

# Curriculum Vitae

## Prof. Dr.-Ing Andreas Kolb

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June 4<sup>th</sup> 1965 Born in Radolfzell (Lake Constance), Germany

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### Education

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08/92 – 12/95 Dissertation in Computer Graphics, University of Erlangen-Nuremberg  
Thesis: “Optimization Techniques for Scattered Data Interpolation”  
10/86 – 02/92 Study of Mathematics, University of Erlangen-Nuremberg  
07/82 – 06/85 Abitur, Technical Gymnasium Konstanz

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### Academic and Professional History

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since 10/03 Full Professor (Chair for Computer Graphics and Multimedia Systems), University of Siegen, Germany  
10/98 – 09/03 Professur for Media Informatics, University of Applied Science Wedel, Germany  
03/97 – 07/98 Lecturer for Computer Graphics (part-time), University of Applied Science Aalen, Germany  
01/96 – 09/98 Software-Engineer and project leader, debis Systemhaus Engineering, Leinfelden-Echterdingen, Germany  
08/92 – 12/95 Research associate, University of Erlangen-Nuremberg, Germany  
04/92 – 06/92 Software-Engineer, Siemens Medical Solutions, Erlangen, Germany

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### Teaching

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Computer Graphics, Geometric Modeling, Visualization, Virtual Reality

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### Current Research Topics

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Simulationen and data processing on graphics hardware  
Processing and fusion of 3D sensor data  
Hardware accelerated rendering

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### Project Funding

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03/10 – 02/12 DFG project “Interactive Multifunctional Confocal Image Analysis” (Grant No. Ko-2960-10/1)  
10/09 – 02/14 Speaker of the DFG<sup>1</sup> Research Training Group 1564 “Imaging New Modalities”  
10/08 – 09/12 Principle Investigator in the NRW-Research-School “Multi-Modal Sensor Systems for Environmental Exploration (MOSES)”

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<sup>1</sup>German Science Foundation

04/08 – 03/10	Graduate School ”Development of integrated Heterosensor-Architekture for n-dimensional (bio)chemical Analytics” (Graduate School of the University of Siegen)
04/06 – 03/10	DFG project “Interactive Processing and Visualization of SAR-Data” as part of the research package “Bistatic Exploration (PAK 59)” (Grant No. Ko-2960-3/1, -2)
02/06 – 01/10	DFG project “2D/3D Processing and -fusion based on PMD-Technology” as part of the research package “Dynamic 3D Vision (PAK 73)” (Grant No. Ko-2960-5/1, -2)
02/06 – 01/10	DFG project “Real Time Acquisition of image based 3D Models for Object Recognition” as part of the research package “Dynamic 3D Vision (PAK 73)” (Grant No. Ko-2960-6/1, -2)
06/06 – 05/09	BMBF <sup>2</sup> project “Lynkeus”: “PMD-Simulation and dynamic Environment Modeling” (Grant No. 16SV2296-310)
10/02 – 03/04	BMBF cooperation projekt with Airbus Germany “Optimization and Texturing on Polygonal Models for VR Applications” (Grant No. 1706002)

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### Coordination and Committees

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2010	Local Chair: Vision, Modeling and Visualization (VMV), Siegen
2010	Int. Programmkomitee Eurographics Conference, Linköping, Sweden
2009	Paper Chair: DAGM Workshop Dynamic 3D Imaging, University of Jena, Germany
2009	Programm Committee: Vision, Modeling and Visualization (VMV), University of Braunschweig, Germany
2008	Organisation Committee: CVPR Workshop ToF-Camera based Computer Vision
2007	Organisation Committee: DAGM Workshop Dynamic 3D Imaging, University of Heidelberg, Germany
since 2007	Program Committee: GI <sup>3</sup> VR/AR Workshop
since 2006	Speaker of the DFG research package “Dynamic 3D Vision” (PAK 73)
2003	Program Committee: Open SG Forum
2003	Program Committee: Web3D Symposium
since 2004	Steering committee of the GI <i>Geometry Processing</i>

