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1. ACM Transactions on Graphics(TOG)

@article{Shu:2017:PLT:3151031.3095816,
 author = {Shu, Zhixin and Hadap, Sunil and Shechtman, Eli and Sunkavalli, Kalyan and Paris, Sylvain and Samaras, Dimitris},
 title = {Portrait Lighting Transfer Using a Mass Transport Approach},
 journal = {ACM Trans. Graph.},
 issue_date = {January 2018},
 volume = {37},
 number = {1},
 month = oct,
 year = {2017},
 issn = {0730-0301},
 pages = {2:1--2:15},
 articleno = {2},
 numpages = {15},
 url = {http://doi.acm.org/10.1145/3095816},
 doi = {10.1145/3095816},
 acmid = {3095816},
 publisher = {ACM},
 address = {New York, NY, USA},
 keywords = {Face relighting, histogram matching, mass transport},
}

@article{Kurlander:1993:ICM:159730.159731,
 author = {Kurlander, David and Feiner, Steven},
 title = {Inferring Constraints from Multiple Snapshots},
 journal = {ACM Trans. Graph.},
 issue_date = {Oct. 1993},
 volume = {12},
 number = {4},
 month = oct,
 year = {1993},
 issn = {0730-0301},
 pages = {277--304},
 numpages = {28},
 url = {http://doi.acm.org/10.1145/159730.159731},
 doi = {10.1145/159730.159731},
 acmid = {159731},
 publisher = {ACM},
 address = {New York, NY, USA},
 keywords = {constraints, empirical learning, graphical editing},
}

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2. IEEE *Transactions on Visualization and Computer Graphics* (TVCG)

@ARTICLE{7867820,
author={J. Barreira and M. Bessa and L. Barbosa and L. Magalhães},
journal={IEEE Transactions on Visualization and Computer Graphics},
title={A Context-Aware Method for Authentically Simulating Outdoors Shadows for Mobile Augmented Reality},
year={2018},
volume={24},
number={3},
pages={1223-1231},
abstract={Visual coherence between virtual and real objects is a major issue in creating convincing augmented reality (AR) applications. To achieve this seamless integration, actual light conditions must be determined in real time to ensure that virtual objects are correctly illuminated and cast consistent shadows. In this paper, we propose a novel method to estimate daylight illumination and use this information in outdoor AR applications to render virtual objects with coherent shadows. The illumination parameters are acquired in real time from context-aware live sensor data. The method works under unprepared natural conditions. We also present a novel and rapid implementation of a state-of-the-art skylight model, from which the illumination parameters are derived. The Sun's position is calculated based on the user location and time of day, with the relative rotational differences estimated from a gyroscope, compass and accelerometer. The results illustrated that our method can generate visually credible AR scenes with consistent shadows rendered from recovered illumination.},
keywords={Cameras;Clouds;Estimation;Lighting;Meteorology;Probes;Sun;Augmented reality;context-awareness;photometric registration;shadows coherence},
doi={10.1109/TVCG.2017.2676777},
ISSN={1077-2626},
month={March},}

@ARTICLE{466716,
author={B. Hamann and Donghua Wu and R. J. Moorhead},
journal={IEEE Transactions on Visualization and Computer Graphics},
title={On particle path generation based on quadrilinear interpolation and Bernstein-Bezier polynomials},
year={1995},
volume={1},
number={3},
pages={210-217},

abstract={Particle path computation in unsteady 3D vector fields given in discrete, structured form (i.e., as a hexahedral curvilinear grid) requires the local approximation of the vector field and the path. Quadrilinear interpolation and Bernstein-Bezier polynomials are used for the local vector field and path approximation. The next point in a sequence of points on a particle path is computed using this local approximation. Bernstein-Bezier polynomials are primarily used in geometric modeling, and their properties allow direct computation of points on a particle path},
keywords={approximation theory;computational geometry;data visualisation;flow visualisation;interpolation;physics computing;polynomials;Bernstein-Bezier polynomials;curvilinear grid;direct computation;geometric modeling;hexahedral curvilinear grid;local approximation;local vector field;particle path computation;particle path generation;path approximation;quadrilinear interpolation;scientific visualization;unsteady 3D vector fields;vector field;Computational modeling;Computer science;Differential equations;Grid computing;Interpolation;Numerical stability;Physics computing;Polynomials;Solid modeling;Visualization},
doi={10.1109/2945.466716},
ISSN={1077-2626},
month={Sep},}

