Bibliography

- [ADEL91] Adelson, E. H., and Bergen, J. R., "The Plenoptic Function and the Elements of Early Vision". In *Computational Models of Visual Processing*, pp. 3-20, MIT Press, Cambridge, MA, 1991.
- [ADOR02] Adorni, G., Cagnoni, S., Carletti, M. and Mordonini, M., "Omnidirectional vision algorithms in robotics". In *Proc. Eight Convention of the AIIA*, Sept 2002.
- [AHER97] Aherne, F. J., Thacker, N. A., and Rockett, P. I., "The Bhattacharyya Metric as an Absolute Similarity Measure for Frequency Coded Data". *Kybernetika*, vol. 32, no. 4, pp. 1-7, 1997.
- [ALIA01a] Aliaga, D., "Accurate Catadioptric Calibration for Real-time Pose Estimation of Room-size Environments". In *Proc. International Conference on Computer Vision (ICCV'01)*, pp. 127-134, Canada, July 2001.
- [ALIA01b] Aliaga, D., and Carlbom, I., "Plenoptic Stitching: A Scalable Method for Reconstructing 3D Interactive Walkthroughs". In *Proc. ACM SIGGRAPH 2001*, pp. 443-450, Aug 2001.
- [ASOH01] Asoh, H., Motomura, Y., Asano, F., Hara, I., Hayamizu, S., Katsonubo, I., Kurita, T., Matsui, T., Vlassis, N., Bunschoten, R., and Kröse, B., "Jijo-2: An Office Robot That Communicates and Learns". In *IEEE Intelligent Systems*, pp. 46-55, Oct 2001.
- [ATIQ99] Atiquzzaman, M., "Coarse-to-Fine Search Technique to Detect Circles in Images". In *International Journal of Advanced Manufacturing Technology*, vol. 15, pp. 96-102, 1999.
- [BAKE98] Baker, S., and Nayar, S. K., "A Theory of Catadioptric Image Formation". In *Proc.* 6th *International Conference on Computer Vision (ICCV'98)*, pp. 35-42, Bombay, India, Jan 1998.
- [BAKE99] Baker, S., and Nayar, S. K., "A Theory of Single-Viewpoint Catadioptric Image Formation". *International Journal of Computer Vision*, vol. 35, pp. 195-196, 1999.
- [BAKS01] Bakstein, H., and Pajdla, T., "An overview of non-central cameras". In *Proc. Sixth Computer Vision Winter Workshop*, pp. 223-233, Ljubljana, Slovenia, Feb 2001.
- [BAKS02] Bakstein, H., and Pajdla, T., "Panoramic Mosaicing with a 180° Field of View Lens". In *Proc. IEEE Workshop on Omnidirectional Vision*, pp. 60-67, Los Alamitos, California, June 2002.
- [BALD99] Baldwin, J., Basu, A., and Zhang, H., "Panoramic Video with Predictive Windows for Telepresence Applications". In *Proc. IEEE International Conference on Robotics and Automation (ICRA)*, pp. 1922-1927, Detroit, Michigan, May 1999.
- [BILM98] Bilmes, J., "A Gentle Tutorial on the EM Algorithm and its Application to Parameter Estimation for Gaussian Mixture and Hidden Markov Models". *Technical Report ICSI-TR-97-021*, University of Berkeley, April 1998. Available: http://www.icsi.berkeley.edu/~bilmes/papers/em.ps.gz

- [BLAK96] Blake, A., and Isard, M., "The Condensation Algorithm Conditional Density Propagation and Applications to Visual Tracking". In *Advances in Neural Information Processing Systems*, 1996.
- [BOUL98a] Boult, T.E., Blum, R., Wallace, R., Zhang, G., Nayar S.K., Allen, P., and Kender J., "Advanced Visual Sensor Systems". In *Proc. DARPA Image Understanding Workshop* (*IUW*), pp. 1323-1334, Nov. 1998.
