

## Bibliography

- [AB] M. A. Arnold and Deborah Bryce. Arnold's glossary of anatomy. The University of Sydney - Anatomy & Histology Online Learning, URL: <http://www.anatomy.usyd.edu.au/glossary>.
- [AB99] Akram Aldroubi and Peter J. Basser. Reconstruction of vector and tensor fields from sampled discrete data. In *The Functional and Harmonic Analysis of Wavelets and Frames*, volume 247 of *Contemporary Mathematics*, pages 1–15. American Mathematical Society, 1999.
- [BBCP<sup>+</sup>02] Y. Assaf, D. Ben-Bashat, J. Chapman, S. Peled, I. E. Biton, M. Kafri, Y. Segev, T. Hendl, A. D. Korczyn, M. Graif, and Y. Cohen. High b-value q-space analyzed diffusion-weighted MRI: Application to multiple sclerosis. *Magnetic Resonance in Medicine*, 47(1):115–126, January 2002. URL: <http://www.tau.ac.il/lifesci/brain/mapunit/publication/115-126.pdf>.
- [BCO<sup>+</sup>03] Marc Alexa, Johannes Behr, Daniel Cohen-Or, Shachar Fleishman, David Levin, and Claudio T. Silva. Computing and rendering point set surfaces. *IEEE Transactions on Visualization and Computer Graphics*, 9(1):3–15, January 2003.
- [BKT<sup>+</sup>00] Elliott Antman, Jean-Pierre Bassand, Werner Klein, Magnus Ohman, Jose Luis Lopez Sendon, Lars Rydén, Maarten Simoons, and Michal Tendera. Myocardial infarction redefined – a consensus document of the joint European Society of Cardiology/American College of Cardiology committee for the redefinition of myocardial infarction. *Journal of the American College of Cardiology*, 36(3):959–969, September 2000. URL: [http://www.acc.org/clinical/consensus/mi\\_redefined/index.htm](http://www.acc.org/clinical/consensus/mi_redefined/index.htm).
- [Abo] About, Inc. Organs of the body - anatomy of the brain. URL: <http://biology.about.com/library/organs/brain/blbrain.htm>.
- [ABW99] Anthony H. Aletras, Robert S. Balaban, and Han Wen. High resolution strain analysis of the human heart with fast-DENSE. *Journal of Magnetic Resonance*, 140(1):41–57, September 1999. URL:

- [http://zeus.nhlbi.nih.gov/medical\\_imaging/jc/11\\_30\\_00/DENSE\\_JMR\\_1999\\_140\\_41-57.pdf](http://zeus.nhlbi.nih.gov/medical_imaging/jc/11_30_00/DENSE_JMR_1999_140_41-57.pdf).
- [ACC<sup>+</sup>98] Amir A. Amini, Yasheng Chen, Rupert W. Curwen, Vaidy Mani, and Jean Sun. Coupled B-snake grids and constrained thin-plate splines for analysis of 2-D tissue deformations from tagged MRI. *IEEE Transactions on Medical Imaging*, 17(3):344–356, June 1998.
- [ACCM01] Theo Arts, Kevin D. Costa, Jim W. Covell, and Andrew D. McCulloch. Relating myocardial laminar architecture to shear strain and muscle fiber orientation. *American Journal of Physiology*, 280(5):H2222–H2229, May 2001. Manuscript available at URL: [http://cardiome.ucsd.edu/Publications\\_files/ArtSheet.pdf](http://cardiome.ucsd.edu/Publications_files/ArtSheet.pdf).
- [AD89] Leon Axel and Lawrence Dougherty. MR imaging of motion with spatial modulation of magnetization. *Radiology*, 171(3):841–845, June 1989.
- [AG00] Rhön-Klinikum AG. 1999 results press conference, May 2000. URL: <http://www.rhoen-klinikum-ag.com>.
- [AKM<sup>+</sup>99] H. J. Aronen, A. Korvenoja, S. Martinkuppi, J. Perkiö, J. Karonen, and S. Carlson. Clinical applications of functional magnetic resonance imaging. *International Journal of Bioelectromagnetism*, 1(1), May 1999. URL: <http://www.ee.tut.fi/rigi/ijbem/volume1/number1/html/ar5.htm>.
- [Ale00] Daniel Alexander. Note on indices of shape and similarity for diffusion tensors. Technical report, Department of Computer Science, University College London, October 2000. URL: <http://www.cs.ucl.ac.uk/brandnew/research2/Publications/rn14.pdf>.
- [Alo98] Juan J. Alonso. Fundamentals of compressible flow, 1998. Lecture notes AA210a, Leland Stanford Junior University, URL: <http://cromagnon.stanford.edu/aa210a/handouts/hdout4.pdf>.
- [And80] Robert H. Anderson. *Cardiac Anatomy*. Gower Medical Publishing, London, 1980.
- [App98] Jon B. Applequist. Tensors in a nutshell. On-line Research Resources, Iowa State University, Dept. of Molecular Biology, January 1998. URL: <http://www.public.iastate.edu/~jba/tensors.pdf>.
- [AS65] Milton Abramowitz and Irene A. Stegun, editors. *Handbook of Mathematical Functions*. Dover Publications, Inc., 1965.
- [ASF<sup>+</sup>94] R. Wayne Alexander, Robert C. Schlant, Valentin Fuster, Robert A. O'Rourke, Robert Roberts, and Edmund H. Sonnenblick, editors. *Hurst's The Heart*. McGraw-Hill Companies, Inc., London, 9<sup>th</sup> edition, 1994.

- [Asi93] Daniel Asimov. Notes on the topology of vector fields and flows. Technical Report RNR-93-003, NASA Ames Research Center, February 1993. URL: <http://www.nas.nasa.gov/Pubs/TechReports/RNRreports/dasimov/RNR-93-003/RNR-93-003.html>.
- [AT95a] Greg Abram and Lloyd Treinish. An extended data-flow architecture for data analysis and visualization. *Computer Graphics*, 29(2):17–21, May 1995.
- [AT95b] Greg Abram and Lloyd Treinish. An extended data-flow architecture for data analysis and visualization. In Gregory M. Nielson and Deborah Silver, editors, *Proceedings of Visualization '95*, pages 263–270. IEEE, 1995.
- [AVS] AVS Advanced Visual Systems. The AVS/Express homepage. URL: [http://www.avs.com/software/soft\\_t/avsxps.html](http://www.avs.com/software/soft_t/avsxps.html).
- [AWR<sup>+</sup>95] Haim Azhari, James L. Weiss, Walter J. Rogers, Cynthia O. Siu, and Edward P. Shapiro. A noninvasive comparative study of myocardial strains in ischemic canine hearts using tagged MRI in 3-D. *American Journal of Physiology*, 268(1):H1918–H1926, January 1995.
- [Bas95] Peter J. Basser. Inferring microstructural features and the physiological state of tissues from diffusion-weighted images. *NMR in Biomedicine*, 8(7–8):333–344, 1995.
- [Bas00] Peter J. Basser. Personal communication, May 2000.
- [Bat82] Klaus-Jürgen Bathe. *Finite Element Procedures in Engineering Analysis*. Prentice-Hall Inc., Englewood Cliffs, New Jersey 07632, 1982.
- [BBK<sup>+</sup>97] Irene Buvat, Marissa L. Bartlett, Anastasia N. Kitsiou, Vasken Dilzizian, and Stephen L. Bacharach. A "hybrid" method for measuring myocardial wall thickening from gated PET/SPECT images. *The Journal of Nuclear Medicine*, 38(2):324–329, February 1997.
- [Ber81] Jacques Bertin. *Graphics and Graphic Information-Processing*. Walter de Gruyter, Berlin; New York, 1981.
- [Ber83] Jacques Bertin. *Semiology of graphics: diagrams, networks, maps*. University of Wisconsin Press, Madison, Wis., 1983. Translated by William J. Berg.
- [BGEH<sup>+</sup>03] Naama Barnea-Goraly, Stephen Eliez, Maj Hedeus, Vinod Menon, Christopher D. White, Michael Moseley, and Allan L. Reiss. White matter tract alterations in fragile X syndrome: Preliminary evidence from diffusion tensor imaging. *American Journal of Medical Genetics (Part B: Neuropsychiatric Genetics)*, 118B(1):81–88,

- April 2003. URL: [http://spnl.stanford.edu/publications/pdfs/Barnea\\_G\\_FX\\_DTI\\_\(AJMG02\).pdf](http://spnl.stanford.edu/publications/pdfs/Barnea_G_FX_DTI_(AJMG02).pdf).
- [BGL96] S. A. Berger, W. Goldsmith, and E. R. Lewis, editors. *Introduction to Bioengineering*. Oxford University Press, 1996.
- [BH99] Rajesh Batra and Lambertus Hesselink. Feature comparison of 3-d vector fields using earth mover's distance. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 105–114. IEEE, October 1999.
- [BHH03] Cynthia A. Brewer, Geoffrey W. Hatchard, and Mark A. Harrower. Colorbrewer in print: A catalog of color schemes for maps. *Cartography and Geographic Information Science*, 30(1):5–32, January 2003.
- [BHR<sup>+</sup>94] Manfred Brill, Hans Hagen, Hans-Christian Rodrian, Wladimir Djatschin, and Stanislav V. Klimentko. Streamball techniques for flow visualization. In R. Daniel Bergeron and Arie E. Kaufman, editors, *Proceedings of Visualization '94*, pages 225–231. IEEE, 1994.
- [Bio97] Bioengineering Research Group. Utrecht chapters, February 1997. University of Auckland, Department of Engineering Science, URL: <http://www.esc.auckland.ac.nz/Academic/Texts/utrecht.html>.
- [Bio01] Bioengineering Research Group. Bionotes, June 2001. University of Auckland, Department of Engineering Science, URL: <http://www.esc.auckland.ac.nz/Academic/Texts/bio-notes.html>.
- [BIP00] J. Bresnahan, J. Insley, and M. E. Papka. Interacting with scientific visualizations: User-interface tools within spatially immersive displays. Technical Report ANL/MCS-P789-0100, Argonne National Laboratory, Argonne, Illinois, USA, January 2000.
- [BK02] Stephan Bischoff and Leif Kobbelt. Isosurface reconstruction with topology control. In *Proceedings of the 10th Pacific Conference on Computer Graphics and Applications (Pacific Graphics '02)*, pages 246–255. IEEE CS Press, October 2002. URL: <http://www-i8.informatik.rwth-aachen.de/publications/downloads/topo.pdf>.
- [BKGY96] Steve Bryson, David Kenwright, and Michael Gerald-Yamasaki. FEL: The field encapsulating library. In Roni Yagel and Gregory M. Nielson, editors, *Proceedings of Visualization '96*, pages 241–247. IEEE, October 1996.
- [BL91] Steve Bryson and Creon Levit. The virtual windtunnel: An environment for the exploration of three-dimensional unsteady flows. In Gregory M. Nielson and Larry Rosenblum, editors, *Proceedings of Visualization '91*, pages 17–24, Los Alamitos, California, 1991. IEEE, Computer Society Press.

- [BLM95] Barry G. Becker, David A. Lane, and Nelson L. Max. Unsteady flow volumes. In Gregory M. Nielson and Deborah Silver, editors, *Proceedings of Visualization '95*, pages 329–335. IEEE, 1995. URL: <http://www.llnl.gov/graphics/docs/UnsteadyFlowVols.pdf>.
- [Blo88] Jules Bloomenthal. Polygonization of implicit surfaces. *Computer-Aided Geometric Design*, 5(4):341–355, November 1988.
- [BMB94] P. J. Basser, J. Mattiello, and D. Le Bihan. MR diffusion tensor spectroscopy and imaging. *Biophysical Journal*, 66:259–267, 1994.
- [BML01] Sylvain Baillet, John C. Mosher, and Richard M. Leahy. Electromagnetic brain mapping. *IEEE Signal Processing Magazine*, 18(6):14–30, November 2001.
- [BMM<sup>+</sup>98] J. L. Boxerman, T. J. Mosher, E. R. McVeigh, E. Atalar, J. A. Lima, and D. A. Bluemke. Advanced MR imaging techniques for evaluation of the heart and great vessels. *Radiographics*, 18(3):543–564, May 1998.
- [BNC96] Morton Bro-Nielsen and Stephane Cotin. Real-time volumetric deformable models for surgery simulation using finite elements and condensation. *Computer Graphics Forum (Proceedings of Eurographics '96)*, 15(3):C57–C66, 1996. Futuroscope - Poitiers, France August 26 – 30, 1996, ISSN 0167-7055.
- [Bor98] Ed Boring. Visualization of tensor fields. Master's thesis, University of California Santa Cruz, June 1998. URL: <http://emerald.ucsc.edu/~7Eedb/thesis.pdf>.
- [Box99] Lawrence M. Boxt. From the RSNA refresher courses: Cardiac MR imaging: A guide for the beginner. *Radiographics*, 19(4):1009–1025, July 1999. URL: <http://radiographics.rsnajnls.org/cgi/content/full/19/4/1009>.
- [BP91] A. J. Baker and D. W. Pepper. *Finite Elements 1-2-3*. McGraw-Hill Book Co., 1991.
- [BP96a] Peter J. Basser and Carlo Pierpaoli. Microstructural and physiological features of tissues elucidated by quantitative-diffusion-tensor MRI. *Journal of Magnetic Resonance Series B*, 111(3):209–219, June 1996.
- [BP96b] Ed Boring and Alex Pang. Directional flow visualization of vector fields. In Roni Yagel and Gregory M. Nielson, editors, *Proceedings of Visualization '96*, pages 389 – 392. IEEE, October 1996.
- [BP98a] C. L. Bajaj and V. Pascucci. Visualization of scalar topology for structural enhancement. In David Ebert, Hans Hagen, and Holly Rushmeier, editors, *Proceedings of Visualization '98*, pages 51–58. IEEE, Computer Society Press, October 1998.

- [BP98b] Ed Boring and Alex Pang. Interactive deformations from tensor fields. In David Ebert, Hans Hagen, and Holly Rushmeier, editors, *Proceedings of Visualization '98*, pages 297–304. IEEE, Computer Society Press, October 1998.
- [BPKW03] Anders Brun, Hae-Jeong Park, Hans Knutsson, and Carl-Fredrik Westin. Coloring of DT-MRI fiber traces using Laplacian eigenmaps. In *Proceedings of Eurocast 2003, Neuro Image Workshop*, Las Palmas, February 2003. Full paper published as SPL Technical Report #369, Harvard Medical School Boston, Massachusetts, URL: <http://splweb.bwh.harvard.edu:8000/pages/papers/brun/eurocast2003/brunEUROCAST-2003.pdf>.
- [BPP<sup>+</sup>00] Peter J. Basser, Sinisa Pajevic, Carlo Pierpaoli, Jeffrey Duda, and Akram Aldroubi. In vivo fiber tractography using DT-MRI data. *Magnetic Resonance in Medicine*, 44(4):625–632, October 2000. URL: <http://dir2.nichd.nih.gov/nichd/limb/stbb/invivofiber.pdf>.
- [BR98] Uwe Behrens and Ralf Ratering. Adding shadows to a texture-based volume renderer. In *Proceedings of the 1998 Symposium on Volume Visualization (VOLVIS-98), Research Triangle Park, North Carolina, October 19-20*, pages 39–46. ACM Press, 1998.
- [Bra95] Robert Braham. Math & visualization: new tools new frontiers. *IEEE Spectrum*, 32(11):19–36, November 1995.
- [Bre] Cynthia A. Brewer. Colorbrewer - selecting good color schemes for maps. URL: <http://www.colorbrewer.org>.
- [Bro00a] Joseph D. Bronzina, editor. *The Biomedical Engineering Handbook*, volume 1. CRC Press, 2<sup>nd</sup> edition, 2000.
- [Bro00b] Joseph D. Bronzina, editor. *The Biomedical Engineering Handbook*, volume 2, chapter 114 - Fluid Shear Stress Effects on Cellular Function. CRC Press, 2<sup>nd</sup> edition, 2000.
- [BRT95] Lawrence D. Bergman, Bernice E. Rogowitz, and Lloyd A. Treinish. A rule-based tool for assisting colormap selection. In Gregory M. Nielson and Deborah Silver, editors, *Proceedings of Visualization '95*, pages 118–125. IEEE, 1995.
- [Bru] J. E. Bruni. Glossary of neuroanatomical and neurological terms. Department of Human Anatomy and Cell Science, University of Manitoba, Winnipeg, Canada, URL: <http://www.umanitoba.ca/faculties/medicine/anatomy/neuro/gloss/gloss.htm>.
- [Bry96] Steve Bryson. Virtual reality in scientific visualization. *Communications of ACM*, 39(5):62–71, May 1996. URL: <http://www.acm.org/pubs/toc/Abstracts/cacm/229467.html>.

- [BS94] David C. Banks and Bart A. Singer. Vortex tubes in turbulent flows: Identification, representation and reconstruction. In R. Daniel Bergeron and Arie E. Kaufman, editors, *Proceedings of Visualization '94*, pages 132–139. IEEE, 1994.
- [BSH97] Henrik Battke, Detlev Stalling, and Hans-Christian Hege. Fast line integral convolution for arbitrary surfaces in 3D. In H. C. Hege and K. Polthier, editors, *Visualization and Mathematics*, pages 181–195. Springer Verlag, Heidelberg, 1997. URL: <http://www.zib.de/Visual/papers/surfaceLIC/index.html>.
- [Bur87] David S. Burnett. *Finite Element Analysis - From Concepts to Applications*. Addison-Wesley Publication Company Inc., 1987.
- [BW90] Jules Bloomenthal and Brian Wyvill. Interactive techniques for implicit modeling. *Computer Graphics*, 24(2):109–116, March 1990. Special Issue on 1990 Symposium on Interactive 3D Graphics.
- [BWR<sup>+</sup>90] Maurice B. Buchalter, James L. Weiss, Walter J. Rogers, Elias A. Zerhouni, Myron L. Weisfeldt, Rafael Beyar, and Edward P. Shapiro. Noninvasive quantification of left ventricular rotational deformation in normal humans using magnetic resonance imaging myocardial tagging. *Circulation*, 81(4):1236–1244, April 1990.
- [BY96] David Blythe and David Yu. Programming with OpenGL - advanced rendering. Course notes #23, ACM SIGGRAPH, 1996.
- [CA91] Roger A. Crawfis and Michael J. Allison. A scientific visualization synthesizer. In Gregory M. Nielson and Larry Rosenblum, editors, *Proceedings of Visualization '91*, pages 262–267, Los Alamitos, California, October 1991. IEEE, Computer Society Press.
- [CA97] Patricia Crossno and Edward Angel. Isosurface extraction using particle systems. In Roni Yagel and Hans Hagen, editors, *Proceedings of Visualization '97*, pages 495–498. IEEE, 1997.
- [CAA<sup>+</sup>97] M. D. Cheitlin, J. S. Alpert, W. F. Armstrong, G. P. Aurigemma, G. A. Beller, F. Z. Bierman, T. W. Davidson, J. L. Davis, P. S. Douglas, L. D. Gillam, R. P. Lewis, A. S. Pearlman, J. T. Philbrick, P. M. Shah, and R. G. Williams. ACC/AHA guidelines for the clinical application of echocardiography: a report of the American College of Cardiology/American Heart Association task force on practice guidelines (committee on clinical application of echocardiography). *Journal of the American College of Cardiology (JACC)*, 29(4):862–879, 1997. URL: <http://www.acc.org/clinical/guidelines/echo/>.
- [Cab97] Christopher Cable M.D. The auscultation assistant, 1997. URL: <http://www.wilkes.med.ucla.edu/intro.html>.

- [CB97] Dru Clark and Michael Bailey. Visualization of height field data with physical models and texture photomapping. In Roni Yagel and Hans Hagen, editors, *Proceedings of Visualization '97*, pages 89–94. IEEE, 1997.
- [CBCH95] Dianne Cook, Andreas Buja, Javier Cabrera, and Catherine Hurley. Grand tour and projection pursuit. *Journal of Computational and Graphical Statistics*, 4(3):155–172, 1995. URL: <http://citeseer.nj.nec.com/cook95grand.html>.
- [CBR<sup>+</sup>97] William R. Crum, Elizabeth Berry, John P. Ridgway, U. Mohan Sivananthan, Lip-Bun Tan, and Michael A. Smith. Simulation of two-dimensional tagged MRI. *Journal of Magnetic Resonance Imaging*, 7(2):416–424, March 1997.
- [CC80] Christopher Chatfield and Alexander J. Collins. *Introduction to multivariate analysis*. Chapman and Hall, London, New York, 1980.
- [CCF94] Brian Cabral, Nancy Cam, and Jim Foran. Accelerated volume rendering and tomographic reconstruction using texture mapping hardware. In Arie Kaufman and Wolfgang Krueger, editors, *1994 Symposium on Volume Visualization*, pages 91–98. ACM SIGGRAPH, October 1994. ISBN 0-89791-741-3.
- [CDA99] Stéphane Cotin, Hervé Delingette, and Nicholas Ayache. Real-time elastic deformations of soft tissues for surgery simulation. *IEEE Transactions on Visualization and Computer Graphics*, 5(1):62–73, January 1999.
- [CE98] Mei C. Chuah and Stephen G. Eick. Information rich glyphs for software management data. *IEEE Computer Graphics and Applications*, 18(4):24–29, July 1998.
- [CFM97] Patrick Clarysse, Denis Frioulet, and Isabelle E. Magnin. Tracking geometrical descriptors on 3-D deformable surfaces: Application to the left-ventricular surface of the heart. *IEEE Transactions on Medical Imaging*, 16(4):392–404, August 1997.
- [CH97] Wenli Cai and Pheng-Ann Heng. Principal stream surfaces. In Roni Yagel and Hans Hagen, editors, *Proceedings of Visualization '97*, pages 395–402. IEEE, 1997.
- [Che73] H. Chernoff. Using faces to represent points in k-dimensional space graphically. *Journal of the American Statistical Association*, 68(342):366–368, 1973.
- [Che95] Evgeni V. Chernyaev. Marching cubes 33: Construction of topologically correct isosurfaces. Technical report, CN/95-17, CERN, Geneva, Switzerland, 1995. URL: <http://citeseer.nj.nec.com/4145.html>.

