [1832] Ben Spencer and Mark W Jones. 2009. Into the Blue: Better Caustics through Photon Relaxation. *Computer Graphics Forum* 28, 2 (April 2009), 319–328. <https://doi.org/10/bssr8t>
- [1833] Ben Spencer and Mark W Jones. January/February 2009. Hierarchical Photon Mapping. *IEEE Transactions on Visualization and Computer Graphics* 15, 1 (January/February 2009), 49–61. <https://doi.org/10/dcvbqv>
- [1834] Domina Eberle Spencer. 1942. Calculation of Illumination from Triangular Sources. *Journal of the Optical Society of America* 32, 5 (1942), 274–281. <https://doi.org/10/ckxj8s>
- [1835] I. F. Spiro, R. C. Jones, and D. Q. Wark. 1965. Atmospheric Transmission: Concepts, Symbols, Units and Nomenclature. *Infrared Physics* 5, 1 (1965), 11–36.
- [1836] Weston M. Stacey, Jr. 1974. *Variational Methods in Nuclear Reactor Physics*. Academic Press, NY.
- [1837] Jos Stam. 1995. Multiple Scattering as a Diffusion Process. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Patrick M. Hanrahan and Werner Purgathofer (Eds.). Springer-Verlag, 41–50. <https://doi.org/10/gfzqh2>
- [1838] Jos Stam. 1999. Diffraction Shaders. In *Annual Conference Series (Proceedings of SIGGRAPH)*, Alyn Rockwood (Ed.). Addison Wesley Longman, 101–110.
- [1839] Jos Stam and Eric Languénou. 1996. Ray Tracing in Non-Constant Media. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Xavier Pueyo and Peter Schröder (Eds.). Springer-Verlag, 225–234.

- [1840] Marc Stamminger, Philipp Slusallek, and Hans-Peter Seidel. 1998. Three Point Clustering for Radiance Computations. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, George Drettakis and Nelson Max (Eds.). Springer-Verlag, 211–222. <https://doi.org/10/c25zb7>
- [1841] Michael M. Stark, Elaine Cohen, Tom Lyche, and Richard F. Riesenfeld. 1999. Computing Exact Shadow Irradiance Using Splines. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press/Addison-Wesley Publishing Co., 155–164. <https://doi.org/10/crk4rk>
- [1842] Michael M. Stark, M. Stark, Elaine Cohen, Tom Lyche, Peter Shirley, Frank Stenger, Thomas Henderson, and David S. Chapman. 2002. Analytic Illumination in Polyhedral Environments. (2002).
- [1843] N. M. Steen. 1966. *A Simple Method to Improve the Efficiency of the  $\Sigma$  /  $\Sigma$  Estimator in Certain Monte Carlo Programs*. Technical Report WAPD-TM-609, Bettis Atomic Power Lab., Pittsburgh, Pa.
- [1844] Charles M. Stein. 1981. Estimation of the Mean of a Multivariate Normal Distribution. *The Annals of Statistics* 9, 6 (Nov. 1981), 1135–1151. <https://doi.org/10/bwrkj4>
- [1845] Michael Stein. 1987. Large Sample Properties of Simulations Using Latin Hypercube Sampling. *Technometrics* 29, 2 (1987), 143–151. <https://doi.org/10/gfzncm>
- [1846] David M. Steinberg and Dennis K. J. Lin. 2006. A Construction Method for Orthogonal Latin Hypercube Designs. *Biometrika* 93, 2 (2006), 279–288. <https://doi.org/10/bns86t>
- [1847] Herbert A. Steinberg and Malvin H. Kalos. 1971. Bounded Estimators for Flux at a Point in Monte Carlo. *Nuclear Science and Engineering* 44, 3 (June 1971), 406–412. <https://doi.org/10/gfzndd>
- [1848] A. James Stewart and Sherif Ghali. 1994. Fast Computation of Shadow Boundaries Using Spatial Coherence and Backprojections. In *Annual Conference Series (Proceedings of SIGGRAPH)*, 231–238.
- [1849] John C. Stewart. 1967. Some Topics in Radiative Transfer. In *Developments in Transfer Theory*, Erdal İnönü and P. F. Zweifel (Eds.). Academic Press, NY, 113–148.
- [1850] John C. Stewart. 1968. On the X- and y-Functions and Green's Function for a Finite Slab. *Journal of Quantitative Spectroscopy and Radiative Transfer* 8 (1968), 487–493. <https://doi.org/10/fnzxwg>
- [1851] John C. Stewart, Ivan Kuščer, and Norman J. McCormick. 1966. Equivalence of Special Models in Energy-Dependent Neutron Transport and Nongrey Radiative Transfer. *Annals of Physics* 40 (1966), 321–333.
- [1852] Martin Stich, Heiko Friedrich, and Andreas Dietrich. 2009. Spatial Splits in Bounding Volume Hierarchies. In *Proceedings of High Performance Graphics*. ACM Press, 7–13.
- [1853] Eric J. Stollnitz, Tony D. DeRose, and David H. Salesin. 1996. *Wavelets for Computer Graphics*. Morgan Kaufmann.
- [1854] Dietrich Stoyan and Helga Stoyan. 1994. *Fractals, Random Shapes, and Point Fields: Methods of Geometrical Statistics*. John Wiley & Sons, Chichester, New York.
- [1855] Shuochen Su, Felix Heide, Robin Swanson, Jonathan Klein, Clara Callenberg, Matthias Hullin, and Wolfgang Heidrich. 2016. Material Classification Using Raw Time-of-Flight Measurements. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.
- [1856] Kartic Subr and James Arvo. 2007. Steerable Importance Sampling. In *Proceedings of IEEE Symposium on Interactive Ray Tracing*. IEEE Computer Society, 133–140. <https://doi.org/10/ctd36t>
- [1857] Kartic Subr and Jan Kautz. 2013. Fourier Analysis of Stochastic Sampling Strategies for Assessing Bias and Variance in Integration. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 32, 4 (July 2013), 128:1–128:12. <https://doi.org/10/gbdg7c>
- [1858] Kartic Subr, Derek Nowrouzezahrai, Wojciech Jarosz, Jan Kautz, and Kenny Mitchell. 2014. Error Analysis of Estimators That Use Combinations of Stochastic Sampling Strategies for Direct Illumination. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 33, 4 (June 2014), 93–102. <https://doi.org/10/f6fgw4>
- [1859] Kartic Subr, Gurprit Singh, and Wojciech Jarosz. 2016. Fourier Analysis of Numerical Integration in Monte Carlo Rendering: Theory and Practice. In *ACM SIGGRAPH Courses*. <https://doi.org/10/gfzncn>
- [1860] Kartic Subr, Gurprit Singh, and Wojciech Jarosz. 2016. Fourier Analysis of Numerical Integration in Monte Carlo Rendering: Theory and Practice: Understanding Estimation Error in Monte Carlo Image Synthesis. In *ACM SIGGRAPH Course Notes*. ACM Press, 10. <https://doi.org/10/gfzncn>
- [1861] Kevin G. Suffer and Edward D. Fackerell. 1990. Interval Methods in Computer Graphics. In *Proceedings of Ausgraph '90*, 35–44.
- [1862] Masamichi Sugihara. 2009. *Free-Form Deformation for Implicit Surfaces*. Ph.D. Thesis.
- [1863] Masamichi Sugihara, Brian Wyvill, and Ryan Schmidt. 2010. WarpCurves: A Tool for Explicit Manipulation of Implicit Surfaces. *Computers & Graphics* 34, 3 (June 2010), 282–291. <https://doi.org/10/dqnmqj>
- [1864] W. E. Sumpner. 1893. The Diffusion of Light. *Philos. Mag.* 35, 213 (Feb. 1893), 81–87.
- [1865] Bo Sun, Ravi Ramamoorthi, Srinivasa G. Narasimhan, and Shree K. Nayar. 2005. A Practical Analytic Single Scattering Model for Real Time Rendering. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 24, 3 (2005), 1040–1049. <https://doi.org/10/fgnbqt>
- [1866] Fasheng Sun, Min-Qian Liu, and Dennis K. J. Lin. 2009. Construction of Orthogonal Latin Hypercube Designs. *Biometrika* 96, 4 (Oct. 2009), 971–974. <https://doi.org/10/dkmc5r>
- [1867] Weifeng Sun and Amar Mukherjee. 2006. Generalized Wavelet Product Integral for Rendering Dynamic Glossy Objects. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 25, 3 (July 2006), 955. <https://doi.org/10/d8gq6s>
- [1868] Xin Sun, Kun Zhou, Yanyun Chen, Stephen Lin, Jiaoying Shi, and Baining Guo. 2007. Interactive Relighting with Dynamic BRDFs. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 26, 3 (July 2007), 27. <https://doi.org/10/d8zjw4>
- [1869] Xin Sun, Kun Zhou, Jie Guo, Guofu Xie, Jingui Pan, Wencheng Wang, and Baining Guo. 2013. Line Segment Sampling with Blue-Noise Properties. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 32, 4 (July 2013), 127:1–127:14. <https://doi.org/10/gbdg4r>
- [1870] Xin Sun, Kun Zhou, Stephen Lin, and Baining Guo. 2010. Line Space Gathering for Single Scattering in Large Scenes. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 29, 4 (July 2010), 54:1–54:8. <https://doi.org/10/dzxvvr>
- [1871] Xin Sun, Kun Zhou, Eric Stollnitz, Jiaoying Shi, and Baining Guo. 2008. Interactive Relighting of Dynamic Refractive Objects. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 27, 3 (Aug. 2008), 1. <https://doi.org/10/fq5wd5>
- [1872] Kelvin Sung and Peter Shirley. 1992. Ray Tracing with the BSP Tree. In *Graphics Gems III*, David Kirk (Ed.). Academic Press, 271–274.
- [1873] Ivan E. Sutherland. 1963. *Sketchpad: A Man-Machine Graphical Communication System*. Ph.D. Thesis. Massachusetts Institute of Technology.
- [1874] Ivan E. Sutherland, Robert F. Sproull, and Robert A. Schumacker. 1974. A Characterization of Ten Hidden-Surface Algorithms. *Computing Surveys* 6, 1 (March 1974), 1–55.
- [1875] T. M. Sutton, F. B. Brown, F. G. Bischoff, D. B. MacMillan, C. L. Ellis, J. T. Ward, C. T. Ballinger, D. J. Kelly, and L. Schindler. 1999. *The Physical Models and Statistical Procedures Used in the RACER Monte Carlo Code*. Technical Report KAPL-4840, Knolls Atomic Power Laboratory, Niskayuna, NY, USA. <https://doi.org/10.2172/767449>
- [1876] Frank Suykens and Yves D. Willems. 2000. Adaptive Filtering for Progressive Monte Carlo Image Rendering. In *Vis. and Interactive Digital Media*.