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### Editor and Reviewer

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2009	Co-editor of the special issue on <i>Time of Flight Camera based Computer Vision</i> , Journal CVIU
since 2007	DFG Ombudsman at University of Siegen
since 2006	Editorial Board Member, Journal <i>Simulation Practice &amp; Theory (SIMPAT)</i>
2005	Editor of the special issue on <i>Programmable Graphics Hardware</i> , Journal SIMPAT
Projects	Reviewer for DFG <sup>4</sup> , MITACS <sup>5</sup> , SFN <sup>6</sup>
Publications	Reviewer for: SIGGRAPH, Eurographics, ACM-TOG, CGF, CAD, CAGD, SIMPAT, IEEE-TVCG, IEEE-TSMC, IEEE-TGRS, IEEE-Vis, EG Symp. on Rendering

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### Memberships

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since 2004	Center for Sensor Systeme (ZESS), University of Siegen
since 2002	ACM/SIGGRAPH
since 2001	EUROGRAPHICS Association
since 1998	GI, Section “Graphical Data Processing” (Computer Graphics)

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### Personal

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<sup>2</sup>Federal Ministry of Education and Research

<sup>3</sup>Gesellschaft für Informatik

<sup>4</sup>German Research Foundation

<sup>5</sup>Mathematics of Information Technology and Complex Systems, Canada

<sup>6</sup>Swiss National Science Foundation, Switzerland

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married, three children

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### Supervisions

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Besides ca. 25 Diploma theses the following PhD theses and habilitations have been resp. are currently supervised:

- [1] M. Lambers. *Interaktive Visualisierung und Exploration von SAR-Daten*. PhD thesis, University of Siegen, Computer Graphics Group, 2010 (scheduled).
- [2] M. Keller. *Rekonstruktion von Umgebungsmodellen auf Basis von PMD-Tiefendaten*. PhD thesis, University of Siegen, Computer Graphics Group, 2010 (scheduled).
- [3] M. Lindner. *Verarbeitung von 2D- und 3D-Daten auf Basis der PMD-Technologie*. PhD thesis, University of Siegen, Computer Graphics Group, 2010 (scheduled).
- [4] I. Chiosa. *Mesh-Segmentierung und -Clustering*. PhD thesis, University of Siegen, Computer Graphics Group, 2010 (scheduled).
- [5] M. Winter. *Image-based incremental reconstruction, rendering and augmented visualization of Surfaces for endoscopic surgery*. PhD thesis, University of Erlangen, Department of Computer Science, 2010. (Second Supervisor).
- [6] N. Cuntz. *Real-time particle systems*. PhD thesis, University of Siegen, Computer Graphics Group, 2009.
- [7] S. Todt. *Real-Time Rendering and Akquisition of spherical light fields*. PhD thesis, University of Siegen, Computer Graphics Group, 2009.
- [8] J.-F. Evers-Senne. *Plenoptic Modelling and Rendering of Complex Rigid Scenes*. PhD thesis, University of Kiel, Institute of Computer Science, 2008. (Second Supervisor).
- [9] R. Reichard. *Ereignisorientierte Simulation einer Hochenergie-Kugelmühle*. PhD thesis, University of Siegen, SIM, 2005. (Second Supervisor).
- [10] M. Groß. *Entwicklung eines Softwaresystems zur universellen Planung chirurgischer Eingriffe in 2D- und 3D Modalitäten*. PhD thesis, University of Siegen, RST, 2004. (Second Supervisor).

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### Peer Reviewed Publications in Journals

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- [1] I. Chiosa and A. Kolb. GPU-based multilevel clustering. *IEEE Trans. on Visualization and Computer Graphics*, 2010. accepted for publication.
- [2] A. Kolb, E. Barth, R. Koch, and R. Larsen. Time-of-flight sensors in computer graphics. *Computer Graphics Forum*, 29(1):141–159, 2010.
- [3] M. Lindner, I. Schiller, A. Kolb, and R. Koch. Time-of-flight sensor calibration for accurate range sensing. *J. Computer Vision and Image Understanding*, 2009. accepted for publication.
- [4] N. Cuntz, A. Pritzkau, and A. Kolb. Time-adaptive lines for the interactive visualization of unsteady flow data sets. *J. Computer Graphics Forum*, 28(8):2165–2175, 2009.
- [5] J. Orthmann, C. Rezk-Salama, and A. Kolb. GPU-based responsive grass. In *Journal of WSCG*, volume 17, pages 65–72, 2009.

