

# Peter Wonka

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## EDUCATION

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- **Vienna University of Technology**  
*Ph.D in Computer Science (Dr. techn.)* Vienna, Austria  
Oct 1997 – Jun 2001
- **Vienna University of Technology**  
*Master of Science in Urban Planning (Dipl.-Ing.)* Vienna, Austria  
Oct 1995 – Oct 2002
- **Vienna University of Technology**  
*Master of Science in Computer Science (Dipl.-Ing.)* Vienna, Austria  
Oct 1993 – Jun 1997

## APPOINTMENTS

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- Professor, KAUST, KSA Jul 2014 – current
- Associate Director, Visual Computing Center (VCC, previously GMSV) Jan 2013 – current
- Acting Director of the GMSV center, KAUST Nov 2013 – Jan 2014
- Associate Professor, KAUST, KSA Aug 2011 – Jul 2014
- Associate Professor, Arizona State University, USA Aug 2010 – Aug 2016
- Assistant Professor, Arizona State University, USA Aug 2004 – May 2010
- Postdoctoral Researcher, Georgia Institute of Technology, USA Aug 2002 – Aug 2004
- Research Assistant, Vienna University of Technology, Austria Oct 1997 – Aug 2002
- Research Assistant, UJF Grenoble (iMAGIS - GRAVIR/IMAG, INRIA), France Jun 2000 – Jan 2001
- Lecturer, Fachhochschule Hagenberg, Austria Mar 2000 – Jun 2000
- Lecturer, Fachhochschule Hagenberg, Austria Mar 1999 – Jun 1999
- Research Assistant, University of Rennes I, France Sep 1998 – Jan 1999

## AWARDS AND STIPENDS

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- 2015: CAD / Graphics best paper award (three awards given)
- 2014: Eurographics best paper award  
(honorable mention – one best paper award and two honorable mention given in total)
- 2011: Eurographics best paper award (2nd place)
- 2006: NSF CAREER Award
- 2006: Best Proposal Award for GAMEWORLD
- 2006: VAST best paper award (2nd place)  
(Eurographics Symposium on Virtual Reality, Archaeology and Cultural Heritage)
- 2001: Eurographics best paper award (Günther Enderle Award for the best paper)  
The same paper also received the best student paper award

## CONFERENCE ACTIVITIES - PROGRAM COMMITTEE MEMBER

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- ACM Siggraph: 2009, 2010, 2015
- ACM Siggraph Asia: 2011, 2014
- IEEE Visualization: 2009, 2010, 2011
- Eurographics: 2012, 2014, 2015, 2017, 2018
- Eurographics Symposium on Rendering: 2003, 2007, 2008
- Eurographics Symposium on Geometry Processing: 2016, 2017, 2018
- ACM Symposium on Interactive 3D Graphics: 2007, 2008, 2009, 2010, 2011, 2012, 2013
- IEEE Symposium of Interactive Ray Tracing: 2007, 2008
- Eurographics Short Paper: 2007
- Pacific Graphics: 2004
- Shape Modeling International: 2011, 2012, 2013, 2014, 2016
- AAG: 2014, 2016, 2018
- CAD Graphics: 2015, 2016, 2017

## CONFERENCE ACTIVITIES - ORGANIZATION

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- Pacific Graphics, Papers Chair, 2014
- IEEE Symposium of Interactive Ray Tracing, Treasurer, 2008

## CONFERENCE ACTIVITIES - REVIEWING

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- ACM Siggraph
- ACM Siggraph Asia
- ACM Siggraph Symposium on Interactive 3D Graphics
- IEEE Visualization
- IEEE Virtual Reality
- IEEE Symposium on Interactive Ray Tracing
- Eurographics
- Eurographics Workshop on Rendering
- Eurographics Workshop on Virtual Environments
- Eurographics Workshop on Computational Aesthetics
- Joint Eurographics- IEEE TCVG Symposium on Visualization
- Virtual Reality Modeling Language Symposium
- AAPR conference
- Summer Conference on Computer Graphics (Bratislava, Slovakia)
- Shape Modeling International
- Winter School on Computer Graphics (Plzen, Czech Republic)
- Pacific Graphics
- Graphics Interface

## JOURNAL GUEST EDITOR

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- Computers and Graphics, 2010
- IEEE Computer Graphics & Applications, 2008