- [1877] Frank Suykens and Yves D. Willems. 2000. Density Control for Photon Maps. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, W. Hansmann, W. Purgathofer, François X. Sillion, Bernard Péroche, and Holly Rushmeier (Eds.). Springer-Verlag, Vienna, 23–34. [https://doi.org/10.1007/978-3-7091-6303-0\\_3](https://doi.org/10.1007/978-3-7091-6303-0_3)
- [1878] Frank Suykens and Yves D. Willems. 2001. Path Differentials and Applications. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, W. Hansmann, W. Purgathofer, François X. Sillion, Steven J. Gortler, and Karol Myszkowski (Eds.). Springer-Verlag, Vienna, 257–268. <https://doi.org/10/bq6pdj> DOI.
- [1879] Laszlo Szecsi, Laszlo Szirmay-Kalos, and Csaba Kelemen. 2003. Variance Reduction for Russian-Roulette. *Journal of the World Society for Computer Graphics (WSCG)* 11, 1–3 (2003).
- [1880] Richard Szeliski. 1996. Video Mosaics for Virtual Environments. *IEEE Computer Graphics & Applications* 16, 2 (1996), 22–30.
- [1881] László Szirmay-Kalos. 2000. *Photorealistic Image Synthesis Using Ray-Bundles*. Ph.D. Thesis. Department of Control Engineering and Information Technology, Technical University of Budapest, Budapest, Hungary.
- [1882] Laszlo Szirmay-Kalos, Balazs Csebfalvi, and Werner Purgathofer. 1999. Importance Driven Quasi-Random Walk Solution of the Rendering Equation. *Computers & Graphics* 23, 2 (1999), 203–212. <https://doi.org/10/cn3gj9>
- [1883] László Szirmay-Kalos, Iliyan Georgiev, Milán Magdics, Balázs Molnár, and Dávid Légrády. 2017. Unbiased Estimators to Render Procedurally Generated Inhomogeneous Participating Media. *Computer Graphics Forum (Proceedings of Eurographics)* 36, 2 (2017).
- [1884] Laszlo Szirmay-Kalos and Werner Purgathofer. 1998. Global Ray-Bundle Tracing with Hardware Acceleration. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, G. Drettakis and N. Max (Eds.). Springer-Verlag, 247–258.
- [1885] László Szirmay-Kalos, Mateu Sbert, and Tamás Ummenhofer. 2005. Real-Time Multiple Scattering in Participating Media with Illumination Networks. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. Eurographics Association, 277–282. <https://doi.org/10/gfzq72>
- [1886] László Szirmay-Kalos, Balázs Tóth, and Milán Magdics. 2011. Free Path Sampling in High Resolution Inhomogeneous Participating Media. *Computer Graphics Forum* 30, 1 (March 2011), 85–97. <https://doi.org/10/bpkdzm>



- [1887] László Szirmay-Kalos and Tamás Umenhoffer. 2008. Displacement Mapping on the GPU - State of the Art. *Computer Graphics Forum* 27, 6 (2008), 1567–1592.
- [1888] Eric Tabellion and Arnauld Lamorlette. 2004. An Approximate Global Illumination System for Computer Generated Films. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 23, 3 (2004), 469–476. <https://doi.org/10/cw2mqm>
- [1889] Ryuichi Tadano, Adithya Kumar Pediredla, Kaushik Mitra, and Ashok Veeraraghavan. 2015. Spatial Phase-Sweep: Increasing Temporal Resolution of Transient Imaging Using a Light Source Array. *arXiv preprint arXiv:1512.06539* (2015).
- [1890] Allen Taflove. 1998. *Advances in Computational Electrodynamics: The Finite-Difference Time-Domain Method*. Artech House Inc.
- [1891] Tapio Takala and James Hahn. 1992. Sound Rendering. *Computer Graphics (Proceedings of SIGGRAPH)* (1992), 211–220. <https://doi.org/10/dr2grw>
- [1892] H. Takeda, S. Farsiu, and P. Milanfar. 2007. Kernel Regression for Image Processing and Reconstruction. *IEEE Transactions on Image Processing* 16, 2 (Feb. 2007), 349–366. <https://doi.org/10/b4gfwtp>
- [1893] Justin F. Talbot, David Cline, and Parris Egbert. 2005. Importance Resampling for Global Illumination. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. Eurographics Association, 139–146. <https://doi.org/10/gfzsm2>
- [1894] Filippo Tampieri. 1993. *Discontinuity Meshing for Radiosity Image Synthesis*. Ph.D. Thesis. Program of Computer Graphics, Cornell University, Ithaca, NY.
- [1895] Filippo Tampieri and Dani Lischinski. 1991. The Constant Radiosity Assumption Syndrome. In *Photorealistic Rendering in Computer Graphics (Proceedings of the Eurographics Workshop on Rendering)*.
- [1896] Rasmus Tamstorf and Henrik Wann Jensen. 1997. Adaptive Sampling and Bias Estimation in Path Tracing. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Julie Dorsey and Philipp Slusallek (Eds.). Springer-Verlag, 285–295.
- [1897] Ping Tan, Stephen Lin, Long Quan, Baining Guo, and Heung-Yeung Shum. 2005. Multiresolution Reflectance Filtering. In *Proceedings Eurographics Symposium on Rendering 2005*. 111–116.
- [1898] Zhiqiang Tan. 1989. Radiative Heat Transfer in Multidimensional Emitting, Absorbing, and Anisotropic Scattering Media – Mathematical Formulation and Numerical Method. *ASME Journal of Heat Transfer* 111 (Feb. 1989), 141–147.
- [1899] Zhiqiang Tan. 1989. Radiative Heat Transfer in Multidimensional Emitting, Absorbing, and Anisotropic Scattering Media—Mathematical Formulation and Numerical Method. *ASME Journal of Heat Transfer* 111, 1 (Feb. 1989), 141–147. <https://doi.org/10/b33g44>
- [1900] Kenichiro Tanaka, Yasuhiro Mukaigawa, Hiroyuki Kubo, Yasuyuki Matsushita, and Yasushi Yagi. 2016. Recovering Transparent Shape from Time-of-Flight Distortion. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.
- [1901] Boxin Tang. 1993. Orthogonal Array-Based Latin Hypercubes. *J. Amer. Statist. Assoc.* 88, 424 (Dec. 1993), 1392–1397. <https://doi.org/10/gfzncp>
- [1902] Boxin Tang. 1998. Selecting Latin Hypercubes Using Correlation Criteria. *Statistica Sinica* 8, 3 (1998), 965–977.
- [1903] David C. Tannenbaum, Peter Tannenbaum, and Michael J. Wozny. 1994. Polarization and Birefringency Considerations in Rendering. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 221–222. <https://doi.org/10/dvmtnk>
- [1904] Jeremy Tanner. 2006. *The Invention of Art History in Ancient Greece: Religion, Society and Artistic Rationalisation*. Cambridge University Press.
- [1905] Takehiro Tawara, Karol Myszkowski, Kirill Dmitriev, Vlastimil Havran, Cyrille Domez, and Hans-Peter Seidel. 2004. Exploiting Temporal Coherence in Global Illumination.. In *Proceedings of the Spring Conference on Computer Graphics (SCCG)*. ACM Press, 23–33. <https://doi.org/10/c7qp3>
- [1906] Takehiro Tawara, Karol Myszkowski, and Hans-Peter Seidel. 2002. Localizing the Final Gathering for Dynamic Scenes Using the Photon Map. In *Proceedings of Vision, Modeling and Visualization*, Günther Greiner (Ed.). Aka GmbH, 69–46.
- [1907] Jonathan Taylor, Vladimir Tankovich, Danhang Tang, Cem Keskin, David Kim, Philip Davidson, Adarsh Kowdle, and Shahram Izadi. 2017. Articulated Distance Fields for Ultra-Fast Tracking of Hands Interacting. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 36, 6 (Nov. 2017), 244:1–244:12. <https://doi.org/10/gcqbht>
- [1908] Seth Teller, Kavita Bala, and Julie Dorsey. 1996. Conservative Radiance Interpolants for Ray Tracing. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*. Springer-Verlag, 257–268.
- [1909] Seth Teller and Pat Hanrahan. 1993. Global Visibility for Illumination Computations. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 239–246.
- [1910] Seth J. Teller. 1992. Computing the Antipumbra of an Area Light Source. *Computer Graphics (Proceedings of SIGGRAPH)* 26, 2 (July 1992), 139–148.
- [1911] Demetri Terzopoulos, John Platt, Alan Barr, and Kurt Fleischer. 1987. Elastically Deformable Models. *Computer Graphics (Proceedings of SIGGRAPH)* 21, 4 (Aug. 1987), 205–214. <https://doi.org/10/c4xrhv>
- [1912] J. Tensendorf. 1987. Radiative Transfer as a Sum over Paths. *Physical Review A* 35, 2 (Jan. 1987), 872–878. <https://doi.org/10/czvqzc>
- [1913] Jerry Tensendorf. 1990. Radiative Transfer on Curved Surfaces. *J. Math. Phys.* 31, 4 (April 1990), 1010–1019. <https://doi.org/10/bm892q>
- [1914] Jerry Tensendorf. 2009. Numerical Integration of the Feynman Path Integral for Radiative Transport. In *International Conference on Mathematics, Computational Methods & Reactor Physics*. American Nuclear Society, Saratoga Springs, New York.
- [1915] The Subcommittee on Photometry of the IESNA Computer Committee. 1991. *IES Standard File Format for Electronic Transfer of Photometric Data and Related Information*.
- [1916] M. Thomas and W. S. Rigdon. 1964. A Simplified Formulation for Radiative Transfer. *American Institute of Aeronautics and Astronautics Journal* 2, 11 (Nov. 1964), 2052–2054.
- [1917] Richard N. Thomas. 1965. *Some Aspects of Non-Equilibrium Thermodynamics in the Presence of a Radiation Field*. University of Colorado Press, Boulder, Colorado.
- [1918] Colin J. Thompson. 1971. *Mathematical Statistical Mechanics*. Macmillan Publishing Company, NY.
- [1919] Luke Tierney. 1998. A Note on Metropolis-Hastings Kernels for General State Spaces. *The Annals of Applied Probability* 8, 1 (Feb. 1998), 1–9. <https://doi.org/10/cpmmn7>
- [1920] Michael Tinkham. 2003. *Group Theory and Quantum Mechanics*. Dover Publications.