- [6] M. Keller and A. Kolb. Real-time simulation of time-of-flight sensors. *J. Simulation Practice and Theory*, 17:967–978, 2009.
- [7] S. Todt, M. Langer, C. Rezk-Salama, A. Kolb, and K. Kuhnert. Spherical light field rendering in application for analysis by synthesis. *Int. J. on Intell. Systems and Techn. and App., Special Issue on Dynamic 3D Imaging*, 5(3/4):304 – 314, 2008.
- [8] M. Lindner, M. Lambers, and A. Kolb. Sub-pixel data fusion and edge-enhanced distance refinement for 2D/3D images. *Int. J. on Intell. Systems and Techn. and App., Special Issue on Dynamic 3D Imaging*, 5(3/4):344 – 354, 2008.
- [9] S. Todt, C. Rezk-Salama, A. Kolb, and K.-D. Kuhnert. GPU-based spherical light field rendering with per-fragment depth correction. *J. Computer Graphics Forum*, 27(8):2081–2095, 2008.
- [10] N. Cuntz, D. Weiskopf, R. Strzodka, and A. Kolb. Particle level set advection for the interactive visualization of unsteady 3D flow. *J. Computer Graphics Forum (Proc. EuroVis)*, 27(3):719–716, 2008. AR=31%.
- [11] M. Lambers, H. Nies, and A. Kolb. Interactive dynamic range reduction for SAR images. *Geoscience and Remote Sensing Letters (GRSL)*, 5(3):507–511, 2008.
- [12] C. Rezk-Salama, S. Todt, and A. Kolb. Raycasting of light field galleries from volumetric data. *J. Computer Graphics Forum (Proc. EuroVis)*, 27(3):839–846, 2008. AR=31%.
- [13] C. Rezk-Salama and A. Kolb. Opacity peeling for direct volume rendering. In *J. Computer Graphics Forum (Proc. Eurographics)*, volume 25, pages 597–606, 2006. AR=17%.
- [14] R. Strzodka, M. Doggett, and A. Kolb. Scientific computation for simulations on programmable graphics hardware. *J. Simulation Practice & Theory*, 13(8):667–680, 2005. AR=19%.
- [15] L. Latta and A. Kolb. Homomorphic factorization of BRDF-based lighting computation. *ACM Trans. Graph. (Proc. SIGGRAPH)*, 21(3):509–516, 2002.
- [16] G. Greiner, A. Kolb, and A. Riepl. Scattered data interpolation using data-dependent optimization techniques. *Graphical Models*, 64:1–18, 2002.
- [17] A. Kolb, H. Pottmann, and H.-P. Seidel. Fair surface reconstruction using quadratic functionals. In *J. Computer Graphics Forum (Proc. Eurographics) '95*, volume 14, pages 469–479. Eurographics, Blackwell Publishers, 1995. AR=41%.
- [18] G. Greiner, A. Kolb, R. Pfeifle, H.-P. Seidel, M. Encarnação, and R. Klein. A platform for visualizing curves and surfaces. *Computer Aided Design*, 27:7:559–566, 1995.
- [19] A. Kolb and H.-P. Seidel. Interpolating scattered data with  $C^2$  surfaces. *Computer Aided Design*, 27:4:277–282, 1995.

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## Book Chapters

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- [1] D. Zukić, C. Rezk-Salama, and Andreas Kolb. *Studies in Computational Intelligence*, volume 240, chapter Classifying Volume Datasets Based on Intensities and Geometric Features, pages 63–86. Springer, 2009.
- [2] S. Todt, C. Rezk-Salama, and A. Kolb. *Virtuelle Welten als Basistechnologie für Kunst und Kultur*, chapter Virtuelle Rekonstruktion und Interaktive Exploration der Schlossanlage Dillenburg, pages 119–138. transscript Verlag, 2009.