## JOURNAL EDITORIAL BOARD

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- ACM Transactions on Graphics, 2013 – current
- IEEE Computer Graphics & Applications, 2016 – current
- IEEE Transactions on Visualization and Computer Graphics, 2016 – current
- Computer Graphics Forum, 2010 – 2013

## JOURNAL REFEREE SERVICE

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- IEEE Transactions on Visualization and Computer Graphics
- ACM Transactions on Graphics
- IEEE PAMI
- Computer Graphics Forum
- IEEE Computer Graphics & Applications
- Visual Computer
- International Journal of Computers and Application
- Graphical Models
- Computers and Graphics
- Geoscience and Remote Sensing Letters
- IEEE Transactions on Computational Intelligence and AI in Games

## PROPOSAL REVIEWER SERVICE

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- National Science Foundation, USA
- Ireland, Hong Kong, Israel, Czech Republic, France, Austria
- Thompson Publishing

## DEPARTMENT COMMITTEE SERVICE ASU

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- Graduate Admissions Committee 2004, 2005, 2006, 2007
- Computing Resources Committee 2007, 2008
- Faculty Hiring Committee 2008 (chair), 2009, 2010, 2011
- College Hiring Committee 2009, 2010
- Graduate Program Committee 2009, 2010, 2011
- Personnel Committee 2010, 2011
- Informatics Committee 2010, 2011

## DEPARTMENT COMMITTEE SERVICE KAUST

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- Graduate Admissions Committee 2011 (chair), 2012, 2013, 2014 (chair), 2015 (chair), 2016 (chair), 2017 (chair)
- Recruiting Committee 2013, 2014, 2015 (chair), 2016 (chair), 2017
- Curriculum Committee 2014, 2015

## UNIVERSITY COMMITTEE SERVICE KAUST

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- Academic Council 2011, 2012

## LOCAL PROFESSIONAL COMMITTEES

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- Intel Science Fair 2005

## INVITED KEYNOTE PRESENTATIONS

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1. Pacific Graphics, Computational Design of Urban Layouts, October 2015
2. JURSE, Encoding Prior Knowledge for Urban Reconstruction, March 2017

## INVITED PRESENTATIONS

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1. TU Darmstadt, Integer Programming for Layout Problems, June 2017
2. MPI Saarbrücken, Integer Programming for Layout Problems, June 2017
3. TU Munich, Integer Programming for Layout Problems, June 2017
4. UCL London, Integer Programming for Layout Computations, September 2016
5. TU Vienna, Integer Programming for Layout Computations, June 2016
6. IST Austria, Exploring Quadrangulations, July 2015
7. Ecole Polytechnique Paris, Mesh Connectivity Editing for Modeling Applications, June 2015
8. TU Vienna, Computational Design of Urban Layouts, November 2014
9. Ewha Womens University, Mesh Connectivity Editing for Modeling Applications, October 2014
10. UBC Vancouver, Design Computation for Urban Layouts, August 2014
11. IST Austria, Design Computation for Urban Layouts, July 2014
12. University of Hong Kong, Modeling of Street Layouts, Mass Models, and Facades, November 2013
13. UCL London, Modeling of Street Layouts, Mass Models, and Facades, June 2013
14. Tsinghua University, Connectivity Editing for Polygonal Meshes, November 2012
15. Microsoft Research Asia, Recent Work in Urban and Architectural Modeling, November 2012
16. SIAT. Architectural Modeling and Reconstruction, November 2012
17. TU Graz, Recent Work in Urban and Architectural Modeling, June 2012
18. TU Vienna, Interactive Modeling with Procedural Extrusions, June 2012
19. IST Austria, Connectivity Editing of Irregular Vertices, August 2011
20. Purdue, Procedural Modeling of Patterns on Surfaces, October 2010
21. KAUST, Modeling and Visualization of Urban Environments, September 2010
22. University of Utah, Modeling and Visualization of Urban Environments, June 2010
23. Navteq, Chicago Modeling and Visualization of Urban Environments, May 2010
24. Lawrence Livermore National Laboratory, "Remote Sensing Research at PRISM", December 2008
25. University of Girona, Procedural Modeling of Urban Environments, July 2008
26. VRVIS Vienna, Modeling of Urban Environments, June 2008
27. Technical University of Vienna, Computer Graphics Education for Graduate Students, June 2008
28. Google Research, California, Urban Reconstruction and Modeling for Building Virtual Worlds, March 2008
29. University of Utah, Modeling and Visualization of Urban Environments, November 2007
30. Oregon State University, February 2007
31. Valve, Seattle, October 2006
32. Universitaet Stuttgart, September 2006
33. Intel Research, Santa Clara, February 2006
34. Eidgenössische Technische Hochschule Zürich (ETH), July 2005
35. Eidgenössische Technische Hochschule Zürich (ETH), June 2004
36. Simon Frasier University, April 2004
37. Arizona State University, April 2004
38. Stony Brook University, March, 2004
39. University College London, England, June 2002
40. Graz University of Technology, Graz, Austria, May 2001
41. Karlava University of Prague, Prague, Czech Republic, April 2001
42. iMAGIS seminar, Grenoble, France, March 2000
43. University of Rennes I, Rennes, France, January 1999