- [BOUL98b] Boult, T.E., Qian, C., Yin, W., Erkin, A., Lewis, P., Power, C., and Micheals, R., "Applications of Omnidirectional Imaging: Multi-body Tracking and Remote Reality". In *Proc. IEEE Workshop on Computer Vision Applications*, pp. 242-243, Oct 1998.
- [BOUL99] Boult, T.E., Micheals, R., Gao, X., Lewis, P., Power, C., Yin, W., and Erkan, A., "Frame-rate Omnidirectional Surveillance and Tracking of Camouflaged and Occluded Targets". In *Proc.* 2nd IEEE International Workshop on Visual Surveillance, pp. 48-55, 1999.
- [BRAS00] Brassart, E., Delahoche, L., Cauchois, C., Drocourt, C., Pegard, C., and Mouaddib, M., "Experimental results got with the omnidirectional vision sensor: SYCLOP". In *Proc. IEEE Workshop on Omnidirectional Vision (OMNIVIS'00)*, pp. 145-152, South Carolina, USA, June 2000.
- [CHAR87] Charles, J., Reeves, R., and Schur, C., "How to Build and Use an All-Sky Camera", *Astronomy Magazine*, pp. 64-70, Apr 1987.
- [CHEN95] Chen, S. E., "QuickTime VR An Image-Based Approach to Virtual Environment Navigation". In *Computer Graphics: Proc. ACM SIGGRAPH 95*, pp. 29-38, Los Angeles, California, Aug 1995.
- [COLL00] Collins, R.T., Lipton, A.J., and Kanade, T., "A System for Video Surveillance and Monitoring". *Technical Report CMU-RI-TR-00-12*, Robotics Institute, Carnegie Mellon University, May 2000. Available: http://www.ri.cmu.edu /pub_files/pub2 /collins_robert_2000_1/collins_robert_2000_1.pdf)
- [CUCC01] Cucchiara, R., Grana, C., Piccardi, M., and Prati., A., "Detecting Objects, Shadows and Ghosts in Video Streams by Exploiting Color and Motion Information". In *Proc. IEEE International Conference on Image Analysis and Processing*, 2001.
- [CUTL98] Cutler, R., and Davis, L., "View-based Detection and Analysis of Periodic Motion". In *Proc.* 14th International Conference on Pattern Recognition, pp. 495-500, Brisbane, Australia, Aug. 1998.
- [CUTL99] Cutler, R., and Davis, L., "Developing Real-Time Computer Vision Applications for Intel Pentium III based Windows NT Workstations". In FRAME-RATE: Frame-rate Applications, Methods and Experiences with Regularly Available Technology and Equipment workshop (ICCV'99), Kerkyra, Greece, Sept, 1999.
- [DANI02] Daniilidis, K., Makadia, A., and Bülow, T., "Image Processing in Catadioptric Planes: Spatiotemporal Derivatives and Optical Flow Computation". In *Proc. Workshop on Omnidirectional Vision*, pp. 3-12, Copenhagen, Denmark, June 2002.
- [ELGA99] Elgammal, A., Harwood, D., and Davis, L., "Non-parametric Model for Background Subtraction". In *Proc. IEEE International Conference on Computer Vision (ICCV'99) FRAME-RATE Workshop*, 1999.
- [ELGA02] Elgammal, A., Duraiswami, R., Harwood, D., and Davis, L.S., "Background and Foreground Modeling Using Nonparametric Kernel Density Estimation for Visual Surveillance". In *Proc. IEEE*, vol. 90, no. 7, pp. 1151-1163, July 2002.

- [FABR02] Fabrizio, J., Tarel, J-P., and Benosman, R., "Calibration of Panoramic Catadioptric Sensors Made Easier". In *Proc. IEEE Third Workshop on Omnidirectional Vision (OMNIVIS'02)*, pp. 45-52, Copenhagen, Denmark, June 2002.