- [Che99] Philip C. Chen. Developing a personal computer-based data visualization system, 1999. The paper was presented at the SPIE conference on Electronic Imaging '99, January 27, 1999, San Jose, California, URL: <http://www.futurevisions.net/pchen/pcvis/index.htm>.
- [CHIa] CHI - Cambridge Healthtech Institute. Molecular imaging glossary. URL: [http://www.genomicglossaries.com/content/imaging\\_glossary.asp](http://www.genomicglossaries.com/content/imaging_glossary.asp).
- [Chib] Children's Hospital of Pittsburgh. Child health library. URL: <http://www.chp.edu/greystone/main/index.php>.
- [Chi00] Ed H. Chi. A taxonomy of visualization techniques using the data state reference model. In *Proceedings of the Symposium on Information Visualization (InfoVis '00)*, pages 69–75, October 9–10, Salt Lake City, Utah, October 2000. IEEE Press. URL: <http://www-users.cs.umn.edu/~echi/papers/infovis00/Chi-TaxonomyVisualization.pdf>.
- [CHM01] Kevin D. Costa, Jeffrey W. Holmes, and Andrew D. McCulloch. Modeling cardiac mechanical properties in three dimensions. *Philosophical Transactions of the Royal Society of London, Series A, Mathematical, Physical and Engineering Sciences*, 359(1783):1233–1250, 2001. URL: [http://cardiome.ucsd.edu/Publications\\_files/CostaHolmesMcCulloch.pdf](http://cardiome.ucsd.edu/Publications_files/CostaHolmesMcCulloch.pdf).
- [CL93] Brian Cabral and Leith (Casey) Leedom. Imaging vector fields using line integral convolution. In James T. Kajiya, editor, *Computer Graphics (SIGGRAPH '93 Proceedings)*, volume 27, pages 263–272. ACM SIGGRAPH, Addison Wesley, August 1993.
- [CL95] C. W. Cryer and P. P. Lunenheimer. *Mathematical Modelling of the Cardiovascular System*. Institut für Numerische und Instrumentelle Mathematik, Universität von Münster, Germany, September 1995. URL: [http://wwwmath.uni-muenster.de/math/inst/num/Vorlesungen/Herz\\_WS95/Problem\\_description.ps.gz](http://wwwmath.uni-muenster.de/math/inst/num/Vorlesungen/Herz_WS95/Problem_description.ps.gz).
- [Cle85] William S. Cleveland. *The elements of graphing data*. Murray Hill, N.J. : AT&T Bell Laboratories, 1985.
- [Cle93] William S. Cleveland. *Visualizing Data*. Hobart Press, Summit, New Jersey, 1993.
- [CM92] Roger Crawfis and Nelson Max. Direct volume visualization of three-dimensional vector fields. In A. Kaufman and W. E. Lorensen, editors, *Workshop on Volume Visualization*, pages 55–60. ACM, 1992.
- [CM93] R. A. Crawfis and N. Max. Texture splats for 3D scalar and vector field visualization. In G. M. Nielson and D. Bergeron, editors, *Proceedings*

- of Visualization '93*, pages 261–265, Los Alamitos, California, 1993. IEEE, Computer Society Press.
- [CM97] Stuart K. Card and Jock Mackinlay. The structure of the information visualization design space. In *Proceedings of the IEEE Symposium on Information Visualization (InfoVis '97)*, pages 92–99, Phoenix, AZ, October 1997. IEEE CS Press. URL: <http://www2.parc.com/istl/projects/uir/pubs/pdf/UIR-R-1996-02-Card-InfoVis97-DesignSpace.pdf>.
- [CMB94] Roger Crawfis, Nelson Max, and Barry Becker. Vector field visualization. *IEEE Computer Graphics and Applications*, 14(5):50–56, September 1994.
- [CMM<sup>+</sup>97] Paolo Cignoni, Paola Marino, Claudio Montani, Enrico Puppo, and Roberto Scopigno. Speeding up isosurface extraction using interval trees. *IEEE Transactions on Visualization and Computer Graphics*, 3(2):158–170, April 1997.
- [Cox88] Donna J. Cox. Using the supercomputer to visualize higher dimensions: An artist's contribution to scientific visualization. *Leonardo*, 22:233–242, 1988.
- [CPD<sup>+</sup>96] Andrew Certain, Jovan Popović, Tony DeRose, Tom Duchamp, David Salesin, and Werner Stuetzle. Interactive multiresolution surface viewing. In Holly Rushmeier, editor, *SIGGRAPH '96 Conference Proceedings*, Annual Conference Series, pages 91–98. ACM SIGGRAPH, Addison-Wesley Publication Company Inc., August 1996. Held in New Orleans, Louisiana, 04-09 August 1996.
- [Cra95] Roger Alan Crawfis. *New Techniques for the Scientific Visualization of Three-Dimensional Multi-variate and Vector Fields*. PhD thesis, University of California, Davis, 1995. URL: <http://citeseer.nj.nec.com/crawfis95new.html>.
- [CRB<sup>+</sup>91] Neil R. Clark, Nathaniel Reichek, Philip Bergey, Eric A. Hoffman, Deanna Brownson, Linda Palmon, and Leon Axel. Circumferential myocardial shortening in the normal human left ventricle: Assessment by magnetic resonance imaging using spatial modulation of magnetization. *Circulation*, 84(1):67–74, July 1991.
- [CRBK98] Ed H. Chi, John Riedl, Phillip Barry, and Joseph Konstan. Principles for information visualization spreadsheets. *IEEE Computer Graphics and Applications (Special Issue on Visualization)*, pages 30–38, July 1998. URL: <http://www-users.cs.umn.edu/~echi/papers/cga98/cga-spreadsheet-principle.pdf>.

- [Cru] Crump Institute for Molecular Imaging. Let's play PET. URL: <http://www.crump.ucla.edu/lpp>.
- [Cur01] Ian Curington. Animated illuminated lines for flow visualization. White paper, AVS Advanced Visual Systems, 2001. URL: [http://www.avs.com/software/soft\\_t/illumlines.html](http://www.avs.com/software/soft_t/illumlines.html).
- [CWD<sup>+</sup>02] Manuel D. Cerqueira, Neil J. Weissman, Vasken Dilsizian, Alice K. Jacobs, Sanjiv Kaul, Warren K. Laskey, Dudley J. Pernell, John A. Rumberger, Thomas Ryan, and Mario S. Verani. Standardized myocardial segmentation and nomenclature for tomographic imaging of the heart: A statement for healthcare professionals from the cardiac imaging committee of the council of clinical cardiology of the american heart association. *Circulation*, 105(4):539–542, January 2002.
- [Cyb] Cyber Brain Research Center. Chung-Ang University, Korea, URL: [http://www.biostudy.net/neuroscience/brain\\_structure.htm](http://www.biostudy.net/neuroscience/brain_structure.htm).
- [CZ92] David T. Chen and David Zeltzer. Pump it up: Computer animation of a biomechanically based model of muscle using the finite element method. In Edwin E. Catmull, editor, *Computer Graphics (SIGGRAPH '92 Proceedings)*, volume 26, pages 89–98, July 1992.
- [Das02] Mehdi Dastani. The role of visual perception in data visualization. *Journal of Visual Languages and Computing*, 13(6):601–622, December 2002.
- [Dav91] Jules B. Davidoff. *Cognition through color*. MIT Press, Cambridge, Mass., 1991.
- [DB91] Jesse W. Driver and William C. Buckalew. Radiative tetrahedral lattices. *Proceedings SPIE Conference on Extracting Meaning from Complex Data: Processing, Display, Interaction*, 1459:109–116, 1991.
- [DBK01] Andrew Davies, Asa G. H. Blakeley, and Cecil Kidd. *Human Physiology*. Churchill Livingstone, Edinburgh, 2001. Glossary available at URL: <http://www.fleshandbones.com/physiology/davies/glossary.cfm>.
- [DBV89] Robert R. Dickinson, Richard H. Bartels, and Allan H. Vermeulen. The interactive editing and contouring of empirical fields. *IEEE Computer Graphics and Applications*, 9(3):34–43, May 1989.
- [DCG<sup>+</sup>01] Lucas DeMaio, Yong S. Chang, Thomas W. Gardner, John M. Tarbell, and David A. Antonetti. Shear stress regulates occludin content and phosphorylation. *American Journal of Physiology*, 281(1):H105–H113, July 2001.

- [dDK<sup>+</sup>96] Giovanni de Simone, Richard B. Devereux, M. J. Koren, G. A. Mensah, P. N. Casale, and John H. Laragh. Midwall left ventricular mechanics: an independent predictor of cardiovascular risk in arterial hypertension. *Circulation*, 93(2):259–265, February 1996.
- [Del94] Thierry Delmarcelle. *The Visualization of Second-Order Tensor Fields*. PhD thesis, Stanford University, 1994. URL: <http://www.nas.nasa.gov/NAS/TechReports/RelatedPapers/StanfordTensorFieldVis/DelmarcelleThesis/abstract.html>.
- [DFRS03] Doug DeCarlo, Adam Finkelstein, Szymon Rusinkiewicz, and Anthony Santella. Suggestive contours for conveying shape. *ACM Transactions on Graphics - Proceedings of ACM SIGGRAPH 2003*, 22(3):848–855, July 2003.
- [DH93] Thierry Delmarcelle and Lambertus Hesselink. Visualizing second-order tensor fields with hyperstreamlines. *IEEE Computer Graphics and Applications*, 13(4):25–33, July 1993.
- [DH94] Thierry Delmarcelle and Lambertus Hesselink. The topology of symmetric, second-order tensor fields. In R. Daniel Bergeron and Arie E. Kaufman, editors, *Proceedings of Visualization '94*, pages 140–148. IEEE, 1994.
- [DH95] Thierry Delmarcelle and Lambertus Hesselink. A unified framework for flow visualization. In R. S. Gallagher, editor, *Computer Visualization Graphics Techniques for Scientific and Engineering Analysis*. CRC Press, 1995.
- [DK91] A. Doi and A. Koide. An efficient method of triangulating equi-valued surfaces by using tetrahedral cells. *IEICE Trans. Commun. Elec. Inf. Syst.*, E-74(1):214–224, January 1991.
- [dL03] Maria Cristina Ferreira de Oliveira and Haim Levkowitz. From visual data exploration to visual data mining: A survey. *IEEE Transactions on Visualization and Computer Graphics*, 9(3):378–394, July 2003.
- [DLS<sup>+</sup>00] Socrates Dokos, Ian J. LeGrice, Bruce H. Smaill, Julia Kar, and Alistair A. Young. A triaxial-measurement shear-test device for soft biological tissue. *Journal of Biomechanical Engineering*, 122(5):471–478, October 2000.
- [DLSY01] Socrates Dokos, Ian J. LeGrice, Bruce H. Smaill, and Alistair A. Young. Shear properties of ventricular myocardium, August 2001. The 36th International Congress of Physiological Sciences, IUPS 2001, 26-31 August, Christchurch, New Zealand.

- [DM97] Thomas S. Denney, Jr. and Elliot R. McVeigh. Model-free reconstruction of three-dimensional myocardial strain from planar tagged MR images. *Journal of Magnetic Resonance Imaging*, 7(5):799–810, September 1997. URL: <ftp://ftp.eng.auburn.edu/pub/tdenney/papers/jmri97.ps.Z>.
- [Dov95] Don Dovey. Vector plots for irregular grids. In Gregory M. Nielson and Deborah Silver, editors, *Proceedings of Visualization '95*, pages 248–253. IEEE, 1995.
- [dP94] Willem C. de Leeuw and Frits H. Post. A statistical view on vector fields. In M. Göbel, H. Müller, and B. Urban, editors, *Visualization in Scientific Computing*, pages 53–62. Springer Verlag, Wien, May 1994.
- [DP95] Thomas S. Denney, Jr. and Jerry L. Prince. Reconstruction of 3-D left ventricular motion from planar tagged cardiac MR images: An estimation theoretic approach. *IEEE Transactions on Medical Imaging*, 14(4):625–635, December 1995. URL: <ftp://ftp.eng.auburn.edu/pub/tdenney/papers/tmi95.ps.Z>.
- [dPPW95] W. C. de Leeuw, H. G. Pagendarm, F. H. Post, and B. Walter. Visual simulation of experimental oil-flow visualization by spot noise images from numerical flow simulation. In R. Scateni, J. J. van Wijk, and P. Zanardini, editors, *Visualization in Scientific Computing '95*, pages 135–148. Springer Verlag, 1995.
- [DSYL02] Socrates Dokos, Bruce H. Smail, Alistair A. Young, and Ian J. LeGrice. Shear properties of passive ventricular myocardium. *American Journal of Physiology*, 283(6):H2650–H2659, December 2002.
- [Duk] Duke University Medical Centre. Echo in context - introduction to doppler echocardiography. URL: <http://www.echoincontext.com/basicDoppler.asp>.
- [Düu88] Martin J. Düurst. Additional reference to “marching cubes”. *Computer Graphics*, 22(2):72, April 1988. Letter.
- [dv93] Willem C. de Leeuw and J. J. van Wijk. A probe for local flow field visualization. In G. M. Nielson and D. Bergeron, editors, *Proceedings of Visualization '93*, pages 39–45, Los Alamitos, California, 1993. IEEE, Computer Society Press.
- [dv95] Willem C. de Leeuw and Jarke J. van Wijk. Enhanced spot noise for vector field visualization. In Gregory M. Nielson and Deborah Silver, editors, *Proceedings of Visualization '95*, pages 233–239. IEEE, 1995.
- [dv98] Wim de Leeuw and Robert van Liere. Comparing LIC and spot noise. In David Ebert, Hans Hagen, and Holly Rushmeier, editors, *Proceedings*

- of Visualization '98*, pages 359–365. IEEE, Computer Society Press, October 1998.
- [dv99] Wim de Leeuw and Robert van Liere. Collapsing flow topology using area metrics. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 349–354. IEEE, October 1999.
- [dv00] Wim C. de Leeuw and R. van Liere. Multi level topology for flow visualization. *Computer and Graphics*, 24(3):324–331, June 2000. URL: <http://www.cwi.nl/~robertl/papers/2000/cg/paper.pdf>.
- [DVS03] Carsten Dachsbacher, Christian Vogelsgang, and Marc Stamminger. Sequential point trees. *ACM Transactions on Graphics - Proceedings of ACM SIGGRAPH 2003*, 22(3):657–662, July 2003.
- [Eck02] Bruce Eckel. *Thinking in C++*, volume 1 & 2. Electronic book, 2<sup>nd</sup> edition, 2002. URL: <http://mindview.net/Books/TICPP/ThinkingInCPP2e.html>.
- [EDC96] Jeffrey W. Eischen, Shigan Deng, and Timothy G. Clapp. Finite-element modeling and control of flexible fabric parts. *IEEE Computer Graphics and Applications*, 16(5):71–80, September 1996.
- [Edw00] Dr. Betty Edwards. Drawing on the right side of the brain, 2000. Course notes #37, SIGGRAPH 2000.
- [eFu] eFunda Inc. efunda - online engineering fundamentals. URL: <http://www.efunda.com>.
- [EG95] Rob Erbacher and Georges Grinstein. Issues in the development of 3D icons. In M. Göbel, H. Müller, and B. Urban, editors, *Visualization in Scientific Computing*, pages 109–123. Springer Verlag, Wien, 1995.
- [EGB<sup>+</sup>99] T. Edvardsen, B. L. Gerber, D. A. Bluemke, J. A. C. Lima, and O. A. Smiseth. Doppler derived strain in myocardial infarction: Validation versus magnetic resonance imaging with tissue tagging. *Circulation*, 100(18):I–776, 1999. (Abstract) Supplement to Circulation - Abstracts from the 72nd Scientific Sessions.
- [Enc] Encyclopaedia Britannica, Inc. Encyclopaedia britannica online. URL: <http://www.britannica.com>.
- [EP90] David S. Ebert and Richard E. Parent. Rendering and animation of gaseous phenomena by combining fast volume and scanline a-buffer techniques. *Computer Graphics (Proceedings of SIGGRAPH '90)*, 24(4):357–366, 1990.

- [ERC] ERC - The Engineering Research Center for Net Shape Manufacturing, The Ohio State University. Sheet metal forming and stamping glossary. URL: [http://nsmwww.eng.ohio-state.edu/Stamping\\_Glossary](http://nsmwww.eng.ohio-state.edu/Stamping_Glossary).
- [ERS<sup>+</sup>99] David S. Ebert, Randall M. Rohrer, Christopher D. Shaw, Pradyut Panda, James M. Kukla, and D. Aaron Roberts. Procedural shape generation for multi-dimensional data visualization. In *VisSym '99, Joint EUROGRAPHICS - IEEE TCCG Symposium on Visualization, Vienna, Austria*, May 1999. URL: <http://www.cs.umbc.edu/~ebert/papers/vissym99.pdf>.
- [ERY02] David S. Ebert, Penny Rheingans, and Terry S. Yoo. Designing effective transfer functions for volume rendering from photographic volumes. *IEEE Transactions on Visualization and Computer Graphics*, 8(2):183–197, April 2002.
- [EW91] Marjorie A. England and Jennifer Wakely. *A Colour Atlas of the Brain & Spinal Cord - An Introduction to Normal Neuroanatomy*. Wolfe Publishing Ltd., 2-16 Torrington Place, London WCIE 7LT, England, 1991.
- [Far95] Gerald E. Farin. *NURBS curves and surfaces: from projective geometry to practical use*. A.K. Peters, 1995.
- [Fau00] Prof. Richard Faull. Personal communication, 28th September 2000.
- [FB90] Steven Feiner and Clifford Besher. Visualizing n-dimensional virtual worlds with n-vision. *Computer Graphics, 1990 Symposium on Interactive 3D Graphics*, 24(2):37–38, March 1990.
- [FBT98] Shiaofen Fang, Tom Biddlecome, and Mihran Tuceryan. Image-based transfer function design for data exploration. In David Ebert, Hans Hagen, and Holly Rushmeier, editors, *Proceedings of Visualization '98*, pages 319–326. IEEE, October 1998.
- [FBZ<sup>+</sup>99] Bernd Fröhlich, Stephen Barrass, Björn Zehner, John Plate, and Martin Göbel. Exploring geo-scientific data in virtual environments. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 169–173. IEEE, October 1999.
- [FC95] L. K. Forssell and S. D. Cohen. Using line integral convolution for flow visualization: curvilinear grids, variable-speed animation, and unsteady flows. *IEEE Transactions on Visualization and Computer Graphics*, 1(2):133–141, June 1995. ISSN 1077-2626.
- [FCF<sup>+</sup>99] Tracy L. Faber, C. David Cooke, Russel D. Folks, Johnathan P. Vansant, Kenneth J. Nichols, and E. Gordon DePuey. Left ventricular function and perfusion from gated SPECT perfusion images: An

- integrated method. *The Journal of Nuclear Medicine*, 40(4):650–659, April 1999.
- [fCG93] American Metereological Society: IIPS Subcommittee for Color Guidelines. Guidelines for using color to depict meteorological information, 1993. Also published as Doore et al., Bull. Amer. Meteor. Soc., 74, 1709-1713, URL: <http://www.cdc.noaa.gov/iips/color.html>.
- [FEP<sup>+</sup>97] Enrique Z. Fisman, Pedro Embon, Amos Pines, Alexander Tenenbaum, Yaakov Drory, Itzhak Shapira, and Michael Motro. Comparison of left ventricular function using isometric exercise doppler echocardiography in competitive runners and weightlifters versus sedentary individuals. *The American Journal of Cardiology*, 79(3):355–359, February 1997.
- [Fer98] James A. Ferweda. Fundamentals of spatial vision, 1998. Applications of visual perception in computer graphics, Course #32, SIGGRAPH '98, 1-27, URL: [http://www.Graphics.Cornell.EDU/~jaf/publications/notes\\_final.pdf](http://www.Graphics.Cornell.EDU/~jaf/publications/notes_final.pdf).
- [FG98] Anton Fuhrmann and Eduard Gröller. Real-time techniques for 3D flow visualization. In David Ebert, Hans Hagen, and Holly Rushmeier, editors, *Proceedings of Visualization '98*, pages 305–312. IEEE, Computer Society Press, October 1998.
- [FG99] Herbert Frank and Sebastian Globits. Magnetic resonance imaging evaluation of myocardial and pericardial disease. *Journal of Magnetic Resonance Imaging Special Issue: Cardiovascular MRI*, 10(5):617–626, November 1999.
- [FH94] Jean M. Favre and James Hahn. An object oriented design for the visualization of multi-variable data objects. In R. Daniel Bergeron and Arie E. Kaufman, editors, *Proceedings of Visualization '94*, pages 318–325. IEEE, 1994.
- [FHdS99] Gary D. Fullerton, Charles B. Higgins, Albert de Roos, and Hajime Sakuma, editors. *Journal of Magnetic Resonance Imaging Special Issue: Cardiovascular MRI*, volume 10. Wiley-Interscience, November 1999. ISSN 1053-1807.
- [Fis86] Gerd Fischer. *Linear Algebra*. Friedr. Vieweg & Sohn, 1986.
- [FKN80] H. Fuchs, Z. Kedem, and B. Naylor. On visible surface generation by a priority tree structure. *Computer Graphics*, 14(3):124–133, June 1980.
- [FLSG98] Anton Fuhrmann, Helwig Löffelmann, Dieter Schmalstieg, and Michael Gervautz. Collaborative visualization in augmented reality. *IEEE Computer Graphics and Applications*, 18(4):54–59, July 1998.

