

# Curriculum Vitae

**Mag. Dr. Werner Benger**  
Center for Computation Technology at  
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## Education

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|--------------------------------|---|
| Ph.D.<br>(Dr.rer.nat.)<br>2005 | <b>Mathematics &amp; Computer Science</b> , Free University Berlin (Germany), “ <i>Visualization of General Relativistic Tensor Fields via a Fiber Bundle Data Model</i> ”, MAGNA CUM LAUDE |
| M.S.<br>(Mag.rer.nat.)<br>1997 | <b>Astronomy</b> , University of Innsbruck (Austria), “ <i>VOIDS - The influence of the cosmological constant on the expanding vacuum voids in the universe</i> ”, WITH DISTINCTION         |

## Employment

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|--------------|---|
| 2005 - pres. | research programmer (IT Analyst 3), <i>Center for Computation &amp; Technology, Louisiana State University</i>  |
| 1997 - 2005  | scientific employee, <i>Zuse-Institute Berlin (ZIB) and the Max-Planck Institute for Gravitational Physics (Albert-Einstein-Institute AEI), Potsdam</i> |
| 1988 - 1997  | student tutor, <i>Institute for Astronomy, University of Innsbruck</i>  |
| 1994 - 1995  | social service, <i>Caritas Austria, diocese Innsbruck</i>   |

## Research Topics

interactive real-time visualization, visualization framework, software design, generic visualization, computer graphics, raytracing, tensor field visualization, special and general relativity, diffusion tensor magnetic resonance imaging, common data model, landscape rendering, remote visualization, large data, astrophysics, interaction of art and science, public outreach

## Computer Skills

C, C++, C++ template metaprogramming, unix shell programming, HTML, Roxen Webserver extended HTML, Pascal, Basic, i386 assembler, perl, pike; make, Qt, OpenGL, HDF5, Amira, Cactus

## Major Software Projects

1992-1997 *The Light++ Raytracer*, special effects software raytracer including relativistic effects

<http://www.photon.at/~werner/light/>

1997-2005 *Amira Numrel Extensions*, astrophysics and cactus-specific extensions for the Amira visualization package

<http://www.zib.de/visual/projects/ART/>

1999-pres. *The Fiber Bundle HDF5 Library F5*, common data model based on the mathematical theory of fiber bundles implemented on top of HDF5

<http://www.fiberbundle.net/>

2005-pres. *Vish (Visualization Shell)*, a high performance highly modular visualization framework based on C++ and OpenGL with strong encapsulation between plugins, suitable as student teaching tool and interactive visualization of large data ( $> 100GB$ ), very systematic treatment of various data types using mathematical foundations based on fiber bundles, topology and geometric algebra

<http://sciviz.cct.lsu.edu/projects/vish>

## Publications

- [1] Werner Benger. The light++ raytracing library. <http://www.photon.at/~werner/light/>, 1990-2005.
- [2] Werner Benger. Raytracing using hyperbolic light paths. Presented during the Alpbach Summer School of the Austrian Space Agency, 1992.
- [3] Stefano Alberico. *Computer Graphica*, (1):pp. 53, 1995.
- [4] Werner Benger. Simulation of a black hole by raytracing. In R.A. Puntigam F.W. Hehl and H. Ruder, editors, *Relativity and Scientific Computing - Computer Algebra, Numerics, Visualization*, pages 2-3, Berlin Heidelberg New York, 1996. Springer Verlag. <http://www.photon.at/~werner/bh/>.
- [5] Jörn Loviscach Werner Benger. Licht auf krummen Touren. *C'T, Magazin für Computertechnik*, page pp. 200, 1996.
- [6] Werner Benger. Voids - der Einfluß der kosmologischen Konstanten auf die Vakuumbblasen im Universum. Master's thesis, Department of Astronomy, University of Innsbruck, 1997. <http://www.photon.at/~werner/Voids/>.
- [7] Gabrielle Allen, Tom Goodale, Gerd Lanfermann, Edward Seidel, Werner Benger, H.-C. Hege, A. Merzky, J.i Masso, and J.Shalf. Solving Einstein's Equation on Supercomputers. *IEEE Computer*, 32(12):52-59, December 1999. [http://www.computer.org/computer/articles/einstein\\_1299\\_1.htm](http://www.computer.org/computer/articles/einstein_1299_1.htm).
- [8] Werner Benger, Ian Foster, Jason Novotny, Edward Seidel, John Shalf, Warren Smith, and Paul Walker. Numerical Relativity in a Distributed Environment. In *Proceedings of the Ninth SIAM Conference on Parallel Processing for Scientific Computing*, March 1999. <http://www.zib.de/visual/papers/bengerw.ps>.
- [9] Werner Benger, Hans-Christian Hege, and Stefan Heusler. Visions of numerical relativity. In A. Gyr et al., editor, *Proceedings of the 3d International Conference on the Interaction of Art and Fluid Mechanics (SCART2000)*, pages 239-246, ETH Zürich Switzerland, Feb. 28 - March 3 2000. Kluwer Academic Publishers. <http://www.zib.de/PaperWeb/abstracts/SC-99-53/>.

