

# Themenliste für das Seminar Computergrafik, Wintersemester 2016/17

## *3D object reconstruction and rendering*

### 1. *(topic already chosen)*

#### **Scalable real-time volumetric surface reconstruction**

Jiawen Chen, Dennis Bautembach, Shahram Izadi

*ACM Transactions on Graphics*, 32 (4), Article 113 (July 2013), 10 p.

<http://dl.acm.org/citation.cfm?doid=2461912.2461940>

<http://delivery.acm.org/10.1145/2470000/2461940/a113->

[chen.pdf?ip=134.76.192.145&id=2461940&acc=ACTIVE%20SERVICE&key=2BA2C432AB83DA15%2E8C14E74AF280C121%2E4D4702B0C3E38B35%2E4D4702B0C3E38B35&CFID=439402070&CFTOKEN=23351634&\\_acm\\_=1412854956\\_d3469e6433062825342917b0d5962404](http://delivery.acm.org/10.1145/2470000/2461940/a113-chen.pdf?ip=134.76.192.145&id=2461940&acc=ACTIVE%20SERVICE&key=2BA2C432AB83DA15%2E8C14E74AF280C121%2E4D4702B0C3E38B35%2E4D4702B0C3E38B35&CFID=439402070&CFTOKEN=23351634&_acm_=1412854956_d3469e6433062825342917b0d5962404)

## *Light regime modelling*

### 2.

#### **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/>

### 3.

#### **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](http://cgg.mff.cuni.cz/projects/SkylightModelling/sccg_2013_alien_sun_preprint.pdf)

Paper webpage: <http://cgg.mff.cuni.cz/projects/SkylightModelling/>

## *Collision detection*

### 4.

#### **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>

## *Modelling of vegetation*

### 5.

#### **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/>

6.

**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/>

7.

**A plastic, dynamic and reducible 3D geometric model for simulating gramineous leaves**

Christian Fournier, Christophe Pradal

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>

8.

**Real-time realistic rendering and lighting of forests**

Eric Bruneton, Fabrice Neyret

*Computer Graphics Forum*, Volume 31, Issue 2, pt 1 (May 2012), pp. 373-382

<http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8659.2012.03016.x/abstract>

<http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8659.2012.03016.x/pdf>

9.

**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&aualast=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://sfx.gbv.de:9004/sfx_sub?sid=google&auinit=ZL&aualast=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](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)

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[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](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)