- [FMS<sup>+</sup>94] S. E. Fischer, G. C. McKinnon, M. B. Scheidegger, W. Prins, D. Meier, and P. Boesiger. True myocardial motion tracking. *Magnetic Resonance in Medicine*, 31:401–413, 1994.
- [FMS95] Issei Fujishiro, Yuji Maeda, and Hiroshi Sato. Interval volume: A solid fitting technique for volumetric data display and analysis. In Gregory M. Nielson and Deborah Silver, editors, *Proceedings of Visualization '95*, pages 151–158. IEEE, 1995.
- [Fon] Fonar Corporation. MRI glossary. URL: <http://fonar.com/glossary.htm>.
- [For94] L. K. Forssell. Visualizing flow over curvilinear grid surfaces using line integral convolution. In R. Daniel Bergeron and Arie E. Kaufman, editors, *Proceedings of Visualization '94*, pages 240–247. IEEE, 1994.
- [Frü96] Thomas Fröhlauf. Raycasting vector fields. In Roni Yagel and Gregory M. Nielson, editors, *Proceedings of Visualization '96*, pages 115–120. IEEE, October 1996.
- [FTAT00] Issei Fujishiro, Yuriko Takeshima, Taeko Azuma, and Shigeo Takahashi. Volume data mining using 3D field topology analysis. *IEEE Computer Graphics and Applications*, 20(5):46–51, 2000.
- [Fun90] Y. C. Fung. *Biomechanics - Motion, Flow, Stress, and Growth*. Springer Verlag New York Inc., 1990.
- [FvFH92] James D. Foley, Andries van Dam, Steven K. Feiner, and John F. Hughes. *Computer Graphics - Principles and Practice*. Addison-Wesley Publication Company Inc., 2<sup>nd</sup> edition, 1992.
- [GCM95] Julius M. Guccione, Kevin D. Costa, and Andrew D. McCulloch. Finite element stress analysis of left ventricular mechanics in the beating dog heart. *Journal of Biomechanics*, 28(10):1167–1177, October 1995.
- [GH95] André Guéziec and Robert Hummel. Exploiting triangulated surface extraction using tetrahedral decomposition. *IEEE Transactions on Visualization and Computer Graphics*, 1(4):328–342, December 1995. ISSN 1077-2626.
- [Gig01] Maryellen L. Giger. Computer-aided diagnosis in medical imaging - a new era in image interpretation. In *Next-Generation Healthcare*. Wolrd Medical Association, October 2001. Official briefing of the 53rd general assembly of the World Medical Association (WMA), URL: <http://www.wmrc.com/businessbriefing/pdf/GHealthcare2001/Book%20Section/Giger>.

- [GKR<sup>+</sup>98] Gennady Geskin, Christopher M. Kramer, Walter J. Rogers, Therese M. Theobald, Diana Pakstis, Yong-Lin Hu, and Nathaniel Reichek. Quantitative assessment of myocardial viability after infarction by dobutamine magnetic resonance tagging. *Circulation*, 98(3):217–223, July 1998.
- [GL95] Georges G. Grinstein and Haim Levkowitz, editors. *Perceptual Issues in Visualization*. Springer Verlag, Berlin, New York, 1995. Proceedings of the IFIP Workshop on Perceptual Issues in Visualization, 23-24 October, 1993, San Jose, California.
- [GLL91] A. Globus, C. Levit, and T. Lasinski. A tool for visualizing the topology of three-dimensional vector fields. In Gregory M. Nielson and Larry Rosenblum, editors, *Proceedings of Visualization '91*, pages 33–40, Los Alamitos, California, 1991. IEEE, Computer Society Press.
- [GPM94] Michael A. Guttman, Jerry L. Prince, and Elliot R. McVeigh. Tag and contour detection in tagged MR images of the left ventricle. *IEEE Transactions on Medical Imaging*, 13(1):74–88, March 1994. URL: <ftp://tempest.bme-mri.jhu.edu/pub/papers/guttman/ieee-tmi%A94.ps.Z>.
- [Gre97] Kate Gregory. *Using Visual C++ 5 - Special Edition*. Que Corporation, 1997.
- [Gro94a] Markus Groß. *Visual Computing*. Springer Verlag, 1994.
- [Gro94b] Markus H. Gross. Subspace methods for the visualization of multi-dimensional data sets. In L. J. Rosenblum et. al., editor, *Scientific Visualization: Advances and Challenges*, chapter 11, pages 171–186. Academic Press, 1994.
- [GS90] G. G. Grinstein and S. Smith. Perceptualization of scientific data. In E. Farrell, editor, *Proceedings of the 1990 SPIE/SPSE Conference #1259: Extracting Meaning from Complex Data*, pages 190–199. The Society for Image Science and Technology, 1990.
- [GU95] Al Globus and Sam Uselton. Evaluation of visualization software. *Computer Graphics*, 29(2):41–44, May 1995.
- [Guo95] Baining Guo. Interval set: A volume rendering technique generalizing isosurface extraction. In Gregory M. Nielson and Deborah Silver, editors, *Proceedings of Visualization '95*, pages 1–10. IEEE, 1995.
- [Guy87] Arthur C. Guyton. *Basic Neuroscience - Anatomy and Physiology*. W.B. Saunders Company, 1987.

- [GZM97] Michael A. Guttman, Elias A. Zerhouni, and Elliot R. McVeigh. Analysis of cardiac function from MR images. *IEEE Computer Graphics and Applications*, 7(2):30–38, February 1997.
- [Hab90] Robert B. Haber. Visualization techniques for engineering mechanics. *Computing Systems in Engineering*, 1(1):37–50, January 1990.
- [Hal93] P. Hall. Volume rendering for vector fields. *The Visual Computer*, 10(3):69–78, 1993.
- [Han97] Chris Hand. A survey of 3D interaction techniques. *Computer Graphics Forum*, 16(5):269–281, 1997.
- [Har] Harcourt Inc. Dictionary of science and technology. URL: <http://www.harcourt.com/dictionary>.
- [Has95] Janet Haswell. Visualizing electromagnetic data. In Georges G. Grinstein and Haim Levkowitz, editors, *Perceptual Issues in Visualization*, pages 109–125, Berlin, New York, 1995. Springer Verlag. Proceedings of the IFIP Workshop on Perceptual Issues in Visualization, 23-24 October, 1993, San Jose, California.
- [HB96] David Henwood and Javier Bonet. *Finite Elements - A Gentle Introduction*. MacMillian Press Ltd., 1996.
- [HBd<sup>+</sup>97] Eduard R. Holman, Vincent G. M. Buller, Albert de Roos, Rob J. van der Geest, Leo H. B. Baur, Arnoud van der Laarse, Albert V. G. Bruschke, Johan H. C. Reiber, and Ernst E. van der Wall. Detection and quantification of dysfunctional myocardium by magnetic resonance imaging: A new three-dimensional method for quantitative wall-thickening analysis. *Circulation*, 95(4):924–931, February 1997. URL: <http://circ.ahajournals.org/cgi/content/full/95/4/924>.
- [HD94] Lambertus Hesselink and Thierry Delmarcelle. Visualization of vector and tensor data sets. In L. J. Rosenblum et. al., editor, *Scientific Visualization: advances and challenges*, chapter 26. Academic Press, London, 1994.
- [HDD<sup>+</sup>93] Hugues Hoppe, Tony DeRose, Tom Duchamp, John McDonald, and Werner Stuetzel. Mesh optimization. In *Proceedings SIGGRAPH '93*, pages 19–26. ACM SIGGRAPH, 1993. URL: <ftp://ftp.cs.washington.edu/tr/1993/01/UW-CSE-93-01-01.PS.Z>.
- [HE98] Christopher G. Healey and James T. Enns. Building perceptual textures to visualize multidimensional datasets. In David Ebert, Hans Hagen, and Holly Rushmeier, editors, *Proceedings of Visualization '98*, pages 111–118. IEEE, Computer Society Press, October 1998.

- [HE99] Christopher G. Healey and James T. Enns. Large datasets at a glance: Combining textures and colors in scientific visualization. *IEEE Transactions on Visualization and Computer Graphics*, 1999. URL: <http://www.csc.ncsu.edu/faculty/healey/download/tvcg.99.ps.gz>.
- [Hea] Heart Center Online, Inc. Glossary. URL: <http://www.heartcenteronline.com/myheartdr/glossary>.
- [Hea96] Christopher G. Healey. Choosing effective colours for data visualization. In Roni Yagel and Gregory M. Nielson, editors, *Proceedings of Visualization '96*, pages 263–270. IEEE, October 1996.
- [Heda] Maj Hedehus. DTI in stroke. URL: <http://www.stanford.edu/~majh/Stroke.html>.
- [Hedb] Maj Hedehus. Magnetic resonance diffusion tensor imaging. URL: <http://www.stanford.edu/~majh/FAttheory.html>.
- [Hei] Andreas Heimdal. Strain rate imaging. URL: <http://www.stud.ntnu.no/~heimdal/SRI>.
- [HEM<sup>+</sup>99] J. Robin Highley, Margaret M. Esiri, Brendan McDonald, Mario Cortina-Borja, Brian M. Herron, and Timothy J. Crow. The size and fibre composition of the corpus callosum with respect to gender and schizophrenia: A post mortem study. *Brain*, 122:99–110, 1999. URL: [http://www.psychiatry.ox.ac.uk/powic/size\\_fibre\\_composition.html](http://www.psychiatry.ox.ac.uk/powic/size_fibre_composition.html).
- [Hen97a] Robert E. Henkin. How efficiently does the heart pump? Nuclear medicine answers the question, 1997. NucMedNet Online Physicians' Guide, URL: <http://www.nucmednet.com/gated.html>.
- [Hen97b] Robert E. Henkin. The role of myocardial perfusion imaging in the 1990s, 1997. NucMedNet Online Physicians' Guide, URL: <http://www.nucmednet.com/mpi.html>.
- [Heu81] Harro Heuser. *Lehrbuch der Analysis*, volume 2. B.G. Teubner, Stuttgart, Germany, 1981.
- [Hey95] Heymans Institute of Pharmacology and Mercator School, Department of Applied Linguistics. Multilingual glossary of technical and popular medical terms in nine European languages, 1995. Project commissioned by The European Commission (DG III), URL: <http://allserv.rug.ac.be/~rvdstich/eugloss/welcome.html>.
- [HF96] R. G. Hughes and A. R. Forrest. Perceptualization using a tactile mouse. In Roni Yagel and Gregory M. Nielson, editors, *Proceedings of Visualization '96*, pages 181–188. IEEE, October 1996.

- [HG00] Phillip J. Horner and Fred H. Gage. Regeneration of the damaged central nervous system. *Nature*, 407(6807):963–970, October 2000.
- [HH89] James L. Helman and Lambertus Hesselink. Representation and display of vector field topology in fluid flow data sets. *IEEE Computer*, 22(8):27–36, August 1989.
- [HH90] James L. Helman and Lambertus Hesselink. Surface representations of two- and three-dimensional fluid flow topology. In *Proceedings of Visualization '90*, pages 6–13, Los Alamitos, California, 1990. IEEE, Computer Society Press.
- [HH91] James L. Helman and Lambertus Hesselink. Visualizing vector field topology in fluid flows. *IEEE Computer Graphics and Applications*, 11(3):36–46, 1991.
- [HH92] Charles D. Hansen and Paul Hinker. Massively parallel isosurface extraction. In *Proceedings of Visualization '92*, pages 77–83, Los Alamitos, California, October 1992. IEEE, Computer Society Press.
- [HHW94] Hans Hagen, Stefanie Hahmann, and Henrik Weimer. Visualization of deformation tensor fields, 1994. Seminar 9421 "Scientific Visualization", IFBI Schloß Dagstuhl, Report Nr. 90, A modified version of the article was published in "Scientific Visualization: Overviews, Methodologies and Techniques" by Gregory M. Nielson (ed.), pp. 357–371, IEEE Press, 1997.
- [HIR99] Christopher Healey, Victoria Interrante, and Penny Rheingans. Fundamental issues of visual perception for effective image generation, 1999. Course notes #6, SIGGRAPH 1999.
- [HKW99] Alexander Hinneburg, Daniel Keim, and Marjus Wawryniuk. HD-Eye: Visual mining of high-dimensional data. *IEEE Computer Graphics and Applications*, 19(5):22–31, September 1999.
- [HL92a] Josef Hoschek and Dieter Lasser. *Fundamentals of Computer Aided Geometric Design*. AK Peters Ltd., Wellesley, MA 02181, 2<sup>nd</sup> edition, 1992.
- [HL92b] Josef Hoschek and Dieter Lasser. *Fundamentals of Computer Aided Geometric Design*, chapter 14, pages 572–601. AK Peters Ltd., Wellesley, MA 02181, 2<sup>nd</sup> edition, 1992.
- [HLD<sup>+</sup>00] Leo Hofstra, Ing Han Liem, Ewald A. Dumont, Hendricus H. Boersma, Waander L. van Heerde, Pieter A. Doevedans, Ebo DeMuinck, H. J. J. Wellens, Gerrit J. Kemerink, Chris P. M. Reutelingsperger, and Guido A. Heidendaal. Visualisation of cell death in vivo in patients with acute myocardial infarction. *The Lancet*, 356(9225):209–212, July 2000.

- [HLL97] Lambertus Hesselink, Yuval Levy, and Yingmei Lavin. The topology of symmetric, second-order 3d tensor fields. *IEEE Transactions on Visualization and Computer Graphics*, 1997.
- [HM90] Robert B. Haber and David A. McNabb. Visualization idioms: A conceptual model for scientific visualization. In Gregory M. Nielson, Bruce Shriner, and Larry J. Rosenblum, editors, *Visualization in Scientific Computing*, pages 74–93. IEEE Computer Society Press, Los Alamitos, California, 1990.
- [HMBG00] Helwig Hauser, Lukas Mroz, Gian-Italo Bischi, and M. Eduard Gröller. Two-level volume rendering - fusing MIP and DVR. In *Proceedings of Visualization 2000*, 2000.
- [HMBG01] Helwig Hauser, Lukas Mroz, Gian-Italo Bischi, and M. Eduard Gröller. Two-level volume rendering. *IEEE Transactions on Visualization and Computer Graphics*, 7(3):242–252, July 2001.
- [HMK95] Lichan Hong, Xiaoyang Mao, and Arie Kaufman. Interactive visualization of mixed scalar and vector fields. In Gregory M. Nielson and Deborah Silver, editors, *Proceedings of Visualization '95*, pages 240–247. IEEE, 1995.
- [HMM<sup>+</sup>98] E. W. Hsu, A. L. Muzikant, S. A. Matulevicius, R. C. Penland, and C. S. Henriquez. Magnetic resonance myocardial fiber-orientation mapping with direct histological correlation. *American Journal of Physiology*, 274:H1627–H1634, May 1998.
- [HMS95] Wolfgang Heidrich, Michael McCool, and John Stevens. Unsteady flow volumes. In Gregory M. Nielson and Deborah Silver, editors, *Proceedings of Visualization '95*, pages 11–18. IEEE, 1995.
- [HNS<sup>+</sup>93] Peter J. Hunter, Poul M. F. Nielsen, Bruce H. Smaill, Ian J. LeGrice, and Ian W. Hunter. An anatomical heart model with applications to myocardial activation and ventricular mechanics. In Theo C. Pilkington, editor, *High-Performance Computing in Biomedical Research*, chapter 1, pages 3–26. CRC Press, 1993.
- [Hop97] Hugues Hoppe. View-dependent refinement of progressive meshes. In *SIGGRAPH '97 Conference Proceedings*, Annual Conference Series, pages 189–198. ACM SIGGRAPH, Addison-Wesley Publication Company Inc., August 1997. Held in Los Angeles, California, August 03–08, 1997, URL: <http://www.research.microsoft.com/research/graphics/hoppe>.
- [HP93] Andrea J. S. Hin and Frits H. Post. Visualization of turbulent flow with particles. In G. M. Nielson and D. Bergeron, editors, *Proceedings of Visualization '93*, pages 46–52, Los Alamitos, California, 1993. IEEE.

- [HP02] Peter Hunter and Andrew Pullan. FEM/BEM notes, February 2002. Department of Engineering Science, University of Auckland, URL: <http://www.esc.auckland.ac.nz/Academic/Texts/FEM-BEM-notes.html>.
- [HPP01] Klaus Hahn, Sergei Prigarin, and Benno Pütz. Edge preserving regularization and tracking for diffusion tensor imaging. In W. J. Niessen and M. A. Viergever, editors, *Medical Image Computing and Computer-Assisted Intervention - MICCAI '01*, Lecture Notes in Computer Science 2208, pages 195–203. Springer-Verlag, October 2001.
- [HS88] Peter J. Hunter and Bruce H. Smaill. The analysis of cardiac function: a continuum approach. *Progress in Biophysics and Molecular Biology*, 52:101–164, 1988.
- [HS97] Hans-Christian Hege and Detlev Stalling. Fast LIC with higher order filter kernels. ZIP Preprint SC 97-74, Konrad-Zuse-Zentrum für Informationstechnik Berlin, Department Scientific Visualization, 1997. (A revised version appeared under the title: Fast LIC with Piecewise Polynomial Filter Kernels in: Mathematical Visualization - Algorithms, Applications, and Numerics. Hege, H.-C., Polthier, K. (eds.) Springer 1998, pages 295-312), URL: <http://www.zib.de/PaperWeb/abstracts/SC-97-74/>.
- [HSTS98] Andreas Heimdal, Asbjørn Stylen, Hans Torp, and Terje Skjærpe. Real-time strain rate imaging of the left ventricle by ultrasound. *Journal of the American Society of Echocardiography*, 11:1013–1019, 1998. URL: <http://www.stud.ntnu.no/~heimdal/SRI/RealTime>.
- [Hua01] H. K. Huang. Teleradiology today. In *Next-Generation Healthcare*. Wolrd Medical Association, October 2001. Official briefing of the 53rd general assembly of the World Medical Association (WMA), URL: <http://www.wmrc.com/businessbriefing/pdf/GHealthcare2001/Ref%20Section/17.pdf>.
- [Hul90] Jeff P. M. Hultquist. Interactive numerical flow visualization using stream surfaces. *Computing Systems in Engineering*, 1(2-4):349–353, 1990. Also available as RNR Technical Report, RNR-90-009 April,1990, NASA Ames Research Centre, URL: <http://www.nas.nasa.gov/Research/Reports/Techreports/1990/rnr-90-009-abstract.html>.
- [Hul92] J. P. M. Hultquist. Constructing stream surfaces in steady 3D vector fields. In *Proceedings of Visualization '92*, pages 171–178, Los Alamitos, California, 1992. IEEE, Computer Society Press.
- [Hum92] Glyn W. Humphreys, editor. *Understanding vision: an interdisciplinary perspective*. Blackwell, Oxford, UK ; Cambridge, USA, 1992.

- [HW90] Mark Hall and Joe Warren. Adaptive polygonization of implicitly defined surfaces. *IEEE Computer Graphics and Applications*, 10(5):33–42, November 1990.
- [HWGR98] Joseph Hanaway, Thomas A. Woolsley, Mokhtar H. Gado, and Melville P. Roberts, Jr. *The Brain Atlas*. Fitzgerald Science Press, Bethesda, Maryland, 1998.
- [HWHJ99] Bjoern Heckel, Gunther Weber, Bernd Hamann, and Kenneth I. Joy. Construction of vector field hierarchies. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 19–25. IEEE, October 1999.
- [HWN93] Ernst Hairer, Gerhard Wanner, and Syvert Paul Nørsett. *Solving Ordinary Differential Equations I - Nonstiff Problems*. Springer Series in Computational Mathematics 8. Springer Verlag, 1993.
- [HWSB99] Geoffrey S. Hubona, Philip N. Wheeler, Gregory W. Shirah, and Matthew Brandt. The relative contributions of stereo, lighting and background scenes in promoting 3D depth visualization. *ACM Transactions on Computer-Human Interface*, 6(3):214–242, September 1999. URL: <http://isc.gsfc.nasa.gov/Papers/DOC/FinalVerRead.pdf>.
- [HYL<sup>+</sup>99] Peter J. Hanley, Alistair A. Young, Ian J. LeGrice, Stephen G. Edgar, and Denis S. Loiselle. 3-dimensional configuration of perimysial collagen fibres in rat cardiac muscle at resting and extended sarcomere lengths. *Journal of Physiology*, 517(3):831–837, 1999.
- [HYMW93] Anna R. Hashima, Alistair A. Young, Andrew D. McCulloch, and Lewis K. Waldman. Nonhomogeneous analysis of epicardial strain distributions during acute myocardial ischemia in the dog. *Journal of Biomechanics*, 26(1):19–35, September 1993.
- [IBM] IBM. The open visualization data explorer homepage. URL: <http://www.opendx.org/>.
- [IBM97] IBM. *IBM Visualization Data Explorer User's Guide, Version 3.1.4*, 7<sup>th</sup> edition, May 1997. URL: <http://opendx.npacil.edu/docs/pdf/userguide.pdf>.
- [ID90] Alfred Inselberg and Bernard Dimsdale. Parallel coordinates: A tool for visualizing multi-dimensional geometry. In *Proceedings of Visualization '90*, pages 361–378. IEEE, 1990.
- [IDSA75] N. B. Ingels, G. T. Daughters, E. B. Stinson, and E. L. Alderman. Measurement of midwall myocardial dynamics in intact man by radiography of surgical implanted markers. *Circulation*, 52:859–867, 1975.

