Themenliste für das Seminar Computergrafik, Wintersemester 2013/14

Modelling of objects

1.
Partition of Unity Parametrics: A framework for meta-modeling
Adam Runions, Faramarz Samavati
The Visual Computer 27 (2011) (6-8), pp. 495-505.
http://algorithmicbotany.org/papers/pup.tvc2011.pdf

2. *(Thema vergeben / topic already assigned to a participant)*
L_1-medial skeleton of point cloud
Hui Huang, Shihao Wu, Daniel Cohen-Or, Minglun Gong, Hao Zhang, Guiqing Li, Baoquan Chen
ACM Transactions on Graphics (TOG), Volume 32, Issue 4 (July 2013), Article No. 65
Paper: http://dl.acm.org/citation.cfm?id=2461913
Paper webpage: http://web.siat.ac.cn/~huihuang/Skeleton/Skeleton_page.html

3. *(Thema vergeben / topic already assigned to a participant)*
Solid simulation with oriented particles
Matthias Müller, Nuttapong Chentanez
ACM Transactions on Graphics (TOG), Volume 30, Issue 4 (July 2011), Article No. 92
Paper: http://dl.acm.org/citation.cfm?id=1964987
Video: http://www.youtube.com/watch?v=LRHqs4GJuCA

4.
A probabilistic model for component-based shape synthesis
Evangelos Kalogerakis, Siddhartha Chaudhuri, Daphne Koller, Vladlen Koltun
ACM Transactions on Graphics (TOG), Volume 31, Issue 4 (July 2012), Article No. 55
http://dl.acm.org/citation.cfm?id=2185551
http://vladlen.info/publications/a-probabilistic-model-for-component-based-shape-synthesis/

Light regime modelling

5.
An analytic model for full spectral sky-dome radiance
Lukas Hosek, Alexander Wilkie
ACM Transactions on Graphics (TOG), Volume 31, Issue 4 (July 2012), Article No. 95
http://dl.acm.org/citation.cfm?id=2185591
http://cgg.mff.cuni.cz/projects/SkylightModelling/

6. *(Thema vergeben / topic already assigned to a participant)*
Adding a solar-radiance function to the Hošek-Wilkie skylight model
Lukas Hosek, Alexander Wilkie
Computer Graphics and Applications, IEEE, Volume 33, Issue 3 (May-June 2013), pp. 44-52
Paper: http://ieeexplore.ieee.org/xpl/articleDetails.jsp?reload=true&arnumber=6459496
Paper webpage: http://cgg.mff.cuni.cz/projects/SkylightModelling/

7. *(Thema vergeben / topic already assigned to a participant)*
Predicting sky dome appearance on earth-like extrasolar worlds
Alexander Wilkie, Lukas Hosek
Proceedings of the 29th Spring Conference on Computer Graphics (SCCG 2013), 2013
Paper: http://cgg.mff.cuni.cz/projects/SkylightModelling/sccg_2013_alien_sun_preprint.pdf
Paper webpage: http://cgg.mff.cuni.cz/projects/SkylightModelling/

Collision detection and avoidance

8.
I-COLLIDE: An interactive and exact collision detection system for large-scale environments
Jonathan D. Cohen, Ming C. Lin, Dinesh Manocha, Madhav Ponamgi
Proceedings of the 1995 Symposium on Interactive 3D graphics (I3D '95) (1995), pp. 189-218
Paper: http://dl.acm.org/citation.cfm?id=199437

9.
Modeling collision avoidance behavior for virtual humans
Stephen J. Guy, Ming Lin, Dinesh Manocha
Proceedings of the 9th International Conference on Autonomous Agents and Multiagent Systems: volume 2 (AAMAS '10) (2010), pp. 575-582
Paper: http://dl.acm.org/citation.cfm?id=1838182
Paper webpage: http://gamma.cs.unc.edu/RCAP/

