

# Themenliste für das Seminar Computergrafik

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## Soft shadow volumes for ray tracing

Samuli Laine, Timo Aila, Ulf Assarsson, Jaakko Lehtinen, Tomas Akenine-Möller

ACM Transactions on Graphics (TOG), Volume 24 , Issue 3 (July 2005)

Proceedings of ACM SIGGRAPH 2005, pp. 1156 – 1165, 2005, ISSN:0730-0301

<http://doi.acm.org/10.1145/1073204.1073327>

[http://www.tml.tkk.fi/~timo/publications/laine2005siggraph\\_paper.pdf](http://www.tml.tkk.fi/~timo/publications/laine2005siggraph_paper.pdf)

2

## A realtime GPU subdivision kernel

Le-Jeng Shiue, Ian Jones, Jörg Peters

ACM Transactions on Graphics (TOG), Volume 24 , Issue 3 (July 2005)

Proceedings of ACM SIGGRAPH 2005, pp. 1010 – 1015, 2005, ISSN:0730-0301

<http://doi.acm.org/10.1145/1073204.1073304>

<http://en.scientificcommons.org/43430909>

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## Meshless deformations based on shape matching

Matthias Müller, Bruno Heidelberger, Matthias Teschner, Markus , Gross

ACM TOG, Volume 24, Issue 3, 2005, pp. 471-478, ISSN 0730-0301

<http://doi.acm.org/10.1145/1073204.1073216>

[www.matthiasmueller.info/publications/MeshlessDeformations\\_SIG05.pdf](http://www.matthiasmueller.info/publications/MeshlessDeformations_SIG05.pdf)

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## Interactive texture synthesis on surfaces using jump maps

Steve Zelinka, Michael Garland

EGRW '03: Proceedings of the 14th Eurographics workshop on Rendering, 2003,

pp. 90-96, ISBN 3-905673-03-7

<http://portal.acm.org/citation.cfm?id=882418>

<http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.15.792>

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## GPU-Based Ray Casting of Quadratic Surfaces.

Christian Sigg, Tim Weyrich, Mario Botsch, Markus Gross.

In Proceedings of Eurographics Symposium on Point-Based Graphics, July 29-30, 2006, Boston.

<http://www.cs.ucl.ac.uk/staff/t.weyrich/>

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## A Simple and Robust Mutation Strategy for the Metropolis Light Transport Algorithm.

Kelemen, C., Szirmay-Kalos, L., Antal, G. and Csonka, F.

Computer Graphics Forum, 21, pp. 531–540, 2002.

doi: 10.1111/1467-8659.t01-1-00703

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**Energy redistribution path tracing**

David Cline, Justin Talbot, Parris Egbert

ACM TOG, Volume 24, Issue 3, 2005, pp. 1186-1195, ISSN 0730-0301

<http://doi.acm.org/10.1145/1073204.1073330>

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**Metropolis light transport**

Eric Veach, Leonidas J. Guibas

SIGGRAPH '97: Proceedings of the 24th annual conference on Computer graphics and interactive techniques, pp. 65-76, 1997, ISBN 0-89791-896-7,

<http://doi.acm.org/10.1145/258734.258775>

<http://www-graphics.stanford.edu/papers/metro/>

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**A practical analytic model for daylight**

A. J. Preetham, Peter Shirley, Brian Smits

SIGGRAPH '99: Proceedings of the 26th annual conference on Computer graphics and interactive techniques, pp. 91-100, 1999, ISBN 0-201-48560-5,

<http://doi.acm.org/10.1145/311535.311545>

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**A physically-based night sky model**

Henrik Wann Jensen, Frédo Durand, Julie Dorsey, Michael M. Stark, Peter Shirley, Simon Premože  
SIGGRAPH '01: Proceedings of the 28th annual conference on Computer graphics and interactive techniques, pp. 399-408, 2001, ISBN 1-58113-374-X

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<http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.2.5532>

<http://graphics.stanford.edu/~henrik/papers/nightsky/>

<http://www.pubzone.org/dblp/conf/siggraph/JensenDDSSP01>

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**3D Rasterization -- Unifying Rasterization and Ray Casting**

Carsten Dachsbacher, Philipp Slusallek, Tomas Davidovic, Thomas Engelhardt, Mike Phillips, Iliyan Georgiev

Techreport VISUS/Saarland University Technical Report, August 20, 2009

[http://www.vis.uni-stuttgart.de/~engelhts/paper/3dr\\_techreport.pdf](http://www.vis.uni-stuttgart.de/~engelhts/paper/3dr_techreport.pdf)

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**Replica Exchange Light Transport.**

S. Kitaoka, Y. Kitamura, F. Kishino

Computer Graphics Forum, 28: pp. 2330–2342. 2009

doi: 10.1111/j.1467-8659.2009.01540.x

<http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8659.2009.01540.x/abstract>

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**Decimation of triangle meshes**

William J. Schroeder, Jonathan A. Zarge, William E. Lorensen  
SIGGRAPH '92: Proceedings of the 19th annual conference on Computer graphics and interactive techniques, pp. 65-70, 1992, ISBN 0-89791-479-1

<http://doi.acm.org/10.1145/133994.134010>

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**Directed Edges--A Scalable Representation for Triangle Meshes**

Swen Campagna, Leif Kobbelt, Hans-Peter Seidel

Journal of Graphics, GPU, and Game Tools, Volume 3, Issue 4, pp. 1-12, 1998

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**The Use of Precomputed Triangle Clusters for Accelerated Ray Tracing in Dynamic Scenes.**

Garanzha, K.

Computer Graphics Forum, 28, pp. 1199–1206, 2009

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**On fast Construction of SAH-based Bounding Volume Hierarchies**

Ingo Wald

IEEE Symposium on Interactive Ray Tracing, pp. 33-40, 2007

<http://www.computer.org/portal/web/csdl/doi/10.1109/RT.2007.4342588>

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**Deterministic Importance Sampling with Error Diffusion**

László Szirmay-Kalos and László Szécsi

Computer Graphics Forum, 28: 1055–1064, 2009

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**Anti-aliased Euclidean distance transform**

Stefan Gustavson, Robin Strand

Pattern Recognition Letters, Volume 32, Issue 2, 15 January 2011, Pages 252-257

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<http://contourtextures.wikidot.com/>

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**Filling holes in meshes**

Peter Liepa

Eurographics symposium on Geometry processing, 2003, 200-205

<http://dl.acm.org/citation.cfm?id=882397>

<http://www.brainjam.ca/papers/FillingHolesSGP2003.pdf>