

## **Seminar “Advanced Topics in Computer Graphics” WS 09/10**

All papers can be found on

<http://cg.informatik.uni-freiburg.de/intern/seminar/> .

The pass will be disclosed in the first seminar on Oct 20.

or on personal request. Alternatively, most papers can be obtained from

<http://www.acm.org/dl/> if logged into the university domain or from

<http://cg.informatik.uni-freiburg.de/> .

D. Knott, D. Pai, “**CInDeR: Collision and Interference Detection in Real-time using Graphics Hardware**”, Graphics Interface 2003.

J. Spillmann, M. Becker, M. Teschner, "**Non-iterative Computation of Contact Forces for Deformable Objects**", Journal of WSCG 2007.

M. Gissler, M. Becker, M. Teschner, "**Local Constraint Methods for Deformable Objects**", Virtual Reality Interactions and Physical Simulations 2006.

J. Spillmann, M. Becker, M. Teschner, "**Efficient Updates of Bounding Sphere Hierarchies for Geometrically Deformable Models**", Virtual Reality Interactions and Physical Simulations 2006.

J. Spillmann, M. Wagner, M. Teschner, "**Robust Tetrahedral Meshing of Triangle Soups**", Vision, Modeling, Visualization 2006.

M. Mueller, B. Heidelberger, M. Teschner, M. Gross, "**Meshless Deformations Based on Shape Matching**", ACM SIGGRAPH 2005.

M. Teschner, S. Kimmerle, B. Heidelberger, G. Zachmann, L. Raghupathi, A. Fuhrmann, M.-P. Cani, F. Faure, N. Magnenat-Thalmann, W. Strasser, P. Volino, "**Collision Detection for Deformable Objects**", Computer Graphics Forum 2005.

B. Heidelberger, M. Teschner, R. Keiser, M. Mueller, M. Gross, "**Consistent Penetration Depth Estimation for Deformable Collision Response**", Vision, Modeling, Visualization 2004.

M. Teschner, B. Heidelberger, M. Mueller, M. Gross, "**A Versatile and Robust Model for Geometrically Complex Deformable Solids**", Computer Graphics International 2004.

B. Heidelberger, M. Teschner, M. Gross, "**Real-Time Volumetric Intersections of Deforming Objects**", Vision, Modeling, Visualization 2003.

M. Mueller, S. Schirm, S. Duthaler, „**Screen Space Meshes**“, Symposium on Computer Animation 2007.

M. Mueller, B. Heidelberger, M. Hennix, J. Ratcliff, „**Position Based Dynamics**“, Virtual Reality Interactions and Physical Simulations 2006.

Thurner Whitted, "**An Improved Illumination Model for Shaded Display**", Communications of the ACM, 1980.

Robert Cook, Thomas Porter, Loren Carpenter, "**Distributed Ray Tracing**", ACM SIGGRAPH 1984.

James T. Kajiya, "**The Rendering Equation**", ACM SIGGRAPH 1986.

William E. Lorensen, Harvey E. Cline, "**Marching Cubes: A High Resolution Surface Reconstruction Algorithm**", ACM SIGGRAPH 1987.

William T. Reeves, David H. Salesin, Robert L. Cook, "**Rendering Antialiased Shadows with Depth Maps**", ACM SIGGRAPH 1987.

James T. Kajiya, Timothy L. Kay, "**Rendering Fur With Three Dimensional Textures**", ACM SIGGRAPH 1989.

Hugues Hoppe, Tony DeRose, Tom Duchamp, John McDonald, Werner Stuetzle, **“Surface Reconstruction from Unorganized Points”**, ACM SIGGRAPH 1992.

William J. Schroeder, Jonathan A. Zarge, William E. Lorensen, **„Decimation of Triangle Meshes“**, ACM SIGGRAPH 1992.

Michael Kelley, Kirk Gould, Brent Pease, Stephanie Winner, Alex Yen, **“Hardware Accelerated Rendering of CSG and Transparency”**, ACM SIGGRAPH 1994.

Philippe Lacroute, Marc Levoy, **“Fast Volume Rendering Using a Shear-Warp Factorization of the Viewing Transformation”**, ACM SIGGRAPH 1994.

Paul E. Debevec, Camillo J. Taylor, Jitendra Malik, **“Modeling and Rendering Architecture from Photographs: A Hybrid Geometry- and Image-based Approach”**, ACM SIGGRAPH 1996.

Steven J. Gortler, Radek Grzeszczuk, Richard Szeliski, Michael F. Cohen, **“The Lumigraph”**, ACM SIGGRAPH 1996.

Hugues Hoppe, **“Progressive Meshes”**, ACM SIGGRAPH 1996.

Marc Levoy, Pat Hanrahan, **“Light Field Rendering”**, ACM SIGGRAPH 1996.

Michael Garland, Paul S. Heckbert, **“Surface Simplification Using Quadric Error Metrics”**, ACM SIGGRAPH 1997.

Henrik Wann Jensen, Per H. Christensen, **„Efficient Simulation of Light Transport in Scenes with Participating Media using Photon Maps“**, ACM SIGGRAPH 1998.

Douglas E. Zongker, Dawn M. Werner, Brian Curless, David H. Salesin, **“Environment Matting and Compositing”**, ACM SIGGRAPH 1999.

Tom Lokovic, Eric Veach, **“Deep Shadow Maps”**, ACM SIGGRAPH 2000.

Eric Parker, James F. O’Brien, **“Real-Time Deformation and Fracture in a Game Environment”**, ACM SIGGRAPH / Eurographics Symposium on Computer Animation 2009.

Barbara Solenthaler, Renato Pajarola, **“Predictive-Corrective Incompressible SPH”**, ACM SIGGRAPH 2009.

Yanci Zhang, Barbara Solenthaler, Renato Pajarola, **“Adaptive Sampling and Rendering of Fluids on the GPU”**, Eurographics Symposium on Volume and Point-based Graphics 2008.

Stefan Popov, Iliyan Georgiev, Rossen Dimov, Philipp Slusallek, **“Object Partitioning Considered Harmful: Space Subdivision for BVHs”**, High Performance Graphics 2009

Javor Kalojanov, Philipp Slusallek, **“A Parallel Algorithm for Construction of Uniform Grids”**, High Performance Graphics 2009.