- [10] Werner Bengler, Hans-Christian Hege, Andr Merzky, Thomas Radke, and Edward Seidel. Efficient distributed file i/o for visualization in grid environments. In B. Engquist, L. Johnsson, M. Hammill, and F. Short, editors, *Simulation and Visualization on the Grid*, volume 13 of *Lecture Notes in Computational Science and Engineering*, pages 1–6. Springer Verlag, 2000. <http://www.zib.de/PaperWeb/abstracts/SC-99-43/>.
- [11] Hans-Christian Hege, Werner Bengler, André Merzky, Friedbert Kasper, Thomas Radke, and Edward Seidel. Schwarze Löcher in Sicht - Immersive überwachung und Steuerung von Remote-Simulationen. *DFN-Mitteilungen*, (52):4–6, Feb. 2000.
- [12] Miguel Alcubierre, Werner Bengler, Bernd Bruegmann, Gerd Lanfermann, Lars Nergler, Edward Seidel, and Ryoji Takahashi. The 3d grazing collision of two black holes. *Phys.Rev.Lett.*, 87, 2001. <http://de.arxiv.org/abs/gr-qc/0012079>.
- [13] Gabrielle Allen, Werner Bengler, Thomas Dramlitsch, Tom Goodale, Hans-Christian Hege, Gerd Lanfermann, André Merzky, Thomas Radtke, and Edward Seidel. Cactus grid computing: Review of current development. In Rizos Sakellariou, Jon Keane, John R. Gurd, and Len Freeman, editors, *Proceedings of Euro-Par 2001: 7th International Euro-Par Conference on Parallel Processing*, volume 2150 of *Lectures Notes in Computer Science*, pages 817–824. Springer Verlag, Berlin Heidelberg 2001, October 2001. <http://link.springer.de/link/service/series/0558/bibs/2150/21500817.htm>.
- [14] Gabrielle Allen, Werner Bengler, Thomas Dramlitsch, Tom Goodale, Hans-Christian Hege, Gerd Lanfermann, André Merzky, Thomas Radtke, Edward Seidel, and John Shalf. Cactus tools for grid applications. *Cluster Computing*, 4(3):179–188, 2001.
- [15] Werner Bengler. Beobachtungen im Datenraum. *SuW Special 6 Gravitation*, 2001. <http://www.mpia-hd.mpg.de/suw/SuW/Programm/SuW-Special/P-Special.html>.
- [16] Werner Bengler. Collisions De Trous Noirs. *Pour La Science (Edition Francaise De Scientific American)*, page 48, 2003.
- [17] Werner Bengler and Hans-Christian Hege. The tensor splats rendering technique. Technical Report ZIB03-17, Zuse Institute Berlin, June 2003.