- [3] A. Kolb, R. Leschke, and T. Reinhard. *Navigationen – Special Issue: Interaktionen*, chapter Interaktion – Ein Begriff zwischen den Wissenschaften, pages 81–102. Transkript Verlag, 2008.
- [4] K. Kuhnert, M. Langer, M. Stommel, and A. Kolb. *Vision Systems*, chapter Dynamic 3D Vision, pages 311–334. Advanced Robotic Systems, Vienna, 2007.
- [5] A. Kolb, C. Rezk-Salama, and J. Venus. *Navigationen – Special Issue: Display II Digital*, chapter Displaying Interplay - Entwicklungstrends der Mensch-Maschine Interaktion, pages 71–85. Transkript Verlag, 2007.
- [6] P. Slusallek, R. Klein, A. Kolb, and G. Greiner. An object-oriented approach for curves and surfaces. In P. Wisskirchen, editor, *Object-oriented and fixed programming paradigms*, pages 33–44. Springer, 1996.
- [7] A. Kolb, H. Pottmann, and H.-P. Seidel. Surface reconstruction based upon minimum norm networks. In M. Dæhlen, T. Lyche, and L.L. Schumaker, editors, *Math. Methods for Curves and Surfaces*, pages 293–304, Ulvik, Norway, 1995. Vanderbilt University Press.
- [8] Ph. Slusallek, R. Klein, A. Kolb, and G. Greiner. An object-oriented framework for curves and surfaces with applications. In P.J. Laurent, A. LeMéhauté, and L.L. Schumaker, editors, *Curves and Surfaces in Geometric Design*, pages 457–466, Boston, 1994. AK Peters.

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#### Peer Reviewed Conference Publications

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**Note:** “AR=x%” indicates the *acceptance ratio*, i.e. the number of accepted in relation to the number of submitted papers, if available.

- [1] J. Orthmann, C. Rezk-Salama, and A. Kolb. Title responsive real-time simulation of ground vegetation for games. In *Proc. GAMEON*, 2009.
- [2] J. Orthmann, M. Keller, and A. Kolb. Integrating GPGPU functionality into scene graphs. In *Proc. Vision, Modeling and Visualization*, pages 233–242, 2009.
- [3] M. Keller, N. Cuntz, and A. Kolb. Interactive dynamic volume trees on the GPU. In *Proc. Vision, Modeling and Visualization*, pages 165–175, 2009.
- [4] S. Wenzel, J. Koch, U. Kelter, and A. Kolb. Evolution analysis with animated and 3D-visualizations. In *IEEE Int. Conf. on Software Maintenance (ICSM), Short Paper*, pages 475–478, 2009. DOI: <http://dx.doi.org/10.1109/ICSM.2009.5306279>.
- [5] M. Lindner and A. Kolb. Compensation of motion artifacts for Time-of-Flight cameras. In *Proc. Dynamic 3D Imaging*, volume 5742 of *LNCS*, pages 16–27. Springer, 2009.
- [6] D. Zukić, C. Rezk-Salama, and Andreas Kolb. Classification of 3d datasets using neural networks. In *Proc. Int. Conf. on Computer Graphics and Artificial Intelligence*, pages 53–62, 2009.
- [7] M. Lambers and A. Kolb. Gpu-based framework for distributed interactive 3d visualization of multimodal remote sensing data. In *IEEE Int. Geosc. & Remote Sensing Symp. (IGARSS)*, number 4, pages IV–57 – IV–60, 2009.
- [8] J. Chiosa and A. Kolb. Parallel mesh clustering. In *Eurographics Symp. on Parallel Graphics and Visualization*, pages 33–40, 2009.
- [9] A. Kolb, E. Barth, R. Koch, and R. Larsen. Time-of-flight sensors in computer graphics. In *Proc. Eurographics (State-of-the-Art Report)*, 2009.