3. IEEE *Computer Graphics and Applications(CG&A)*
@ARTICLE{8103316,
author={C. Jaenichen},
journal={IEEE Computer Graphics and Applications},
title={Visual Communication and Cognition in Everyday Decision-Making},
year={2017},
volume={37},
number={6},
pages={10-18},
abstract={The role of visual communication quickly changes, however, and with the influence and evolution of new materials and technology, commercial art and graphic design approaches were created. From cuneiform (a writing system that dates back to Mesopotamia that used a stylus to imprint markings on clay tablets) to Johannes Gutenberg's development of metal movable type and the start of the printing revolution, materials and technology created opportunities for visual communication to reach more people and share more diverse messaging faster than ever before.},
keywords={cognition;decision making;social sciences;cognition;cuneiform;decision making;printing materials;printing revolution;printing technology;visual communication;Cognition;Decision making;Risk assessment;Visual communication;Visualization;computer graphics;computer graphics

applications;graphic design;health risk communication;information design;visual communication},
doi={10.1109/MCG.2017.4031060},
ISSN={0272-1716},
month={November},}

@ARTICLE{232114,
author={P. K. Ghosh and P. K. Jain},
journal={IEEE Computer Graphics and Applications},
title={An algebra of geometric shapes},
year={1993},
volume={13},
number={5},
pages={50-59},
abstract={A simple algebra of shapes with 2D planar regions is developed. The fact that a 2D region can be completely described by a one-dimensional, closed-boundary curve if it is homogeneous is used in the presented approach, which first converts the spatial description of the closed curve into an equivalent Fourier series description and then uses the Fourier-description to define binary composition operations that combine two planar shapes to form another planar shape. It is shown how the geometric system comprising the set of all planar shapes and the composition operations can be mapped onto the algebraic system of linear/vector space.<>},
keywords={algebra;computational geometry;computer graphics;series (mathematics);2D planar regions;binary composition operations;closed-boundary curve;composition operations;equivalent Fourier series description;geometric shapes;geometric system;linear/vector space;planar shape;spatial description;Algebra;Arithmetic;Concrete;Fourier series;Lead;Marine vehicles;Mathematics;Polynomials;Shape;Solid modeling},
doi={10.1109/38.232114},
ISSN={0272-1716},
month={Sept},}

4. ACM SIGGRAPH Computer Graphics (conference proceedings only, published as an ACM TOG issue)

@proceedings{Gain:2010:1811158,
title = {AFRIGRAPH '10: Proceedings of the 7th International Conference on Computer Graphics, Virtual Reality, Visualisation and Interaction in Africa},
year = {2010},
isbn = {978-1-4503-0118-3},
location = {Franschhoek, South Africa},
note = {434102},
publisher = {ACM},
address = {New York, NY, USA},

}

@proceedings{Chalmers:2001:513867,
title = {AFRIGRAPH '01: Proceedings of the 1st International Conference on Computer Graphics, Virtual Reality and Visualisation},
year = {2001},
isbn = {1-58113-446-0},
location = {Camps Bay, Cape Town, South Africa},
note = {434012},
publisher = {ACM},
address = {New York, NY, USA},
}