- [1921] Paul Allen Tipler and Gene Mosca. 2004. *Physics for Scientists and Engineers* (5th extended ed.). W. H. Freeman, New York.
- [1922] Hideki Todo, Ken-ichi Anjyo, William Baxter, and Takeo Igarashi. 2007. Locally Controllable Stylized Shading. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 26, 3 (July 2007), 17. <https://doi.org/10/bvk82w>
- [1923] Yusuke Tokuyoshi and Takahiro Harada. 2016. Stochastic Light Culling. *Journal of Computer Graphics Techniques (JCGT)* 5, 1 (2016).
- [1924] Osama Tolba, Julie Dorsey, and Leonard McMillan. 1999. Sketching with Projective 2D Strokes. In *UIST-1999*. 149–157.
- [1925] C. Tomasi and R. Manduchi. 1998. Bilateral Filtering for Gray and Color Images. In *Proceedings of the International Conference on Computer Vision (ICCV)*. 839–846. <https://doi.org/10/dwsr88>
- [1926] J. S. Toor and R. Viskanta. 1968. A Numerical Experiment of Radiant Heat Interchange by the Monte Carlo Method. *International Journal of Heat and Mass Transfer* 11 (1968), 883–897. <https://doi.org/10/fts5kfz>
- [1927] Salvatore Torquato, Obiana U. Uche, and Frank H. Stillinger. 2006. Random Sequential Addition of Hard Spheres in High Euclidean Dimensions. *Physical Review E* 74, 6 (2006). <https://doi.org/10/d9q29g>
- [1928] K. E. Torrance and E. M. Sparrow. 1967. Theory for Off-Specular Reflection from Roughened Surfaces. *Journal of the Optical Society of America* 57, 9 (Sept. 1967), 1105–1114. <https://doi.org/10/dw6f9n>
- [1929] Daniel L. Toth. 1985. On Ray Tracing Parametric Surfaces. *Computer Graphics (Proceedings of SIGGRAPH)* 19, 3 (July 1985), 171–179.
- [1930] Alexander P. Trotter. 1911. *Illumination: Its Distribution and Measurement*. Macmillan Publishing Company, London.
- [1931] Roy Troutman and Nelson L. Max. 1993. Radiosity Algorithms Using Higher-Order Finite Element Methods. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 209–212.
- [1932] Grigorios Tsagkatakis, Arnaud Woiselle, George Tzagkarakis, Marc Bousquet, Jean-Luc Starck, and Panagiotis Tsakalides. 2012. Active Range Imaging via Random Gating. In *SPIE Security+ Defence*.
- [1933] Grigorios Tsagkatakis, Arnaud Woiselle, George Tzagkarakis, Marc Bousquet, Jean Luc Starck, and Panagiotis Tsakalides. 2013. Compressed Gated Range Sensing. In *SPIE Optical Engineering+ Applications*.
- [1934] Grigorios Tsagkatakis, Arnaud Woiselle, George Tzagkarakis, Marc Bousquet, Jean-Luc Starck, and Panagiotis Tsakalides. 2015. Multireturn Compressed Gated Range Imaging. *Opt. Eng.* 54, 3 (2015). <https://doi.org/10/gfz5nb>
- [1935] Chia-Yin Tsai, Ashok Veeraraghavan, and Aswin C Sankaranarayanan. 2016. Shape and Reflectance from Two-Bounce Light Transients. In *IEEE International Conference on Computational Photography*. <https://doi.org/10/gfz5nc>
- [1936] Yu-Ting Tsai, Chin-Chen Chang, Qing-Zhen Jiang, and Shr-Ching Weng. 2008. Importance Sampling of Products from Illumination and BRDF Using Spherical Radial Basis Functions. *The Visual Computer* 24, 7 (July 2008), 817–826. <https://doi.org/10/bbtzn7>
- [1937] Yu-Ting Tsai and Zen-Chung Shih. 2006. All-Frequency Precomputed Radiance Transfer Using Spherical Radial Basis Functions and Clustered Tensor Approximation. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 25, 3 (2006), 967–976. <https://doi.org/10/dwsd3h>
- [1938] Shubham Tulsiani, Hao Su, Leonidas J Guibas, Alexei A Efros, and Jitendra Malik. 2017. Learning Shape Abstractions by Assembling Volumetric Primitives. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. IEEE Computer Society, 1466–1474. <https://doi.org/10/gfz56d>



- [1939] Greg Turk. 1990. Generating Random Points in Triangles. In *Graphics Gems*, Andrew S. Glassner (Ed.). Academic Press, NY, 24–28.
- [1940] Greg Turk. 1992. Re-Tiling Polygonal Surfaces. *Computer Graphics (Proceedings of SIGGRAPH)* 26, 2 (July 1992), 55–64.
- [1941] Greg Turk and Marc Levoy. 1994. Zippered Polygon Meshes from Range Images. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 311–318.
- [1942] Greg Turk and James F. O'Brien. 1999. *Variational Implicit Surfaces*. Technical Report. Georgia Institute of Technology.
- [1943] Stanley Tzeng, Anjul Patney, Andrew Davidson, Mohamed S. Ebeida, Scott A. Mitchell, and John D. Owens. 2012. High-Quality Parallel Depth-of-Field Using Line Samples. In *Proceedings of High Performance Graphics*. Eurographics Association, 23–31. <https://doi.org/10/gfzncq>
- [1944] G. E. Uhlenbeck. 1973. The Validity and the Limitations of the Boltzmann Equation. *Acta Physica Austriaca Supplementum X* (1973), 107–119. Proceedings of the International Symposium “100 Years Boltzmann Equation”.
- [1945] Seiji Ukai. 1972. Solution of Multi-Dimensional Neutron Transport Equation by Finite Element Method. *Journal of Nuclear Science and Technology* 9, 6 (June 1972), 366–373.
- [1946] Justus Ulbrich, Jan Novák, Hauke Rehfeld, and Carsten Dachsbacher. 2013. Progressive Visibility Caching for Fast Indirect Illumination. In *Proceedings of Vision, Modeling and Visualization*. Eurographics Association, 203–210.
- [1947] Robert Ulichney. 1987. *Digital Halftoning*. MIT Press, Cambridge, MA, USA.
- [1948] R. A. Ulichney. 1988. Dithering with Blue Noise. *Proc. IEEE* 76, 1 (Jan. 1988), 56–79. <https://doi.org/10/brtszd>
- [1949] K. Umashankar and A. Teflove. 1982. A Novel Method to Analyze Electromagnetic Scattering of Complex Objects. *IEEE Transactions on Electromagnetic Compatibility EMC-24*, 4 (Nov. 1982), 397–405. <https://doi.org/10/bbwvnt>
- [1950] S. Uneo and A. P. Wang. 1974. Scattering and Transmission Functions of Radiation by a Finite Atmosphere with a Diffuse-and-Specular Reflector. *Bulletin of the American Astronomical Society* 6, 3 (1974), 385.
- [1951] M. Unser. 2000. Sampling—50 Years After Shannon. *Proc. IEEE* 88, 4 (April 2000), 569–587. <https://doi.org/10/b4rn6n>
- [1952] Craig Upson and Michael Keeler. 1988. V-Buffer: Visible Volume Rendering. *Computer Graphics (Proceedings of SIGGRAPH)* 22, 4 (Aug. 1988), 59–64.
- [1953] Carlos Ureña, Marcos Fajardo, and Alan King. 2013. An Area-Preserving Parametrization for Spherical Rectangles. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 32, 4 (2013), 59–66. <https://doi.org/10/gfzncr>
- [1954] Kartik Vaidyanathan, Jakob Munkberg, Petrik Clarberg, and Marco Salvi. [n. d.]. Layered Light Field Reconstruction for Defocus Blur. *ACM Trans. Graph., to appear* [n. d.].
- [1955] Rodolphe Vaillant, Loïc Barthe, Gaël Guennebaud, Marie-Paule Cani, Damien Rohmer, Brian Wyvill, Olivier Gourmel, and Mathias Paulin. 2013. Implicit Skinning: Real-Time Skin Deformation with Contact Modeling. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 32, 4 (July 2013), 125:1–125:12. <https://doi.org/10/gfz54q>
- [1956] Rodolphe Vaillant, Gaël Guennebaud, Loïc Barthe, Brian Wyvill, and Marie-Paule Cani. 2014. Robust Iso-Surface Tracking for Interactive Character Skinning. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 33, 6 (Nov. 2014), 189:1–189:11. <https://doi.org/10/gfz54r>
- [1957] M. S. Vallarta and R. P. Feynmann. 1939. The Scattering of Cosmic Rays by the Stars of a Galaxy. *PhRev* 55, 5 (March 1939), 506–507.
- [1958] Jeroen van Baar, Steven Poulakos, Wojciech Jarosz, Derek Nowrouzezahrai, Rasmus Tamstorf, and Markus Gross. 2011. Perceptually-Based Compensation of Light Pollution in Display Systems. In *Proceedings of the ACM SIGGRAPH Symposium on Applied Perception in Graphics and Visualization*. ACM Press, New York, NY, USA, 45–52. <https://doi.org/10/b9z7b2>
- [1959] Hendrik Christoffel van de Hulst. 1948. Scattering in a Planetary Atmosphere. *Astrophysical Journal* 107, 1 (Jan. 1948), 220–246. <https://doi.org/10/ct8fpj>
- [1960] D. Van de Ville and M. Kocher. 2009. SURE-Based Non-Local Means. *IEEE Signal Processing Letters* 16, 11 (Nov. 2009), 973–976. <https://doi.org/10/ccrxzx>
- [1961] Aaron van den Oord, Sander Dieleman, Heiga Zen, Karen Simonyan, Oriol Vinyals, Alex Graves, Nal Kalchbrenner, Andrew Senior, and Koray Kavukcuoglu. 2016. Wavenet: A Generative Model for Raw Audio. *arXiv preprint arXiv:1609.03499* (2016).