- [18] B. Ullmer, A. Hutanu, W. Benger, and H.-C. Hege. Emerging tangible interfaces for facilitating collaborative immersive visualizations. In *Proc. NSF Lake Tahoe Workshop on Collaborative Virtual Reality and Visualization*, 2003.
- [19] Werner Benger. *Visualization of General Relativistic Tensor Fields via a Fiber Bundle Data Model*. PhD thesis, FU Berlin, 2004.
- [20] Werner Benger and Hans-Christian Hege. Tensor splats. In Erbacher, Chen, Roberts, Gröhn, and Börner, editors, *Conference on Visualization and Data Analysis 2004*, pages 151–162. Proceedings of SPIE Vol. #5295, 2004. IS&T/SPIE Electronic Imaging Symposium in San Jose, CA.
- [21] Werner Benger. F5 - fiberbundle hdf5. <http://www.fiberbundle.net/>, 2005.
- [22] Werner Benger and Ed Seidel. Stereographic rendering of curved space. Presented at Supercomputing 2005, Seattle, 2005.
- [23] Marcel Ritter. Rendering Black Holes in Maya. 2nd High-End Visualization Workshop, Obergurgl, 2005. <http://astro.uibk.ac.at/visworkshop2005/talks/MayaBlackHole.pdf>.
- [24] Werner Benger, Hauke Bartsch, H.-C. Hege, H. Kitzler, A. Shumilina, and A. Werner. Visualizing Neuronal Structures in the Human Brain via Diffusion Tensor MRI. *International Journal of Neuroscience*, 116(4):pp. 461–514, 2006.
- [25] Werner Benger, Brad Corso, Erin Gillilan, and Manuel Tiglio. A black hole in the living room. In *International Workshop on Virtual Reality in Scientific Applications and Learning 2006 (VRSAL 2006)*, May 8 – 11 2006. Poster Presentation.
- [26] Werner Benger and Hans-Christian Hege. Analysing curved spacetimes with tensor splats. In M. Novello, S. Perez-Bergliaffa, and R. Ruffini, editors, *The Tenth Marcel Grossmann Meeting - On Recent Developments in Theoretical and Experimental General Relativity, Gravitation and Relativistic Field Theories*. World Scientific, Singapore, 2006. <http://www.zib.de/visual/publications/sources/MGX.pdf>.
- [27] Werner Benger, Shalini Venkataraman, Amanda Long, Gabrielle Allen, Stephen David Beck, Maciej Brodowicz, Jon MacLaren, and Edward

- Seidel. Visualizing katrina - merging computer simulations with observations. In *Workshop on state-of-the-art in scientific and parallel computing, Umeå, Sweden, June 18-21, 2006*, pages 340–350. Lecture Notes in Computer Science (LNCS), Springer Verlag, 2006.
- [28] Shalini Venkataraman, Werner Benger, Amanda Long, and Luc Renambot Byungil Jeong. Visualizing hurricane katrina - large data management, rendering and display challenges. In *GRAPHITE 2006, 29 November - 2 December 2006, Kuala Lumpur, Malaysia*, 2006.
- [29] Werner Benger, Georg Ritter, and René Heinzl. The Concepts of VISH. In *4<sup>th</sup> High-End Visualization Workshop, Obergurgl, Tyrol, Austria, June 18-21, 2007*, pages 26–39. Berlin, Lehmanns Media-LOB.de, 2007.
- [30] Werner Benger. Colliding galaxies, rotating neutron stars and merging black holes - visualising high dimensional data sets on arbitrary meshes. *New Journal of Physics*, 10, 2008.
- [31] Werner Benger. Diffusion tensor visual analysis of the human brain. In *Tagungsband 11. IFF-Wissenschaftstage 2008*. Fraunhofer IRB Verlag, 2008.
- [32] Ismail Akturk, Mehmet Balman, Xinqi Wang, Tevfik Kosar, Tyler Barker, Erik Schnetter, Raju Gottumukkala, Ramesh Kolluru, Somnath Roy, Sumanta Acharya, and Werner Benger. Distributed data sharing with petashare for collaborative research in cybertools. In *NSF EPSCoR RII Abstract and Poster, LSU, May 11, 2009*, 2009.
- [33] Werner Benger. On safari in the file format djungle - why can't you visualize my data? *CISE*, 2009. at work.
- [34] Werner Benger, Andrew Hamilton, Mike Folk, Quincey Koziol, Simon Su Princeton, Erik Schnetter, Marcel Ritter, and Georg Ritter. Using geometric algebra for navigation in riemannian and hard disc space. In Vaclav Scala and Dietmar Hildenbrand, editors, *GraVisMa 2009 - Computer Graphics, Vision and Mathematics for Scientific Computing*, 2009. accepted for publication.
- [35] Werner Benger, Georg Ritter, Marcel Ritter, and Wolfram Schoor. Beyond the visualization pipeline. In *5<sup>th</sup> High-End Visualization Workshop, Baton Rouge, Louisiana, March 18th - 21st, 2009*. Berlin, Lehmanns Media-LOB.de, 2009.