5. Computers and Graphics (C&G)

@article{RIFFNALLERSCHIEFER201866,
title = "Physics-based deformation of subdivision surfaces for shared virtual worlds",
journal = "Computers & Graphics",
volume = "71",
pages = "66 - 76",
year = "2018",
issn = "0097-8493",
doi = "https://doi.org/10.1016/j.cag.2017.12.005",
url = "http://www.sciencedirect.com/science/article/pii/S0097849317302182",
author = "Andreas Riffnaller-Schiefer and Ursula H. AugsdÃ¶rfer and Dieter W. Fellner",
keywords = "Subdivision surfaces, Isogeometric analysis, Interactive, Soft-body, Web service",
abstract = "Creating immersive interactive virtual worlds not only require plausible visuals, but it is also important to allow the user to interact with the virtual scene in a natural way. While rigid-body physics simulations are widely used to provide basic interaction, realistic soft-body deformations of virtual objects are challenging and therefore typically not offered in multi user environments. We present a web service for interactive deformation which can accurately replicate real world material behavior. Its architecture is highly flexible, can be used from any web enabled client, and facilitates synchronization of computed deformations across multiple users and devices at different levels of detail."
}

@article{HUANG2006927,
title = "An efficient large deformation method using domain decomposition",
journal = "Computers & Graphics",
volume = "30",
number = "6",
pages = "927 - 935",
year = "2006",
issn = "0097-8493",
doi = "https://doi.org/10.1016/j.cag.2006.08.014",

url = "http://www.sciencedirect.com/science/article/pii/S0097849306001488",
author = "Jin Huang and Xinguo Liu and Hujun Bao and Baining Guo and Heung-Yeung Shum",
keywords = "Deformation, Domain decomposition, Cluster PCA, Cholesky factorization",
abstract = "Efficiently simulating large deformations of flexible objects is a challenging problem in computer graphics. In this paper, we present a physically based approach to this problem, using the linear elasticity model and a finite elements method. To handle large deformations in the linear elasticity model, we exploit the domain decomposition method, based on the observation that each sub-domain undergoes a relatively small local deformation, involving a global rigid transformation. In order to efficiently solve the deformation at each simulation time step, we pre-compute the object responses in terms of displacement accelerations to the forces acting on each node, yielding a forceâ€ “ displacement matrix. However, the forceâ€ “ displacement matrix could be too large to handle for densely tessellated objects. To address this problem, we present two methods. The first method exploits spatial coherence to compress the force-displacement matrix using the clustered principal component analysis method; and the second method pre-computes only the forceâ€ “ displacement vectors for the boundary vertices of the sub-domains and resorts to the Cholesky factorization to solve the acceleration for the internal vertices of the sub-domains. Finally, we present some experimental results to show the large deformation effects and fast performance on complex large scale objects under interactive user manipulations."
}

6. Computers Graphics Forum (CGF)

@article{12659911120171201,
Abstract = {Shape interpolation has many applications in computer graphics such as morphing for computer animation. In this paper, we propose a novel data-driven mesh interpolation method. We adapt patch-based linear rotational invariant coordinates to effectively represent deformations of models in a shape collection, and utilize this information to guide the synthesis of interpolated shapes. Unlike previous data-driven approaches, we use a rotation/translation invariant representation which defines the plausible deformations in a global continuous space. By effectively exploiting the knowledge in the shape space, our method produces realistic interpolation results at interactive rates, outperforming state-of-the-art methods for challenging cases. We further propose a novel approach to interactive editing of shape morphing according to the shape distribution. The user can explore the morphing path and select example models intuitively and adjust the path with simple interactions to edit the morp},
Author = {Gao, Lin and Chen, Shu-Yu and Lai, Yu-Kun and Xia, Shihong},
ISSN = {01677055},
Journal = {Computer Graphics Forum},
Keywords = {Interpolation, Shapes, Computer graphics, Morphing (Computer animation), Computer-generated imagery, data-driven, I.3.5 [Computer Graphics]: Computational Geometry and Object Modelling-object representations, morphing editing, shape interpolation, shape space},
Number = {8},
Pages = {19 - 31},
Title = {Data-Driven Shape Interpolation and Morphing Editing.},

Volume = {36},
URL =
{https://umasslowell.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=126599111&site=ehost-live},
Year = {2017},
}