- [1962] J. J. van Wijk. 1984. Ray Tracing Objects Defined by Sweeping Planar Cubic Splines. *ACM Transactions on Graphics* 3, 3 (July 1984), 223–237. <https://doi.org/10/bkp823>
- [1963] Peter Vangorp, Jurgen Laurijssen, and Philip Dutré. 2007. The Influence of Shape on the Perception of Material Reflectance. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 26, 3 (2007). <https://doi.org/10/c63gbh>
- [1964] Gokul Varadhan, Shankar Krishnan, Young J. Kim, Suhas Diggavi, and Dinesh Manocha. 2003. Efficient Max-Norm Distance Computation and Reliable Voxelization. In *Proceedings of the Symposium on Geometry Processing*. Eurographics Association, Aire-la-Ville, Switzerland, Switzerland, 116–126. <https://doi.org/10/gfz548>
- [1965] Richard Vasques and Edward W. Larsen. 2014. Non-Classical Particle Transport with Angular-Dependent Path-Length Distributions. I: Theory. *Annals of Nuclear Energy* 70, Supplement C (2014), 292–300. <https://doi.org/10.1016/j.anucene.2013.12.021>
- [1966] Richard Vasques and Edward W. Larsen. 2014. Non-Classical Particle Transport with Angular-Dependent Path-Length Distributions. II: Application to Pebble Bed Reactor Cores. *Annals of Nuclear Energy* 70, Supplement C (2014), 301–311. <https://doi.org/10.1016/j.anucene.2013.12.020>
- [1967] Eric Veach. 1996. Non-Symmetric Scattering in Light Transport Algorithms. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Xavier Pueyo and Peter Schröder (Eds.). Springer-Verlag, 81–90.
- [1968] Eric Veach. 1997. *Robust Monte Carlo Methods for Light Transport Simulation*. Ph.D. Thesis. Stanford University, United States – California.
- [1969] Eric Veach and Leonidas J. Guibas. 1994. Bidirectional Estimators for Light Transport. In *Photorealistic Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, Georgios Sakas, Peter Shirley, and Stefan Müller (Eds.). Springer-Verlag, 145–167. <https://doi.org/10/gfznbh>
- [1970] Eric Veach and Leonidas J. Guibas. 1995. Optimally Combining Sampling Techniques for Monte Carlo Rendering. In *Annual Conference Series (Proceedings of SIGGRAPH)*, Vol. 29. ACM Press, 419–428. <https://doi.org/10/d7b6n4>
- [1971] Eric Veach and Leonidas J. Guibas. 1997. Metropolis Light Transport. In *Annual Conference Series (Proceedings of SIGGRAPH)*, Vol. 31. ACM Press, Not Known, 65–76. <https://doi.org/10/bkjqj4>
- [1972] Christophe Vedel. 1992. Improved Storage and Reconstruction of Light Intensities on Surfaces. In *CE\_EGWR93*. 113–121.
- [1973] Christophe Vedel. 1993. Computing Illumination from Area Light Sources by Approximate Contour Integration. In *Proceedings of Graphics Interface*. Morgan Kaufmann, 237–244.
- [1974] Luiz Velho, Jonas Gomes, and Luiz H de Figueiredo. 2007. *Implicit Objects in Computer Graphics*. Springer-Verlag.
- [1975] Andreas Velten, Everett Lawson, Andrew Bardagjy, Mouni Bawendi, and Ramesh Raskar. 2011. Slow Art with a Trillion Frames per Second Camera. In *ACM SIGGRAPH Talks*.
- [1976] Andreas Velten, Thomas Willwacher, Otkrist Gupta, Ashok Veeraraghavan, Mouni G. Bawendi, and Ramesh Raskar. 2012. Recovering Three-Dimensional Shape around a Corner Using Ultrafast Time-of-Flight Imaging. *Nature Communications* 3 (2012).
- [1977] Andreas Velten, Di Wu, Adrian Jarabo, Belen Masia, Christopher Barsi, Chinmaya Joshi, Everett Lawson, Mouni Bawendi, Diego Gutierrez, and Ramesh Raskar. 2013. Femto-Photography: Capturing and Visualizing the Propagation of Light. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 32, 4, Article 44 (July 2013), 8 pages. <https://doi.org/10/gfxxpt>
- [1978] Andreas Velten, Di Wu, Adrian Jarabo, Belen Masia, Christopher Barsi, Everett Lawson, Chinmaya Joshi, Diego Gutierrez, Mouni G. Bawendi, and Ramesh Raskar. 2012. Relativistic Ultrafast Rendering Using Time-of-Flight Imaging. In *ACM SIGGRAPH Talks*. <https://doi.org/10/gfz5nd>
- [1979] Andreas Velten, Di Wu, Belen Masia, Adrian Jarabo, Christopher Barsi, Chinmaya Joshi, Everett Lawson, Mouni Bawendi, Diego Gutierrez, and Ramesh Raskar. 2016. Transient Imaging of Macroscopic Scenes at Picosecond Resolution. *Commun. ACM* to appear (2016).
- [1980] C. P. Verbeek and D. P. Greenberg. 1984. A Comprehensive Light Source Description for Computer Graphics. *IEEE Computer Graphics & Applications* 4, 7 (July 1984), 66–75. <https://doi.org/10/c74qvv>
- [1981] Jakob J. Verbeek, Jan R. J. Nunnink, and Nikos Vlassis. 2006. Accelerated EM-Based Clustering of Large Data Sets. *Data Mining and Knowledge Discovery* 13, 3 (Nov. 2006), 291–307. <https://doi.org/10/dk7fqt>
- [1982] Romain Vergne, Pascal Barla, Roland W. Fleming, and Xavier Granier. 2012. Surface Flows for Image-Based Shading Design. *ACM Transactions on Graphics* 31, 4 (July 2012), 94:1–94:9. <https://doi.org/10/gbbwnb>
- [1983] Ryusuke Villemin and Christophe Hery. 2013. Practical Illumination from Flames. *Journal of Computer Graphics Techniques (JCGT)* 2, 2 (2013), 142–155.
- [1984] Emmanuel Villiermaux and Benjamin Bossa. 2009. Single-Drop Fragmentation Determines Size Distribution of Raindrops. *Nature Physics* 5, 9 (Sept. 2009), 697–702. <https://doi.org/10/bw8w4d>
- [1985] Walter G. Vincenti and Charles H. Kruger, Jr. 1965. *Introduction to Physical Gas Dynamics*. John Wiley & Sons, NY.
- [1986] Wolfram von Funck, Holger Theisel, and Hans-Peter Seidel. 2006. Vector Field Based Shape Deformations. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 25, 3 (July 2006), 1118. <https://doi.org/10/c8h9dt>
- [1987] H. von Helmholtz and J.P.C. Southall. 1924. *Helmholtz's Treatise on Physiological Optics*. The Optical Society of America.
- [1988] John von Neumann. 1951. Various Techniques Used in Connection with Random Digits. *Journal of Research of the National Bureau of Standards, Appl. Math. Series* 12 (1951), 36–38.
- [1989] Jiří Vorba, Ondřej Karlik, Martin Šik, Tobias Ritschel, and Jaroslav Krivánek. 2014. On-Line Learning of Parametric Mixture Models for Light Transport

- Simulation. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 33, 4 (Aug. 2014), 101:1–101:11. <https://doi.org/10/f6c2cp>
- [1990] Jiří Vorba and Jaroslav Krivánek. 2016. Adjoint-Driven Russian Roulette and Splitting in Light Transport Simulation. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 35, 4 (July 2016), 42:1–42:11. <https://doi.org/10/f89mcz>
- [1991] Florent Wachtel, Adrien Pilleboue, David Coeurjolly, Katherine Breeden, Gurprit Singh, Gaël Cathelin, Fernando de Goes, Mathieu Desbrun, and Victor Ostromoukhov. 2014. Fast Tile-Based Adaptive Sampling with User-Specified Fourier Spectra. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 33, 4, Article 56 (July 2014), 11 pages.
- [1992] Ingo Wald, Thomas Kollig, Carsten Benthin, Alexander Keller, and Philipp Slusallek. 2002. Interactive Global Illumination Using Fast Ray Tracing. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*. 15–24.
- [1993] Ingo Wald, William R. Mark, Johannes Günther, Solomon Boulos, Thiago Ize, Warren Hunt, Steven G. Parker, and Peter Shirley. 2007. State of the Art in Ray Tracing Animated Scenes. In *Proceedings of Eurographics – State of the Art Reports*. The Eurographics Association, 89–116.
- [1994] Ingo Wald, William R. Mark, Johannes Günther, Solomon Boulos, Thiago Ize, Warren Hunt, Steven G. Parker, and Peter Shirley. 2009. State of the Art in Ray Tracing Animated Scenes. *Computer Graphics Forum* 28, 6 (2009), 1691–1722. <https://doi.org/10/b2bqbm>
- [1995] Ingo Wald, Philipp Slusallek, Carsten Benthin, and Markus Wagner. 2001. Interactive Distributed Ray Tracing of Highly Complex Models. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*. Springer-Verlag, London, UK, UK, 277–288.
- [1996] Ingo Wald, Philipp Slusallek, Carsten Benthin, and Markus Wagner. 2001. Interactive Rendering with Coherent Ray Tracing. *Computer Graphics Forum (Proceedings of Eurographics)* 20, 3 (2001), 153–165. <https://doi.org/10/fgz2r>
- [1997] Ingo Wald, Sven Woop, Carsten Benthin, Gregory S. Johnson, and Manfred Ernst. 2014. Embree: A Kernel Framework for Efficient CPU Ray Tracing. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 33, 4 (2014). <https://doi.org/10/gfzwcw>
- [1998] John R. Wallace, Michael F. Cohen, and Donald P. Greenberg. 1987. A Two-Pass Solution to the Rendering Equation: A Synthesis of Ray Tracing and Radiosity Methods. *Computer Graphics (Proceedings of SIGGRAPH)* 21, 4 (July 1987), 311–320. <https://doi.org/10/bnqng3>
- [1999] John R. Wallace, Kells A. Elmquist, and Eric A. Haines. 1989. A Ray Tracing Algorithm for Progressive Radiosity. *Computer Graphics (Proceedings of SIGGRAPH)* 23, 3 (July 1989), 315–324.
- [2000] John W. T. Walsh. 1929. Note on a Geometrical Radiation Problem. *Philos. Mag.* 7 (1929), 1092–1093.
- [2001] John W. T. Walsh. 1929. Uniformly Diffused Light through Two Apertures. *Philos. Mag.* 7 (1929), 1093–1094.
- [2002] Bruce Walter, Adam Arbree, Kavita Bala, and Donald P. Greenberg. 2006. Multidimensional Lightcuts. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 25, 3 (July 2006), 1081–1088. <https://doi.org/10.1145/1141911.1141997>
- [2003] Bruce Walter, Kavita Bala, Milind Kulkarni, and Keshav Pingali. 2008. Fast Agglomerative Clustering for Rendering. In *Proceedings of IEEE Symposium on Interactive Ray Tracing*. 81–86.