- [10] S. Todt, C. Rezk-Salama, L. Brückbauer, and A. Kolb. Progressive light field rendering for web based data presentation. In *Proc. Workshop on Hyper-media 3D Internet*, pages 23–31, 2008.
- [11] A. Kolb, E. Barth, and R. Koch. ToF-sensors: New dimensions for realism and interactivity. In *IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), Workshop on ToF Camera based Computer Vision (TOF-CV)*, pages 1–6, 2008. DOI 10.1109/CVPRW.2008.4563159.
- [12] M. Lindner, A. Kolb, and T. Ringbeck. New insights into the calibration of TOF sensors. In *IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), Workshop on ToF Camera based Computer Vision (TOF-CV)*, pages 1–5, 2008. DOI 10.1109/CVPRW.2008.4563172.
- [13] S. Todt, C. Rezk-Salama, and A. Kolb. Light field rendering for games. In *Proc. Theory and Practice of Computer Graphics*, pages 10–20, 2008. Best Presentation Award.
- [14] M. Lambers and A. Kolb. Automatic point target detection for interactive visual analysis of SAR images. In *IEEE Int. Geosc. & Remote Sensing Symp. (IGARSS)*, volume 2, pages II-903 – II-906, 2008.
- [15] I. Chiosa and A. Kolb. Variational multilevel mesh clustering. In *Proc. IEEE Int. Conf. on Shape Modeling and Applications (SMI)*, pages 197–204, 2008. AR=42%.
- [16] M. Lambers and A. Kolb. Adaptive dynamic range reduction for SAR images. In *Proc. EUSAR*, pages 371–374, 2008.
- [17] T. Horz, A. Pritzkau, C. Rezk, S. Todt, and A. Kolb. Gaming technology in cultural heritage systems. In *Proc. GAMEON*, pages 147–151, 2007.
- [18] M. Lindner and A. Kolb. Calibration of the intensity-related distance error of the PMD ToF-camera. In *Proc. SPIE, Intelligent Robots and Computer Vision*, volume 6764, page 67640W, 2007. doi:10.1117/12.752808.
- [19] N. Cuntz and A. Kolb. Fast hierarchical 3D distance transforms on the GPU. In *Proc. Eurographics, Short-Paper*, pages 93–96, 2007. AR=41%.
- [20] S. Todt, C. Rezk-Salama, T. Horz, A. Pritzkau, and A. Kolb. An interactive exploration of the virtual stronghold Dillenburg. In *Proc. Eurographics, Cultural Heritage Paper*, pages 17–24, 2007.
- [21] M. Lindner, A. Kolb, and K. Hartmann. Data-fusion of PMD-based distance-information and high-resolution RGB-images. In *Int. Sym. on Signals Circuits & Systems (ISSCS), session on Algorithms for 3D TOF-cameras*, pages 121–124. IEEE, 2007.
- [22] M. Keller, A. Kolb, and V. Peters. A simulation-framework for time-of-flight sensors. In *Int. Sym. on Signals Circuits & Systems (ISSCS), session on Algorithms for 3D TOF-cameras*, pages 125–128. IEEE, 2007.
- [23] M. Lambers, A. Kolb, and H. Nies. GPU-based framework for interactive visualization of sar data. In *IEEE Int. Geosc. & Remote Sensing Symp. (IGARSS)*, pages 4076–4079. IEEE, 2007.
- [24] B. Streckel, B. Bartczak, R. Koch, and A. Kolb. Supporting structure from motion with a 3D-range-camera. In *Scandinavian Conf. Image Analysis (SCIA)*, pages 233–242, 2007. AR=38%.
- [25] N. Cuntz, M. Leidl, A. Kolb, C. Rezk-Salama, and M. Böttinger. GPU-based dynamic flow visualization for climate research applications. In *Proc. Simulation and Visualization*, pages 371–384, 2007.