- [IFP95] Victoria Interrante, Henry Fuchs, and Stephen Pizer. Enhancing transparent skin surfaces with ridge and valley lines. In Gregory M. Nielson and Deborah Silver, editors, *Proceedings of Visualization '95*, pages 52–59. IEEE, 1995.
- [IFP96] Victoria Interrante, Henry Fuchs, and Stephen Pizer. Illustrating transparent surfaces with curvature-directed strokes. In Roni Yagel and Gregory M. Nielson, editors, *Proceedings of Visualization '96*, pages 211–218. IEEE, October 1996.
- [IFP97] Victoria Interrante, Henry Fuchs, and Stephen M. Pizer. Conveying the 3D shape of smoothly curving transparent surfaces via texture. *IEEE Transactions on Visualization and Computer Graphics*, 3(2):98–117, April 1997.
- [IG97] Victoria Interrante and Chester Grosch. Strategies for effectively visualizing 3d flow with volume LIC. In Roni Yagel and Hans Hagen, editors, *Proceedings of Visualization '97*, pages 421–424. IEEE, 1997.
- [IG98] Victoria Interrante and Chester Grosch. Visualizing 3D flow. *IEEE Computer Graphics and Applications*, 18(4):49–53, July 1998.
- [IHM<sup>+</sup>00] Terrie Inder, Petra S. Huppi, Stephan E. Maier, Ferenc A. Jolesz, Don di Salvo, Richard Robertson, Patrick D. Barnes, and Joseph J. Volpe. Early detection of periventricular leukomalacia by diffusion-weighted MR imaging techniques, May 2000. SPL Technical Report #157, Harvard Medical School Boston, Massachusetts, URL: <http://splweb.bwh.harvard.edu:8000/pages/papers/inder/earlydet/earlydet.html>.
- [IIC] IICM - Institute for Information Processing and Computer Supported New Media. Human depth perception. Graz University of Technology, Austria, URL: [http://www2.iicm.edu/0x811bc833\\_0x000dacca](http://www2.iicm.edu/0x811bc833_0x000dacca).
- [IK95] Takayuki Itoh and Koji Koyamada. Automatic isosurface propagation using an extrema graph and sorted boundary cell lists. *IEEE Transactions on Visualization and Computer Graphics*, 1(4):319–327, December 1995.
- [Int97] Victoria L. Interrante. Illustrating surface shape in volume data via principal direction-driven 3d line integral convolution. In Turner Whitted, editor, *Proceedings of SIGGRAPH '97, Computer Graphics Proceedings, Annual Conference Series*, pages 109–116. ACM, August 1997. URL: <http://www-users.cs.umn.edu/~interran/sig97-paper/sig97.html>.
- [Jas97] Vijendra Jaswal. CAVEvis: Distributed real-time visualization of time-varying scalar and vector fields using the cave virtual reality theater.

- In Roni Yagel and Hans Hagen, editors, *Proceedings of Visualization '97*, pages 301–308. IEEE, 1997.
- [JB] Keith A. Johnson M.D. and J. Alex Becker. The whole brain atlas. URL: <http://www.med.harvard.edu/AANLIB/home.html>.
- [JBP98] Peter Jezzard, Alan S. Barnett, and Carlo Pierpaoli. Characterization of and correction for eddy current artifacts in echo planar diffusion imaging. *Magnetic Resonance in Medicine*, 39(5):801–812, May 1998.
- [JEH00] Bruno Jobard, Gordon Erlebacher, and M. Yousuff Hussaini. Hardware-accelerated texture advection. In *Proceedings of IEEE Visualization 2000*, pages 155–162, 2000. URL: [http://www.cscs.ch/~bjobard/Research/Publications/vis2000/Assets/Documents/jeobard\\_HATA.pdf](http://www.cscs.ch/~bjobard/Research/Publications/vis2000/Assets/Documents/jeobard_HATA.pdf).
- [JEH01] Bruno Jobard, Gordon Erlebacher, and M. Yousuff Hussaini. Lagrangian-eulerian advection for unsteady flow visualization. In *Proceedings of IEEE Visualization 2001*, pages 53–60, 2001. URL: [http://www.cscs.ch/~bjobard/Research/Publications/vis2001/Assets/Documents/jeobard\\_lea\\_paper.pdf](http://www.cscs.ch/~bjobard/Research/Publications/vis2001/Assets/Documents/jeobard_lea_paper.pdf).
- [JEH02] Bruno Jobard, Gordon Erlebacher, and M. Yousuff Hussaini. Lagrangian-eulerian advection of noise and dye textures for unsteady flow visualization. *IEEE Transactions on Visualization and Computer Graphics*, 8(3):211–222, July 2002.
- [JI94] Andreas Johannsen and Robert J. Moorhead II. Case study: Visualization of mesoscale flow features in ocean basins. In R. Daniel Bergeron and Arie E. Kaufman, editors, *Proceedings of Visualization '94*, pages 355–358. IEEE, 1994.
- [JI95] Andreas Johannsen and Robert J. Moorhead II. AGP: Ocean model flow visualization. *IEEE Computer Graphics and Applications*, 15(4), July 1995.
- [JKM01] T. J. Jankun-Kelly and Kwan-Liu Ma. Visualization exploration and encapsulation via a spreadsheet-like interface. *IEEE Transactions on Visualization and Computer Graphics*, 7(3):275–287, July 2001.
- [JKR<sup>+</sup>01] Brian E. Jaski, Joe Kim, Susan Rademacher, Leigh Reardon, and Ian Cheesman. Heart Failure online (sponsored in part by the San Diego Cardiac Center and the Sharp Foundation For Cardiovascular Research and Education, San Diego, CA), 2001. URL: <http://www.heartfailure.org>.

- [JL97a] Bruno Jobard and Wilfrid Lefer. Creating evenly-spaced streamlines of arbitrary density. In W. Lefer and M. Grave, editors, *Visualization in Scientific Computing '97 (Proc. of Eighth Eurographics Workshop on Visualization in Scientific Computing, Boulogne sur Mer, France, April 28-30, 1997)*, Focus on Computer Graphics series. Springer, 1997. URL: <http://www-lil.univ-littoral.fr/~lefer/papers/Springer97.ps.gz>.
- [JL97b] Bruno Jobard and Wilfrid Lefer. The motion map: Efficient computation of steady flow animations. In Roni Yagel and Hans Hagen, editors, *Proceedings of Visualization '97*, pages 323–328. IEEE, 1997.
- [JP94] Christopher R. Johnson and Steven G. Parker. A computational steering model applied to problems in medicine. In *Proceedings of Supercomputing 94*, pages 540–549. IEEE Press, 1994. URL: [http://www.sci.utah.edu/publications/sc94\\_9.ps](http://www.sci.utah.edu/publications/sc94_9.ps).
- [JPH<sup>+</sup>99] Christopher R. Johnson, Steven G. Parker, Charles Hansen, Gordon L. Kindlmann, and Yarden Livnat. Interactive simulation and visualization. *IEEE Computer*, 32(12):59–65, December 1999.
- [JPW00] Christopher R. Johnson, Steven Parker, and David Weinstein. Large-scale computational science applications using the scirun problem solving environment. In *Proceedings of Supercomputer 2000*, 2000. URL: <http://citeseer.nj.nec.com/426017.html>.
- [JPWH02] Christopher R. Johnson, Steve Parker, David Weinstein, and Sean Heffernan. Component-based problem solving environments for large-scale scientific computing. *Journal on Concurrency and Computation: Practice and Experience*, (14):1337–1349, 2002. URL: <http://citeseer.nj.nec.com/469537.html>.
- [JSF<sup>+</sup>02] Boris Jeremić, Gerik Scheuermann, Jan Frey, Zhaohui Yang, Bernd Hamann, Kenneth I. Joy, and Hans Hagen. Tensor visualizations in computational geomechanics. *International Journal for Numerical and Analytical Methods in Geomechanics*, 26(10):925–944, August 2002. URL: <http://sokocalo.engr.ucdavis.edu/~jeremic/publications/FromWEB/Visualization.pdf>.
- [JWH97] D. K. Jones, S. C. R. Williams, and M. A. Horsfield. Full representation of white-matter fibre direction on one map via diffusion tensor analysis. In *Proc. 5th Int. Soc. of Mag. Res. in Med.*, page 1743, 1997.
- [Kal92] Alan D. Kalvin. A survey of algorithms for constructing surfaces from 3D volume data. Research report RC 17600 (#77606) 1/16/92, IBM Research Division, T.J. Watson Research Center, Yorktown Heights, NY 10598, January 1992.

- [Kay] Kay Medical Group. The structure and function of the heart. URL: <http://204.140.221.39/heart.htm>.
- [KB96] Ming-Hoe Kiu and David C. Banks. Multi-frequency noise for LIC. In Roni Yagel and Gregory M. Nielson, editors, *Proceedings of Visualization '96*, pages 121–126. IEEE, October 1996.
- [KCR99] Scott A. King, Roger A. Crawfis, and Wayland Reid. Fast animationm of amorphous and gaseous phenomena, 1999. URL: <http://www.cis.ohio-state.edu/graphics/research/papers/kingVG99.pdf>.
- [KD98] Gordon Kindlmann and James W. Durkin. Semi-automatic generation of transfer functions for direct volume rendering. In *Proceedings of the 1998 Symposium on Volume Visualization (VOLVIS-98), Research Triangle Park, North Carolina, October 19-20*, pages 79–86. ACM Press, 1998.
- [Kei02] Daniel A. Keim. Information visualization and visual data mining. *IEEE Transactions on Visualization and Computer Graphics*, 8(1):1–8, January 2002. URL: <http://fusion.cs.uni-magdeburg.de/pubs/TVCG02.pdf>.
- [Ken98] David N. Kenwright. Automatic detection of open and closed separation and attachment lines. In David Ebert, Hans Hagen, and Holly Rushmeier, editors, *Proceedings of Visualization '98*, pages 151–158. IEEE, Computer Society Press, October 1998.
- [Ken04] David N. Kenwright. Personal communication, 29th January 2004.
- [KGM95] R. D. Kriz, E. H. Glaesgen, and J. D. MacRae. Eigenvalue-eigenvector glyphs: Visualizing zeroth, second, fourth and higher order tensors in a continuum. Workshop on Modelling the Development of Residual Stresses During Thermoset Composite Curing, September 15-16, 1995, University Of Illinoise, Urbana-Champaign, URL: [http://www.sv.vt.edu/NCSA\\_WkShp/kriz/WkShp\\_kriz.html](http://www.sv.vt.edu/NCSA_WkShp/kriz/WkShp_kriz.html), September 1995.
- [KGPG96] Erwin Keeve, Sabine Girod, Paula Pfeifle, and Bernd Girod. Anatomy-based facial tissue modelling using the finite element method. In Roni Yagel and Gregory M. Nielson, editors, *Proceedings of Visualization '96*, pages 21–28. IEEE, October 1996.
- [KH91] R. Victor Klassen and Steven J. Harrington. Shadowed hedgehogs: A technique for visualizing 2D slices of 3D vector fields. In Gregory M. Nielson and Larry Rosenblum, editors, *Proceedings of Visualization '91*, pages 148–153, Los Alamitos, California, 1991. IEEE, Computer Society Press.

- [KH97] David Kenwright and Robert Haimes. Vortex identification - application in aerodynamics: A case study. In Roni Yagel and Hans Hagen, editors, *Proceedings of Visualization '97*, pages 413–416. IEEE, 1997.
- [KHL99] David N. Kenwright, Chris Henze, and Creon Levit. Feature extraction of separation and attachment lines. *IEEE Transactions on Visualization and Computer Graphics*, 5(2):135–144, April 1999.
- [KHN99] Peter Kohl, Peter Hunter, and Denis Noble. Stretch-induced changes in heart rate and rhythm: clinical observations, experiments and mathematical models. *Progress in Biophysics and Molecular Biology*, 71(1):91–138, January 1999.
- [Kil] Mark Kilgard. Shadows, reflections, lighting, textures. easy with OpenGL! URL: <http://reality.sgi.com/opengl/tips/TexShadowReflectLight.html>.
- [Kit] Kitware, Inc. VTK Home Page. URL: <http://public.kitware.com/VTK/>.
- [KK93] Peter R. Keller and Mary M. Keller. *Visual Cues - Practical Data Visualization*. IEEE Computer Society Press, Los Alamitos, CA, 1993.
- [KK94] Daniel A. Keim and Hans-Peter Kriegel. VisDB: Database exploration using multidimensional visualization. *IEEE Computer*, 14(5):40–49, September 1994.
- [KKH02] Joe Kniss, Gordon Kindlmann, and Charles Hansen. Multidimensional transfer functions for interactive volume rendering. *IEEE Transactions on Visualization and Computer Graphics*, 8(3):270–285, July 2002.
- [KL95] David N. Kenwright and David A. Lane. Optimization of time-dependent particle tracing using tetrahedral decomposition. In Gregory M. Nielson and Deborah Silver, editors, *Proceedings of Visualization '95*, pages 321–328. IEEE, 1995.
- [KL96] David N. Kenwright and David A. Lane. Interactive time-dependent particle tracing using tetrahedral decomposition. *IEEE Transactions on Visualization and Computer Graphics*, 2(2):120–129, June 1996.
- [Kla] Richard E. Klabunde. Cardiovascular physiology concepts. URL: <http://www.oucom.ohiou.edu/cvphysiology>.
- [KML99] R. M. Kirby, H. Marmanis, and D. H. Laidlaw. Visualizing multivalued data from 2d incompressible flows using concepts from painting. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 333–340. IEEE, October 1999.

- [KPF<sup>+</sup>99] J.-A. Koch, L. W. Poll, P. Feindt, E. Godehardt, B. Schwartzkopff, and U. Mödder. MR imaging of the heart and great vessels: Clinical experience with a standard 1.0 tesla system. *Medica Mundi*, 43(4):2–17, November 1999. URL: [http://www.medical.philips.com/news/publications/assets/documents/mm\\_vol43\\_no4/mm\\_vol43\\_no4\\_article\\_mr\\_imaging\\_of\\_the\\_heart.pdf](http://www.medical.philips.com/news/publications/assets/documents/mm_vol43_no4/mm_vol43_no4_article_mr_imaging_of_the_heart.pdf).
- [KS02] Matthias Kreuseler and Heidrun Schumann. A flexible approach for visual data mining. *IEEE Transactions on Visualization and Computer Graphics*, 8(1):39–51, January 2002.
- [KT96] Alan D. Kalvin and Russell H. Taylor. Superfaces: Polygonal mesh simplification with bounded error. *IEEE Computer Graphics and Applications*, 16(3):64–77, May 1996. ISSN 0272-1716.
- [KU ] KU Medical Centre. Medical study guide. URL: <http://www.kumc.edu/AMA-MSS/study/study.htm>.
- [Kul01] Peter Kulka. *High-resolution Splatting*. PhD thesis, Department of Computer Science, University of Auckland, Auckland, New Zealand, June 2001.
- [KW99] Gordon Kindlmann and David Weinstein. Hue-balls and lit-tensors for direct volume rendering of diffusion tensor fields. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 183–189. IEEE, October 1999.
- [KWH00] Gordon Kindlmann, David Weinstein, and David Hart. Strategies for direct volume rendering of diffusion tensor fields. *IEEE Transactions on Visualization and Computer Graphics*, 6(2):124–138, April 2000. URL: [http://www.sci.utah.edu/publications/gk\\_tvbg00/strategies-tensor.pdf](http://www.sci.utah.edu/publications/gk_tvbg00/strategies-tensor.pdf).
- [KWP01] Kwansik Kim, Craig M. Wittenbrink, and Alex Pang. Extended specifications and test data sets for data level comparison of direct volume rendering algorithms. *IEEE Transactions on Visualization and Computer Graphics*, 7(4):299–317, October 2001.
- [KWT87] Michael Kass, Andrew Witkin, and Demetri Terzopoulos. Snakes: Active contour model. *International Journal of Computer Vision*, 1(4):321–331, June 1987.
- [KYCA95] Dara L. Kraitchman, Alistair A. Young, Cheng-Ning Chang, and Leon Axel. Semi-automatic tracking of myocardial motion in MR tagged images. *IEEE Transactions on Medical Imaging*, 14(3):422–433, September 1995.

- [KYW<sup>+</sup>00] Philip J. Kilner, Guang-Zhong Yang, A. John Wilkes, Raad H. Mohiaddin, David N. Firmin, and Magdi H. Yacoub. Asymmetric redirection of flow through the heart. *Nature*, 404(13):759–761, April 2000.
- [LAKR98] David H. Laidlaw, Eric T. Ahrens, David Kremers, and Carol Readhead. Visualizing diffusion tensor images of the mouse spinal cord. In David Ebert, Hans Hagen, and Holly Rushmeier, editors, *Proceedings of Visualization '98*, pages 127–134. IEEE, Computer Society Press, October 1998.
- [Lar82] Harold J. Larson. *Introduction to probability theory and statistical inference*. John Wiley & Sons, 3<sup>rd</sup> edition, 1982.
- [LB03] Adriano Lopes and Ken Brodlie. Improving the robustness and accuracy of the marching cubes algorithm for isosurfacing. *IEEE Transactions on Visualization and Computer Graphics*, 9(1):16–29, January 2003.
- [LBH98] Yingmei Lavin, Rajesh Batra, and Lambertus Hesselink. Feature comparison of vector fields using earth mover’s distance. In David Ebert, Hans Hagen, and Holly Rushmeier, editors, *Proceedings of Visualization '98*, pages 103–109. IEEE, Computer Society Press, October 1998.
- [LC87] W. Lorensen and H. Cline. Marching cubes: A high resolution 3D surface construction algorithm. *Computer Graphics*, 21(4):163–169, July 1987. Proceedings of SIGGRAPH '87.
- [LC99] Tae-Hwan Lim and Sang Il Choi. MRI of myocardial infarction. *Journal of Magnetic Resonance Imaging*, 10(5):686–693, November 1999. Special Issue: Cardiovascular MRI.
- [LDG98] Helwig Löffelmann, H. Doleisch, and Eduard Gröller. Visualizing dynamical systems near critical points. In *Proceedings of Spring Conference on Computer Graphics (SCCG '98)*, pages 175–184, 1998. URL: <http://www.cg.tuwien.ac.at/research/vis/dynsys/AdvFPViz/paper.ps.gz>.
- [LDW97] Michael Lounsbery, Tony D. DeRose, and Joe Warren. Multiresolution analysis for surfaces of arbitrary topological type. *ACM Transactions on Graphics*, 16(1):34–73, January 1997.
- [Len98] Jed Lengyel. The convergence of graphics and vision. *IEEE Computer*, 31(7):46–53, July 1998.
- [Lev90] Marc Levoy. Efficient ray tracing of volume data. *ACM Transactions on Graphics*, 9(3):245–261, July 1990.

- [Lev97] Haim Levkowitz. Color center, 1997. Interactive images and demos for the book “Color Theory and Modeling for Computer Graphics, Visualization, and Multimedia Applications”, Haim Levkowitz, Kluwer Academic Publishers, Spring 1997, URL: <http://www.cs.uml.edu/~haim/ColorCenter/ColorCenter.htm>.
- [LG95] L. Lippert and M. H. Gross. Fast wavelet based volume rendering by accumulation of transparent texture maps. *Computer Graphics Forum (Proceedings of Eurographics '95)*, 14(3):431–444, August 1995. ISSN 1067-7055.
- [LGK97] L. Lippert, M. H. Gross, and C. Kurmann. Compression domain volume rendering for distributed environments. *Computer Graphics Forum (Proceedings of Eurographics '97)*, 16(3):95–108, August 1997. ISSN 1067-7055.
- [LH87] M. S. Livingstone and D. H. Hubel. Psychophysical evidence for separate channels for the perception of form, colour, movement and depth. *The Journal of Neuroscience*, 7:3416–3468, 1987.
- [LH92] Haim Levkowitz and Gabor T. Herman. Color scales for image data. *IEEE Computer Graphics and Applications*, 12(1):72–80, January 1992.
- [LHM<sup>+</sup>99] Kelvin O. Lim, Maj Hedehus, Michael Moseley, Alexander de Crespigny, Edith V. Sullivan, and Adolf Pfefferbaum. Compromised white matter tract integrity in schizophrenia inferred from diffusion tensor imaging. *Archives of General Psychiatry*, 56(4):367–374, April 1999.
- [Lif] LifeFX Network Inc. LifeFX homepage. URL: <http://www.lifefx.com>.
- [Lig] LightLab Imaging. Lightlab imaging - optical coherence tomography. URL: <http://www.lightlabimaging.com/>.
- [Lin03] Gary P. Liney. Magnetic resonance imaging, June 2003. The University of Hull, Centre for MR Investigations, URL: [http://www.hull.ac.uk/mri/lectures/Gpl%20web%20page/gpl\\_page](http://www.hull.ac.uk/mri/lectures/Gpl%20web%20page/gpl_page).
- [Lip] Lenny Lipton. Stereo3D Handbook. URL: <http://www.stereographics.com/support/developers/handbook.pdf>.
- [LKG97] Helwig Löffelmann, Andreas König, and Eduard Gröller. Fast visualization of 2D dynamical systems by the use of virtual ink droplets. Technical report TR-186-2-97-13, Institute of Computer Graphics and Algorithms, Vienna University of Technology, Austria, April 1997. URL: <http://www.cg.tuwien.ac.at/research/TR/97/TR-186-2-97-13Abstract.html>.