- [2004] Bruce Walter, Sebastian Fernandez, Adam Arbree, Kavita Bala, Michael Donikian, and Donald P. Greenberg. 2005. Lightcuts: A Scalable Approach to Illumination. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 24, 3 (Aug. 2005), 1098–1107. <https://doi.org/10/dhp5d3>
- [2005] Bruce Walter, Philip M. Hubbard, Peter Shirley, and Donald P. Greenberg. 1997. Global Illumination Using Local Linear Density Estimation. *ACM Transactions on Graphics* 16, 3 (July 1997), 217–259. <https://doi.org/10/fdxkwb>
- [2006] Bruce Walter, Pramook Khungurn, and Kavita Bala. 2012. Bidirectional Lightcuts. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 31, 4 (July 2012), 59:1–59:11. <https://doi.org/10/gfzrcx>
- [2007] Bruce Walter, Stephen R. Marschner, Hongsong Li, and Kenneth E. Torrance. 2007. Microfacet Models for Refraction through Rough Surfaces. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. Eurographics Association, 195–206. <https://doi.org/10/gfz4kg>
- [2008] Bruce Walter, Shuang Zhao, Nicolas Holzschuch, and Kavita Bala. 2009. Single Scattering in Refractive Media with Triangle Mesh Boundaries. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 28, 3 (July 2009), 1. <https://doi.org/10/bq66rh>
- [2009] Bruce Johnathan Walter. 1998. *Density Estimation Techniques for Global Illumination*. Ph.D. Thesis. Cornell University, Ithaca, NY.
- [2010] George N. Walton. 1987. Algorithms for Calculating Radiation View Factors between Plane Convex Polygons with Obstructions. In *Fundamentals and Applications of Radiation Heat Transfer (24th National Heat Transfer Conference and Exhibition)*. Vol. HTD-Vol. 72. ASME, NY, 45–52.
- [2011] Alan P. Wang. 1990. Basic Equations of Three-Dimensional Radiative Transfer. *J. Math. Phys.* 31, 1 (Jan. 1990), 175–181.
- [2012] Beibei Wang, Jean-Dominique Gascuel, and Nicolas Holzschuch. 2016. Point-Based Light Transport for Participating Media with Refractive Boundaries. In *Proceedings of EGSR (Experimental Ideas & Implementations)*.
- [2013] Changyaw Wang. 1992. Physically Correct Direct Lighting for Distribution Ray Tracing. In *Graphics Gems III*, David Kirk (Ed.). Academic Press, NY, 301–312.
- [2014] Changyaw Wang. 1994. *The Direct Lighting Computation in Global Illumination Methods*. Ph.D. Thesis. Indiana University.
- [2015] Changyaw Wang and Kelvin Sung. 1999. Multi-Stage N-Rooks Sampling Method. *Journal of Graphics Tools* 4, 1 (1999), 39–47. <https://doi.org/10/gfzqzh>
- [2016] Jingwen Wang and Ravi Ramamoorthi. 2018. Analytic Spherical Harmonic Coefficients for Polygonal Area Lights. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 37, 4 (July 2018), 1–11. <https://doi.org/10/gd52s2>
- [2017] Jiaping Wang, Peiran Ren, Minmin Gong, John Snyder, and Baining Guo. 2009. All-Frequency Rendering of Dynamic, Spatially-Varying Reflectance. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 28, 5 (Dec. 2009), 1. <https://doi.org/10/dfr74x>
- [2018] Lihong Wang, Steven L. Jacques, and Liqiong Zheng. 1995. MCML—Monte Carlo Modeling of Light Transport in Multi-Layered Tissues. *Computer Methods and Programs in Biomedicine* 47, 2 (July 1995), 131–146. <https://doi.org/10/fshzqd>
- [2019] Peng Wang, Ge Li, Xibao Wang, and Dongling Liu. 2016. An External Rendering Algorithm for IR Imaging Simulation of Complex Infrared Scene. In *Theory, Methodology, Tools and Applications for Modeling and Simulation of Complex Systems*, Lin Zhang, Xiao Song, and Yunjie Wu (Eds.). Springer-Verlag, 158–166.
- [2020] Rui Wang, John Tran, and David Luebke. 2004. All-Frequency Relighting of Non-Diffuse Objects Using Separable BRDF Approximation. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. Eurographics Association, Aire-la-Ville, Switzerland, Switzerland, 345–354. <https://doi.org/10/gfz5vq>
- [2021] Xi Wang, Xin Tong, Stephen Lin, Shimin Hu, Baining Guo, and Heung-Yeung Shum. 2004. Generalized Displacement Maps. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. Eurographics Association, Aire-la-Ville, Switzerland, Switzerland, 227–233. <https://doi.org/10/gfz552>
- [2022] Zhou Wang, Alan C. Bovik, Hamid R. Sheikh, and Eero P. Simoncelli. 2004. Image Quality Assessment: From Error Visibility to Structural Similarity. *IEEE Transactions on Image Processing* 13, 4 (2004), 600–612. <https://doi.org/10/c7sr27>
- [2023] Greg Ward. 1991. Real Pixels. In *Graphics Gems II*, James Arvo (Ed.). Morgan Kaufmann, San Diego, 80–83. <https://doi.org/10.1016/B978-0-08-050754-5.50025-6>
- [2024] Gregory J. Ward. 1992. Measuring and Modeling Anisotropic Reflection. *Computer Graphics (Proceedings of SIGGRAPH)* 26, 2 (July 1992), 265–272. <https://doi.org/10/fm228r>
- [2025] Gregory J. Ward. 1994. Adaptive Shadow Testing for Ray Tracing. In *Photorealistic Rendering in Computer Graphics (Proceedings of the Eurographics Workshop on Rendering) (Focus on Computer Graphics)*, P. Brunet and F. W. Jansen (Eds.). Springer-Verlag, 11–20. <https://doi.org/10/b7zrhx>
- [2026] Gregory J. Ward. 1994. The RADIANCE Lighting Simulation and Rendering System. In *Annual Conference Series (Proceedings of SIGGRAPH)*. ACM Press, New York, NY, USA, 459–472. <https://doi.org/10/dsfsr8>
- [2027] Gregory J. Ward and Paul S. Heckbert. 1992. Irradiance Gradients. In *CE EGWR93*, Alan Chalmers, Derek Paddon, and François X. Sillion (Eds.). Consolidation Express Bristol, 85–98.
- [2028] Gregory J. Ward, Francis M. Rubinstein, and Robert D. Clear. 1988. A Ray Tracing Solution for Diffuse Environments. *Computer Graphics (Proceedings of SIGGRAPH)* 22, 4 (1988), 85–92. <https://doi.org/10/f68z8>
- [2029] Gregory J. Ward, Francis M. Rubinstein, and Robert D. Clear. 1988. A Ray Tracing Solution for Diffuse Interreflection. *Computer Graphics (Proceedings of SIGGRAPH)* 22, 4 (Aug. 1988), 85–92. <https://doi.org/10/dk6rt5>
- [2030] John E. Warnock. 1969. *A Hidden-Surface Algorithm for Computer Generated Half-Tone Pictures*. Ph.D. Thesis. University of Utah. TR 4-15.
- [2031] David F. Watson and Alistair I. Mees. 1996. Natural Trees—Neighbourhood-Location in a Nutshell. *International Journal of Geographical Information Systems* 10, 5 (July 1996), 563–572. <https://doi.org/10/bmjsdf>
- [2032] Mark Watt. 1990. Light-Water Interaction Using Backward Beam Tracing. *Computer Graphics (Proceedings of SIGGRAPH)* 24, 4 (July 1990), 377–385. <https://doi.org/10/bb7t4s>
- [2033] Pascal Weber, Johannes Hanika, and Carsten Dachsbacher. 2017. Multiple Vertex next Event Estimation for Lighting in Dense, Forward-Scattering Media. *Computer Graphics Forum (Proceedings of Eurographics)* 36, 2 (April 2017), 21–30. <https://doi.org/10/gbm2gf>
- [2034] Hank Weghorst, Gary Hooper, and Donald Greenberg. 1984. Improved Computational Methods for Ray Tracing. *ACM Transactions on Graphics* 3, 1 (Jan. 1984), 52–69. <https://doi.org/10/cxk2h2>
- [2035] Li-Yi Wei. 2008. Parallel Poisson Disk Sampling. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 27, 3, Article 20 (Aug. 2008), 9 pages. <https://doi.org/10/cs3jiv>
- [2036] Li-Yi Wei. 2010. Multi-Class Blue Noise Sampling. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 29, 4 (July 2010), 79:1–79:8. <https://doi.org/10/>



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- [2037] Li-Yi Wei and Rui Wang. 2011. Differential Domain Analysis for Non-Uniform Sampling. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 30, 4 (July 2011), 50:1–50:10. <https://doi.org/10/d43g4g>
- [2038] H. K. Weickmann and H. J. aufm Kampe. 1953. Physical Properties of Cumulus Clouds. *Journal of Meteorology* 10, 3 (1953), 204–211. <https://doi.org/10/df246b>
- [2039] Andrea Weidlich and Alexander Wilkie. 2008. Realistic Rendering of Birefringency in Uniaxial Crystals. *ACM Transactions on Graphics* 27, 1, Article 6 (March 2008), 12 pages. <https://doi.org/10/d8xgj6>
- [2040] Kevin Weiler. 1980. Polygon Comparison Using a Graph Representation. *Computer Graphics (Proceedings of SIGGRAPH)* 14, 3 (July 1980), 10–18.
- [2041] Kevin Weiler and Peter Atherton. 1977. Hidden Surface Removal Using Polygon Area Sorting. *Computer Graphics (Proceedings of SIGGRAPH)* 11, 3 (1977), 214–222.
- [2042] Alvin M. Weinberg. 1951. *Theory of Neutron Chain Reactions*. Technical Information Service, Oak Ridge, Tennessee.
- [2043] Alvin M. Weinberg and Eugene P. Wigner. 1958. *The Physical Theory of Neutron Chain Reactors*. University of Chicago Press.
- [2044] Daniel Weiskopf, Marc Borchers, Thomas Ertl, Martin Falk, Oliver Fechtig, Regine Frank, Frank Grave, Andreas King, Ute Kraus, Thomas Muller, Hans-Peter Nollert, Isabel Rica Mendez, Hanns Ruder, Tobias Schafhitzel, Sonja Schar, Corvin Zahn, and Michael Zatloukal. 2006. Explanatory and Illustrative Visualization of Special and General Relativity. *IEEE Transactions on Visualization and Computer Graphics* 12, 4 (2006). <https://doi.org/10/bpj7ms>
- [2045] Daniel Weiskopf, Ute Kraus, and Hanns Ruder. 1999. Searchlight and Doppler Effects in the Visualization of Special Relativity: A Corrected Derivation of the Transformation of Radiance. *ACM Transactions on Graphics* 18, 3 (1999), 278–292. <https://doi.org/10/cvrr4q>
- [2046] R.M. Welch, S.K. Cox, J.M. Davis, and J.M. Davis. 1980. *Solar Radiation and Clouds*. Number no. 39, v. 17 in American Meteorological Society - Meteorological Monographs. American Meteorological Society.