- [FERM98] Fermüller, C., and Aloimonos, Y., "Geometry of Eye Design: Biology and Technology". Center for Automation Research, *Technical Report CAR-TR-900*, Univ. of Maryland, College Park, USA, 1998. Available: ftp://ftp.cfar.umd.edu/TRs/CVL-Reports-1998/TR3963-fermueller.ps.gz
- [FERR01] Ferryman, J.M (ed.), "Proc. of the Second IEEE International Workshop on Performance Evaluation of Tracking and Surveillance (PETS'01)", Hawaii, USA, Dec 2001. (PETS2001 datasets available from ftp://pets.rdg.ac.uk/PETS2001).
- [FERR03] Ferryman, J.M. (ed.), "Proc. of the Fourth IEEE International Workshop on Performance Evaluation of Tracking and Surveillance (PETS-ICVS)", Graz, Austria, March 2003. (PETS-ICVS 2003 datasets available from ftp://pets.rdg.ac.uk/PETS-ICVS).
- [FIEG97] Fieguth, P., and Terzopoulos, D., "Color-Based Tracking of Heads and Other Mobile Objects at Video Frame Rates". In *Proc. IEEE Conference on Computer Vision and Pattern Recognition*, vol. 1, pp. 21–27, June 1997.
- [FORS02] Forsyth, D., and Ponce, J., "Computer Vision: A Modern Approach". Prentice Hall, NJ, USA, 2002.
- [FREE93] Freeman, M., "The Image", (Collins Photography Workshop). Harper Collins, Italy, 1993.
- [FRIE97] Friedman, N., and Russell, S., "Image segmentation in video sequences: A probabilistic approach". In *Proc. 13th Conf. Uncertainty in Artificial Intelligence*, pp. 175-181, Providence, RI, 1997.
- [GÄCH01] Gächter, S., "Motion Detection as an Application for the Omnidirectional Camera". *Technical Report CTU-CMP-2001-07*, Center for Machine Perception, Czech Technical Univ., March 2001. Available http://cmp.felk.cvut.cz/projects/omniviews/results/Gaechter-TR-2001-07.pdf
- [GASP02] Gaspar, J., Deccó, C., Okamoto, J., and Santos-Victor, J., "Constant Resolution Omnidirectional Cameras". In *Proc. Workshop on Omni-directional Vision* (OMNIVIS'02), Copenhagen, Denmark, June 2002.
- [GEYE99] Geyer, C, and Daniliidis, K., "Catadioptric Camera Calibration". In *Proc. of the IEEE International Conference on Computer Vision*, pp. 398-404, Kerkyra, Greece, Sept 1999.
- [GEYE01] Geyer, C., and Daniilidis, K. "Catadioptric projective geometry." In *International Journal of Computer Vision*, vol. 43, pp. 223–243, 2001.
- [GEYE02] Geyer, C., and Daniilidis, K., "Paracatadioptric Camera Calibration". In *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 24, no. 5, pp. 687-695, May 2002.
- [GEYE03] Geyer, C., and Daniilidis, K., "Omnidirectional Video", *The Visual Computer*, 2003. Available: http://www.cis.upenn.edu/~kostas/mypub.dir/geyer02vc.pdf
- [GROV98] Grove, T.D., Tan, T.N., and Baker, K.D., "Colour Based Object Tracking". In *Proc. International Conference on Pattern Recognition (ICPR'98)*, pp. 1442-1444, May 1998.
- [HALL01] Hall, B., Huang, K., and Trivedi, M., "A Televiewing System for Multiple Simultaneous Customized Perspectives and Resolutions". *IEEE International Conference on Intelligent Transportation Systems*, Oakland, California, Aug 2001.

- [HARI98] Haritaoglu, I., Harwood, D., and Davis, L. S., "W⁴: Who? When? Where? What? A Real Time System for Detecting and Tracking People". In *Third International Conference on Face and Gesture Recognition*, Nara, Japan, April 1998.
