Themenliste für das Seminar Computergrafik, Wintersemester 2017/18

Modelling of vegetation

1.
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/

2.
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/

3.
Simple reconstruction of tree branches from a single range image
Zhang-Lin Cheng, Xiao-Peng Zhang, Bao-Quan Chen
Journal of Computer Science and Technology, Vol. 22, issue 6 (Nov. 2007), pp. 846-858
http://sfx.gbv.de:9004/sfx_sub?sid=google&auinit=ZL&aulast=Cheng&atitle=Simple+reconstruction+of+tree+branches+from+a+single+range+image&id=doi:10.1007/s11390-007-9095-6&title=Journal+of+Computer+Science+and+Technology&volume=22&issue=6&date=2007&spage=846
http://download.springer.com/static/pdf/432/art%253A10.1007%252Fs11390-007-9095-6.pdf?originUrl=http%3A%2F%2Flink.springer.com%2Farticle%2F10.1007%2Fs11390-007-9095-6&token2=exp=1475768269~acl=%2Fstatic%2Fpdf%2F432%2Fart%25253A10.1007%25252Fs11390-007-9095-6.pdf%3ForiginUrl%3Dhttp%253A%252F%252Flink.springer.com%252Farticle%252F10.1007%252Fs11390-007-9095-6*~hmac=70e159743aed2339b4b0a67dcd60b2e6e4947239412202398e70c6007f7113dc

4.
Responsive real-time grass rendering for general 3D scenes
Klemens Jahrmann, Michael Wimmer
In: *Proceedings of the 21st ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games* (I3D '17), Stephen N. Spencer (Ed.). ACM, New York, NY, USA, 2017, Article 6, 10 pages.
https://dl.acm.org/citation.cfm?id=3023380

5.
Full 3D plant reconstruction via intrusive acquisition
Kangxue Yin, Hui Huang, Pinxin Long, Alexei Gaissinski, Minglun Gong, Andrei Sharf
Computer Graphics Forum, 35 (2016), 1, 272-284.
http://web.b.ebscohost.com/ehost/results?vid=0&sid=c208aeea-f032-4447-8488-d62125b4df47%40sessionmgr101&bquery=(SO+(Computer+graphics+forum))AND(DT+20

16)AND(TI+full+3d+plant+reconstruction+via+intrusive+acquisition)&bdata=JmRiPWJ0aCZ0eXBlPTEmc2l0ZT1laG9zdC1saXZl

6.
Tree modeling with real tree-parts examples
Ke Xie, Feilong Yan, Andrei Sharf, Oliver Deussen, Hui Huang, Baoquan Chen
IEEE Transactions on Visualization and Computer Graphics, 22 (2016), 12, 2608-2618.
http://kops.uni-konstanz.de/bitstream/handle/123456789/33521/Xie_0-324787.pdf?sequence=1&isAllowed=y

7.
Deformation grammars: Hierachical constraint preservation under deformation
Ulysse Vimont, Damien Rohmer, Antoine Begault, Marie-Paule Cani
Computer Graphics Forum (2017), doi:10.1111/cgf.13090
https://hal.inria.fr/hal-01518534/document

8.
Modeling and optimization of a tree based on virtual reality for immersive virtual landscape generation
Jinmo Kim
Symmetry, 2016, 8, 93 (17 p.)
http://www.mdpi.com/2073-8994/8/9/93/pdf

9.
IMapple – functional structural model of apple trees
Hao Kang, Marek Fiser, Biying Shi, Fatemeh Sheibani, Peter Hirst, Bedrich Benes
In: International Conference on Plant Growth Modeling, Simulation, Visualization and Applications (FSPMA) 2016, 7-11 November 2016, Qingdao, China (8 p.)
http://hpcg.purdue.edu/papers/Kang16FSPMA.pdf

10.
A real-time 3D visualization approach for the appearance of crop leaves
Teng Miao, Xinyu Guo, Boxiang Xiao, Chunjiang Wang, Weiliang Wen
Bangladesh J. Bot. 45 (4) (2016), 895-904.
http://www.bdbotsociety.org/journal/journal_issue/2016%20September%20Supplementary/20.pdf

Modelling of landscapes

11.
Sparse representation of terrains for procedural modeling
Eric Guérin, Julie Digne, Eric Galin, Adrien Peytavie
EUROGRAPHICS 2016 (eds.: J. Jorge, M. Lin), 35 (2) (2016) (11 p.)
https://www.researchgate.net/profile/Eric_Guerin2/publication/299977904_eg2016/links/5707857508ae04e9708f187f.pdf

Modelling of architecture

12.
Procedural modeling of buildings
Pascal Müller, Peter Wonka, Simon Haegler, Andreas Ulmer, Luc Van Gool
ACM Transactions on Graphics (TOG) - Proceedings of ACM SIGGRAPH 2006, vol. 25 (3) (July 2006), 614-623.
http://delivery.acm.org/10.1145/1150000/1141931/p614-muller.pdf?ip=134.76.192.140&id=1141931&acc=ACTIVE%20SERVICE&key=2BA2C432AB83DA15%2E8C14E74AF280C121%2E4D4702B0C3E38B35%2E4D4702B0C3E38B35&CFID=818083293&CFTOKEN=30151722&__acm__=1507713725_8ec3be5eed854549bc1f00329f2c34ea

13.
Layered shape grammars for procedural modelling of buildings
Diego Jesus, António Coelho, António Augusto Sousa
The Visual Computer 32 (2016), 933-943
https://link.springer.com/content/pdf/10.1007%2Fs00371-016-1254-8.pdf

Surface modelling

14.
A practical bump mapping technique in scene simulation
Jun Sun, Limei Xu, Hui Li, Qian Wu
Proceedings of the IEEE International Conference on Mechatronics & Automation, Niagara Falls, Canada, July 2005, 166-170.
http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=1626541&tag=1

Illumination

15.
Sequential Monte Carlo instant radiosity
Peter Hedman, Tero Karras, Jaakko Lehtinen
IEEE Transactions on Visualization and Computer Graphics, 23 (5) (May 2017), 1442-1453.
http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=7867077

16.
Correlated photon mapping for interactive global illumination of time-varying volumetric data
Daniel Jönsson, Anders Ynnerman
IEEE Transactions on Visualization and Computer Graphics, 23 (1) (Jan. 2017), 901-910.
http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=7534852

Object recognition

17.
Multi-scale classification of 3D objects
Dongmei Zhang, Martial Hebert
IEEE Conference on Computer Vision and Pattern Recognition 1997, 864-869.
http://repository.cmu.edu/cgi/viewcontent.cgi?article=1470&context=robotics

Animation

18.
Detection of gradual transitions in video sequences using B-spline interpolation
Jeho Nam, Ahmed H. Tewfik
IEEE Transactions on Multimedia, 7 (4) (August 2005), 667-679.
http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=1468152