- [2047] W. H. Wells and J. J. Sidorowich. 1982. Anisotropic Multiple Scattering of Collimated Irradiance. *Annals of Physics* 144 (1982), 203–237.
- [2048] Burton Wendroff. 1969. A Difference Scheme for Radiative Transfer. *J. Comput. Phys.* 4, 2 (1969), 211–229. <https://doi.org/10/bwvxwm>
- [2049] Jiaying Weng. 2014. *Maximin Strong Orthogonal Arrays*. M.Sc. Thesis. Simon Fraser University.
- [2050] Stephen H. Westin. 1992. *Predicting Reflectance Functions from Complex Surfaces*. Ph.D. Thesis. Cornell University, Ithaca, New York.
- [2051] Stephen H. Westin, James R. Arvo, and Kenneth E. Torrance. 1992. Predicting Reflectance Functions from Complex Surfaces. *Computer Graphics (Proceedings of SIGGRAPH)* 26, 2 (July 1992), 255–264.
- [2052] Lee Westover. 1989. Interactive Volume Rendering. In *Proceedings of the Chapel Hill Workshop on Volume Visualization*.
- [2053] Lee Westover. 1990. Footprint Evaluation for Volume Rendering. *Computer Graphics (Proceedings of SIGGRAPH)* 24, 4 (Aug. 1990), 367–376.
- [2054] Gordon Wetzstein, Douglas Lanman, Wolfgang Heidrich, and Ramesh Raskar. 2011. Layered 3D: Tomographic Image Synthesis for Attenuation-Based Light Field and High Dynamic Range Displays. *ACM Transactions on Graphics* 30, 4, Article 95 (July 2011), 12 pages. <https://doi.org/10/d6gcgq>
- [2055] Tim Weyrich, Jason Lawrence, Hendrik P.A. Lensch, Szymon Rusinkiewicz, and Todd Zickler. 2009. Principles of Appearance Acquisition and Representation. *Foundations and Trends in Computer Graphics and Vision* 4, 2 (Oct. 2009), 75–191. <https://doi.org/10/c36r2s>
- [2056] Tim Weyrich, Wojciech Matusik, Hanspeter Pfister, Bernd Bickel, Craig Donner, Chien Tu, Janet McAndless, Jinho Lee, Addy Ngan, Henrik Wann Jensen, and Markus Gross. 2006. Analysis of Human Faces Using a Measurement-Based Skin Reflectance Model. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 25, 3 (July 2006), 1013–1024. <https://doi.org/10/ctncb6>
- [2057] Tim Weyrich, Pieter Peers, Wojciech Matusik, and Szymon Rusinkiewicz. 2009. Fabricating Microgeometry for Custom Surface Reflectance. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 28, 3 (2009), 32:1–32:6. <https://doi.org/10/bd9jq7>
- [2058] Kyu-Young Whang, Ju-Won Song, Ji-Woong Chang, Ji-Yun Kim, Wan-Sup Cho, Chong-Mok Park, and Il-Yeol Song. 1995. Octree-R: An Adaptive Octree for Efficient Ray Tracing. *IEEE Transactions on Visualization and Computer Graphics* 1, 4 (Dec. 1995), 343–349.
- [2059] C.W. White and P.S. Peercy. 1980. *Laser and Electron Beam Processing of Materials*. Academic Press.
- [2060] William H. Whitmore. 1939. Interreflections inside an Infinite Cylinder. *Journal of Mathematics and Physics* 17, 4 (Jan. 1939), 218–232.
- [2061] Turner Whitted. 1980. An Improved Illumination Model for Shaded Display. *Commun. ACM* 23, 6 (Jan. 1980), 343–349. <https://doi.org/10/dgdj7>
- [2062] Turner Whitted and David M. Weimer. 1982. A Software Testbed for the Development of 3D Raster Graphics Systems. *ACM Transactions on Graphics* 1, 1 (Jan. 1982), 43–58. <https://doi.org/10/dvrhgz>
- [2063] Refael Whyte, Lee Streeter, Michael J Cree, and Adrian A Dorrington. 2015. Resolving Multiple Propagation Paths in Time of Flight Range Cameras Using Direct and Global Separation Methods. *Opt. Eng.* 54, 11 (2015). <https://doi.org/10/gfz5nf>
- [2064] John A. Wiebelt. 1966. *Engineering Radiation Heat Transfer*. Holt, Rinehart and Winston, NY.
- [2065] Eugene P. Wigner. 1954. The Problem of Multiple Scattering. *PhRev* 94, 1 (April 1954), 17–25.
- [2066] Eugene P. Wigner. 1961. Mathematical Problems of Nuclear Reactor Theory. In *Nuclear Reactor Theory. Proceedings of the Eleventh Symposium in Applied Mathematics*. The Annals of Mathematical Statistics, Prov, 89–104.
- [2067] Rupert Wildt. 1956. Radiative Transfer and Thermodynamics. *Astrophysical Journal* 123, 1 (Jan. 1956), 107–116.
- [2068] Jane Wilhelms and Allen Van Gelder. 1991. A Coherent Projection Approach for Direct Volume Rendering. *Computer Graphics (Proceedings of SIGGRAPH)* 25, 4 (July 1991), 275–284.
- [2069] Alexander Wilkie, Sehera Nawaz, Marc Droske, Andrea Weidlich, and Johannes Hanika. 2014. Hero Wavelength Spectral Sampling. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 33, 4 (June 2014), 123–131. <https://doi.org/10/f6f6b4>
- [2070] Alexander Wilkie, Robert F. Tobler, and Werner Purgathofer. 2001. Combined Rendering of Polarization and Fluorescence Effects. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*. Springer-Verlag, 197–204. <https://doi.org/10/db37tg>
- [2071] Alexander Wilkie and Andrea Weidlich. 2012. Polarised Light in Computer Graphics. In *SIGGRAPH Asia 2012 Courses*. <https://doi.org/10/gfz5nn>
- [2072] Lance Williams. 1978. Casting Curved Shadows on Curved Surfaces. *Computer Graphics (Proceedings of SIGGRAPH)* 12, 3 (Aug. 1978), 270–274. <https://doi.org/10/ftz4zz>
- [2073] Lance Williams. 1983. Pyramidal Parametrics. *Computer Graphics (Proceedings of SIGGRAPH)* 17, 3 (1983), 1–11. <https://doi.org/10/cq4xrd>
- [2074] Michael Maurice Rudolph Williams. 1971. *Mathematical Methods in Particle Transport Theory*. (1971).
- [2075] M. M. R. Williams. 1973. The Wiener-Hopf Technique: An Alternative to the Singular Eigenfunction Method. In *Advances in Nuclear Science and Technology*, E. J. Henley and J. Lewins (Eds.). Vol. 7. Plenum, NY, 283–327.
- [2076] Josh Wills, Sameer Agarwal, David Kriegman, and Serge Belongie. 2009. Toward a Perceptual Space for Gloss. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 28, 4 (Sept. 2009), 103:1–103:15. <https://doi.org/10/d2j4zc>
- [2077] G. Milton Wing. 1962. *An Introduction to Transport Theory*. John Wiley & Sons, NY.
- [2078] Holger Winnemöller, Sven C Olsen, and Bruce Gooch. 2006. Real-Time Video Abstraction. *ACM Transactions on Graphics* 25, 3 (2006), 1221–1226. <https://doi.org/10/fpfbck>
- [2079] Lawrence B. Wolf. 1992. Diffuse Reflection. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)* 23, 4 (June 1992), 472–478.
- [2080] Lawrence B. Wolff and David J. Kurlander. 1990. Ray Tracing with Polarization Parameters. *IEEE Computer Graphics & Applications* 10, 6 (Nov. 1990), 44–55. <https://doi.org/10/cjmk6m>
- [2081] Kin-Ming Wong and Tien-Tsin Wong. 2017. Blue Noise Sampling Using an N-Body Simulation-Based Method. *The Visual Computer* 33, 6–8 (June 2017), 823–832. <https://doi.org/10/gbjj74>
- [2082] E. R. Woodcock, T. Murphy, P. J. Hemmings, and T. C. Longworth. 1965. Techniques Used in the GEM Code for Monte Carlo Neutronics Calculations in Reactors and Other Systems of Complex Geometry. In *Applications of Computing Methods to Reactor Problems*. Argonne National Laboratory.
- [2083] Sven Woop, Carsten Benthin, Ingo Wald, Gregory Johnson, and Eric Tabellion. 2014. Exploiting Local Orientation Similarity for Efficient Ray Traversal of Hair and Fur. In *Proceedings of High Performance Graphics*.
- [2084] Magnus Wrenninge. 2012. *Production Volume Rendering: Design and Implementation*. CRC Press.
- [2085] Magnus Wrenninge. 2016. Efficient Rendering of Volumetric Motion Blur Using Temporally Unstructured Volumes. *Journal of Computer Graphics Techniques (JCGT)* 5, 1 (Jan. 2016), 1–34.
- [2086] Magnus Wrenninge, Chris Kulla, and Viktor Lundqvist. 2013. Oz: The Great and Volumetric. In *ACM SIGGRAPH Talks*. ACM Press, Article 46, 1 pages. <https://doi.org/10.1145/2504459.2504518>
- [2087] Magnus Wrenninge, Ryusuke Villemin, and Christophe Hery. 2017. *Path Traced Subsurface Scattering Using Anisotropic Phase Functions and Non-Exponential Free Flights*. Technical Memo 17-07. Pixar.
- [2088] Magnus Wrenninge, Nafees Bin Zafar, Jeff Clifford, Gavin Graham, Devon Penney, Janne Kontkanen, Jerry Tessendorf, and Andrew Clinton. 2010. Volumetric Methods in Visual Effects. In *ACM SIGGRAPH Course Notes*.
- [2089] Magnus Wrenninge, Nafees Bin Zafar, Ollie Harding, Gavin Graham, Jerry Tessendorf, Victor Grant, Andrew Clinton, and Antoine Bouthors. 2011. *Production Volume Rendering 2: Systems*. In *ACM SIGGRAPH Course Notes*. ACM



- Press.