## TEACHING

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- Computer Graphics (AMCS 248), KAUST, Fall 2011, Fall 2012, Fall 2013, Fall 2014, Fall 2015, Fall 2016, Fall 2017
- Geometry Processing (AMCS 272), KAUST, Spring 2012, Spring 2013, Spring 2015, Spring 2016, Spring 2017, Spring 2018
- Graphics for Games (CPI411), Arizona State University, Spring 2009, Spring 2010, Spring 2011
- Introduction to Computer Graphics (CSE 470), Arizona State University, Fall 2005, Fall 2006, Fall 2007, Fall 2009, Fall 2010
- Real-time Rendering (CSE 591), Arizona State University, Spring 2005, Spring 2007, Spring 2008, Fall 2009
- Introduction to ASU (ASU 101), Arizona State University, Fall 2008
- Advanced Computer Graphics (CSE 570), Arizona State University, Spring 2006, Spring 2008
- Introduction to Theoretical Computer Science (CSE355), Arizona State University, Spring 2005
- Multi-media Programming (MMP6), Fachhochschule Hagenberg, Spring 1999, Spring 2000

## COURSES AT CONFERENCES AND WORKSHOPS

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- **Practical Grammar-based Procedural Modeling of Architecture**  
Michael Schwarz, Peter Wonka  
Course at ACM Siggraph Asia 2015
- **A Survey of Urban Reconstruction**  
Przemyslaw Musialski, Peter Wonka, Daniel G. Aliaga, Michael Wimmer, Luc van Gool, Werner Purgathofer  
State of the Art Report at Eurographics 2012
- **Modeling 3D Urban Spaces Using Procedural and Simulation-Based Techniques**  
Peter Wonka, Daniel Aliaga, Pascal Mller, Carlos Vanegas, Michael Frederickson  
Course at ACM Siggraph 2011
- **Modeling the Appearance and Behavior of Urban Spaces**  
Carlos Vanegas, Daniel G. Aliaga, Pascal Mller, Paul Waddell, Ben Watson, Peter Wonka  
State of the Art Report at Eurographics 2009
- **Urban Design and Procedural Modeling.**  
B. Watson, P. Mller, P. Wonka, A. Fuller  
Course at ACM Siggraph 2007.
- **Procedural Modeling of Urban Environments**  
Peter Wonka, Ben Watson, Pascal Mueller, Eric Haines  
Course at ACM Siggraph 2006

## CURRENT PROJECTS

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- **Analyzing Large Scale 3D Shape Collections**  
Peter Wonka (PI), Maks Ovjanikov, Peter Richtarik  
KAUST Competitive Research Grant, 2018 – 2021, 3yrs, 975K, KAUST
- **CCF: Visual Computer Center**  
Wolfgang Heidrich (PI), Ghanem, Hadwiger, Wonka, Sundaramoorthi  
KAUST Research Grants, 2015 – 2020. 5 yrs. 10M, KAUST

## COMPLETED PROJECTS

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Note: The percentages indicate the allocated recognition for each project as tracked by ASU.