- [HART00] Hartley, R., and Zisserman, A., "Multiple View Geometry in Computer Vision". Cambridge Univ. Press, Cambridge, UK, 2000.
- [HORP99] Horprasert. T., Harwood D., and Davis, L.S., "A Statistical Approach for Real-time Robust Background Subtraction and Shadow Detection". In *Proc. IEEE ICCV'99 FRAME-RATE Workshop*, Kerkyra, Greece, 1999.
- [HORP00] Horprasert, T., Hardwood, D., and Davis, L.S., "A Robust Background Subtraction and Shadow Detection". In *Proc. Asian Conference on Computer Vision (ACCV'00)*, Taipie, Taiwan, Jan 2000.
- [HUAN01] Huang, K.S., and Trived, M., "NOVA: Networked Omnivision Arrays for Intelligent Environment". In *Proc. SPIE Conference on Applications and Science of Soft Computing IV*, vol. 4479, Aug 2001.
- [HUAN02] Huang, K.S., and Trived, M., "Video Arrays for Real-Time Tracking of Persons, Head and Face in an Intelligent Room". *Machine Vision and Applications, Omni-directional Vision, Special Issue*, Aug 2002.
- [IAPP] *IAPP (International Association of Panoramic Photographers)* web site. http://www.panoramicassociation.org
- [INTEL99] *Intel Architecture Software Developer's Manual*, vol. 1 (Basic Architecture). Intel Corporation, 1999. Available: http://www.intel.com/design/Pentium4/manuals
- [INTI95] Intille, S., and Bobick, A., "Closed-World Tracking". In *Proc. Fifth International Conference on Computer Vision*, pp. 672-678, June 1995.
- [ISHI98] Ishiguro, H., "Development of Low-Cost Compact Omnidirectional Vision Sensors and their applications". In *Proc. International Conference on Information Systems, Analysis and Synthesis (ISAS'98)*, pp. 433-439, Orlando, USA, July 1998.
- [JABR00] Jabri, S., Duric, Z., Wechsler, H., and Rosenfield, A., "Detection and Location of People in Video Images Using Adaptive Fusion of Color and Edge Information". In *Proc. International Conference on Pattern Recognition (ICPR'00)*, vol. 4, pp. 4627-4631, Barcelona, Spain, Sept. 2000.
- [JAIN95] Jain, R., Kasturi, R., and Schunck, B., "Machine Vision". McGraw-Hill, Singapore, 1995.
- [JONE99] Jones, M., and Regehr, J., "The Problems You're Having May Not Be the Problems You Think You're Having: Results from a Latency Study of Windows NT". In *Proc.* 7th Workshop on Hot Topics in Operating Systems (HotOS-VII), Arizona, March 1999.
- [KANG00] Kang, S., "Catadioptric Self-Calibration". In *Proc. IEEE Conference on Computer Vision and Pattern Recognition*, pp. 201-207, Hilton Head Island, SC, June 2000.
- [KUML00] Kumler, J., and Bauer, M., "Fish-eye lens designs and their relative performance". In *Proc. SPIE vol. 4093: Current Developments in Lens Design and Optical Systems Engineering*, pp. 360-369, Oct 2000.
- [LECK98] Lecky, N., "Using MMX Technology to Speed Up Machine Vision Algorithms". Personal Workstation, 1998.
- [LIPT98] Lipton, A.J., Fujiyoshi, H., and Patil, R.S., "Moving Target Classification and Tracking from Real-time Video". In *Proc. DARPA Image Understanding Workshop*, vol. 1, pp. 129-136, Nov 1998.

- [MAJU99] Majumder, A., Gopi, M., Seales, B., and Fuchs, H., "Immersive Teleconferencing: A New Algorithm to Generate Seamless Panoramic Video Imagery". In *Proc. Seventh ACM International Conference on Multimedia*, pp. 169-178, 1999.