- [2090] D. Wu, M. O'Toole, A. Velten, A. Agrawal, and R. Raskar. 2012. Decomposing Global Light Transport Using Time of Flight Imaging. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. 366–373. <https://doi.org/10/gfz5rk>
- [2091] Di Wu, Andreas Velten, Matthew O'Toole, Belen Masia, Amit Agrawal, Qionghai Dai, and Ramesh Raskar. 2014. Decomposing Global Light Transport Using Time of Flight Imaging. *International Journal of Computer Vision* 107 (2014).
- [2092] Di Wu, Gordon Wetzstein, Christopher Barsi, Thomas Willwacher, Matthew O'Toole, Nikhil Naik, Qionghai Dai, Kyros Kutulakos, and Ramesh Raskar. 2012. Frequency Analysis of Transient Light Transport with Applications in Bare Sensor Imaging. In *Proceedings of the European Conference on Computer Vision (ECCV)*. <https://doi.org/10/gfz5ng>
- [2093] Hongzhi Wu, Julie Dorsey, and Holly Rushmeier. 2011. Physically-Based Interactive Bi-Scale Material Design. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 30, 6 (Dec. 2011), 1. <https://doi.org/10/cqtdrq>
- [2094] Hongzhi Wu, Julie Dorsey, and Holly Rushmeier. 2013. Inverse Bi-Scale Material Design. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 32, 6 (Nov. 2013), 163:1–163:10. <https://doi.org/10/gbd5kf>
- [2095] Jun Wu, Yang Wang, Lev Perelman, Irving Itzkan, Ramachandra R Dasari, and Michael S Feld. 1995. Time-Resolved Multichannel Imaging of Fluorescent Objects Embedded in Turbid Media. *Opt. Lett.* 20, 5 (1995). <https://doi.org/10/b68pc5>
- [2096] Rihui Wu, Adrian Jarabo, Jinli Suo, Feng Dai, Yongdong Zhang, Qionghai Dai, and Diego Gutierrez. 2018. Adaptive Polarization-Difference Transient Imaging for Depth Estimation in Scattering Media. *Opt. Lett.* 6 (March 2018), 1299–1302. <https://doi.org/10/gfz5kv>
- [2097] Yonghui Wu, Mike Schuster, Zhifeng Chen, Quoc V Le, Mohammad Norouzi, Wolfgang Macherey, Maxim Krikun, Yuan Cao, Qin Gao, Klaus Macherey, et al. 2016. Google's Neural Machine Translation System: Bridging the Gap between Human and Machine Translation. *arXiv preprint arXiv:1609.08144* (2016).
- [2098] Chris Wyman and Shaun Ramsey. 2008. Interactive Volumetric Shadows in Participating Media with Single-Scattering. In *Proceedings of IEEE Symposium on Interactive Ray Tracing*. IEEE Computer Society, 87–92. <https://doi.org/10/bvtpwp>
- [2099] Christopher R. Wyman. 2004. *Fast Local Approximation to Global Illumination*. Ph.D. Thesis. University of Utah.
- [2100] G. Wyszecki and W. S. Stiles. 1982. *Color Science: Concepts and Methods, Quantitative Data and Formulae*. John Wiley & Sons.
- [2101] Brian Wyvill, Andrew Guy, and Eric Galin. 1998. *The Blob Tree- Warping, Blending and Boolean Operations in an Implicit Surface Modeling System*. Technical Report. University of Calgary.
- [2102] Brian Wyvill, Andrew Guy, and Eric Galin. 1999. Extending the CSG Tree. Warping, Blending and Boolean Operations in an Implicit Surface Modeling System. *Computer Graphics Forum* 18, 2 (1999), 149–158. <https://doi.org/10/ffd743>
- [2103] Lei Xiao, Felix Heide, Matthew O'Toole, Andreas Kolb, Matthias B Hullin, Kyros Kutulakos, and Wolfgang Heidrich. 2015. Defocus Deblurring and Superresolution for Time-of-Flight Depth Cameras. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.
- [2104] Feng Xie, Eric Tabellion, and Andrew Pearce. 2007. Soft Shadows by Ray Tracing Multilayer Transparent Shadow Maps. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. Eurographics Association, Aire-la-Ville, Switzerland, Switzerland, 265–276. <https://doi.org/10/gfz5tj>
- [2105] Shi-Qing Xin, Bruno Lévy, Zhonggui Chen, Lei Chu, Yaohui Yu, Changhe Tu, and Wenping Wang. 2016. Centroidal Power Diagrams with Capacity Constraints: Computation, Applications, and Extension. *ACM Transactions on Graphics* 35, 6, Article 244 (Nov. 2016), 12 pages. <https://doi.org/10/gfz5hc>
- [2106] Xixian Xiong, Fugen Zhou, Xiangzhi Bai, Bindang Xue, and Changming Sun. 2016. Semi-Automated Infrared Simulation on Real Urban Scenes Based on Multi-View Images. *Opt. Express* 24, 11 (May 2016), 11345–11375. <https://doi.org/10/gfz5m5>
- [2107] Feng Xu, James A. Lock, and Cameron Tropea. 2010. Debye Series for Light Scattering by a Spheroid. *Journal of the Optical Society of America A* 27, 4 (April 2010), 671–686. <https://doi.org/10/c682pg>
- [2108] Kun Xu, Yue Gao, Yong Li, Tao Ju, and Shi-Min Hu. 2007. Real-Time Homogeneous Translucent Material Editing. *Computer Graphics Forum (Proceedings of Eurographics)* 26, 3 (Sept. 2007), 545–552. <https://doi.org/10/dcbqmw>
- [2109] Q. Xu, J. Sun, Z. Wei, Y. Shu, S. Messelodi, and J. Cai. 2001. Zero Variance Importance Sampling Driven Potential Tracing for Global Illumination. In *Journal of the World Society for Computer Graphics (WSCG)*.
- [2110] Ruifeng Xu and Sumanta N. Pattanaik. 2005. A Novel Monte Carlo Noise Reduction Operator. *IEEE Computer Graphics & Applications* 25, 2 (March 2005), 31–35. <https://doi.org/10/cgs6vx>
- [2111] Wen Xu, Alex Nikolov, Darsh T. Wasan, Alex Gonsalves, and Rajendra P. Borwankar. 1998. Fat Particle Structure and Stability of Food Emulsions. *Journal of Food Science* 63, 2 (1998), 183–188. <https://doi.org/10/c9drqt>
- [2112] Yin Xu, Ligang Liu, Craig Gotsman, and Steven J. Gortler. 2011. Capacity-Constrained Delaunay Triangulation for Point Distributions. *Computers & Graphics* 35, 3 (2011), 510–516. <https://doi.org/10/d5z3jm> Shape Modeling International (SMI) Conference 2011.
- [2113] Y. Yamada. 1995. Light-Tissue Interaction and Optical Imaging in Biomedicine. *Ann. Rev. Fluid Mech. Heat Transfer* 6 (1995), 1–59. <https://doi.org/10/gfz5np>
- [2114] Fujio Yamaguchi. 1978. A New Curve Fitting Method Using a CRT Computer Display. *Computer Graphics and Image Processing* 7 (1978), 425–437.
- [2115] Ziro Yamauti. 1926. The Light Flux Distribution of a System of Interreflecting Surfaces. *Journal of the Optical Society of America* 13, 5 (Nov. 1926), 561–571. <https://doi.org/10/fc76dx>
- [2116] Ziro Yamauti. 1927. *Further Study of Geometrical Calculations of Illumination Due to Light from Luminous Surface Sources of Simple Forms*. Technical Report 194. Researches of the Electrotechnical Laboratory, Ministry of Communications, Tokyo, Japan.
- [2117] Ziro Yamauti. 1929. *The Amount of Flux Incident to Rectangular Floor through Rectangular Windows*. Technical Report 250. Researches of the Electrotechnical Laboratory, Ministry of Communications, Tokyo, Japan.
- [2118] Ziro Yamauti. 1932. *Theory of Field of Illumination*. Technical Report 339. Researches of the Electrotechnical Laboratory, Ministry of Communications, Tokyo, Japan.
- [2119] Dong-Ming Yan and Peter Wonka. 2013. Gap Processing for Adaptive Maximal Poisson-Disk Sampling. *ACM Transactions on Graphics* 32, 5 (2013), 148:1–148:15. <https://doi.org/10/gbd5wt>
- [2120] Ling-Qi Yan, Miloš Hašan, Wenzel Jakob, Jason Lawrence, Steve Marschner, and Ravi Ramamoorthi. 2014. Rendering Glints on High-Resolution Normal-Mapped Specular Surfaces. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 33, 4 (July 2014), 116:1–116:9. <https://doi.org/10/f6cprp>
- [2121] Ling-Qi Yan, Chi-Wei Tseng, Henrik Wann Jensen, and Ravi Ramamoorthi. 2015. Physically-Accurate Fur Reflectance: Modelling, Measurement and Rendering. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 34, 6 (2015).
- [2122] Ping Yang and K. N. Liou. 1995. Light Scattering by Hexagonal Ice Crystals: Comparison of Finite-Difference Time Domain and Geometric Optics Models. *Journal of the Optical Society of America A* 12, 1 (Jan. 1995), 162–176. <https://doi.org/10/c3bb4n>
- [2123] Ping Yang and K. N. Liou. 1996. Finite-Difference Time Domain Method for Light Scattering by Small Ice Crystals in Three-Dimensional Space. *Journal of the Optical Society of America A* 13, 10 (Oct. 1996), 2072–2085. <https://doi.org/10/b53mzb>
- [2124] Chunhui Yao, Bin Wang, Bin Chan, Junhai Yong, and Jean-Claude Paul. 2010. Multi-Image Based Photon Tracing for Interactive Global Illumination of Dynamic Scenes. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 29, 4 (2010), 1315–1324.