- [36] Werner Benger, Georg Ritter, Simon Su, Dimitris E. Nikipoulos, Eamonn Walker, Sumanta Acharya, Somnath Roy, Farid Harhad, and Wolfgang Kapferer. Doppler speckles - a multi-purpose vectorfield visualization technique for arbitrary meshes. In *CGVR'09 - The 2009 International Conference on Computer Graphics and Virtual Reality*, 2009.
- [37] Werner Benger, Marcel Ritter, Sumanta Acharya, Somnath Roy, and Feng Jijao. Fiberbundle-based visualization of a stir tank fluid. In *WSCG 2009, Plzen*, 2009.
- [38] Bidur Bohara, Somnath Roy, Marcel Ritter, Nathan E. Brener, S. Sitharama Iyengar, Sumanta Acharya, and Werner Benger. Visualization of pathlines in computational fluid dynamics simulations. In *NSF EPSCoR RII Abstract and Poster, LSU, May 11, 2009*, 2009.
- [39] Matthew T. Dougherty, Michael J. Folk, Herbert J. Bernstein, Frances C. Bernstein, Kevin W. Eliceiri, Werner Benger, Erez Zadok, and Christoph Best. Unifying biological image formats with hdf5. *CACM - special issue on Biosciences Computing*, 2009. at work.
- [40] Kexi Liu, Brygg Ullmer, Cornelius Toole, Chris Branton, Werner Benger, Eamonn Walker, Dimitris E. Nikipoulos, Mayank Tyagi, Steven A. Soper, and Michael C. Murphy. An approach for combining visualization tools and assignable controllers toward interactive computational fluid dynamics applications. In *NSF EPSCoR RII Abstract and Poster, LSU, May 11, 2009*, 2009.
- [41] Sudheer Rani, Taeyoon Lee, Pin-Chuan Chen, Daniel Park, Kexi Liu, Sanjay Kodiyalam, Werner Benger, Brygg Ullmer, Gloria Thomas, Michael C. Murphy, Steven A. Soper, and Dimitris E. Nikipoulos. Numerical simulation of a multi-module assembled microfluidic chip system using high performance computing. In *NSF EPSCoR RII Abstract and Poster, LSU, May 11, 2009*, 2009.
- [42] Kazim Sekeroglu, Brygg Ullmer, Rajesh Sankaran, Sanjay Kodiyalam, Werner Benger, Somnath Roy, Sumanta Acharya, and Amitava Jana. Exploring cfd simulation data via tangible device controlled synchronized cfd stirred tank mechatronic simulators coupled to cave-based visualization. In *NSF EPSCoR RII Abstract and Poster, LSU, May 11, 2009*, 2009.

- [43] Simon Su, Werner Bengler, William Sherman, Eliot Feibush, and Curtis Hillegas. Using open source and commercial visualization packages for analysis and visualization of large simulation dataset. In *Proceedings of the 3rd International Conference on Informatics and Technology 2009*, 2009. submitted.
- [44] Eamonn D. Walker, Namwon Kim, Wonbae Lee, Arnold Rousselet, Kexi Liu, Farid Harhad, Werner Bengler, Ismail Akturk, S.-H. Ko, Sanjay Kodiyalam, Prescott Deininger, Brygg Ullmer, Mayank Tyagi, Dorel Moldovan, Michael C. Murphy, Steven A. Soper, and Dimitris E. Nikitopoulos. Efficient cybertools for multiphase flow in complex geometries for micro-fluidic applications. In *NSF EPSCoR RII Abstract and Poster, LSU, May 11, 2009*, 2009.
- [45] Werner Bengler and Hans-Christian Hege. *Strategies for Direct Visualization of Second-Rank Tensor Fields*, chapter 11, pages 191–214. Springer, 2006.
- [46] Werner Bengler, Rene Heinzl, Tino Weinkauff, Holger Theisel, David Tschumperle, and Hauke Bartsch. *Mathematical Tools for Visualization*, chapter Mathematical Tools for Visualization. Springer, 2010. at work.

## Image Publications

- [47] *The Future or Theoretical Physics and Cosmology*. Cambridge University Press, 2003. Cover.
- [48] Harnessing the power of grid computing computational - astrophysics code runs on 1500 processors at sdsc and ncsa. *NPACI Online*, 5(10). <http://www.npaci.edu/online/v5.10/cactus.html>.
- [49] Bernd Bruegmann. Numerical relativity in 3+1 dimensions.
- [50] Frank Fleschner. Signale von kosmischen kollisionen. <http://www.BerlinOnline.de/suche/.bin/mark.cgi/wissen/wissenschaftsarchiv/990113/.html/physik1.html>.
- [51] National Science Foundation. Nsf submits its fiscal 2006 budget request of \$5.6 billion. Cover page, [http://www.nsf.gov/news/news\\_images.jsp?cntn\\_id=100890&org=OLPA](http://www.nsf.gov/news/news_images.jsp?cntn_id=100890&org=OLPA).
- [52] Max-Planck Gesellschaft. Der Kosmos bebt - wie Forscher nach Gravitationswellen lauschen. Cover page.
- [53] Peter Hübner. From now to timelike infinity on a finite grid. Illustration of multipoles.
- [54] IOP. The case for mini black holes. Cover page, <http://www.cerncourier.com/main/toc/44/9>.
- [55] Institute of Physics. Poster on quantum gravity. <http://www.iop.org/icons/Journals/Info/CQG/cqposter.pdf>.
- [56] W. Benger. Biggest crashes in the universe. *Max-Planck-Research Notes*, page pp30, 1999. image publication for article by Uwe Seidenfaden.
- [57] W. Benger. Lauscher fuer das urknall-echo. *Max-Planck-Forschung*, page pp40, 1999. image publication for article by Uwe Seidenfaden.
- [58] Karen Green. Colliding with a supercomputing record. *Access magazine (alliance/NCSA)*, 12(3), 1999. cover image.
- [59] GEO Magazin. Kosmischer "crash-test", 1999. <http://www.geo.de/themen/geoskope/99/11/KOSKosmischerCrashTest.html>.