- **Urban Image Analysis for Urban Modeling**  
Peter Wonka (PI), Ganesh Sundaramoorthi  
KAUST Competitive Research Grant, 2015 – 2018. 3 yrs. 677K, KAUST
- **3D Modeling using Multi-Sided Patches**  
Peter Wonka (PI), Alyn Rockwood, Tamas Varadi  
Boeing Company. 2013 – 2015. 3yrs. 550K, KAUST
- **CAREER: Constrained Procedural Urban Modeling.**  
Peter Wonka (PI, 100%),  
NSF. 2007 – 2014. 5 yrs (extended). 400K, ASU
- **Multi-source Visual Analytics**  
Jieping Ye, Peter Wonka (Co-PI 25%), Anshuman Razdan  
NSF. 2009 – 2014, 3yrs. 500K, ASU
- **HCC: Small: Collaborative Research: Graph and Pattern Design on Surfaces**  
Eugene Zhang, OSU and Peter Wonka, ASU  
NSF. 2008 – 2013. 3 yrs. 250K, ASU
- **CPA-G&V: Tensor Factory**  
Peter Wonka (PI, 50%), Jieping Ye (Co-PI)  
NSF. 2008 – 2011. 3 yrs. 299K
- **Aerospace and Defense Initiative**  
Rick Shangraw et al. (Peter Wonka Co-PI 7%)  
SFAZ. 2010 – 2011, 1yr, 1M, ASU
- **Geospecific Displacement Maps for Real Time, Stereoscopic Training Simulation**  
Anshuman Razdan, Peter Wonka (Co-PI 50%), John Femiani  
SBIR Phase 1. 2010 – 2011, 6 months. 50K, ASU + STRC
- **Pilot: SOUZOU – Creativity through Procedural Modeling**  
Yoshihiro Kobayashi (PI), Peter Wonka (Co-PI, 50%)  
NSF. 2008 – 2011. 2+1 yrs. 199K
- **Gameworld.**  
Michael Wimmer(PI), Peter Wonka(Co-PI, 100K Euro subcontract), Harald Riegler (Co-PI)  
FIT-IT. 2007 – 2010. 3 yrs. 500K Euro
- **Integrated Spectral Dimensionality Reduction.**  
Jieping Ye (PI), Peter Wonka (Co-PI, 25%), Anshuman Razdan (Co-PI)  
NGA. 2008 – 2010. 2 yrs. 300K
- **Visual Geo-Analytics**  
Peter Wonka (PI, 50%), Anshuman Razdan (Co-PI), Elisabeth Wentz (Co-PI)  
NSF. 2006 – 2010. 3 yrs. 623K
- **Innovative 2D/3D Building, Asset, and Resource Tracking Visualization Tool.**  
Kutta Consultion (PI), A. Razdan (Co-PI), Peter Wonka (Co-PI, 20%)  
SBIR. 2007 – 2010. 2.5 yrs. Phase I 100K + Phase II 450K.
- **Procedural Details**  
Peter Wonka (PI, 80%), Jieping Ye (Co-PI)  
NVIDIA. 2008. 6 months. 2008. 25K
- **Interactive Procedural Urban Reconstruction from Aerial Images**  
Peter Wonka (PI 100%).  
Google. 2008. 40K

- **Geometry-based Feature Extraction and Analysis for Geospatial Datasets**

Anshuman Razdan (PI), Peter Wonka (Co-PI, 50%)

NGA. 2005 – 2008. 3 yrs. 450K

- **Image-based Simplification for 3D GIS.**

Peter Wonka (PI)

2002 – 2004, Austrian Science Fund (FWF), 70K Euro

## RECENT COLLABORATORS (2 YEARS) AND ADVISORS

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- Dieter Schmalstieg (TU Graz), PhD advisor
- Michael Gervautz (Qualcomm), PhD advisor
- William Ribarsky (UNC-C), postdoctoral advisor
- Michael Wimmer (TU Vienna), collaborator
- Pascal Mueller (ESRI), collaborator
- Anshuman Razdan (ASU), collaborator
- John Femiani (Miami University), collaborator
- Helmut Pottmann (KAUST, TU Vienna), collaborator
- Niloy Mitra (University College London), collaborator
- Xiaopeng Zhang (Chinese Academy of Sciences), collaborator
- Ligang Liu (USTC), collaborator
- Maks Ovsjanikov (Ecole Polytechnique), collaborator

## MASTERS THESIS AWARDED

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- Yazeed AlHarbi (MS), KAUST, graduated 2018, first employment: PhD student at KAUST
- Sahar A Aseeri (MS), KAUST, graduated 2013, first employment: PhD student at U of Minnesota
- Mohamed Ibrahim (MS), KAUST, graduated 2012, first employment: PhD student at KAUST
- Yuanyuan Li (MS), ASU, graduated 2010
- Ji Liu (MS), ASU, graduated 2010, first employment: PhD student at U of Wisconsin
- Kaichi Zhou (MS), ASU, graduated 2008, first employment: NVIDIA
- Deepali Bhagvat (MS), ASU, graduated 2008, first employment: Microsoft
- Saif Ali (MS), ASU, graduated 2007, first employment: AMD