- [LLH97] Yingmei Lavin, Yuval Levy, and Lambertus Hesselink. Singularities in nonuniform tensor fields. In Roni Yagel and Hans Hagen, editors, *Proceedings of Visualization '97*, pages 59–66. IEEE, 1997.
- [LLN] LLNL - Lawrence Livermore National Laboratory. Visualization images and movie clips. URL: [http://www.llnl.gov/graphics/images\\_clips.html](http://www.llnl.gov/graphics/images_clips.html).
- [LM00] Jacques-Olivier Lachaud and Annick Montanvert. Continuous analogs of digital boundaries: A topological approach to iso-surfaces. *Graphical models*, 62(3):129–164, May 2000.
- [LMGP97] Helwig Löffelmann, Lukas Mroz, Eduard Gröller, and Werner Purgathofer. Stream arrows: enhancing the use of stream surfaces for the visualization of dynamical systems. *The Visual Computer*, 13(8):359–369, 1997.
- [LN02] Tie-Qiang Li and Michael D. Noseworthy. Mapping the development of white matter tracts with diffusion tensor imaging. *Developmental Science*, 5(3):293–300, 2002. URL: <http://cogsci.ucsd.edu/DCNL/pdf/li.pdf>.
- [Löf98] Helwig Löffelmann. *Visualizing Local Properties and Characteristic Structures of Dynamic Systems*. PhD thesis, Vienna University of Technology, Institute for Computer Graphics and Algorithms, Vienna, Austria, November 1998. URL: <http://www.cg.tuwien.ac.at/~helwig/diss/diss.htm>.
- [LOMP<sup>+</sup>94] Carlos H. Lugo-Olivieri, Christopher C. Moore, Eric G.-C. Poon, Joao A. C. Lima, Elliot R. McVeigh, and Elias A. Zerhouni. Temporal evolution of three dimensional deformation in the ischemic human left ventricle: Assessment by MR tagging. In *Proceedings of the 2nd Annual Meeting of the Society of Magnetic Resonance*, page 1482, Berkely, California, August 1994. Society of Magnetic Resonance Imaging (SMR). URL: [http://prospero.bme-mri.jhu.edu/abstracts/lugo94\\_1/temporal.html](http://prospero.bme-mri.jhu.edu/abstracts/lugo94_1/temporal.html).
- [Lor95] Hambleton D. Lord. Improving the application development process with modular visualization environments. *Computer Graphics*, 29(2):10–12, May 1995.
- [LRK86] W. Michael Lai, David Rubin, and Erhard Krempl. *Introduction to Continuum Mechanics*, volume 17 of *Pergamon Unified Engineering Series*. Pergamon Press, Headington Hill Hall, Oxford OX3 0BW, England, revised edition in SI/metric units edition, 1986.
- [LRM<sup>+</sup>01] Conor F. Lundergan, Allan M. Ross, William F. McCarthy, Jonathan S. Reiner, Deneane Boyle, Cynthia Fink, Robert M. Califf, Eric J.

- Topol, Maarten L. Simoons, Marcel van den Brand, Frans van de Werf, and Karin S. Coyne. Predictors of left ventricular function after acute myocardial infarction: Effects of time to treatment, patency, and body mass index: The GUSTO-I angiographic experience. *American Heart Journal*, 142(1):43–50, January 2001. URL: <http://www.medscape.com/mosby/AmHeartJ/2001/v142.n01/ahj1421.02.1und/mig-pnt-ahj1421.02.1und.html>.
- [LSB00] Aleš Leonardis, Franc Solina, and Ruzena Bajcsy, editors. *Confluence of Computer Vision and Computer Graphics*, volume 84 of *NATO Science Series 3. High Technology*. Kluwer Academic Publishers, Dordrecht, 2000.
- [LSHP03] R. Lamerichs, T. Schäffter, Y. Hämisch, and J. Powers. Molecular imaging: the road to better healthcare. *Medica Mundi*, 47(1):2–9, February 2003. URL: [http://www.medical.philips.com/main/news/assets/docs/medicamundi/mm\\_vol47\\_no1/04\\_lamerichs.pdf](http://www.medical.philips.com/main/news/assets/docs/medicamundi/mm_vol47_no1/04_lamerichs.pdf).
- [LSJ96] Yarden Livnat, Han-Wei Shen, and Christopher R. Johnson. A near optimal isosurface extraction algorithm using the span space. *IEEE Transactions on Visualization and Computer Graphics*, 2(1):73–84, March 1996.
- [LSM<sup>+</sup>02] Wei Li, Jessica S. Stern, Vu M. Mai, Linda N. Pierchala, Robert R. Edelman, and Pottumarthi V. Prasad. MR assessment of left ventricular function: Quantitative comparison of fast imaging employing steady-state acquisition (FIESTA) with fast gradient echo cine technique. *Journal of Magnetic Resonance Imaging*, 16(5):559–564, November 2002.
- [LTC95] I. J. LeGrice, Y. Takayama, and J. W. Covell. Transverse shear along myocardial cleavage planes provides a mechanism for normal systolic wall thickening. *Circulation Research*, 77(1):182–193, July 1995.
- [LVG80] S. Lobregt, P. W. Verbeek, and F. C. A. Groen. Three-dimensional skeletonization: Principle and algorithm. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, PAMI-2(1):75–77, January 1980.
- [LWS96] Sureh K. Lodha, Catherine M. Wilson, and Robert E. Sheehan. LISTEN: Sounding uncertainty visualization. In Roni Yagel and Gregory M. Nielson, editors, *Proceedings of Visualization '96*, pages 189–195. IEEE, October 1996.
- [LWT<sup>+</sup>03] Mariana Lazar, David M. Weinstein, Jay S. Tsuruda, Khader M. Hasan, Konstantinos Arfanakis, M. Elizabeth Meyerand, Benham Badie, Howard A. Rowley, Victor Haughton, Aaron Field, and Andrew L.

- Alexander. White matter tractography using diffusion tensor deflection. *Human Brain Mapping*, 18(4):306–321, April 2003. URL: <http://www.sci.utah.edu/publications/lazar03/lazar.hbm.03.pdf>.
- [MA92] Elliot R. McVeigh and Ergin Atalar. Cardiac tagging with breath-hold cine MRI. *Magnetic Resonance in Medicine*, 28(2):318–327, December 1992. URL: [http://prospero.bme-mri.jhu.edu/papers/mcveigh92\\_1/paper.html](http://prospero.bme-mri.jhu.edu/papers/mcveigh92_1/paper.html).
- [Ma99] Kwan-Liu Ma. Image graphs - a novel approach to visual data exploration. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 81–88. IEEE, October 1999. ISBN 0-7803-5897-X.
- [Ma00] Kwan-Liu Ma. Visualizing visualizations. *IEEE Computer Graphics and Applications*, 20(5):16–19, September 2000.
- [Mac86] Jock D. Mackinlay. Automating the design of graphical presentations of relational information. *ACM Transactions on Graphics*, 5(2):110–141, April 1986. URL: <http://www2.parc.com/istl/projects/uir/pubs/pdf/UIR-R-1986-02-Mackinlay-TOG-Automating.pdf>.
- [Mal93] Tom Malzbender. Fourier volume rendering. *ACM Transactions on Graphics*, 12(3):233–250, July 1993.
- [Mat] Matria Healthcare, Inc. The cancer page - glossary. URL: <http://www.cancerpage.com/glossary/>.
- [Max00] Kenneth J. Maxwell. Human-computer interface design issues. In Joseph D. Bronzina, editor, *The Biomedical Engineering Handbook*, volume 2, chapter 153. CRC Press, 2<sup>nd</sup> edition, 2000.
- [Maya] Mayo Foundation for Medical Education and Research. Mayo clinic health oasis. URL: <http://mayohealth.org/mayo/common/htm/search.htm>.
- [Mayb] Mayo Foundation for Medical Education and Research. Mayo Clinic.com - reliable information for a healthier life. URL: <http://www.mayoclinic.com>.
- [MBC93] N. Max, B. Becker, and R. Crawfis. Flow volumes for interactive vector field visualization. In G. M. Nielson and D. Bergeron, editors, *Proceedings of Visualization '93*, Los Alamitos, California, 1993. IEEE, Computer Society Press.
- [MCD<sup>+</sup>96] Michael J. Moulton, Lawrence L. Creswell, Stephen W. Downing, Ricardo L. Actis, Barna A. Szabo, Michael W. Vannier, and Michael K. Pasque. Spline surface interpolation for calculating 3-D ventricular

- strains from MRI tissue tagging. *American Journal of Physiology*, 270(1):H281–H297, January 1996.
- [McG] McGraw-Hill. AccessScience - science dictionary. URL: <http://www.accessscience.com/Dictionary>.
- [MCG94] Nelson Max, Roger Crawfis, and Charles Grant. Visualizing 3D velocity fields near contour surfaces. In R. Daniel Bergeron and Arie E. Kaufman, editors, *Proceedings of Visualization '94*, pages 248–255. IEEE, 1994.
- [McV96] Elliot R. McVeigh. Functional cardiac MRI: Motion tracking techniques. *Magnetic Resonance Imaging*, 14(2):137–150, 1996. URL: [http://prospero.bme-mri.jhu.edu/papers/mcveigh95\\_1/paper.ps](http://prospero.bme-mri.jhu.edu/papers/mcveigh95_1/paper.ps).
- [MCW93] Nelson Max, Roger Crawfis, and Dean Williams. Visualization for climate modeling. *IEEE Computer Graphics and Applications*, 13(4):34–40, July 1993.
- [Meda] Med Help International. The patient medical information centre. URL: <http://www.medhelp.org>.
- [Medb] Medial Network Inc. HealthAtoZ - encyclopedia. URL: <http://www.healthatoz.com/healthatoz/atoz/ency/encyindex.html>.
- [MER99] Christopher J. Morris, David S. Ebert, and Penny Rhengans. An experimental analysis of the pre-attentiveness of features in chernoff faces. In *Applied Imagery Pattern Recognition '99: 3D Visualization for Data Exploration and Decision Making*, October 1999. URL: [http://www.cs.umbc.edu/~ebert/papers/Chernoff\\_990402.PDF](http://www.cs.umbc.edu/~ebert/papers/Chernoff_990402.PDF).
- [MFE<sup>+</sup>01] Elliot McVeigh, Owen Faris, Dan Ennis, Patrick Helm, and Frank Evans. Measurement of ventricular wall motion, epicardial electrical mapping and myocardial fiber angles in the same heart. In Toivo Katila, Isabelle E. Magnin, Patrick Clarysse, Johan Montagnat, and Jukka Nenonen, editors, *Proceedings of the First International Workshop on Functional Imaging and Modeling of the Heart, Helsinki, Finland, November 15-16, 2001*, volume 2230 of *Lecture Notes in Computer Science*, pages 76–82. Springer, 2001. URL: <http://link.springer.de/link/service/series/0558/papers/2230/22300076.pdf>.
- [MGP<sup>+</sup>94] Elliot McVeigh, Michael Guttman, Eric Poon, Pisupati Chandrasekhar, Christopher Moore, Elias Zerhouni, Meiyappan Solaiyappan, and Pheng Ann Heng. Visualization and analysis of functional cardiac MRI data. In *Proceedings of Medical Imaging '94: Physiology and Function from Multidimensional Images*, volume SPIE Proceedings 2168, 1994. URL: [http://prospero.bme-mri.jhu.edu/papers/mcveigh94\\_1/paper.html](http://prospero.bme-mri.jhu.edu/papers/mcveigh94_1/paper.html).

- [MH99] Patrick J. Moran and Chris Henze. Large field visualization with demand-driven calculation. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 27–33. IEEE, October 1999.
- [MHC90] Nelson Max, Pat Hanrahan, and Roger Crawfis. Area and volume coherence for efficient visualization of 3D scalar functions. *Computer Graphics (San Diego Workshop on Volume Visualization)*, 24(5):27–33, November 1990.
- [MHG00] Lukas Mroz, Helwig Hauser, and Eduard Gröller. Interactive high-quality maximum intensity projection. *Computer Graphics Forum (Proceedings of Eurographics 2000)*, 19(3):341–350, August 2000. URL: <http://www.cad.zju.edu.cn/Eurograph/2000/cgf/volume19/issue3/paper65.pdf>.
- [MHHI98] Xiaoyang Mao, Yuji Hatanaka, Hidenori Higashida, and Atsumi Imamiya. Image-guided streamline placement on curvilinear grid surfaces. In David Ebert, Hans Hagen, and Holly Rushmeier, editors, *Proceedings of Visualization '98*, pages 135–142. IEEE, Computer Society Press, October 1998.
- [MHK95] Xiaoyang Mao, Lichan Hong, and Arie Kaufman. Splatting of curvilinear volumes. In Gregory M. Nielson and Deborah Silver, editors, *Proceedings of Visualization '95*, pages 61–68. IEEE, 1995.
- [MHK<sup>+</sup>98] Xiaoyang Mao, Lichan Hong, Arie Kaufman, Noboru Fujita, and Makoto Kikukawa. Multi-granularity noise for curvilinear grid LIC. In *Proceedings of Graphics Interface 1998*, pages 193–200, June 1998. URL: <http://www.graphicsinterface.org/proceedings/1998/151/>.
- [MID<sup>+</sup>94] Marc R. Moon, Neil B. Ingels, Jr., George T. Daughters, Edward B. Stinson, David E. Hansen, and Craig Miller. Alterations in left ventricular twist mechanics with inotropic stimulation and volume loading in human subjects. *Circulation*, 89(1):142–150, January 1994.
- [MMJ92] Robert S. MacLeod, Christopher R. Johnson, and Mike A . Matheson. Visualization tools for computational electrocardiography. In R. A. Robb, editor, *Proc. Visualization in Biomedical Computing*, volume 1808, pages 433–444, Bellingham, Washington, 1992. SPIE.
- [ML94] S. R. Marschner and R. J. Lobb. An evaluation of reconstruction filters for volume rendering. In R. Daniel Bergeron and Arie E. Kaufman, editors, *Proceedings of Visualization '94*, pages 100–107. IEEE, 1994.

- [MM01] A. D. McCulloch and R. Mazhari. Regional ventricular mechanics: Integrative computational models of myocardial flow-function relations. *Journal of Nuclear Cardiology*, 8(4):506–519, July 2001. Manuscript available at URL: [http://cardiome.ucsd.edu/Publications\\_files/JNCreview.pdf](http://cardiome.ucsd.edu/Publications_files/JNCreview.pdf).
- [MMC99] Klaus Mueller, Torsten Möller, and Roger Crawfis. Splatting without the blur. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 363–370. IEEE, October 1999.
- [MMK<sup>+</sup>98] Torsten Möller, Klaus Müller, Yair Kurzion, Raghu Machiraju, and Roni Yagel. Design of accurate and smooth filters for function and derivative reconstruction. In *Proceedings of the 1998 Symposium on Volume Visualization (VOLVIS-98), Research Triangle Park, North Carolina, October 19-20*, pages 134–151. ACM Press, 1998.
- [MMMY97] Torsten Möller, Raghu Machiraju, Klaus Mueller, and Roni Yagel. A comparison of normal estimation schemes. In Roni Yagel and Hans Hagen, editors, *Proceedings of Visualization '97*, pages 19–26. IEEE, 1997.
- [MO01] Elliot McVeigh and Cengizhan Ozturk. Imaging myocardial strain. *IEEE Signal Processing Magazine*, 18(6):44–56, November 2001.
- [MOMZ92] Christopher C. Moore, Walter G. O'Dell, Elliot R. McVeigh, and Elias A. Zerhouni. Calculation of three dimensional left ventricular strains from bi-planar tagged MR images. *Journal of Magnetic Resonance Imaging*, 2:165–175, 1992.
- [MP73] I. Mirsky and W. W. Parmley. Assessment of passive elastic stiffness for isolated heart muscle and the intact heart. *Circulation Research*, 33(2):233–243, August 1973.
- [MPC<sup>+</sup>01] J. F. Mangin, C. Poupon, C. Clark, D. Le Bihan, and I. Bloch. Eddy-current distortion correction and robust tensor estimation for MR diffusion imaging. In W. J. Niessen and M. A. Viergever, editors, *Medical Image Computing and Computer-Assisted Intervention - MICCAI '01*, Lecture Notes in Computer Science 2208, pages 186–194. Springer-Verlag, October 2001.
- [MR90] Greg McRae and Ted Russell. Smog: Visualizing the components, 1990. Computer Animation Competition, SIGGRAPH '90, URL: <http://www.ncsa.uiuc.edu/SCMS/DigLib/text/geosciences/Smog-Visualizing-Components-Siggraph90-McRae.htm>.
- [MRM94] Christopher C. Moore, Scott B. Reeder, and Elliot R. McVeigh. Tagged MR imaging in a deforming phantom: photographic validation. *Radiology*, 190(3):765–769, March 1994.

- [MS00] Alexander R. Margulis and Jonathan H. Sunshine. Radiology at the turn of the millenium. *Radiology*, 214(1):15–23, January 2000.
- [MSC<sup>+</sup>86] J. Hurley Myers, Mack C. Stirling, Mike Choy, Andrew J. Buda, and Kim P. Gallagher. Direct measurement of inner and outer wall thickening dynamics with epicardial echocardiography. *Circulation*, 74(1):164–172, July 1986.
- [MSS94] C. Montani, R. Scateni, and R. Scopigno. A modified look-up table for implicit disambiguation of marching cubes. *The Visual Computer*, 10(6):353–355, July 1994.
- [MSTM01] Andrew D. McCulloch, Derrick Sung, Mary Ellen Thomas, and Anushka Michailova. Experimental and computational modeling of cardiac electromechanical coupling. In Toivo Katila, Isabelle E. Magnin, Patrick Clarysse, Johan Montagnat, and Jukka Nenonen, editors, *Proceedings of the First International Workshop on Functional Imaging and Modeling of the Heart, Helsinki, Finland, November 15-16, 2001*, volume 2230 of *Lecture Notes in Computer Science*, pages 113–119. Springer, 2001. URL: <http://link.springer.de/link/service/series/0558/papers/2230/22300113.pdf>.
- [Mv95] Jurriaan D. Mulder and Jarke J. van Wijk. 3D computational steering with parametrized geometric objects. In Gregory M. Nielson and Deborah Silver, editors, *Proceedings of Visualization '95*, pages 304–311. IEEE, 1995.
- [MvD<sup>+</sup>99] Frederik Maes, Koen van Leemput, Lynn E. DeLisis, Dirk Vandermeulen, and Paul Suetens. Quantification of cerebral grey and white matter asymmetry from MRI. In Chris Taylor and Alan Colchester, editors, *Medical Image Computing and Computer-Assisted Intervention - MICCAI '99*, Lecture Notes in Computer Science 1679, pages 348–357, Cambridge, UK, September 1999. Springer Verlag.
- [MYPF00] Sharmeen Masood, Guang-Zhong Yang, Dudley J. Pennell, and David N. Firmin. Investigating intrinsic myocardial mechanics - the role of MR tagging, velocity phase mapping and diffusion imaging. *Journal of Magnetic Resonance Imaging*, 12(6):873–883, December 2000. URL: <http://www.doc.ic.ac.uk/~gzy/pub/mashood%20tagging%20JMRI%202000.pdf>.
- [MZ91] Elliot R. McVeigh and Elias A. Zerhouni. Noninvasive measurement of transmural gradients in myocardial strain with MR imaging. *Radiology*, 180(3):677–683, September 1991.
- [MZ94] Kwan-Liu Ma and Z. C. Zheng. 3D visualization of unsteady 2D airplane wake vortices. In R. Daniel Bergeron and Arie E. Kaufman, editors, *Proceedings of Visualization '94*, pages 124–131. IEEE, 1994.

- [MZ95] Robert J. Moorhead II and Zhifan Zhu. Signal processing aspects of scientific visualization. *IEEE Signal Processing Magazine*, 12(5):20–41, September 1995. URL: [http://www.erc.msstate.edu/research/labs/vail/pubs/sig\\_proc/spmag\\_06.html](http://www.erc.msstate.edu/research/labs/vail/pubs/sig_proc/spmag_06.html).
- [NAG] NAG Ltd. The IRIS Explorer homepage. URL: [http://www.nag.com/Welcome\\_IEC.html](http://www.nag.com/Welcome_IEC.html).
- [NAG98] NAG Ltd. The IRIS Explorer Users' Guide, 1998. URL: <http://www.nag.com/visual/IE/iecbb/DOC/UG/CONTENTS.html>.
- [Nas95] Martyn P. Nash. Heart mechanics using mathematical modelling. In *Second NZ Postgrad Conference for Engineering and Technology Students*, Auckland, NZ, September 1995. URL: <http://www.physiol.ox.ac.uk/~mn/publications/postgrad95paper.pdf>.
- [Nat02] National Cancer Institute. Network for translational research: Optical imaging, August 2002. RFA CS-03-2002, URL: <http://grants1.nih.gov/grants/guide/rfa-files/RFA-CA-03-002.html>.
- [NB93] Paul Ning and Jules Bloomenthal. An evaluation of implicit surface tilers. *IEEE Computer Graphics and Applications*, 13(6):33–41, November 1993.
- [NCS] NCSA Visualization and Virtual Environments Group. Training information about IDL. URL: <http://www.ncsa.uiuc.edu/SCD/Vis/Software/Idl/Training/Intro/>.
- [NF91] Derek R. Ney and Elliot K. Fishman. Editing tools for 3D medical imaging. *IEEE Computer Graphics and Applications*, 11(6):63–71, November 1991.
- [NFHL91] Gregory M. Nielson, Thomas A. Foley, Bernd Hamann, and David Lane. Visualizing and modeling scattered multivariate data. *IEEE Computer Graphics and Applications*, 11(3):47–55, May 1991.
- [NH91] Gregory M. Nielson and Bernd Hamann. The asymptotic decider: Resolving the ambiguity in marching cubes. In Gregory M. Nielson and Larry Rosenblum, editors, *Proceedings of Visualization '91*, pages 83–91, Los Alamitos, California, October 1991. IEEE, Computer Society Press.
- [NHB<sup>+</sup>97] Tasneem Z. Naqvi, Rory Hachamovitch, Daniel Berman, Neil Buchbinder, Hosen Kiat, and Prediman K. Shah. Does the presence and site of myocardial ischemia on perfusion scintigraphy predict the occurrence and site of future myocardial infarction in patients with stable coronary artery diseases? *The American Journal of Cardiology*, 79(11):1521–1524, June 1997.