- [MCIV00] McIvor, A., "Background Subtraction Techniques". In *Proc. Image & Vision Computing New Zealand 2000 (IVCNZ'00)*, Auckland, New Zealand, 2000.
- [MCLA97] McLachlan, G., and Krishnan, T., "The EM Algorithm and Extensions". Wiley Publ., New York, 1997.
- [MEYE96] Meyers, S., "More Effective C++". Addison-Wesley Publ., Massachusetts, USA, 1996.
- [MORI03] Morita, S., Yamazawa, K., and Yokoya, N., "Internet Telepresence by Real-Time View-Dependent Image Generation with Omnidirectional Video Camera". In *Proc. SPIE Electronic Imaging*, vol. 5018, pp. 51-60, 2003.
- [MSDN99] *The Microsoft Developer Network* CD-ROM, Microsoft, Jan 1999. Available: http://msdn.microsoft.com/developer/
- [NAYA97] Nayar, S. K., "Omnidirectional Vision". In *Proc. Eight International Symposium on Robotics Research (ISRR)*, Shonan, Japan, Oct 1997.
- [NAYA99] Nayar, S. K., and Peri, V., "Folded Catadioptric Cameras". In *Proc. IEEE Conference Computer Vision and Pattern Recognition*, pp. 217-225, Fort Collins, CO, June 1999.
- [NAYA00] Nayar, S. K., and Karmarkar, A., "360 x 360 Mosaics". In *Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2000)*, vol. 2, pp. 388-395, June 2000.
- [NEAL98] Neal, R., and Hinton, G., "A view of the EM algorithm that justifies incremental, sparse, and other variants". In M. Jordan (Ed.), *Learning in Graphical Models*, pp. 355–371, Kluwer Academic Publishers, The Netherlands, 1998.
- [NEUM00] Neumann, U., Pintaric, T., and Rizzo, A., "Immersive Panoramic Video". In *Proc. Eighth ACM International Conference on Multimedia*, pp. 493-494, Los Angeles, CA, Oct 2000.
- [NG99] Ng, K. C., Ishiguro, H., Trivedi, M., and Sogo T., "Monitoring dynamically changing nvironments by ubiquitous vision system". In *IEEE Workshop Visual Surveillance*, pp. 67-73, June 1999.
- [NG03] Ng, S.-K., and McLachlan, G., "On Some Variants of the EM Algorithm for the Fitting of Finite Mixture Models". *Austrian Journal of Statistics*, vol. 32, no. 1&2, pp. 143-161, 2003.
- [NICH98] Nichols, J., and Moore, M., "An Adaptable, Cost Effective Image Processing System". In *Proc.* 10th JANNAF Non-destructive Evaluation Sub Committee, pp. 1-5, Salt Lake City, UT, March 1998.
- [NUMM03] Nummiaro, K., Koller-Meier, E., and Van Gool, L., "Color Features for Tracking Non-Rigid Objects". In *Special Issue on Visual Surveillance, Chinese Journal of Automation* (ACTA), vol. 29, no. 3, pp. 345-355, May 2003.
- [OKAT01] Okatani, T., and Deguchi, K., "On Photometric Aspects of Catadioptric Cameras". In *Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2001)*, pp. 1106-1113, Dec 2001.
- [OLLI99] Ollis, M., Herman, H., and Singh, S., "Analysis and Design of Panoramic Stereo Vision Using Equi-Angular Pixel Cameras". *Technical Report CMU-RI-TR-99-04*, Carnegie Mellon University Robotics Institute, PA, Jan 1999.
- [OMNI] The Page of Omnidirectional Vision website. http://www.cis.upenn.edu/~kostas/omni

- [OPENCV] Open Source Computer Vision Library (OpenCV), version Beta 3.1, Intel Corporation, Feb 2003. Available: http://www.intel.com/research/mrl/research/opencv
- [OR00] Or, S.H., Wong, K.H., Lee, K.S., and Lao, T.K., "Segmenting Video by Panorama and Color Mixture Models". In *International Conference on Imaging Science, Systems, and Technology (CISST'00)*, Nevada, US, June 2000.