## DOCTORAL DISSERTATIONS AWARDED

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- Caigui Jiang, graduated June 2016, co-chair Helmut Pottmann, first employment: post-doc at MPI
- Sen Yang, graduated December 2014, co-chair Jieping Ye, first employment: Alibaba R&D, Seattle
- Chi-han Peng, graduated December 2014, first employment: post-doc with Prof. Mitra at UCL
- Fan Bao, graduated December 2014, first employment: Facebook
- Ming Cui, ASU, graduated February 2010, co-chair Anshuman Razdan, first employment: Google
- Pushpak Karnick, ASU, graduated August 2009, co-chair Anshuman Razdan, first employment: DigiPen Institute of Technology, Seattle

## CURRENT GRADUATE STUDENTS

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- Lama Affara (PhD), KAUST, starting date August 2013
- Jing Ren (PhD), KAUST, starting date August 2015
- Anna Fruehstueck (PhD), KAUST, starting date February 2017
- Yazeed Alharbi (PhD)
- Tian Yu (MS / PhD)
- Wamiq R. Para (MS / PhD)
- Peihao Zhu (MS / PhD)



## POST-DOCTORAL RESEARCHERS

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- Yipeng Qin, 2017 – current
- Ibraheem Alhashim, 2017 – current
- Lubin Fan, KAUST, 2014 – 2017, next employment: Alibaba
- Feilong Yan, KAUST, 2015 – 2016, next employment: Baidu
- Mohamed Hachama, KAUST, 2014 – 2016, next employment: faculty at University of Khemis Miliana, Algeria
- Paul Guerrero, KAUST, 2015, next employment: post-doc at UCL
- Yuanyuan Cao, KAUST, 2013 – 2015
- Mohamed Ben Romdhane, KAUST, 2012, next employment: faculty at Gulf University for Science and Technology (Kuwait)
- Dongming Yang, KAUST, 2011 – 2014, next employment: faculty at the Chinese Academy of Sciences
- Michael Schwarz, ASU, 2010 – 2011, next employment: post-doc at Cornell
- David Cline, ASU, 2007 – 2009, next employment: faculty at Oklahoma State University
- Stefan Jeschke, ASU, 2007 – 2009, next employment: post-doc at TU Vienna

## VISITORS

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- Mengke Yuan, KAUST, 01.12.2017 – 05.05.2018
- Songlin Chen, KAUST, 15.08.2017 – 25.01.2018
- Yuhai Lan, KAUST 10.02.2017 – 15.07.2017
- Wenming Wu, KAUST 2016 – 3027 (multiple visits)
- Haiyong Jang, KAUST, 2014 – 2017 (multiple visits)
- Jiaqi Liu, KAUST, 17.12.2014 – 13.06.2015
- Hualiang Xie, KAUST, 17.12.2014 – 13.06.2015
- Minglei Li, KAUST, 20.08.2014 – 12.02.2015 2015
- Ngoc Minh Dang, 15.11.2014 – 23.01.2015
- Paul Guerrero, KAUST, 2012 – 2015 (multiple visits)
- Fuzhang Wu, KAUST, 2012 – 2013 (multiple visits)
- Tom Kelly, KAUST, 5.11.2011 – 19.12.2011
- Gurkan Koldas, ASU, 2010
- Tom Kelly, ASU, 2009
- Alejandro Sanchez Guinea, ASU, 2009 – 2010
- Fu Yinghua, ASU, 2007

## UNDERGRADUATE INTERNS / VISITORS

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- Faisal AlRayya, KAUST, KGSP, Summer 2017
- Yu Tian, KAUST, 15.11.2016 – 06.04.2017
- Xiaohan Wu, KAUST, 07.02.2017 – 10.06.2017
- Shan-Da Yang, KAUST, 02.07.2017 – 28.09.2017
- Abdulellah Abualshour, KAUST, KGSP, Summer 2017
- Abrar Kotbi, KAUST, Summer 2016
- Abdulrahman Humayed, KAUST, Summer 2016
- Naheel Alshafei, KAUST, Summer 2015
- Yazeed AlHarbi, KAUST, Summer 2014