- [Nie03] Gregory M. Nielson. On marching cubes. *IEEE Transactions on Visualization and Computer Graphics*, 9(3):283–297, July 2003.
- [nVi] nVidia, Inc. nVidia Homepage. URL: <http://www.nvidia.com>.
- [NvS00] Herke Jan Noordmans, Hans T. M. van der Voort, and Arnold W. M. Smeulders. Spectral volume rendering. *IEEE Transactions on Visualization and Computer Graphics*, 6(3):196–207, July 2000.
- [Nyc99] Nycomed Amersham Ltd. Nycomed Amersham intercontinental continuing education in radiology, course on functional imaging, 1999. 11–13 June, Oslo, Norway, URL: <http://www.na-imaging.com/common/nicer/horiz99/0sloabs.htm>.
- [OKMP99] Nael F. Osman, William S. Kerwin, Elliot R. McVeigh, and Jerry L. Prince. Cardiac motion tracking using CINE harmonic phase (HARP) magnetic resonance imaging. *Magnetic Resonance in Medicine*, 42(6):1048–1060, December 1999. URL: [http://zeus.nhlbi.nih.gov/medical\\_imaging/jc/11\\_30\\_00/HAR\\_MRM\\_1999\\_42\\_1048-60.pdf](http://zeus.nhlbi.nih.gov/medical_imaging/jc/11_30_00/HAR_MRM_1999_42_1048-60.pdf).
- [OL96] Arthur Okada and David Lane. Enhanced line integral convolution with flow feature detection. Technical report, NASA Ames Research Center, Moffet Field, CA 94035-1000, June 1996. URL: <http://www.nas.nasa.gov/Research/Reports/Techreports/1996/nas-96-007.html>.
- [OM00] Cengizhan Ozturk and Elliot R. McVeigh. Four-dimensional B-spline based motion analysis of tagged MR images: introduction and in vivo validation. *Physics in Medicine and Biology*, 45:1683–1702, 2000. URL: [http://www.bme.jhu.edu/~cozturk/papers/SD\\_pap\\_ver\\_final.PDF](http://www.bme.jhu.edu/~cozturk/papers/SD_pap_ver_final.PDF).
- [Ome98] Jeffrey H. Omens. Stress and strain as regulators of myocardial growth. *Progress in Biophysics and Molecular Biology*, 69(2–3):559–572, March 1998.
- [OMH<sup>+</sup>95] Walter G. O’Dell, Christopher C. Moore, William C. Hunter, Elias A. Zerhouni, and Elliot R. McVeigh. Three-dimensional myocardial deformations: Calculations with displacement field fitting to tagged MR images. *Radiology*, 195(3):829–835, June 1995.
- [OMM91] Jeffrey H. Omens, Karen D. May, and Andrew D. McCulloch. Transmural distribution of three-dimensional strain in the isolated arrested canine left ventricle. *American Journal of Physiology*, 261:H919–H928, 1991.
- [OVS<sup>+</sup>01] Evren Ozarsland, Baba Vemuri, Xeve Silver, Michelle DeFord, and Tom Mareci. Fiber tract mapping with magnetic resonance diffusion tensor

- imaging. *National High Magnetic Field Laboratory Report*, 8(3):17–18, 2001. URL: <http://www.magnet.fsu.edu/publications/reports/summer01screen.pdf>.
- [PA94] Alex Pang and Naim Alper. Mix & match: A construction kit for visualization. In R. Daniel Bergeron and Arie E. Kaufman, editors, *Proceedings of Visualization '94*, pages 302–309. IEEE, 1994.
- [Pan94] Alex Pang. Spray rendering. *IEEE Computer Graphics and Applications*, 14(5):57–63, September 1994.
- [Par02] Parallel Graphics Inc. Cortona VRML client homepage, 2002. URL: <http://www.parallelgraphics.com/products/cortona>.
- [PB96] Carlo Pierpaoli and Peter J. Basser. Toward a quantitative assessment of diffusion anisotropy. *Magnetic Resonance in Medicine*, 36(6):893–906, June 1996. [published erratum appears in Magn Reson Med 1997 Jun; 37(6) p. 972].
- [PCF<sup>+</sup>99] C. Poupon, C. A. Clark, V. Frouin, D. LeBihan, I. Bloch, and J.-F. Mangin. Inferring the brain connectivity from MR diffusion tensor data. In Chris Taylor and Alan Colchester, editors, *Medical Image Computing and Computer-Assisted Intervention - MICCAI '99*, Lecture Notes in Computer Science 1679, pages 453–462, Cambridge, MA, October 1999. Springer Verlag.
- [PCF<sup>+</sup>00] C. Poupon, C. A. Clark, V. Frouin, J. Régis, I. Bloch, D. Le Bihan, and J.-F. Mangin. Regularization of diffusion-based direction maps for the tracking of brain white matter fascicles. *Neuroimage*, 12(2):184–195, August 2000.
- [Pea02] Roy D. Pea. Learning science through collaborative visualization over the internet, May 2002. URL: <http://www.nobel.se/nobel/nobel-foundation/symposia/interdisciplinary/ns120/lectures/pea.pdf>.
- [PG01] Mark Pauly and Markus Gross. Spectral processing of point-sampled geometry. In *Proceedings of ACM SIGGRAPH 2001*, Computer Graphics Proceedings, Annual Conference Series, pages 379–386, August 2001.
- [PGK02] Mark Pauly, Markus Gross, and Leif Kobbelt. Efficient simplification of point-sampled surfaces. In *Proceedings of IEEE Visualization 2002*, pages 163–170. IEEE CS Press, October 2002. Boston, MA, U.S.A., Oct 27–Nov 1, 2002, URL: <http://citeseer.nj.nec.com/538555.html>.
- [PGLS95] Ronald M. Pickett, Georges Grinstein, Haim Levkowitz, and Stuart Smith. Harnessing preattentive perceptual processes in visualization.

- In Georges G. Grinstein and Haim Levkowitz, editors, *Perceptual Issues in Visualization*, pages 33–45, Berlin, New York, 1995. Springer Verlag. Proceedings of the IFIP Workshop on Perceptual Issues in Visualization, 23-24 October, 1993, San Jose, California.
- [PGV99] Sergio Pinheiro, Jonas Gomes, and Luiz Velho. Interactive specification of 3D displacement vectors using arcball. In Bob Werner, editor, *Proceedings of the Conference on Computer Graphics International 1999, June 7–11, Canmore, Alberta, Canada*, pages 70–75. IEEE Computer Society, 1999.
- [PGW<sup>+</sup>98] Sharon Peled, Hákon Gudbjartsson, Carl-Fredrik Westin, Ron Kikinis, and Ferenc A. Jolesz. Magnetic resonance imaging shows orientation and asymmetry of white matter fiber tracts. *Brain Research*, 780:27–33, January 1998. URL: <http://splweb.bwh.harvard.edu:8000/pages/papers/peled/htmlBrainRes.html>.
- [Pie97] Carlo Pierpaoli. Oh no! one more method for color mapping of fiber tract direction using diffusion MR imaging data. In *Proc. 5th Int. Soc. of Mag. Res. in Med.*, page 1741, 1997.
- [PJB<sup>+</sup>96] Carlo Pierpaoli, Peter Jezzard, Peter J. Basser, Alan Barnett, and Giovanni Di Chiro. Diffusion tensor MR imaging of the human brain. *Radiology*, 201(3):637–648, December 1996.
- [PMF<sup>+</sup>98] C. Poupon, J.-F. Mangin, V. Frouin, J. Régis, F. Poupon, M. Pachot-Clouard, D. Le Bihan, and I. Bloch. Regularization of MR diffusion tensor maps for tracking brain white matter bundles. In William M. Wells, Alan Colchester, and Scott Delp, editors, *Medical Image Computing and Computer-Assisted Intervention - MICCAI '98*, Lecture Notes in Computer Science 1496, pages 489–498, Cambridge, MA, October 1998. Springer Verlag.
- [PNP<sup>+</sup>99] Sorin V. Pislaru, Yicheng Ni, Cristina Pislaru, Hilde Bosmans, Yi Miao, Jan Bogaert, Steven Dymarkowski, Wolfhard Semmler, Guy Marchal, and Frans J. van de Werf. Noninvasive measurements of infarct size after thrombolysis with a necrosis-avid MRI contrast agent. *Circulation*, 99(5):690–696, February 1999.
- [POCD99] Roderic I. Pettigrew, John N. Oshinski, George Chatzimavroudis, and W. Thomas Dixon. MRI techniques for cardiovascular imaging. *Journal of Magnetic Resonance Imaging*, 10(5):590–601, November 1999. Special Issue: Cardiovascular MRI.
- [Pow95] H. Power, editor. *Bio-Fluid Mechanics*. Computational Mechanics Publications, Southampton, SO40 7AA, UK, 1995.

- [Poy00] Charles Poynton. Color science and color management for CGI and film, 2000. Course notes #21, SIGGRAPH 2000.
- [PP95] Hans-Georg Pagendarm and Frits H. Post. Comparative visualization - approaches and examples. In M. Göbel, H. Müller, and B. Urban, editors, *Visualization in Scientific Computing*, pages 95–108. Springer Verlag, Wien, 1995. URL: [http://www.ts.go.dlr.de/sm-sk\\_info/library/documents/EGSciVis94/](http://www.ts.go.dlr.de/sm-sk_info/library/documents/EGSciVis94/).
- [PP99] Sinisa Pajevic and Carlo Pierpaoli. Color schemes to represent the orientation of anisotropic tissues from diffusion tensor data: Application to white matter fiber tract mapping in the human brain. *Magnetic Resonance in Medicine*, 42(3):526–540, September 1999.
- [PP00] Konrad Polthier and Eike Preuß. Variational approach to vector field decompostion. In W. de Leeuw and R. van Liere, editors, *Data Visualization 2000 (Proceedings of the Joint EUROGRAPHICS and IEEE TCVG Symposium on Visualization, Amsterdam, Netherlands, May 29–31 2000)*, pages 147–155, 2000.
- [PR99a] Ronald Peikert and Martin Roth. The "parallel vectors" operator - a vector field visualization primitive. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 263–270. IEEE, October 1999.
- [PR99b] T. Preußer and M. Rumpf. Anisotropic nonlinear diffusion in flow visualization. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 325–332. IEEE, October 1999.
- [Pro96] Computational Science Education Project. e-book, 1991–1996. Sponsored by the U.S. Department of Energy, URL: <http://csep1.phy.ornl.gov>.
- [PSDD99] Xenophon Papademetris, Albert J. Sinusas, Donald P. Dione, and James S. Duncan. 3D cardiac deformation from ultrasound images. In *Medical Image Computing and Computer-Assisted Intervention - MICCAI '99*, pages 420–429, Cambridge, England, September 1999.
- [PSDD01] Xenophon Papademetris, Albert J. Sinusas, Donald P. Dione, and James S. Duncan. Estimation of 3D left ventricular deformation from echocardiography. *Medical Image Analysis*, 5(1):17–28, March 2001.
- [Pv94] Frits H. Post and Jarke J. van Wijk. Visual representation of vector fields: recent developments and research directions. In L. J. Rosenblum et. al., editor, *Scientific Visualization: Advances and Challenges*, chapter 23, pages 367–390. Academic Press, 1994.

- [PvPS95] Frank J. Post, Theo van Walsum, Frits H. Post, and Deborah Silver. Iconic techniques for feature visualization. In Gregory M. Nielson and Deborah Silver, editors, *Proceeding Visualization '95*, pages 288–295. IEEE, 1995.
- [PTVF92] William H. Press, William T. Vetterling, Saul A. Teukolsky, and Brian P. Flannery. *Numerical Recipes in C - The Art of Scientific Computing*. Cambridge University Press, 2<sup>nd</sup> edition, 1992. URL: <http://www.library.cornell.edu/nr/bookcpdf.html>.
- [PW95] Alex Pang and Craig M. Wittenbrink. Spray rendering as a modular visualization environment. *Computer Graphics*, 29(2):33–36, May 1995.
- [PW96] Frederic I. Parke and Keith Waters. *Computer Facial Animation*. A K Peters Ltd., Wellesley, Massachusetts, 1996.
- [PWKB02] Geoffrey J. M. Parker, Claudia A. M. Wheeler-Kingshott, and Gareth J. Barker. Estimating distributed anatomical connectivity using fast marching methods and diffusion tensor imaging. *IEEE Transactions on Medical Imaging*, 21(5), May 2002.
- [PWL97] Alex T. Pang, Craig M. Wittenbrink, and Suresh K. Lodha. Approaches to uncertainty visualization. *The Visual Computer*, 13(8):370–390, 1997.
- [Qu02] Danhong (Jessica) Qu. A graphical user interface for colour map design. FoS summer scholarship project report, University of Auckland, February 2002.
- [RAEM94] William Ribarsky, Eric Ayers, John Eble, and Sougata Mukherja. Glyphmaker: Creating customized visualizations of complex data. *IEEE Computer*, 27(7):57–64, July 1994.
- [Rat] Rational Software Corporation. Rational Rose/C++ demo v. 4.0.3. CD-ROM. URL: <http://www.rational.com>.
- [RB00] James C. Rodger and Roger A. Browse. Choosing rendering parameters for effective communication of 3D shape. *IEEE Computer Graphics and Applications*, 20(2):20–28, March 2000.
- [RdB99] Terrence D. Ruddy, Robert A. deKamp, and Rob S. Beanlands. Taking PET to heart. *eCMAJ - Canadian Medical Association Journal, Electronic Edition*, 161(9):1131, November 1999. URL: <http://www.cma.ca/cmaj/vol-161/issue-9/1131.htm>.
- [RE01] Penny Rheingans and David S. Ebert. Volume illustration: Nonphotorealistic rendering of volume models. *IEEE Transactions on Visualization and Computer Graphics*, 7(3):253–264, July 2001.

- [Rei99] Nathaniel Reichek. MRI myocardial tagging. *Journal of Magnetic Resonance Imaging*, 10(5):609–616, November 1999. Special Issue: Cardiovascular MRI.
- [Res] Research Systems Inc. The interactive data language homepage. URL: <http://www.rsinc.com/idl/index.cfm>.
- [Res99] Research Systems Inc. *Getting started with IDL, Version 5.3*, September 1999. URL: <http://www.rsinc.com/idl/GetStart.pdf>.
- [Rhe96] Penny Rheingans. Opacity-modulating triangular textures for irregular surfaces. In Roni Yagel and Gregory M. Nielson, editors, *Proceedings of Visualization '96*, pages 219–225. IEEE, October 1996.
- [RHH<sup>+</sup>97] Fridtjof Roder, Karl-Heinz Hiller, Peter Henz, Markus v. Kienlin, Wolfgang R. Bauer, Georg Ertl, and Axel Haase. Three-dimensional coronary angiography of the perfused rat heart. *Journal of Magnetic Resonance Imaging*, 1997.
- [Rhy00] Theresa-Marie Rhyne. Two stepping information technology with visualization. *Computer Graphics*, 34(1):45–47, February 2000. URL: <http://www.siggraph.org/publications/newsletter/v34n1/contributions/Rhyne.html>.
- [RJH<sup>+</sup>98] Kishin Ramani, Robert M. Judd, Thomas A. Holly, Todd B. Parrish, Vera H. Rigolin, Michele A. Parker, Cathy Callahan, Steven W. Fitzgerald, Robert O. Bonow, and Francis J. Klocke. Contrast magnetic resonance imaging in the assessment of myocardial viability in patients with stable coronary artery disease and left ventricular dysfunction. *Circulation*, 98(24):2687–2695, December 1998.
- [RKJH99] William Ribarsky, Jochen Katz, Frank Jiang, and Aubrey Holland. Discovery visualization using fast clustering. *IEEE Computer Graphics and Applications*, 19(5):32–39, September 1999.
- [RKN00] S. Y. Rabbany, J. Y. Kresh, and A. Noordergraaf. Myocardial wall stress: Evaluation and management. *Cardiovascular Engineering - Journal for Extracorporeal Circulation, Assist Devices, Transplantation and Artificial Organs*, 5(1):3–10, 2000.
- [RL95] Penny Rheingans and Chris Landreth. Perceptual principles of visualization. In Georges G. Grinstein and Haim Levkowitz, editors, *Perceptual Issues in Visualization*, pages 59–73, Berlin, New York, 1995. Springer Verlag. Proceedings of the IFIP Workshop on Perceptual Issues in Visualization, 23-24 October, 1993, San Jose, California.

- [RL00] Szymon Rusinkiewicz and Marc Levoy. QSplat: A multiresolution point rendering system for large meshes. In *Proceedings of ACM SIGGRAPH 2000*, Computer Graphics Proceedings, Annual Conference Series, pages 343–352, July 2000.
- [RN96] David Rossiter and Wai-Yin Ng. A system for the complementary visualization of 3D volume images using 2D and 3D binaurally processed sonification representations. In Roni Yagel and Gregory M. Nielson, editors, *Proceedings of Visualization '96*, pages 351–354. IEEE, October 1996.
- [RO86] P. K. Robertson and J. F. O'Callaghan. The generation of color sequences for univariate and bivariate mapping. *IEEE Computer Graphics and Applications*, 6(2):24–32, February 1986.
- [Rob91] Philip K. Robertson. A methodology for choosing data representation. *IEEE Computer Graphics and Applications*, 11(3):56–67, May 1991.
- [RP96] Martin Roth and Ronald Peikert. Flow visualization for turbomachinery design. In Roni Yagel and Gregory M. Nielson, editors, *Proceedings of Visualization '96*, pages 381–384. IEEE, October 1996.
- [RP98] Martin Roth and Ronald Peikert. A higher-order method for finding vortex core lines. In David Ebert, Hans Hagen, and Holly Rushmeier, editors, *Proceedings of Visualization '98*, pages 143–150. IEEE, Computer Society Press, October 1998.
- [RSE99] Randall M. Rohrer, John Sibert, and David S. Ebert. A shape-based visual interface for text retrieval. *IEEE Computer Graphics and Applications*, 19(5):40–46, September 1999.
- [RSEB<sup>+</sup>00] C. Rezk-Salama, K. Engel, M. Bauer, G. Greiner, and T. Ertl. Interactive volume rendering on standard PC graphics hardware using multi-textures and multi-stage rasterization. In *Proc. SIGGRAPH/Eurographics Graphics Hardware Workshop 2000*, pages 109–118. Addison-Wesley Publication Company Inc., 2000. URL: <http://wwwvis.informatik.uni-stuttgart.de/ger/research/pub/pub2000/vis00-roettger.pdf>.
- [RSHTE99] C. Rezk-Salama, P. Hastreiter, C. Teitzel, and T. Ertl. Interactive exploration of volume line integral convolution based on 3D-texture mapping. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 233–240. IEEE, October 1999.
- [RSZ94] E. A. Rakhmanov, E. B. Saff, and Y. M. Zhou. Minimal discrete energy on the sphere. *Mathematical Research Letters*, 1(6):647–662, November 1994.

- [RT90] Penny Rheingans and Brice Tebbs. A tool for dynamic exploration of color mappings. *Computer Graphics*, 24(2):146–147, March 1990.
- [SAH00] William J. Schroeder, Lisa S. Avila, and William Hoffman. Visualizing with VTK: A tutorial. *IEEE Computer Graphics and Applications*, 20(5):20–27, September 2000.
- [SAI<sup>+</sup>92] Robert C. Schlant, Robert J. Adolph, John P. D. Imarco, Leonard S. Dreifus, Marvin I. Dunn, Charles Fisch, Arthur Garson Jr., Julian Haywood, Herbert J. Levine, John A. Murray, R. Joe Noble, and James A. Ronan. Guidelines for electrocardiography - a report of the American College of Cardiology/American Heart Association task force on assessment of diagnostic and therapeutic cardiovascular procedures (committee on electrocardiography). *Journal of the American College of Cardiology*, 19(3):473–481, March 1992. URL: <http://www.acc.org/clinical/guidelines/electro/preamble.htm>.
- [SB85] Samuel Sideman and Rafael Beyar, editors. *Simulation and Imaging of the Cardiac System*. Martinus Nijhoff Publishers, Dordrecht, Netherlands, 1985.
- [SB99] David D. Stark and William G. Bradley, Jr. *Magnetic Resonance Imaging*, volume 1. Mosby, St. Louis, Missouri, 3<sup>rd</sup> edition, 1999.
- [SBA<sup>+</sup>01] Stig A. Slørdahl, Steinar Bjærum, Brage H. Amundsen, Asbjørn Støylen, Andreas Heimdal, Stein Inge Rabben, and Hans Torb. High frame rate strain rate imaging of the interventricular septum in healthy subjects. *European Journal of Ultrasound*, 14(2–3):149–155, December 2001.
- [SBGS69] R. A. Schumacker, R. Brand, M. Gilliland, and W. Sharp. Study for applying computer-generated images to visual simulation. Technical Report AFHRL-TR-69-14, U.S. Air Force Human Resource Laboratory, 1969.
- [SBH99] Gerik Scheuermann, Holger Burbach, and Hans Hagen. Visualizing planar vector fields with normal component using line integral convolution. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 255–261. IEEE, October 1999.
- [SBM<sup>+</sup>94] Mark A. Sagar, David Bullivant, Gordon D. Mallinson, Peter J. Hunter, and Ian W. Hunter. A virtual environment and model of the eye for surgical simulation. In Andrew Glassner, editor, *Proceedings of SIGGRAPH '94 (Orlando, Florida, July 24–29, 1994)*, Computer Graphics Proceedings, Annual Conference Series, pages 205–213. ACM SIGGRAPH, ACM Press, July 1994. ISBN 0-89791-667-0.