- [ORDO02] Ordonez, C., and Omiecinski, E., "FREM: Fast and Robust EM Clustering for Large Data Sets". In *Proc. ACM International Conference on Information and Knowledge Management (CIKM'02)*, pp. 590-599, McLean, Virginia, US, 2002.
- [OWEN02] Owens, J., Hunter, A., and Fletcher, E., "A Fast Model-Free Morphology-Based Object Tracking Algorithm". *British Machine Vision Conference (BMVC'02)*, pp. 767-776, Cardiff, UK, Sept 2002.
- [PAJD00] Pajdla, T., and Roth, H., "Panoramic Imaging with SVAVISCA Camera Simulations and Reality". *Technical Report CTU-CMP-2000-16*, Center for Machine Perception, Czech Technical Univ., Oct 2000. Available: ftp://cmp.felk.cvut.cz/pub/cmp/articles/pajdla/Pajdla-TR-2000-16.pdf
- [PÉRE02] Pérez, P., Hue, C., Vermaak, J., and Gangnet, M., "Color-Based Probabilistic Tracking". In *Proc. European Conference on Computer Vision (ECCV'02)*, pp. 661-675, 2002.
- [PERI97] Peri, V., and Nayar, S.K., "Generation of Perspective and Panoramic Video from Omnidirectional Video". In *Proc. DARPA Image Understanding Workshop (IUW)*, pp. 243-245, New Orleans, May 1997.
- [PERŠ02] Perš, J., and Kovačič, S., "Nonparametric, Model-Based Radial Lens Distortion Correction Using Tilted Camera Assumption". In *Proc. Seventh Computer Vision Winter Workshop*, pp. 286-295, Austria, Feb 2002.
- [POV02] Persistence of Vision Ray Tracer (POV-Ray), version 3.5, 2002. Available: www.povray.
- [PRAT01] Prati, A., Cucchiara, R., Mikic, I., and Trivedi, M., "Analysis and Detection of Shadows in Video Streams: A Comparative Evaluation," In *IEEE CVPR Workshop on Empirical Evaluation Methods in Computer Vision*, Kauai, Hawaii, Dec 2001.
- [RAJA98] Raja, Y., McKenna, S.J., and Gong, S., "Segmentation and Tracking Using Colour Mixture Models". In *Proc. Third Asian Conference on Computer Vision (ACCV'98)*, vol. 1, pp. 607-614, 1998.
- [RAMA98] Ramamritham, K., Shen, S., Gonzáles, O., Sen, S., and Shirgurkar, S., "Using Windows NT for Real-Time Applications: Experimental Observations and Recommendations". In *Proc. IEEE Real-Time Technology and Applications Symposium (RTAS'98)*, pp. 102-111, Denver, Colorado, June 1998.
- [RASM96] Rasmussen, C., Toyama, K., and Hager, G., "Tracking Objects By Color Alone". *Technical Report DCS-RR-1114*, Dept. of Computer Science, Yale University, New Haven, CT, June 1996. Available: http://cs-www.cs.yale.edu/homes/rasmussen/lib/papers/rr1114.ps.gz
- [REES70] Rees, D.W., "Panoramic Television Viewing System". *United States Patent, No. 3, 505, 465*, April 1970.
- [RUI01] Rui, Y., Gupta, A., and Cadiz, J.J., "Viewing Meetings Captured by an Omni-Directional Camera", In *Proc. ACM Conference on Human Factors Comput. Syst. (CHI'01)*, Seattle, WA, April 2001.
- [SCHA97] Schafer, J.L., "Analysis of Incomplete Multivariate Data", Chapman & Hall/CRC, Boca Raton, Florida, 1997.