- [60] NPACI. Globus links environment for scientific discovery. *enVision magazine*, 15(2), 1999. <http://www.npaci.edu/enVision/v15.2/globus.html>.
- [61] Max Planck Research. News release, 1999. [http://www.mpg.de/pri99/pri44\\_99.htm](http://www.mpg.de/pri99/pri44_99.htm),[http://www.mpg.de/news99/news38\\_99.htm](http://www.mpg.de/news99/news38_99.htm).
- [62] Lee Smolin. The new universe around the next corner - theory of everything. *Physics World*, 12:80p, 1999.
- [63] W. Benger. Jagd auf Gravitationswellen. *Spektrum der Wissenschaften*, 2000. Cover Image, [http://www.spektrum.de/archiv/aktuelles\\_heft.phtml?jahr=2000&monat=12](http://www.spektrum.de/archiv/aktuelles_heft.phtml?jahr=2000&monat=12).
- [64] Ruediger Vaas. Die Magie der schwarzen Löcher, 2000.
- [65] B.Brugmann, A.M.Ghez, and J.Greiner. Black holes. *PNAS*, 98(19), 2001. <http://www.pnas.org/cgi/reprint/98/19/10525.pdf>.
- [66] W. Benger. Gravitational physics - black hole blockbuster. *Nature*, (4), 2001. image publication, [http://www.nature.com/cgi-taf/DynaPage.taf?file=/nature/journal/v413/n6855/full/413473a0\\_fs.html](http://www.nature.com/cgi-taf/DynaPage.taf?file=/nature/journal/v413/n6855/full/413473a0_fs.html).
- [67] Thomas Bürke. Astrophysiker berechnen Gravitationswellen. *Sterne und Weltraum*, page p.937, 2001.
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- [69] Karen Green. Cover image. *Access magazine (alliance/NCSA)*, 14(2), 2001. cover image.
- [70] Michael Odenwald. Signale vom anfang des universums. *FOCUS*, 23:pp.132, 2001.
- [71] Der klang der Schwarzen Löcher, 2002.
- [72] W. Benger. Schwarze Löcher - die Monster im All. *Bild der Wissenschaft*, pages 48–49, 2002. image publication for the title story.
- [73] W. Benger. Trout noirs. *Science & Vie*, (1022), 2002. Cover image.

- [74] Henning Engeln. Orte ohne wiederkehr. *GEO Magazin*, pages p.56/57, p.74/75, 2002. <http://www.geo.de/GEO/service/hefte/GEO/2002/11.html>.
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- [80] Maxine Brown. Blueprint for the future of high-performance networking. *COMMUNICATIONS OF THE ACM (CACM)*, 46(11), 2003. Cover.
- [81] Thomas Bührke. Merlins Suche nach dem heiligen Gral der Physik. *Berliner Zeitung*, (152), 2003.
- [82] Henning Engeln. *GEO russia*, 2:p.124, p.128, p.130, 2003.
- [83] Wayt Gibbs. Des ondulations dans l'espace-temps, 2003.
- [84] Bernard Schutz. Gravity from the ground up, 2003. Cover.
- [85] The SEU2003 Roadmap Team. Beyond einstein: From the big bang to blackholes, 2003. <http://universe.gsfc.nasa.gov/be/roadmap/Chapter-2.pdf>, <http://universe.gsfc.nasa.gov/science/goals3.html>.
- [86] Thomas Vasek. *GEO russia*, 3:p.130, 2003.
- [87] 38th eslab symposium, 5th international lisa symposium, 2004. <http://www.rssd.esa.int/index.php?project=SP&page=LISA%20Symposium>.