- [2125] Hector Yee, Sumanta Pattanaik, and Donald P. Greenberg. 2001. Spatiotemporal Sensitivity and Visual Attention for Efficient Rendering of Dynamic Environments. *ACM Transactions on Graphics* 20, 1 (Jan. 2001), 39–65. <https://doi.org/10/b978sv>
- [2126] Kane S. Yee. 1966. Numerical Solution of Initial Boundary Value Problems Involving Maxwell's Equations in Isotropic Media. *IEEE Transactions on Antennas and Propagation* 14, 3 (May 1966), 302–307. <https://doi.org/10/b8dmtt>
- [2127] John I. Yellott, Jr. 1983. Spectral Consequences of Photoreceptor Sampling in the Rhesus Retina. *Science* 221, 4608 (July 1983), 382–385. <https://doi.org/10/brfz5f>
- [2128] Yuhui Yin, Dennis K.J. Lin, and Min-Qian Liu. 2014. Sliced Latin Hypercube Designs via Orthogonal Arrays. *Journal of Statistical Planning and Inference* 149 (June 2014), 162–171. <https://doi.org/10/gfzncs>
- [2129] A. Yodh and B. Chance. 1995. Spectroscopy and Imaging with Diffusing Light. *Phys. Today* 48 (1995), 34–40. <https://doi.org/10/c3dd9r>
- [2130] K. M. Yoo and R. R. Alfano. 1990. Time-Resolved Coherent and Incoherent Components of Forward Light Scattering in Random Media. *Opt. Lett.* 15, 6 (1990). <https://doi.org/10/cskkhh>
- [2131] Shin Yoshizawa, Alexander Belyaev, and Hans-Peter Seidel. 2007. Skeleton-Based Variational Mesh Deformations. *Computer Graphics Forum* 26, 3 (2007), 255–264. <https://doi.org/10/cqrz7x>
- [2132] Insu Yu, Andrew Cox, Min H Kim, Tobias Ritschel, Thorsten Grosch, Carsten Dachsbacher, and Jan Kautz. 2009. Perceptual Influence of Approximate Visibility in Indirect Illumination. *ACM Transactions on Applied Perception* 6, 4 (Sept. 2009), 24:1–24:14.
- [2133] Yonghao Yue, Kei Iwasaki, Bing-Yu Chen, Yoshinori Dobashi, and Tomoyuki Nishita. 2010. Unbiased, Adaptive Stochastic Sampling for Rendering Inhomogeneous Participating Media. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 29, 6 (Dec. 2010), 177:1–177:8. <https://doi.org/10/bp73xb>
- [2134] Yonghao Yue, Kei Iwasaki, Bing-Yu Chen, Yoshinori Dobashi, and Tomoyuki Nishita. 2011. Toward Optimal Space Partitioning for Unbiased, Adaptive Free Path Sampling of Inhomogeneous Participating Media. *Computer Graphics Forum (Proceedings of Pacific Graphics)* 30, 7 (2011), 1911–1919. <https://doi.org/>

10/b9x66x

- [2135] W. W. Yuen and C. L. Tien. 1980. A Successive Approximation Approach to Problems in Radiative Transfer with a Differential Approximation. *ASME Journal of Heat Transfer* 102, 1 (Feb. 1980), 86–91.
- [2136] Cem Yuksel. 2015. Sample Elimination for Generating Poisson Disk Sample Sets. *Computer Graphics Forum (Proceedings of Eurographics)* 34, 2 (May 2015), 25–32. <https://doi.org/10/f7k7c7>
- [2137] Can Yuksel and Cem Yuksel. 2017. Lighting Grid Hierarchy for Self-Illuminating Explosions. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 36, 4, Article 110 (2017), 10 pages. <https://doi.org/10/gbxhcj>
- [2138] Richard Zanibbi, Kevin Novins, James Arvo, and Katherine Zanibbi. 2001. Aiding Manipulation of Handwritten Mathematical Expressions through Style-Preserving Morphs. In *Proceedings of Graphics Interface*. 127–134.
- [2139] S.K. Zaremba. 1972. *Applications de la théorie des nombres à l'analyse numérique*. Academic Press.
- [2140] S. K. Zaremba. 1968. The Mathematical Basis of Monte Carlo and Quasi-Monte Carlo Methods. *SIAM Rev.* 10, 3 (July 1968), 303–314. <https://doi.org/10/bkw77v>
- [2141] David Zareski, Bretton Wade, Philip Hubbard, and Peter Shirley. 1995. Efficient Parallel Global Illumination Using Density Estimation. In *Proceedings of the IEEE Symposium on Parallel Rendering (PRS '95)*. ACM Press, New York, NY, USA, 47–54. <https://doi.org/10/cvzqcq>
- [2142] Harold Zatz. 1992. *Galerkin Radiosity: A Higher Order Solution Method for Global Illumination*. Ph.D. Thesis. Cornell University, Ithaca, New York.
- [2143] Harold R. Zatz. 1993. Galerkin Radiosity: A Higher Order Solution Method for Global Illumination. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 213–220.
- [2144] Robert C. Zeleznik, Kenneth P. Herndon, and John F. Hughes. 1996. SKETCH: An Interface for Gestural Modeling. In *Annual Conference Series (Proceedings of SIGGRAPH)*. 163–170.
- [2145] C. D. Zerby, R. B. Curtis, and H. W. Bertini. 1961. *The Relativistic Doppler Problem*. Technical Report ORNL-61-7-20. Oak Ridge National Laboratory, Oak Ridge, TN, USA. <https://doi.org/10.2172/4836227>
- [2146] Xiuda Zhang and Huimin Yan. 2011. Three-Dimensional Active Imaging with Maximum Depth Range. *Applied Optics* 50, 12 (2011). <https://doi.org/10/cn7j9s>
- [2147] Xiuda Zhang, Huimin Yan, and Jun Lv. 2012. Multireturn Three-Dimensional Active Imaging Based on Compressive Sensing. *Opt. Lett.* 37, 23 (2012). <https://doi.org/10/gfz5nh>
- [2148] Yong Zhang, Hongliang Yi, and Heping Tan. 2013. One-Dimensional Transient Radiative Transfer by Lattice Boltzmann Method. *Optics Express* 21, 21 (2013), 24532–24549. <https://doi.org/10/gfz5nj>
- [2149] Shuang Zhao, Miloš Hašan, Ravi Ramamoorthi, and Kavita Bala. 2013. Modular Flux Transfer: Efficient Rendering of High-Resolution Volumes with Repeated Structures. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 32, 4 (July 2013), 131:1–131:12. <https://doi.org/10/gfzwcw>
- [2150] Shuang Zhao, Ravi Ramamoorthi, and Kavita Bala. 2014. High-Order Similarity Relations in Radiative Transfer. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 33, 4 (July 2014), 104:1–104:12. <https://doi.org/10/f6cz6p>
- [2151] Shuang Zhao, Lifan Wu, Frédo Durand, and Ravi Ramamoorthi. 2016. Downsampling Scattering Parameters for Rendering Anisotropic Media. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 35, 6 (Nov. 2016), 166:1–166:11. <https://doi.org/10/f9cpqs>
- [2152] Kun Zhou, Qiming Hou, Minmin Gong, John Snyder, Baining Guo, and Heung-Yeung Shum. 2007. Fogshop: Real-Time Design and Rendering of Inhomogeneous, Single-Scattering Media. In *Pacific Graphics*. 116–125.
- [2153] Kun Zhou, Qiming Hou, Rui Wang, and Baining Guo. 2008. Real-Time kd-Tree Construction on Graphics Hardware. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia)* 27, 5 (Dec. 2008), 126:1–126:11.
- [2154] Yahan Zhou, Haibin Huang, Li-Yi Wei, and Rui Wang. 2012. Point Sampling with General Noise Spectrum. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 31, 4 (July 2012), 76:1–76:11. <https://doi.org/10/gfznc2>
- [2155] C. Zhu and Q. Liu. 2013. Review of Monte Carlo Modeling of Light Transport in Tissues. *J. Biomed. Opt.* 18, 5 (2013). <https://doi.org/10/gbdg9z>
- [2156] Henning Zimmer, Fabrice Rousselle, Wenzel Jakob, Oliver Wang, David Adler, Wojciech Jarosz, Olga Sorkine-Hornung, and Alexander Sorkine-Hornung. 2015. Path-Space Motion Estimation and Decomposition for Robust Animation Filtering. *Computer Graphics Forum (Proceedings of the Eurographics Symposium on Rendering)* 34, 4 (July 2015), 131–142. <https://doi.org/10/f7mb34>
- [2157] Kurt Zimmerman and Peter Shirley. 1995. A Two-Pass Realistic Image Synthesis Method for Complex Scenes. In *Rendering Techniques (Proceedings of the Eurographics Workshop on Rendering)*, P. M. Hanrahan and W. Purgathofer (Eds.). Springer-Verlag, 284–295.
- [2158] Arno Zinke and Andreas Weber. 2006. Efficient Ray Based Global Illumination Using Photon Maps. In *Proceedings of Vision, Modeling and Visualization*. Akademische Verlagsgesellschaft Aka GmbH, Berlin, 113–120.
- [2159] Michael Zollhöfer, Angela Dai, Matthias Innmann, Chenglei Wu, Marc Stamminger, Christian Theobalt, and Matthias Nießner. 2015. Shading-Based Refinement on Volumetric Signed Distance Functions. *ACM Transactions on Graphics (Proceedings of SIGGRAPH)* 34, 4 (July 2015), 96:1–96:14. <https://doi.org/10/f7m2r3>
- [2160] Douglas E. Zongker, Dawn M. Werner, Brian Curless, and David H. Salesin. 1999. Environment Matting and Compositing. In *Annual Conference Series (Proceedings of SIGGRAPH)*. Addison-Wesley, 205–214.
- [2161] Paul F. Zweifel. 1981. The Boltzmann Equation and Its Properties. In *Kinetic Theories and the Boltzmann Equation*, C. Cercignani (Ed.). Springer-Verlag, NY, 111–175.
- [2162] Matthias Zwicker, Wojciech Jarosz, Jaakko Lehtinen, Bochang Moon, Ravi Ramamoorthi, Fabrice Rousselle, Pradeep Sen, Cyril Soler, and Sung-Eui Yoon. 2015. Recent Advances in Adaptive Sampling and Reconstruction for Monte Carlo Rendering. *Computer Graphics Forum (Proceedings of Eurographics – State of the Art Reports)* 34, 2 (May 2015), 667–681. <https://doi.org/10/f7k6kj>
- [2163] Matthias Zwicker, Wojciech Matusik, Frédo Durand, and Hanspeter Pfister. 2006. Antialiasing for Automultiscopic 3D Displays. In *Rendering Techniques (Proceedings of the Eurographics Symposium on Rendering)*. 73–82.
- [2164] Mattias Zwicker, Hanspeter Pfister, Jeroen van Baar, and Markus Gross. 2001. EWA Volume Splatting. In *IEEE Visualization 2001*. 29–36.
- [2165] Matthias Zwicker, Hanspeter Pfister, Jeroen van Baar, and Markus Gross. 2002. EWA Splatting. *IEEE Transactions on Visualization and Computer Graphics* 8, 3 (July 2002), 223–238. <https://doi.org/10/btc75p>