- [SBS99] Sabine Süsstrunk, Robert Buckley, and Steve Swen. Standard RGB color spaces. In *Proceedings of IS&T/SID's 7th Color Imaging Conference*, pages 127–134, 1999. URL: <http://lcavwww.epfl.ch/~sabines/127.pdf>.
- [Sch] Birgid Schlindwein. A hypermedia glossary of genetic terms. URL: <http://www.weihenstephan.de/~schlind/genglos.html>.
- [Sch96] Harvey Richard Schiffman. *Sensation and Perception: An Integrated Approach*. John Wiley & Sons, 4<sup>th</sup> edition, 1996.
- [Sci] Scientific Computing and Imaging Institute (SCI). BioTensor software tutorial. URL: <http://software.sci.utah.edu/doc/User/Tutorials/BioTensor/BioTensor.html>.
- [SDd<sup>+</sup>97] Adam E. Schussheim, Richard B. Devereux, Giovanni de Simone, Jeffrey S. Borer, Edmund McM. Herrold, and John H. Laragh. Usefulness of subnormal midwall fractional shortening in predicting left ventricular exercise dysfunction in asymptomatic patients with systemic hypertension. *The American Journal of Cardiology*, 79(8):1065–1074, April 1997.
- [SE00] Erik Stålberg and Hacer Erdem. Nerve conductive studies. *Journal on Neurological Sciences (Turkish)*, 17(2), April 2000. URL: <http://www.med.ege.edu.tr/~norobil/2000/NBD10900.html>.
- [SH95] Detlev Stalling and Hans-Christian Hege. Fast and resolution independent line integral convolution. In *Computer Graphics Proceedings (SIGGRAPH '95)*, pages 249–256, 1995.
- [SHB<sup>+</sup>99] C. Shaw, J. Hall, C. Blahut, D. Ebert, and D Roberts. Using shape to visualize multivariate data. In *CIKM'99 Workshop on New Paradigms in Information Visualization and Manipulation*. ACM Press, November 1999. URL: <http://www.cs.umbc.edu/~ebert/papers/npiv99.ps>.
- [She98] Han-Wei Shen. Isosurface extraction in time-varying fields using a temporal hierarchical index tree. In David Ebert, Hans Hagen, and Holly Rushmeier, editors, *Proceedings of Visualization '98*, pages 159–166. IEEE, Computer Society Press, October 1998.
- [SHK<sup>+</sup>97] Gerik Scheuermann, Hans Hagen, Heinz Krüger, Martin Menzel, and Alyn Rockwood. Visualization of higher order singularities in vector fields. In Roni Yagel and Hans Hagen, editors, *Proceedings of Visualization '97*, pages 67–74. IEEE, 1997.
- [Sho94] Ken Shoemake. Arcball rotation control. In Paul S. Heckbert, editor, *Graphic Gems IV*, chapter 3, pages 175–192. Academic Press, Cambridge, MA 02139, 1994.

- [SHS<sup>+</sup>01] F. B. Sachse, C. Henriquez, G. Seemann, C. Riedel, C. D. Werner, R. C. Penland, B. Davis, and E. Hsu. Modeling of fiber orientation in the ventricular myocardium with MR diffusion imaging. In *Proceedings of Computers in Cardiology*, volume 28, pages 617–620, Rotterdam, Netherlands, 23-26 September 2001, September 2001.
- [SHSS00] Philip M. Sutton, Charles D. Hansen, Han-Wei Shen, and Dan Schikore. A case study of isosurface extraction algorithm performance. In W. de Leeuw and R. van Liere, editors, *Data Visualization 2000 (Proceedings of the Joint EUROGRAPHICS and IEEE TCVG Symposium on Visualization, Amsterdam, Netherlands, May 29–31 2000)*, pages 259–268, 2000.
- [SHWF98] D. F. Scollan, Alex Holmes, Raimond Winslow, and John Forder. Histological validation of myocardial microstructure obtained from diffusion tensor magnetic resonance imaging. *American Journal of Physiology*, 275(6):H2308–2318, December 1998.
- [Sil95] Deborah Silver. Object-oriented visualization. *IEEE Computer Graphics and Applications*, 15(3):54–62, May 1995.
- [SJM96] Han-Wei Shen, Christopher R. Johnson, and Kwan-Liu Ma. Visualizing vector fields using line integral convolution and dye advection. ICASE report no. 96-67, Institute for Computer Applications in Science and Engineering, NASA Langley Research Center, Hampton, VA, December 1996. A later version of this article has been published in the Proceedings of the 1996 Symposium of Volume Visualization, pages 63–70, IEEE Computer Society Press, Los Alamitos, CA, 1996, URL: <ftp://ftp.icase.edu/pub/techreports/96/96-67.ps.Z>.
- [SK90] Don Speray and Steve Kennon. Volume probes: Interactive data exploration on arbitrary grids. *Computer Graphics*, 24(5):5–12, 1990.
- [SK94] Lisa M. Sobierajski and Arie E. Kaufman. Volumetric ray tracing. In Arie Kaufman and Wolfgang Krueger, editors, *1994 Symposium on Volume Visualization*, pages 11–18. ACM SIGGRAPH, October 1994. ISBN 0-89791-741-3.
- [SK97a] E. B. Saff and A. B. J. Kuijlaars. Distributing many points on a sphere. *The Mathematical Intelligencer*, 19(1):5–11, 1997.
- [SK97b] Han-Wei Shen and David L. Kao. UFLIC: A line integral convolution algorithm for visualizing unsteady flows. In Roni Yagel and Hans Hagen, editors, *Proceedings of Visualization '97*, pages 317 –328. IEEE, Computer Society Press, 1997.
- [SK98] Han-Wei Shen and David L. Kao. A new line integral convolution algorithm for visualizing time-varying flow fields. *IEEE Transactions*

- on Visualization and Computer Graphics*, 4(2), April 1998. ISSN 1077-2626.
- [SKMR98] Gerik Scheuermann, Heinz Krüger, Martin Menzel, and Alyn Rockwood. Visualizing nonlinear vector field topology. *IEEE Transactions on Visualization and Computer Graphics*, 4(2):109–116, April 1998.
- [SL82] Kathryn T. Spoehr and Stephen W. Lehmkuhle. *Visual Information Processing*. W. H. Freeman and Company, 1982.
- [SLNI00] Stefan Skare, Tie-Qiang Li, Bo Nordell, and Martin Ingvar. Noise considerations in the determination of diffusion tensor anisotropy. *Magnetic Resonance Imaging*, 18(6):659–669, July 2000.
- [SML96a] Will Schroeder, Ken Martin, and Bill Lorensen. *The Visualization Toolkit: An Object-Oriented Approach to 3D Graphics*. Prentice Hall PTR, Upper Saddle River, New Jersey 07458, 1996.
- [SML96b] William J. Schroeder, Kenneth M. Martin, and William E. Lorensen. The design and implementation of an object-oriented toolkit for 3D graphics and visualization. In Roni Yagel and Gregory M. Nielson, editors, *Proceedings of Visualization '96*, pages 93–100. IEEE, October 1996.
- [SMP98] Veridiana C. L. Salvador, Rosane Minghim, and Magnus L. Pacheco. Sonification to support visualization tasks. In Luciano da Fontoura Costa and Gilberto Câmara, editors, *Proceeding of the International Symposium on Computer Graphics, Image Processing, and Vision (SIBGRAPI '98)*, pages 150–157. IEEE Computer Society, 1998.
- [SPC<sup>+</sup>01] Albert J. Sinusas, Xenophon Papademetris, R. Todd Constable, Donald P. Dione, Martin D. Slade, Pengcheng Shi, and James S. Duncan. Quantification of 3-D regional myocardial deformation: shape-based analysis of magnetic resonance images. *American Journal of Physiology*, 281(2):H698–H714, August 2001. URL: <http://ajpheart.physiology.org/cgi/content/full/281/2/H698>.
- [SPH<sup>+</sup>96] Meiyappan Solaiyappan, Tim Poston, Pheng Ann Heng, Elliot R. McVeigh, Michael A. Guttman, and Elias A. Zerhouni. Interactive visualization for rapid noninvasive cardiac assessment. *Computer*, 29(1):55–62, January 1996.
- [Spi] Bill Spitzak. The FLTK home page. URL: <http://www.fltk.org>.
- [SPU98] Qin Shen, Alex Pang, and Sam Uselton. Data level comparison of wind tunnel and computational fluid dynamics data. In David Ebert, Hans Hagen, and Holly Rushmeier, editors, *Proceedings of Visualization '98*, pages 415–418. IEEE, Computer Society Press, October 1998.

- [SSF<sup>+</sup>99] M. Stuber, M. B. Scheidegger, S. E. Fischer, E. Nagel, F. Steinemann, O. M. Hess, and B. Boesiger. Alterations in the local myocardial motion pattern in patients suffering from pressure overload due to aortic stenosis. *Circulation*, 100(4):361–368, July 1999.
- [SSM<sup>+</sup>87] U. Sechtem, B. A. Sommerhoff, W. Morkiewicz, R. D. White, M. D. Cheitlin, and C. B. Higgins. Regional left ventricular wall thickening by MRI: evaluation in normal persons and patients with global and regional dysfunction. *The American Journal of Cardiology*, 59(1):145–151, January 1987.
- [SSW<sup>+</sup>96] Dieter H. Szolar, Maythem Saeed, Michael F. Wendland, Hajime Sakuma, Timothy P. L. Roberts, Michael A. Stiskal, Nikita Derugin, and Charles B. Higgins. MR imaging characterization of postischemic myocardial dysfunction (“stunned myocardium”): Relationship between functional and perfusion abnormalities. *Journal of Magnetic Resonance Imaging*, 6(4):615–624, July 1996.
- [SSZC94] Ravi Samtaney, Deborah Silver, Norman Zabusky, and Jim Cao. Visualizing features and tracking their evolution. *IEEE Computer*, 27(7):20–27, July 1994.
- [ST90] Takafumi Saito and Tokiichiro Takahashi. Comprehensible rendering of 3-D shapes. *Computer Graphics (Proceedings of SIGGRAPH '90)*, 24(4):197–206, August 1990.
- [STH99] Gerik Scheuermann, Xavier Tricoche, and Hans Hagen. C1-interpolation for vector field topology visualization. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 271–278. IEEE, October 1999.
- [STH03] Chris Stolte, Diane Tang, and Pat Hanrahan. Multiscale visualization using data cubes. *IEEE Transactions on Visualization and Computer Graphics*, 9(2):176–187, April 2003.
- [Sto00] Maureen Stone. A survey of color for computer graphics, 2000. Course notes #10, SIGGRAPH 2000.
- [Sun03] Andreas Sundquist. Dynamic line integral convolution for visualizing streamline evolution. *IEEE Transactions on Visualization and Computer Graphics*, 9(3):273–282, July 2003. URL: <http://evangelion.mit.edu/FieldLineMotionPapers/DLICArticle.pdf>.
- [Sv92] J. Stolk and J. J. van Wijk. Surface particles for 3D flow visualization. In F. H. Post and A. J. S. Hin, editors, *Advances in Scientific Visualization*, pages 119–130. Springer Verlag, Berlin, 1992.

- [SVL91] W. J. Schroeder, C. R. Volpe, and W. E. Lorensen. The stream polygon: A technique for 3D vector field visualization. In Gregory M. Nielson and Larry Rosenblum, editors, *Proceedings of Visualization '91*, pages 126–132, Los Alamitos, California, 1991. IEEE.
- [SW93] Jan Strackee and Nico Westerhof. *The Physics of Heart and Circulation*. Institute of Physics Publishing, Redcliffe Way, Bristol BS1 6NX, UK, 1993.
- [SW97] Deborah Silver and Xin Wang. Tracking and visualizing turbulent 3D features. *IEEE Transactions on Visualization and Computer Graphics*, 3(2):129–141, April 1997.
- [SW98] Deborah Silver and Xin Wang. Tracking scalar features in unstructured grids. In David Ebert, Hans Hagen, and Holly Rushmeier, editors, *Proceedings of Visualization '98*, pages 79–86. IEEE, Computer Society Press, October 1998.
- [SZ93] D. Silver and N. J. Zabusky. Quantifying visualizations for reduced modeling in nonlinear science: Extracting structures from data sets. *Journal of Visual Communication and Image Representation*, 4(1):46–61, March 1993.
- [SZH97] Detlev Stalling, Malte Zöckler, and Hans-Christian Hege. Fast display of illuminated field lines. *IEEE Transactions on Visualization and Computer Graphics*, 3(2):118–128, April 1997.
- [SZP<sup>+</sup>00] Rajeev Sharma, Michael Zeller, Vladimir I. Pavlovic, Thomas S. Huang, Zion Lo, Stephen Chu, Yunxin Zhao, James C. Phillips, and Klaus Schulten. Speech/gesture interface to a visual-computing environment. *IEEE Computer Graphics and Applications*, 20(2):29–37, March 2000.
- [Tab01] Larry A. Taber. Biomechanics of cardiovascular development. *Annual Reviews of Biomedical Engineering*, 3:1–25, 2001.
- [TB96] Greg Turk and David Banks. Image-guided streamline placement. In Holly Rushmeier, editor, *Proceedings of SIGGRAPH '96*, Annual Conference Series, pages 453–460. ACM SIGGRAPH, Addison Wesley, August 1996. Held in New Orleans, Louisiana, 4–9 August 1996.
- [TCS94] Ray Twiddy, John Cavallo, and Shahram M. Shiri. Restorer: A visualization technique for handling missing data. In R. Daniel Bergeron and Arie E. Kaufman, editors, *Proceedings of Visualization '94*, pages 212–216. IEEE, 1994.
- [Tex] Texas Heart Institute. Anatomy of the human heart. URL: <http://www.tmc.edu/thi/anatomy.html>.

- [TL93] Takashi Totsuka and Marc Levoy. Frequency domain volume rendering. In James T. Kajiya, editor, *Computer Graphics (SIGGRAPH '93 Proceedings)*, volume 27, pages 271–278, August 1993.
- [TLHD03] Yiyang Tong, Santiago Lombeyda, Anil N. Hirani, and Mathieu Desbrun. Discrete multiscale vector field decomposition. *ACM Transactions on Graphics - Proceedings of ACM SIGGRAPH 2003*, 22(3):445–452, July 2003.
- [TM98] Chi-Keung Tang and Gérard Medioni. Extremal feature extraction from 3-D vector and noisy scalar fields. In David Ebert, Hans Hagen, and Holly Rushmeier, editors, *Proceedings of Visualization '98*, pages 95–102. IEEE, Computer Society Press, October 1998.
- [TM01] Clare M. C. Tempny and Barbara J. McNeil. Advances in biomedical imaging. *The Journal of the American Medical Association*, 285(5):556–561, February 2001. URL: <http://jama.ama-assn.org/issues/v285n5/ffull/jsc00355.html>.
- [TNBT01] Paul M. Thompson, Katherine L. Narr, Rebecca E. Blanton, and Arthur W. Toga. *The Corpus Callosum*, chapter 6 - Mapping Structural Alterations of the Corpus Callosum during Brain Development and Degeneration. Kluwer Academic Press, The Netherlands, 2001. Eran Zaidel and Marco Iacoboni, editors, URL: [http://www.loni.ucla.edu/~thompson/MarcoChpt/MarcoChpt\\_full.html](http://www.loni.ucla.edu/~thompson/MarcoChpt/MarcoChpt_full.html).
- [TRW<sup>+</sup>02] David S. Tuch, Timothy G. Reese, Mette R. Wiegell, Nikos Makris, John W. Belliveau, and J. van Wedeen. High angular resolution diffusion imaging reveals intravoxel white matter fiber heterogeneity. *Magnetic Resonance in Medicine*, 48(4):577–582, October 2002.
- [Tuc97] Allen B. Tucker, Jr., editor. *The Computer Science and Engineering Handbook*. CRC Press Inc., 2000 Corporate Blvd., N.W., Boca Raton, Florida 33431, 1997.
- [Tuf83] Edward R. Tufte. *The Visual Display of Quantitative Information*. The Graphics Press, Cheshire, Connecticut, 1983.
- [Tur91] Greg Turk. Generating textures on arbitrary surfaces using reaction-diffusion. *Computer Graphics*, 25(4):289–298, 1991.
- [Tur92] Greg Turk. Re-tiling polygonal surfaces. In Edwin E. Catmull, editor, *Computer Graphics (SIGGRAPH '92 Proceedings)*, volume 26, pages 55–64, July 1992.
- [Tv99] Alexandru Telea and Jarke J. van Wijk. Simplified representation of vector fields. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 35–42. IEEE, October 1999.

- [Tv00] Alexandru Telea and Jarke J. van Wijk. SMARTLINK: an agent for supporting dataflow application construction. In W. de Leeuw and R. van Liere, editors, *Data Visualization 2000 (Proceedings of the Joint EUROGRAPHICS and IEEE TCVG Symposium on Visualization, Amsterdam, Netherlands, May 29–31 2000)*, pages 189–198, 2000.
- [UFK<sup>+</sup>89] Craig Upson, Thomas A. Faulhaber Jr., David Kamins, David Laidlaw, David Schlegel, Jeffrey Vroom, Robert Gurwits, and Andries van Dam. The application visualization system: A computational environment for scientific visualization. *IEEE Computer Graphics and Applications*, 9(4):30–42, July 1989.
- [Unia] University of Cambridge. Maths thesaurus. URL: <http://thesaurus.maths.org>.
- [Unib] University of Tasmania, Department of Physiology. The electrical conduction system of the heart. URL: <http://www.healthsci.utas.edu.au/physiol/tute2/rm11.html>.
- [Unic] University of Utah. Hyperbrain - glossary of terms. URL: <http://medstat.med.utah.edu/kw/hyperbrain/glossary/glosstop.html>.
- [UNM01] UNM Ltd. Myocardial perfusion imaging, 2001. URL: <http://www.nucmednet.com/featured.htm>.
- [Unt03] Joseph L. Unthank. Lecture notes: T551: Systems Approach to Biomedical Sciences I - Cardiovascular Module, 2003. Departments of Surgery, and Physiology and Biophysics, Indiana University School of Medicine, URL: <http://www.iuvascular.com/Unthank/Teach/dental/ho-arteries.pdf>.
- [USM95] Shyh-Kuang Ueng, Christopher Sikorski, and Kwan-Liu Ma. Fast algorithms for visualizing fluid motion in steady flow on unstructured grids. In Gregory M. Nielson and Deborah Silver, editors, *Proceedings of Visualization '95*, pages 313–320. IEEE, 1995.
- [USM96] Shyh-Kuang Ueng, Christopher Sikorski, and Kwan-Liu Ma. Efficient streamline, streamribbon, and streamtube constructions on unstructured grids. *IEEE Transactions on Visualization and Computer Graphics*, 2(2):101–111, June 1996.
- [vAIC99] Johanna E. van der Heyden, M. Stella Atkins, Kori Inkpen, and M. Sheelagh Carpendale. Visual presentation of magnetic resonance images. In *Proceedings of SPIE International Symposium on Medical Imaging 1999*, pages 370 – 381. IEEE, Computer Society Press, February 1999.

- [van91] Jarke J. van Wijk. Spot noise: Texture synthesis for data visualization. *Computer Graphics Proceedings of SIGGRAPH '91*, 25(4):309–318, July 1991.
- [van93a] Jarke J. van Wijk. Flow visualization with surface particles. *IEEE Computer Graphics and Applications*, 13(4):18–24, July 1993.
- [van93b] Jarke J. van Wijk. Implicit stream surfaces. In G. M. Nielson and D. Bergeron, editors, *Proceedings of Visualization '93*, pages 245–252, Los Alamitos, California, 1993. IEEE, Computer Society Press.
- [vCIA98] J. E. van der Heyden, M. S. T. Carpendale, K. Inkpen, and M. S. Atkins. Visual presentation of magnetic resonance images. In David Ebert, Hans Hagen, and Holly Rushmeier, editors, *Proceedings of Visualization '98*, pages 423–426. IEEE, Computer Society Press, October 1998.
- [vHdP94] Jarke J. van Wijk, Andrea J. S. Hin, Willem C. de Leeuw, and Frits H. Post. Three ways to show 3D fluid flow. *IEEE Computer Graphics and Applications*, 14(5):33–39, September 1994.
- [VKP99] Vivek Verma, David Kao, and Alex Pang. PLIC: Bridging the gap between streamlines and LIC. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 341–348. IEEE, October 1999.
- [Vol89] G. Volpe. Streamlines and streamribbons in aerodynamics. In *AIAA 27th Aerospace Science Meeting, Reno, Nevada*, AIAA paper 89-0140, January 1989.
- [VPC<sup>+</sup>96] Albert Varga, Eugenio Picano, Lauro Cortigiani, Nunzia Petix, Franca Margaria, Ornella Magaia, Joanna Heyman, Riccardo Bigi, Wilson Mathias, Jr., Guido Gigli, Patrizia Lani, Mauro Raciti, Alessandro Pngitore, and Rosa Sicari. Does stress echocardiography predict the site of future myocardial infarction. *The American Journal of Cardiology*, 28(1):45–51, July 1996.
- [vR99] Rob J. van der Geest and Johan H. C. Reiber. Quantification in cardiac MRI. *Journal of Magnetic Resonance Imaging*, 10(5):602–608, November 1999. Special Issue: Cardiovascular MRI.
- [vvd<sup>+</sup>91] Paul R. M. van Dijkman, Ernst E. van der Wall, Albert de Ross, Niels A. A. Matheijsen, Albert C. van Rossum, Joost Doornbos, Arnoud van der Laarse, Ad E. van Voorthuisen, and Albert V. G. Bruschke. Acute, subacute, and chronic myocardial infarction: Quantitative analysis of gadolinium-enhanced MR images. *Radiology*, 180(1):147–151, July 1991.

- [vW92] Allen van Gelder and Jane Wilhelms. Interactive animated visualization of flow fields. In *Workshop on Volume Visualization*, pages 47–54, New York, October 1992. ACM.
- [vW94] Allen van Gelder and Jane Wilhelms. Topological considerations in isosurface generation. *ACM Transactions on Graphics*, 13(4):337–375, October 1994.
- [Wal91] A. Wallin. Constructing isosurfaces from CT data. *IEEE Computer Graphics and Applications*, 11(6):28–33, November 1991.
- [Wan] Brian A. Wandell. Useful numbers in vision science. URL: <http://white.stanford.edu/html/numbers/numbers.html>.
- [Wan99] Brian A. Wandell. Computational neuroimaging of human visual cortex. *Annual Review of Neuroscience*, 10(22):145–173, 1999. URL: <ftp://white.stanford.edu/users/brian/mri/ar99.pdf>.
- [War88] Colin Ware. Color sequences for univariate maps: Theory, experiments, and principles. *IEEE Computer Graphics and Applications*, 8(5):41–49, September 1988.
- [War94] Matthew O. Ward. XmdvTool: Integrating multiple methods for visualizing multivariate data. In R. Daniel Bergeron and Arie E. Kaufman, editors, *Proceedings of Visualization '94*, pages 326–333. IEEE, 1994.
- [WB96] Pak Chung Wong and R. Daniel Bergeron. Multiresolution multidimensional wavelet brushing. In Roni Yagel and Gregory M. Nielson, editors, *Proceedings of Visualization '96*, pages 141–148. IEEE, October 1996.
- [WB97] Pak Chung Wong and R. Daniel Bergeron. Brushing techniques for exploring volumetric datasets. In Roni Yagel and Hans Hagen, editors, *Proceedings of Visualization '97*, pages 429–432. IEEE, 1997.
- [WCEI97] R. Willenheimer, C. Cline, L. Erhardt, and B. Israelsson. Left ventricular atrioventricular plane displacement: an echocardiographic technique for rapid assessment of prognosis in heart failure. *Heart*, 78(3):230–236, September 1997.
- [WCG00] Colin Ware, Ed H. Chi, and Rich Gossweiler. Visual perception for data visualization (tutorial for CHI 2000). In *Proceedings of the Human Factor in Computing Systems Conference (CHI 2000)*, Amsterdam, Netherlands, April 2000. URL: <http://www-users.cs.umn.edu/~echi/tutorial/perception2000/>.
- [WCL<sup>+</sup>92] S. Warach, D. Chien, W. Li, M. Ronthal, and R. R. Edelman. Fast magnetic resonance diffusion-weighted imaging of acute human stroke. *Neurology*, 42(9):1717–1723, September 1992. (published erratum appears in Neurology 1992 Nov;42(11):2192).