@article{2709246620070901,
Abstract = {In this paper, a new free-form shape deformation approach is proposed. We combine a skeleton-based mesh deformation technique with discrete differential coordinates in order to create natural-looking global shape deformations. Given a triangle mesh, we first extract a skeletal mesh, a two-sided Voronoibased approximation of the medial axis. Next the skeletal mesh is modified by free-form deformations. Then a desired global shape deformation is obtained by reconstructing the shape corresponding to the deformed skeletal mesh. The reconstruction is based on using discrete differential coordinates. Our method preserves fine geometric details and original shape thickness because of using discrete differential coordinates and skeleton-based deformations. We also develop a new mesh evolution technique which allow us to eliminate possible global and local self-intersections of the deformed mesh while preserving fine geometric details. Finally, we present a multi-resolution version of our appr},
Author = {Yoshizawa, Shin and Belyaev, Alexander and Seidel, Hans-Peter},
ISSN = {01677055},
Journal = {Computer Graphics Forum},
Keywords = {Deformation of surfaces, Congruences (Geometry), Computer drawing, Computer graphics, Three-dimensional imaging, Digital image processing, I.3.5 [Computer Graphics]: Computational Geometry and Object Modeling},
Number = {3},
Pages = {255 - 264},
Title = {Skeleton-based Variational Mesh Deformations.},
Volume = {26},
URL =
{https://umasslowell.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=27092466&site=ehost-live},
Year = {2007},
}

7. Computers Graphics Forum (CGF)

@Article{Ju2017,
author="Ju, Mingye
and Zhang, Dengyin
and Wang, Xuemei",
title="Single image dehazing via an improved atmospheric scattering model",
journal="The Visual Computer",
year="2017",
month="Dec",

day="01",
volume="33",
number="12",
pages="1613--1625",
abstract="Under foggy or hazy weather conditions, the visibility and color fidelity of outdoor images are prone to degradation. Hazy images can be the cause of serious errors in many computer vision systems. Consequently, image haze removal has practical significance for real-world applications. In this study, we first analyze the inherent weaknesses of the atmospheric scattering model and propose an improvement to address those weaknesses. Then, we present a fast image haze removal algorithm based on the improved model. In our proposed method, the input image is partitioned into several scenes based on the haze thickness. Next, averaging and erosion operations calculate the rough scene luminance map in a scene-wise manner. We obtain the rough scene transmission map by maximizing the contrast in each scene and then develop a way to gently remove the haze using an adaptive method for adjusting scene transmission based on scene features. In addition, we propose a guided total variation model for edge optimization, so as to prevent from the block effect as well as to eliminate the negative effect from the wrong scene segmentation results. The experimental results demonstrate that our method is effective in solving a series of common problems, including uneven illuminance, overenhanced and oversaturated images, and so forth. Moreover, our method outperforms most current dehazing algorithms in terms of visual effects, universality, and processing speed.",
issn="1432-2315",
doi="10.1007/s00371-016-1305-1",
url="https://doi.org/10.1007/s00371-016-1305-1"
}

@Article{Berzin2002,
author="Berzin, Dmitrii
and Hagiwara, Ichiro",
title="Minimal area for surface reconstruction from cross sections",
journal="The Visual Computer",
year="2002",
month="Nov",
day="01",
volume="18",
number="7",
pages="437--444",
abstract="Surface reconstruction from cross-sectional data is important in aÂ variety of applications. It is usually possible to generate aÂ surface in many ways, but only reasonable ones are acceptable. AÂ surface of minimal area has been considered as one of the most natural optimal criteria for the original tiling method of surface reconstruction from cross sections. In the paper, we consider minimal surfaces for continuous generalization of the tiling approach and in the general situation of reconstruction from cross sections. We show that in these cases the minimal area criterion leads to defective surfaces and is thus unacceptable.",
issn="1432-2315",
doi="10.1007/s003710100163",
url="https://doi.org/10.1007/s003710100163"

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