## Art Projects

- 1992 Tyrolean avantgarde culture project “*Hear the sky*” - transforming optical spectra of galaxies into audible tone sequences
- 1999 34min video “*Visions of numerical Relativity*” in collaboration with Stefan Heusler (<http://www.scienceofart.com>), a narrated compilation of scientific movies accompanied by specifically composed music
- 2000 At the IGrid2000 conference in Yokohama, Japan, an image of particles falling into a rotating black hole was chosen as T-shirt cover for conference participants.
- 2002 Contributed two animation sequences to the Thomas Lucas production “*The unfolding universe*” for the Discovery Channel, in collaboration with Donna Cox, Robert Patterson and Stuart Levy (NCSA)
- 2002 Participated in design of the joint art project “*Blind Date*” with artist Susanne Weihrich on the topic “event horizon”, initiated by the Brandenburgischer Kunstverein e.V., Potsdam, Germany
- 2003 Provided a synthesized sunset for the CD cover image of “*Levitation*” by Nancy Walker, Canada ([www.nanctwalkerjazz.com](http://www.nanctwalkerjazz.com)).
- 2003 The video “*Tackling the Riddles of Gravity*” was ranked among the top ten in the first Visualization Challenge Contest of the NSF and magazine Science, the only one among the top ten that was not made in the U.S.
- 2005 Contributed animation sequence for dome projection of the Einstein Opera “*C - The speed of light*” as performed by Phase7.
- 2006 “*Katrina Revealed*” - Animation sequence based on diverse datasets from observation and simulation depicting the impact of Hurricane Katrina on New Orleans and Louisiana.
- 2009 Providing animation sequences for the IMAX Movie in cooperation with Donna Cox, NCSA (under development)

## Attended Conferences

- Alpbach Summer School of the Austrian Space Agency, 1992 and 1995
- The Deep Universe (1993), *A.R.Sandage, R.G.Kron, M.S.Longair* Saas-Fee Advanced Course, Les Diablerets
- WE-Heraeus-Seminar, 1994
- 179th. WE-Heraeus-Seminar - Black Holes: Theory and Observation, 1997
- Siggraph'98, Orlando
- Supercomputing'99, Portland
- SCART 2000, Zürich - Science and Art 2000, 3rd International Conference on the Interaction of Art and Fluid Mechanics, ETH Zürich 28.2.-3.3.2000
- IGrid 2000, Yokohama - An International Grid Application Research at INET
- HDPC 2000, Pittsburgh, Conference on High Performance Distributed Computing
- MG X, 10th Marcel Grossmann meeting on general relativity, Rio de Janeiro, 2003
- 1<sup>st</sup> High-End Visualization Workshop - *Numerical Relativity Mesh Refinement Visualization Meeting*, 26-28 February 2004, Innsbruck, Austria, (**Organizer**)
- VDA2004, Conference on Visualization and Data analysis, San Jose, 2004
- 2<sup>nd</sup> High-End Visualization Workshop - *Multipatch Methods*, 20-24 April 2005, Obergurgl, Austria, (**Organizer**)
- Supercomputing'05, Seattle, WA
- 3<sup>th</sup> High-End Visualization Workshop - *Public Relations and Public Outreach of Scientific Visualization*, 25-28 April 2005, Obergurgl, Austria, (**Organizer**)

- VRSAL 06 - International Workshop on Virtual Reality in Scientific Applications and Learning 2006, Glasgow, UK
- Para 06 - Workshop on state-of-the-art in scientific and parallel computing, Umeå, Sweden, June 18-21, 2006
- Supercomputing'06, Tampa, FL
- 4<sup>th</sup> High-End Visualization Workshop - *Visualization of Non-Trivial Data Structures*, 17. - 22. July 2007, Obergurgl, Tyrol, Austria, (**Organizer**)
- Supercomputing'07, Reno, NV
- IFF-Wissenschaftstage 2008 - Virtual Reality und Augmented Reality, VR in der Medizintechnik, Magdeburg, Germany
- Supercomputing'08, Austin, TX
- WSCG 09 - The 17<sup>th</sup> International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision, Poznan February 2-5, 2009, Czech Republic
- 5th High-End Visualization Workshop 2009 - *Remote Visualization*, Baton Rouge, Louisiana (**Organizer**)
- CGVR'09 - Conference for Computer Graphics and Virtual Reality, Las Vegas, NV