- [Web02] Merriam Webster. Medical dictionary, 2002. URL: <http://www.intellicheck.com/IH/ihtIH/WSIHW000/9276/9276.html>.
- [Wei] Eric W. Weisstein. Eric Weisstein's world of Mathematics - A Wolfram Web Resource. Hosted by Wolfram Research Inc., URL: <http://mathworld.wolfram.com>.
- [Wei97] Daming Wei. Whole-heart modeling: progress, principles and applications. *Progress in Biophysics and Molecular Biology*, 67(1):17–66, 1997.
- [Wei99] Ralph Weissleder. Molecular imaging: exploring the next frontier. *Radiology*, 212(3):609–614, September 1999. URL: <http://radiology.rsna.org/cgi/content/full/212/3/609>.
- [WEL<sup>+</sup>00] Christopher Weigle, William G. Emigh, Geniva Liu, Russell M. Taylor, James T. Enns, and Christopher G. Healey. Oriented sliver textures: A technique for local value estimation of multiple scalar fields. In *Proceedings of Graphics Interface 2000*, 2000. URL: <http://www.graphicsinterface.org/proceedings/2000/137/>.
- [Wes91] Lee Westover. *SPLATTING: A Parallel, Feed-Forward Volume Rendering Algorithm*. PhD thesis, University of North Carolina, Chapel Hill, 1991. Also available as Dept. of Computer Science Tech. Report TR91-029, URL: <ftp://ftp.cs.unc.edu/pub/publications/techreports/91-029.ps.tar.Z>.
- [WF01] Michael Wagner and Manfred Fuchs. Integration of functional MRI, structural MRI, EEG, and MEG. *International Journal of Bioelectromagnetism*, 3(1), March 2001. URL: <http://www.ee.tut.fi/rigi/ijbem/volume3/number1/pdf/wagner.pdf>.
- [WFL<sup>+</sup>00] Pak Chung Wong, Harlan Foote, Ruby Leung, Dan Adams, and Jim Thomas. Data signatures and visualization of scientific data sets. *IEEE Computer Graphics and Applications*, 20(2):12–15, March 2000.
- [WG97] Rainer Wegenkittl and Eduard Gröller. Fast oriented line integral convolution for vector field visualization via the internet. In Roni Yagel and Hans Hagen, editors, *Proceedings of Visualization '97*, pages 309–316. IEEE, Computer Society Press, 1997.
- [WGP97] Rainer Wegenkittl, Eduard Gröller, and Werner Purgathofer. Animating flow fields: Rendering of oriented line integral convolution. In *Proceedings of Computer Animation '97*, pages 15–21. IEEE, Computer Society Press, June 1997.
- [WH94] Andrew P. Witkin and Paul S. Heckbert. Using particles to sample and control implicit surfaces. In *Computer Graphics (Proceedings of SIGGRAPH '94)*, pages 269–277. ACM, 1994.

- [WK95] Colin Ware and William Knight. Using visual texture for information display. *ACM Transactions on Graphics*, 14(1):3–20, January 1995.
- [WK98] Catherine Westbrook and Carolyn Kaut. *MRI in Practice*. Blackwell Science, Osney Mead, Oxford OX2 0EL, UK, 2<sup>nd</sup> edition, 1998.
- [WK00] Cun Wang and Charles E. Kahn, Jr. Potential use of extensible markup language for radiology reporting: A tutorial. *Radiographics*, 20(1):287–293, January 2000. URL: <http://radiographics.rsnajnl.org/content/vol20/issue1/>.
- [WKB99] Ming Wan, Arie Kaufmann, and Steve Bryson. High performance presence-accelerated ray casting. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 379–386. IEEE, October 1999.
- [WKL99] David Weinstein, Gordon Kindlmann, and Eric Lundberg. Tensorlines: Advection-diffusion based propagation through diffusion tensor fields. In David Ebert, Markus Gross, and Bernd Hamann, editors, *Proceedings of Visualization '99*, pages 249–253. IEEE, October 1999.
- [WL99] Burkhard C. Wünsche and Richard Lobb. A toolkit for the visualization of stress and strain tensor fields in biological tissue. In *Proceedings of VIP'99*, pages 6–15, 1999.
- [WL01a] Burkhard C. Wünsche and Richard Lobb. A scientific visualization schema incorporating perceptual concepts. In *Proceedings of IVCNZ'01*, pages 31 –36, 2001.
- [WL01b] Burkhard C. Wünsche and Richard Lobb. The visualization of diffusion tensor fields in the brain. In *Proceedings of METMBS'01*, pages 498–504. CSREA Press, 2001.
- [WL03] Burkhard C. Wünsche and Jenny Zheng Lin. An efficient and topological correct polygonisation algorithm for finite element data sets. In *Proceedings of IVCNZ '03*, pages 90 – 95, 2003.
- [WL04] Burkhard C. Wünsche and Richard Lobb. The 3D visualization of brain anatomy from diffusion-weighted magnetic resonance imaging. In *Proceedings of GRAPHITE 2004*. ANZGRAPH and SEAGRAPH, 2004. (accepted for publication).
- [WLG97] Rainer Wegenkittl, Helwig Löfleman, and Eduard Gröller. Visualizing the behaviour of higher dimensional dynamic systems. In Roni Yagel and Hans Hagen, editors, *Proceedings of Visualization '97*, pages 119–125. IEEE, Computer Society Press, 1997.

- [WLW00] Mette R. Wiegell, Henrik B. W. Larsson, and Van J. Wedeen. Fiber crossing in human brain depicted with diffusion tensor MR imaging. *Radiology*, 217(3), December 2000. URL: <http://airto.loni.ucla.edu/BMCweb/CourseWork/JournalClub/Wiegell2000.pdf>.
- [WLY04] Burkhard C. Wünsche, Richard Lobb, and Alistair A. Young. The visualization of myocardial strain for the improved analysis of cardiac mechanics. In *Proceedings of GRAPHITE 2004*. ANZGRAPH and SEAGRAPH, 2004. (accepted for publication).
- [WMFC02] Brian Wylie, Kenneth Moreland, Lee Ann Fisk, and Patricia Crossno. Tetrahedral projection using vertex shaders. In *Proceedings of the 2002 IEEE symposium on Volume visualization and graphics*, pages 7–12, 2002.
- [WMK<sup>+</sup>99] C.-F. Westin, S. E. Maier, B. Khidir, P. Everett, F. A. Jolesz, and R. Kikinis. Image processing for diffusion tensor magnetic resonance imaging. In Chris Taylor and Alan Colchester, editors, *Medical Image Computing and Computer-Assisted Intervention - MICCAI '99*, Lecture Notes in Computer Science 1679, pages 441–452, Cambridge, UK, September 1999. Springer Verlag.
- [WMN<sup>+</sup>96] K. J. Worsley, S. Marrett, P. Neelin, A. C. Vandal, K. J. Friston, and A. C. Evans. A unified statistical approach for determining significant signals in images of cerebral activation. *Human Brain Mapping*, 4:58–73, 1996.
- [WMW86] Geoff Wyvill, Craig McPheevers, and Brian Wyvill. Animating soft objects. *The Visual Computer*, 2(4):235–242, August 1986.
- [WND97] Mason Woo, Jackie Neider, and Tom Davis. *OpenGL Programming Guide*. Addison-Wesley Publication Company Inc., 3<sup>rd</sup> edition, 1997.
- [WPG<sup>+</sup>97] C.-F. Westin, S. Peled, H. Gubjartsson, R. Kikinis, and F. A. Jolesz. Geometrical diffusion measures for MRI from tensor basis analysis. In *Proceedings of ISMRM, 5th meeting*, April 1997. URL: <http://www.spl.harvard.edu:8000/pages/ppl/westin/papers/smr97/htmlversion.html>.
- [WPL96] Craig M. Wittenbrink, Alex T. Pang, and Suresh K. Lodha. Glyphs for visualizing uncertainty in vector fields. *IEEE Transactions on Visualization and Computer Graphics*, 2(3):266–279, September 1996.
- [WSC97] John (Juyang) Weng, Ajit Singh, and M. Y. Chiu. Learning-based ventricle detection from cardiac MR and CT images. *IEEE Transactions on Medical Imaging*, 16(4):378–391, August 1997.

- [WT04] Burkhard C. Wünsche and Ewan Temporo. A comparison and evaluation of interpolation methods for visualising discrete 2d survey data. In *Proceedings of the 2004 Australasian Symposium on Information Visualisation (InVis.au 2004)*, pages 1–7, 2004. Published as Information Visualisation 2004, vol. 35, ACS Conferences in Research and Practice in Information Technology (CRPIT) series.
- [WTMB99] Ralph Weissleder, Ching-Hsuan Tung, Umar Mahmood, and Alexei Bogdanov, Jr. In vivo imaging of tumors with protease-activated near-infrared fluorescent probes. *Nature Biotechnology*, 17(4):375–378, April 1999.
- [Wün97] Burkhard C. Wünsche. A survey and analysis of common polygonization methods & optimization techniques. *Machine Graphics & Vision*, 6(4):451–486, 1997.
- [Wün02] Burkhard C. Wünsche. A field data structure for improved interactive exploration of scientific data sets. In *Proceedings of IVCNZ '02*, pages 13–18, 2002.
- [Wün03a] Burkhard C. Wünsche. A toolkit for visualizing biomedical data sets. In *Proceedings of GRAPHITE 2003*, pages 167–174. ANZGRAPH and SEAGRAPH, 2003.
- [Wün03b] Burkhard C. Wünsche. The visualization and measurement of left ventricular deformation. In *Proceedings of APBC '03, The First-Asia Pacific Bioinformatics Conference*, pages 119–128, 2003. Published as Bioinformatics 2003, vol. 19, ACS Conferences in Research and Practice in Information Technology (CRPIT) series, <http://crpit.com/confpapers/CRPITV19Wuensche.pdf>.
- [Wün04a] Burkhard C. Wünsche. Advanced texturing techniques for the effective visualization of neuroanatomy from diffusion tensor imaging data. In *Proceedings of the Second Asia-Pacific Bioinformatics Conference (APBC '04)*, pages 303–308, 2004. Published as Bioinformatics 2004, vol. 29, ACS Conferences in Research and Practice in Information Technology (CRPIT) series, <http://crpit.com/confpapers/CRPITV29Wuensche.pdf>.
- [Wün04b] Burkhard C. Wünsche. A survey, classification and analysis of perceptual concepts and their application for the effective visualisation of complex information. In *Proceedings of the 2004 Australasian Symposium on Information Visualisation (InVis.au 2004)*, pages 17–24, 2004. Published as Information Visualisation 2004, vol. 35, ACS Conferences in Research and Practice in Information Technology (CRPIT) series.
- [Wv92] Jane Wilhelms and Allan van Gelder. Octrees for faster isosurface generation. *ACM Transactions on Graphics*, 11(3):201–227, July 1992.

- [WvTG96] Jane Wilhelms, Allen van Gelder, Paul Tarantino, and Jonathan Gibbs. Hierarchical and parallelizable direct volume rendering for irregular and multiple grids. In Roni Yagel and Gregory M. Nielson, editors, *Proceedings of Visualization '96*, pages 57–64. IEEE, October 1996.
- [WWB97] Jason D. Wood, Helen Wright, and Ken W. Brodlie. Collaborative visualization. In Roni Yagel and Hans Hagen, editors, *Proceedings of Visualization '97*, pages 253–260. IEEE, November 1997. ISBN 0-58113-011-2.
- [WWG<sup>+</sup>99] Simon K. Warfield, Carl-Fredrik Westin, Charls R. G. Guttmann, Marilyn Albert, Ferenc A. Jolesz, and Ron Kikinis. Fractional segmentation of white matter. In Chris Taylor and Alan Colchester, editors, *Medical Image Computing and Computer-Assisted Intervention - MICCAI '99*, Lecture Notes in Computer Science 1679, pages 62–71, Cambridge, UK, September 1999. Springer Verlag.
- [WWH01] Douglas J. Wagenaar, Ralph Weissleder, and Arne Hengerer. Glossary of molecular imaging terminology. *Academic Radiology*, 8(5):409–420, May 2001. URL: [http://www.academicroadiology.com/AR\\_2001/May01/5c050100409p.PDF](http://www.academicroadiology.com/AR_2001/May01/5c050100409p.PDF).
- [WY03] Burkhard C. Wünsche and Alistair A. Young. The visualization and measurement of left ventricular deformation using finite element models. *Journal of Visual Languages and Computing - Special Issue on Biomedical Visualization for Bioinformatics*, 14(4):299–326, August 2003.
- [XMSD02] Dongrong Xu, Susumu Mori, Dinggang Shen, and Christos Davatzikos. Statistically-based reorientation of diffusion tensor fields. In *Proceedings of the IEEE Symposium on Biomedical Imaging*, pages 757–760, Washington D.C., 7–10 July, July 2002. URL: [http://oasis.rad.upenn.edu/~dgshen/papers/Dongrong\\_ISBI2002.pdf](http://oasis.rad.upenn.edu/~dgshen/papers/Dongrong_ISBI2002.pdf).
- [XvC<sup>+</sup>99] Rong Xue, Peter C. M. van Zijl, Barbara J. Crain, Meiyappan Solaippan, and Susumu Mori. In vivo three-dimensional reconstruction of rat brain axonal projections by diffusion tensor imaging. *Magnetic Resonance in Medicine*, 42(6):1123–1127, December 1999.
- [XZ00] Yingcai Xiao and John P. Ziebarth. FEM-based scattered data modeling and visualization. *Computers & Graphics*, 24(5):775–789, October 2000.
- [YA92] Alistair A. Young and Leon Axel. Three-dimensional motion and deformation of the heart wall: Estimation with spatial modulation of magnetization - a model-based approach. *Radiology*, 185:241–247, 1992.

- [YAD<sup>+</sup>93] Alistair A. Young, Leon Axel, Lawrence Dougherty, Daniel K. Bogen, and C. S. Parenteau. Validation of tagging with MR imaging to estimate material deformation. *Radiology*, 188, 1993.
- [YAH<sup>+</sup>00] Qing Yuan, Leon Axel, Eduardo H. Hernandez, Lawrence Dougherty, James J. Pilla, Craig H. Scott, Victor A. Ferrari, and Aaron S. Blom. Cardiac-respiratory gating method for magnetic resonance imaging of the heart. *Magnetic Resonance in Medicine*, 43(2):314–318, February 2000.
- [YDP<sup>+</sup>00] A. A. Young, S. Dokos, K. A. Powell, B. Sturm, A. D. McCulloch, R. C. Starling, P. M. McCarthy, and R. D. White. Regional heterogeneity of function in nonischemic dilated cardiomyopathy. *Cardiovascular Research*, 49(2):308–318, February 2000.
- [Yet89] A. L. Yettram, editor. *Material properties and stress analysis in biomechanics*. Manchester University Press, 1989.
- [YICA94] Alistair A. Young, Hitoshi Imai, Cheng-Ning Chang, and Leon Axel. Two-dimensional left ventricular deformation during systole using magnetic resonance imaging with spatial modulation of magnetization. *Circulation*, 89(2):740–752, February 1994.
- [Yin85] Frank C. P. Yin, editor. *Ventricular/Vascular Coupling*. Springer Verlag, New York, 1985.
- [YKDA95] Alistair A. Young, Dara L. Kraitchman, Lawrence Dougherty, and Leon Axel. Tracking and finite element analysis of stripe deformation in magnetic resonance tagging. *IEEE Transactions on Medical Imaging*, 14(3):413–421, September 1995.
- [YKF<sup>+</sup>94] Alistair A. Young, Christopher M. Kramer, Victor A. Ferrari, Leon Axel, and Nathaniel Reichek. Three-dimensional left ventricular deformation in hypertrophic cardiomyopathy. *Circulation*, 90(2):854–867, August 1994.
- [YKMF00] Guang-Zhong Yang, Philip J. Kilner, Raad H. Mohiaddin, and David N. Firmin. Transient streamlines: texture synthesis for in vivo flow visualization. *The International Journal of Cardiac Imaging*, 16(3):175–184, June 2000. URL: <http://www.doc.ic.ac.uk/~gzy/pub/cardiac-imaging.pdf>.
- [YM95] Boris Yamrom and Kenneth M. Martin. Vector field animation with texture maps. *IEEE Computer Graphics and Applications*, 15(2):22–24, March 1995.
- [You00] Alistair A. Young. Personal communication, 17th March 2000.

- [You02] Alistair A. Young. Personal communication, 9th December 2002.
- [YR91] Forrest W. Young and Penny Rheingans. Visualizing structure in high-dimensional multivariate data. *IBM Journal of Research and Development (Special Issue on Visual Interpretation of Data)*, 35(1/2):97–107, January/March 1991. URL: <http://forrest.psych.unc.edu/teaching/p208a/visuals/visuals.html>.
- [Zag] Mike Zagardo. Diffusion imaging. Peoria Radiology Associates, P.C., URL: [http://www.peoria-radiology.com/diffusion\\_mri.htm](http://www.peoria-radiology.com/diffusion_mri.htm).
- [ZCML00a] Song Zhang, Charlie Curry, Daniel S. Morris, and David H. Laidlaw. Streamtubes and streamsurfaces for visualizing diffusion tensor MRI volume images. URL: [http://www.cs.brown.edu/~dhl/pdf/vis2000\\_dti.pdf](http://www.cs.brown.edu/~dhl/pdf/vis2000_dti.pdf), 2000.
- [ZCML00b] Song Zhang, Charlie Curry, Daniel S. Morris, and David H. Laidlaw. Visualizing diffusion tensor MR images using streamtubes and stream-surfaces. URL: <http://www.cs.brown.edu/~dhl/pdf/hbp00dti.pdf>, 2000.
- [ZDK<sup>+</sup>01] Song Zhang, Cagatay Demiralp, Daniel Keefe, Marco DaSilva, Benjamin D. Greenberg, Peter J. Basser, Carlo Pierpaoli, E. A. Chiocca, T. S. Deisboeck, and David H. Laidlaw. An immersive virtual environment for DT-MRI volume visualization applications: a case study. In *Proceedings of IEEE Visualization 2001*, pages 437–440, October 2001. URL: <http://www.cs.brown.edu/research/vis/lists/pdf/Zhang-2001-IVE.pdf>.
- [ZDL03] Song Zhang, Cagatay Demiralp, and David H. Laidlaw. Visualizing diffusion tensor MR images using streamtubes and streamsurfaces. *IEEE Transactions on Visualization and Computer Graphics*, 2003. In Press, URL: <http://www.cs.brown.edu/research/vis/resources/lists/pdf/Zhang-2003-VDT.pdf>.
- [ZFS97] Robert C. Zeleznik, Andrew S. Forsberg, and Paul S. Strauss. Two pointer input for 3D interaction. In *ACM/SIGGRAPH Symposium on Interactive 3D Graphics, Providence, Rhode Island, April 27-30*, pages 115–120, 1997. URL: <http://www.cs.brown.edu/research/graphics/research/pub/papers/twohand.ps>.
- [ZIBa] ZIB - Konrad-Zuse-Zentrum für Informationstechnik Berlin, Germany. The Amira homepage. URL: <http://www.amiravis.com/>.
- [ZIBb] ZIB - Konrad-Zuse-Zentrum für Informationstechnik, Berlin, Germany, Department Scientific Visualization. Vector field visualization. URL: <http://www.zib.de/Visual/projects/vector/>.

- [ZLB<sup>+</sup>02a] Song Zhang, David H. Laidlaw, Mark E. Bastin, Saurabh Sinha, and Thomas S. Deisboeck. Application of DTI visualization and analysis on a data set from a brain tumor patient. In *Proceedings of IEEE Visualization '02*, October 2002. Poster session, published on conference DVD, URL: <http://www.cs.brown.edu/research/vis/lists/pdf/Zhang-2002-AOD.pdf>.
- [ZLB<sup>+</sup>02b] Song Zhang, David H. Laidlaw, Mark E. Bastin, Saurabh Sinha, and Thomas S. Deisboeck. Computational visualization and analysis of structural heterogeneity in a diffusion tensor MR-imaging data set from a brain tumor patient. *submitted for publication in Magnetic Resonance in Medicine*, 2002. URL: <http://www.cs.brown.edu/research/vis/lists/pdf/Zhang-2002-CVA.pdf>.
- [ZPR<sup>+</sup>88] Elias A. Zerhouni, David M. Parish, Walter J. Rogers, Andrew Yang, and Edward P. Shapiro. Human heart: Tagging with MR imaging - a method for noninvasive assessment of myocardial motion. *Radiology*, 169(1):59–63, 1988.
- [ZSH96] Malte Zöckler, Detlev Stalling, and Hans-Christian Hege. Interactive visualization of 3D-vector fields using illuminated stream lines. In Roni Yagel and Gregory M. Nielson, editors, *Proceedings of Visualization '96*, pages 107–113. IEEE, October 1996.