Modelling of vegetation

10. *(Thema vergeben / topic already assigned to a participant)*
Plastic Trees: Interactive self-adapting botanical tree models
Soren Pirk, Ondrej Stava, Julian Kratt, Michel Abdul-Massih, Boris Neubert, Radomir Mech, Bedrich Benes, Oliver Deussen
ACM Transactions on Graphics (TOG), Volume 31, Issue 4 (July 2012), Article No. 50
http://dl.acm.org/citation.cfm?id=2185546
http://graphics.uni-konstanz.de/publikationen/2012/plastic_trees/website/

11.
Interactive authoring of simulation-ready plants
Yili Zhao, Jernej Barbič
ACM Transactions on Graphics (TOG), Volume 32, Issue 4 (July 2013), Article No. 84
Paper: http://dl.acm.org/citation.cfm?id=2461961&picked=formats
Paper webpage: http://run.usc.edu/botanical/

12.
Modeling and generating moving trees from video
Chuan Li, Oliver Deussen, Yizhe Song, Phil Willis, Peter Hall
ACM Transactions on Graphics (TOG), Volume 30, Issue 6 (December 2011), Article No. 127
http://dl.acm.org/citation.cfm?id=2024161
http://www.cs.bath.ac.uk/~cl249/

13.

A plastic, dynamic and reducible 3D geometric model for simulating gramineous leaves
Christian Fournier, Christophe Pradal
In *International Symposium on Plant Growth Modeling, Simulation, Visualization and Applications*, 2012, pp. 125-132
http://hal.archives-ouvertes.fr/docs/00/78/81/40/PDF/leafshape.pdf

14.

Real-time realistic rendering and lighting of forests
Eric Bruneton, Fabrice Neyret
Computer Graphics Forum, Volume 31, Issue 2pt1 (May 2012), pp. 373-382
Paper: http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8659.2012.03016.x/abstract

Information visualization

15. *(Thema vergeben / topic already assigned to a participant)*
Information visualization and visual data mining
Daniel A. Keim
IEEE Transactions on Visualization and Computer Graphics, Volume 8, Issue 1 (Jan/Mar 2002), pp. 1-8
Paper: http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=981847

Texturing, rendering and rasterization

16. *(Thema vergeben / topic already assigned to a participant)*
CG2Real: Improving the realism of computer generated images using a large collection of photographs
Micah K. Johnson, Kevin Dale, Shai Avidan, Hanspeter Pfister, William T. Freeman, Wojciech Matusik
IEEE Transactions on Visualization and Computer Graphics, Volume 17, Issue 9 (September 2011), pp. 1273-1285
Paper:
http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=5620893&sortType%3Dasc_p_Sequence%26filter%3DAND%28p_IS_Number%3A5946031%29
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5620893
Paper webpage: http://people.csail.mit.edu/wojciech/CG2Real/index.html

17. *(Thema vergeben / topic already assigned to a participant)*
*i*PACKMAN: high-quality, low-complexity texture compression for mobile phones
Jacob Ström, Tomas Akenine-Möller
Proceedings of the ACM SIGGRAPH/EUROGRAPHICS Conference on Graphics Hardware (HWWS '05), pp. 63-70, 2005
Paper: http://dl.acm.org/citation.cfm?id=1071877

18.
Wavelet rasterization
J. Manson, S. Schaefer
Computer Graphics Forum, Volume 30, Issue 2 (April 2011), pp. 395-404
http://josiahmanson.com/research/wavelet_rasterization/
http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8659.2011.01887.x/full

19.
A runtime cache for interactive procedural modeling
Tim Reiner, Sylvain Lefebvre, Lorenz Diener, Ismael García, Bruno Jobard, Carsten
Dachsbacher
Computers and Graphics, Volume 36, Issue 5 (August, 2012), pp. 366-375
http://cg.ibds.kit.edu/publikationen.php
http://cg.ibds.kit.edu/publications/2012/RuntimeCache/Runtime-Cache-SMI2012.pdf