- [SHI94] Shi, J., and Tomasi, C., "Good features to track". In *Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR94)*, pp. 593–600, Seattle, Washington, June 1994.
- [SHUM97] Shum, H. Y., and Szeliski, R., "Panoramic Image Mosaics". *Technical Report, MSR-TR-97-23*, Microsoft Research, Sept 1997. Available: ftp://ftp.research.microsoft.com/pub/tr/tr-97-23.pdf
- [SOGO00] Sogo, T., Ishiguro, H., and Trivedi, M., "Real-Time Target Localization and Tracking by N-Ocular Stereo". In *Proc. IEEE Workshop on Omnidirectional Vision (OMNIVIS'00)*, pp. 153-160, June 2000.
- [SONK93] Sonka, M., Hlavac, V., and Boyle, R., "Image Processing, Analysis and Machine Vision". Chapman & Hall, London, UK, 1993.
- [STAU99] Stauffer, C., and Grimson, W. E. L., "Adaptive Background Mixture Models for Real-time Tracking," in *Proc. IEEE Conference on Computer Vision and Pattern Recognition*, vol. 1, pp. 22–29, 1999.
- [STIE02] Stiefelhagen, R., Yang, J., and Waibel, A., "Modeling Focus of Attention for Meeting Indexing Based on Multiple Cues". In *IEEE Transactions on Neural Networks*, vol. 13, no. 4, pp. 928-938, July 2002.
- [STRE01] Strelow, D., Mishler, J., Koes, D., and Singh, S., "Precise Omnidirectional Camera Calibration". In *Computer Vision and Pattern Recognition (CVPR'01)*, pp. 689-694, 2001.
- [STRO94] Stroustrup, B., *The Design and Evolution of C++*. Addison-Wesley Publish., Massachusetts, USA, 1994.
- [STUR00] Sturm, P., "A Method for 3D Reconstruction of Piecewise Planar Objects from Single Panoramic Images." In *Proc. IEEE Workshop on Omnidirectional Vision*, pp. 119–126, Hilton Head, SC, June2000.
- [SVOB97] Svoboda, T., Pajdla, T., and Hlaváč, V., "Central Panoramic Cameras: Geometry and Design". Center for Machine Perception, Czech Technical University, *Technical Report K335/97/147*, Dec 1997. Available: ftp://cmp.felk.cvut.cz/pub/cvl/articles/svoboda/TR-K335-97-147.ps.gz.
- [SVOB01] Svoboda, T., and Pajdla, T., "Matching in Catadioptric Images with Appropriate Windows and Outliers Removal". In *Proc. 9th International Conference on Computer Analysis of Images and Patterns*, Warsaw, Poland, Sept 2001.
- [SWAM99] Swaminathan, R., and Nayar, S. K., "Polycameras: Camera Clusters for Wide Angle Imaging". *Technical Report CUCS-013-99*, Dept. of Computer Science, Columbia Univ., New York, 1999. Available: http://www1.cs.columbia.edu/CAVE/publinks/swaminathan_CUTR_1999_013.pdf
- [SWAM01] Swaminathan, R., Grossberg, M., and Nayar, S. K., "Caustics of Catadioptric Cameras". In *Proc. IEEE International Conference on Computer Vision*, pp. 2-9, Vancouver, Canada, July 2001.
- [TALL99] Talla, D., and John, L., "Quantifying the Effectiveness of MMX in Native Signal Processing". In *Proc. IEEE Mid-West Symposium on Circuits and Systems*, pp. 18-21, Aug. 1999.
- [TAN02] Tan, K.-H., Hua, H., and Ahuja, N., "Multiview Panoramic Cameras Using a Mirror Pyramid". In *Proc. IEEE Workshop on Omnidirectional Vision (ECCV 2002)*, Copenhagen, 2002.