- [26] C. Rezk-Salama, S. Todt, L. Brückbauer, T. Horz, T. Knoche, B. Labitzke, M. Leidl, J. Orthmann, H. Payer, M. Piotraschke, T. Schmiade, and A. Kolb. Game development as part of the computer science education. In *Proc. Games Conference*, pages 15–24, 2006.
- [27] M. Lindner and A. Kolb. Lateral and depth calibration of pmd-distance sensors. In *Proc. Int. Symp. on Visual Computing*, LNCS, pages 524–533. Springer, 2006. AR=23%.
- [28] J. Mehnert-Spahn, S. Steck, and A. Kolb. A cross-platform approach for user-interaction in virtual environments. In *Proc. 9. IFF Fachtagung zu Virtual Reality und Augmented Reality*, pages 321–328. Fraunhofer IFF, Magdeburg, 2006.
- [29] J. Ender, J. Klare, I. Walterscheid, A. R. Brenner, M. Weiß, C. Kirchner, H. Wilden, O. Loffeld, A. Kolb, W. Wiechert, M. Kalkuhl, S. Knedlik, U. Gebhardt, H. Nies, K. Natroshvili, S. Ige, A. Medrano Ortiz, and A. Amankwah. Bistatic exploration using spaceborne and airborne SAR sensors: A close collaboration between FGAN, ZESS and FOMAAS. In *IEEE Int. Geosc. & Remote Sensing Symp. (IGARSS)*, pages 1828–1831. IEEE, 2006.
- [30] A. Kolb and C. Rezk-Salama. Efficient empty space skipping for per-pixel displacement mapping. In *Proc. Vision, Modeling and Visualization*, pages 407–414, 2005. AR=33%.
- [31] C. Rezk-Salama and A. Kolb. A vertex program for efficient box-plane intersection. In *Proc. Vision, Modeling and Visualization*, pages 115–122, 2005.
- [32] C. Bastuck, T.Hambürger, T.Hof, M.Keller, P.Kohlmann, J.Mehnert, S.Nowak, C.Rezk-Salama, and A.Kolb. An open and extensible framework for visualization. In *Proc. GI-Informatiktage*, pages 151–154. Gesellschaft für Informatik, 2005.
- [33] A. Kolb and N. Cuntz. Dynamic particle coupling for GPU-based fluid simulation. In *Proc. Symposium on Simulation Technique*, pages 722–727, 2005.
- [34] A. Kolb, L. Latta, and C. Rezk-Salama. Hardware-based simulation and collision detection for large particle systems. In *Proc. Graphics Hardware*, pages 123–131. ACM/Eurographics, 2004. AR=33%.
- [35] A. Kolb and L. John. Volumetric model repair for virtual reality applications. In *Proc. Eurographics, Short-Paper*, pages 249–256. University of Manchester, 2001. ISSN 1017-4656.
- [36] Ph. Slusallek, R. Klein, A. Kolb, and G. Greiner. An object-oriented approach to curves and surfaces. In *Proc. Fourth Eurographics Workshop on Object-Oriented Graphics*, pages 29–39, Sintra, Portugal, 1994.

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## Posters and Technical Reports

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- [1] A. Kolb, M. Lambers, S. Todt, N. Cuntz, and R. Rezk-Salama. Immersive rear projection on curved screens. IEEE VR (Poster-Session), 2009.
- [2] N. Cuntz, R. Strzodka, and A. Kolb. Parallel particle level set method on the GPU. Sym. on Interactive 3D Graphics & Games, Seattle, Poster-Session, 2007.
- [3] N. Cuntz and A. Kolb. Fast hierarchical 3D distance transforms on the GPU. Technical report, Computer Graphics Group, University of Siegen, 2006.
- [4] S. Todt, C. Rezk-Salama, and A. Kolb. Real-time fusion of range and light field images. SIGGRAPH Poster-Session, 2005.

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## Other Publications

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- [1] A. Kolb and V. Blanz. Bildinformatik/Visual Computing - Ein "visionärer" Informatik-Studiengang. Informatik Spektrum, GI e.V., 2007.
- [2] A. Kolb. SIMPRA special issue on programmable graphics hardware (editor's preface). *J. Simulation Practice & Theory*, 13(8):665–666, 2005.
- [3] A. Kolb. Reparatur und Texturierung von Polygonmodellen für Virtual Reality Anwendungen. <http://vrlab.fh-wedel.de/themen/modellreparatur.html>, 2002-2003. BMBF-gefördert in Rahmen des aFuE-Programms, Förderkennziffer 1706002.
- [4] A. Kolb. Kooperation Airbus – FH Wedel. Auditorium - Jahresschrift der FH Wedel, 2001.
- [5] L. Latta and A. Kolb. Lichtspiele in der Medieninformatik. Auditorium - Jahresschrift der FH Wedel, 2001.
- [6] A. Kolb. Virtuelle Realität an der Fachhochschule Wedel. Mensch & Technik, VDI-BV Hamburg, 2000.
- [7] A. Kolb. Praxisnahes Arbeiten: Das Virtual Reality Labor. Auditorium - Jahresschrift der FH Wedel, 2000.
- [8] A. Kolb. *Optimierungsansätze bei der Interpolation verteilter Daten*. PhD thesis, Universität Erlangen–Nürnberg, 1995.

