Themenliste / List of topics, Seminar Computergrafik, Winter 2023/24

Modelling of vegetation

1.
Yili Zhao, Jernej Barbič (2013):
Interactive authoring of simulation-ready plants.
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/

2.
Yi, L., Li, H., Guo, J., Deussen, O., & Zhang, X. (2018):
Tree growth modelling constrained by growth equations.
Computer Graphics Forum, vol. 37, no. 1, 239-253.
https://onlinelibrary.wiley.com/doi/pdf/10.1111/cgf.13263

3.
Wang, Y., Xue, X., Jin, X., & Deng, Z. (2017):
Creative virtual tree modeling through hierarchical topology-preserving blending.
IEEE Transactions on Visualization and Computer Graphics, vol. 23, no. 12, 2521-2534.
https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7775115

4.
Ulysse Vimont, Damien Rohmer, Antoine Begault, Marie-Paule Cani (2017):
Deformation grammars: Hierachical constraint preservation under deformation.
Computer Graphics Forum (2017), vol. 36, no. 8, pp. 429-443. doi:10.1111/cgf.13090.
https://hal.inria.fr/hal-01518534/document

5.
Xie, D., Wang, X., Qi, J., Chen, Y., Mu, X., Zhang, W., & Yan, G. (2018):
Reconstruction of single tree with leaves based on terrestrial LiDAR point cloud data.
Remote Sensing, vol. 10, no. 5.
https://res.mdpi.com/remotesensing/remotesensing-10-00686/article_deploy/remotesensing-10-00686.pdf?filename=&attachment=1

Modelling of architecture

6.
Lars Krecklau, Janis Born, Leif Kobbelt (2013):
View-dependent realtime rendering of procedural facades with high geometric detail.
In: I. Navazo, P. Poulin (eds.): EUROGRAPHICS 2013. *Computer Graphics Forum*, vol. 32 (2013), no. 2.
https://www.graphics.rwth-aachen.de/media/papers/krecklau_2013_eg.pdf

Surface modelling

7.
James Andrews, Carlo H. Séquin (2013):
Type-constrained direct fitting of quadric surfaces.
Computer-Aided Design and Applications, 11 (1), 107-119.
http://graphics.berkeley.edu/papers/Andrews-TCD-2013-06/Andrews-TCD-2013-06.pdf

Object reconstruction

8.
Hassnae, R., & Mohammed, S. (2019):
3D object reconstruction from 3D point cloud by supershapes using PSO.
Journal of Theoretical and Applied Information Technology, 97 (24).
https://pdfs.semanticscholar.org/00ab/36d175aa7fc37c08cdd67442339abefb3e30.pdf

Raytracing

9.
Doug Baldwin, Michael Weber (2016):
Fast ray-triangle intersections by coordinate transformation.
Journal of Computer Graphics Techniques, vol. 5, no. 3, 39-49.
http://www.jcgt.org/published/0005/03/03/paper.pdf

Natural phenomena

10.
Giroud, A., & Biri, V. (2010):
Modeling and rendering heterogeneous fog in real-time using B-spline wavelets.
archives-ouvertes.fr.
https://hal-upec-upem.archives-ouvertes.fr/hal-00681748/file/GB10.pdf

11.
Goswami, Prashant (2021): **A survey of modeling, rendering and animation of clouds in computer graphics**
DOI:10.1007/s00371-020-01953-y
https://link.springer.com/content/pdf/10.1007/s00371-020-01953-y.pdf
(Juli 2021)

12.
Favorskaya, M. N., & Tkacheva, A. (2013):
Rendering of wind effects in 3D landscape scenes.
Procedia Computer Science, 22, 1229-1238.
https://www.sciencedirect.com/science/article/pii/S187705091301003X/pdf?md5=a15d78253d23887feec72dc80df810d8&pid=1-s2.0-S187705091301003X-main.pdf

Rewriting techniques

13.
Jason Bernard, Ian McQuillan (2018):
A fast and reliable hybrid approach for inferring L-systems.
In: Artificial Life Conference Proceedings. MIT Press, 2018. pp. 444-451.
https://www.mitpressjournals.org/doi/pdf/10.1162/isal_a_00083

14.
S. Vilgertshofer, A. Borrmann (2018):
Supporting feature-based parametric modeling by graph rewriting.
In: 35th Internat. Symposium on Automation and Robotics in Construction (ISARC 2018).
https://publications.cms.bgu.tum.de/2018_vilgertshofer_isarc.pdf