- [TAYL00] Taylor, C., "VideoPlus". In IEEE Workshop on Omnidirectional Vision (OMNIVIS'00), pp. 3-10, June 2000.

- [THAC96] Thacker, N.A., Prendergast, D., and Rockett, P.I., "B-Fitting: An Estimation Technique With Automatic Parameter Selection". In *Proc. British Machine Vision Conference* (BMVC'96), Edinburgh, 1996.
- [THIE01] Thiesson, B., Meek, C., and Heckerman, D., "Accelerating EM for Large Databases". *Machine Learning*, vol. 45(3), pp. 279–299, 2001.
- [THOM03] Thomas G., "Real-time Panospheric Image Dewarping and Presentation for Remote Mobile Robot Control". In *Advanced Robotics*, vol. 17, no. 4, pp. 359-368, 2003.
- [TINB80] Tinbergen, N., "Animal Behavior". Time-Life Books, 2nd edition, Hong Kong, 1980.
- [TOYA99] Toyama, K., Krumm, J., Brumitt, B., and Meyers, B., "Wallflower: Principles and Practice of Background Maintenance". In *Proc. International Conference on Computer Vision*, vol. 1, pp. 255-261, 1999.
- [TRIV02] Trivedi, M., Prati, A., and Kogut, G., "Distributed Interactive Video Arrays for Event Based Analysis of Incidents". In *IEEE Conference on Intelligent Transportation Systems*, Singapore, Sept 2002.
- [TRUC98] Trucco, E., and Verri, A., "Introductory Techniques for 3-D Computer Vision". Prentice Hall, New Jersey, USA, 1998.
- [URBA00] Urban, M., Svoboda, T., and Pajdla, T., "Transformation of Panoramic Images: from hyperbolic mirror with central projection to parabolic mirror with orthogonal projection". *Technical Report CTU-CMP-2000-09*, Center for Machine Perception, Czech Technical University, Aug 2000. Available: ftp://cmp.felk.cvut.cz/pub/cmp/articles/urbanm/Urban-TR-2000-09.ps.gz).
- [WATA96] Watanabe, M., and Nayar, S. K., "Telecentric Optics for Computational Vision". In *Proc. European Conference on Computer Vision (ECCV'96)*, pp. 439-451, Cambridge, April 1996.
- [WINT00] Winters, N., Gaspar, J., Lacey, G., and Santos-Victor, J., "Omni-directional Vision for Robot Navigation", In *Proc. IEEE Workshop on Omnidirectional Vision (OMNIVIS'00)*, pp. 21-28, June 2000.
- [XU01] Xu, M., and Ellis, T., "Illumination-Invariant Motion Detection Using Colour Mixture Models". In *British Machine Vision Conference (BMVC'01)*, 2001.
- [YAGI95] Yagi, Y., Nishizawa, Y., and Yachida, M., "Map-Based Navigation for a Mobile Robot with Omnidirectional Image Sensor COPIS". In *IEEE Trans. on Robotics and Automation*, vol. 11, pp. 634-648, Oct 1995.
- [YAGI99] Yagi, Y., "Omnidirectional Sensing and Its Applications". In *IEICE Transactions Inform.* & *Systems*, vol. E82-D, no.3, pp. 568-579, March 1999.
- [YAMA02] Yamazawa, K., and Yokoya, N., "Detecting moving objects with an omnidirectional camera and subtraction whose background image is renewed". In *Proc. IAPR Workshop on Machine Vision Applications (MVA2002)*, no. 3-28, pp. 154-157, Dec 2002.
- [ZHU99] Zhu, Z., Riseman, E. M., and Hanson, A. R., "Geometrical Modeling and Real-Time Vision Applications of a Panoramic Annular Lens (PAL) Camera System". *Technical Report TR #99-11*, Computer Science Dept., Univ. of Massachusetts, Amherst, February 1999. Available: ftp://ftp.cs.umass.edu/pub/techrept/techreport/1999/UM-CS-1999-011.ps