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## Talks

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- [1] A. Kolb and E. Barth. Time-of-flight sensors in computer graphics. Eurographics State-of-the-Art Report, 2009. München, Germany, 03.04.2009.
- [2] A. Kolb. Kalibrierung und 2D/3D Bildverarbeitung mit dem PMD-Sensor. PMDVisionDay, 2008. München, Germany, 18.11.2008.
- [3] A. Kolb. ToF-sensors: New dimensions for realism and interactivity. Time-of-Flight Camera based Computer Vision, Int. IEEE Conference on Pattern Recognition, 2008. Anchorage, USA, 28.06.2008.
- [4] A. Kolb. Rekonstruktion der Dillenburg. Workshop Virtuelle Welten als Basistechnologie für Kunst und Kultur, 2008. St. Augustin, Germany, 08.02.2008.
- [5] A. Kolb. Algorithmen zur interaktiven Verarbeitung von PMD-basierten Tiefendaten. Freitags-Kolloquium, GRIS, Universität Tübingen, 2007. Tübingen, Germany, 06.06.2007.
- [6] A. Kolb. Einsatzpotentiale der PMD-Technologie für Computer-Graphik und Computer-Vision. INB Lunch-Seminar, Universität Lübeck, 2007. Lübeck, Germany, 01.06.2007.
- [7] A. Kolb. Computing Power Beyond Imagination. C& C Research Lab, NEC Europe, 2007. St. Augustin, Germany, 08.05.2007.
- [8] A. Kolb. "Research in the Loop" – Schnelle Simulationen und Visualisierungen. Center of Material Science, Universität Siegen, 2007. Siegen, Germany, 07.05.2007.
- [9] A. Kolb. Concepts and Applications of Programmable Graphics Hardware. Informatik-Kolloquium, FU Hagen, 2007. Hagen, Germany, 31.01.2007.

- [10] A. Kolb. Einsatzpotentiale der PMD-Technologie in Computer-Graphik und Computer-Vision. Informatik-Kolloquium der TU Clausthal, 2006. Clausthal, Germany, 26.06.2006.
- [11] A. Kolb. Non-graphical applications of programmable graphics hardware. Graduiertenkolleg Universität Konstanz, 2005. Konstanz, Germany, 28.06.2005.
- [12] A. Kolb. Simulation based upon programmable graphics hardware. ASIM – Workshop, 2005. Wuppertal, Germany, 09-11.03.2005.
- [13] A. Kolb. Einsatz der PMD-Technik in der Computergraphik. DFG-Arbeitstreffen Technisches 3D-Sehen auf der Basis der PMD-Technologie, 2004. Siegen, Germany, 07.10.2004.
- [14] A. Kolb. Hardware-based simulation and collision detection for large particle system. Graphics Hardware, 2004. Grenoble, France, 30.08.2004.
- [15] A. Kolb. Hardware-based simulation and collision detection for large particle system. Universität Tübingen, GRIS-Freitags-Kolloquium, 2004. Tübingen, Germany, 07.05.2004.
- [16] A. Kolb. Homomorphic factorization of BRDF-based lighting computation. Universität Bonn, 2002. Bonn, Germany, 21.10.2002.
- [17] A. Kolb. Homomorphic factorization of BRDF-based lighting computation. ACM/SIGGRAPH, 2002. San Antonio, USA, 25.07.2002.
- [18] A. Kolb. Volumetric model repair for VR applications. EUROGRAPHICS, 2001. Manchester, September 2001.
- [19] A. Kolb. Optimierungsansätze bei der Interpolation verteilter Daten. Technische Universität Wien, 1995. Wien, Österreich, 1.12.1995.
- [20] A. Kolb. Fair surface reconstruction using quadratic functionals. EUROGRAPHICS, 1995. Maastricht, Holland, 30.08-1.09.1995.
- [21] A. Kolb. Surface reconstruction based upon minimum norm networks. Third International Conference on Mathematical Methods in CAGD, 1994. Ulvik, Norwegen, 16.06-21.06.1994.
- [22] A. Kolb. Interpolating scattered data with  $C^2$ -surfaces. Modeling Curved Surfaces using Direct Manipulation Techniques, 1993. Eindhoven, Holland, 8.11.1993.