## UNDERGRADUATE RESEARCH PROJECTS

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- Robert Winkler, ASU, Fall 2011, NSF
- Daniel Garvey, ASU, Fall 2010, NSF
- Paul Silkey, ASU, Fall 2010, NSF
- Robert Nelson, ASU, Spring 2008, Fulton Research Initiative for Undergraduates
- Sean Williams, ASU, Spring 2006, Fulton Research Initiative for Undergraduates
- Seth Carpenter, ASU, Spring 2006, Fulton Research Initiative for Undergraduates
- Jacob Boyle, ASU, Fall 2006, Fulton Research Initiative for Undergraduates

## VISITING HIGHSCHOOL STUDENTS

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- Faris Aldilajjan, KAUST, SRSI, summer 2017
- Reema BinMandeel, KAUST, SRSI, summer 2014

Notes: In Visual Computing many conferences publish the proceedings as special issues of journals. For example ACM SIGGRAPH has published proceedings in ACM TOG since 2002 and IEEE Visualization has published proceedings in IEEE TVCG since 2006. In case a conference directly publishes proceedings in a journal I only list them as journal publication. For citation statistics please refer to my google scholar page [<http://scholar.google.com/citations?user=0EKXSXgAAAAJ>].

1. **Gaussian Material Synthesis**  
Károly Zsolnai-Fehér, Peter Wonka, Michael Wimmer  
ACM Transactions on Graphics (Proceedings of ACM Siggraph), 2018.
2. **Space-time Tomography for Continuously Deforming Objects**  
Guangming Zang and Ramzi Idoughi and Ran Tao and Gilles Lubineau and Peter Wonka and Wolfgang Heidrich  
ACM Transactions on Graphics (Proceedings of ACM Siggraph), 2018.
3. **Designing Patterns using Triangle-Quad Hybrid Meshes**  
Chi-han Peng, Helmut Pottmann, Peter Wonka  
ACM Transactions on Graphics (Proceedings of ACM Siggraph), 2018.
4. **MIQP-based Layout Design for Building Interiors**  
Wenming Wu, Lubin Fan, Ligang Liu, Peter Wonka  
Computer Graphics Forum (Proceedings of Eurographics), 2018.
5. **String Art: Towards Computational Fabrication of String Images**  
Michael Birsak, Florian Rist, Peter Wonka, Przemyslaw Musialski  
Computer Graphics Forum (Proceedings of Eurographics), 2018.
6. **BigSUR: Large-scale Structured Urban Reconstruction**  
Tom Kelly, John Femiani, Peter Wonka, Niloy Mitra  
ACM Transactions on Graphics (Proceedings of ACM Siggraph Asia), 2017.
7. **How Do Users Map Points Between Dissimilar Shapes?**  
Michael Hecher, Paul Guerrero, Peter Wonka, Michael Wimmer  
IEEE Transactions on Visualization and Computer Graphics, 2017
8. **Design and Volume Optimization of Space Structures**  
Caigui Jiang, Chengcheng Tang, Hans-Peter Seidel, Peter Wonka  
ACM Transactions on Graphics (Proceedings of ACM Siggraph), 2017
9. **Design Transformations for Rule-based Procedural Modeling**  
Stefan Lienhard, Cheryl Lau, Pascal Muller, Peter Wonka, Mark Pauly  
Computer Graphics Forum (Proceedings of Eurographics), 2017
10. **Dynamic Path Exploration on Mobile Devices**  
Michael Birsak, Przemyslaw Musialski, Peter Wonka, Michael Wimmer  
IEEE Transactions on Visualization and Computer Graphics, 2017
11. **Block Assembly for Global Registration of Building Scans**  
Feilong Yan, Liangliang Nan, Peter Wonka  
ACM Transactions on Graphics (Proceedings of ACM Siggraph Asia), 2016.
12. **A Probabilistic Model for Exteriors of Residential Buildings**  
Lubin Fan, Peter Wonka  
ACM Transactions on Graphics, 2016.
13. **Computational Network Design from Functional Specifications**  
Chi-han Peng, Yong-Liang Yang, Fan Bao, Daniel Fink, Dong-Ming Yan, Peter Wonka, Niloy Mitra  
ACM Transactions on Graphics (Proceedings of ACM Siggraph), 2016.
14. **RAID: A Relation-Augmented Image Descriptor**  
Paul Guerrero, Niloy Mitra, Peter Wonka  
ACM Transactions on Graphics (Proceedings of ACM Siggraph), 2016.
15. **Tetrahedral meshing via maximal Poisson-disk sampling**  
Jianwei Guo, Dong-Ming Yan, Li Chen, Xiaopeng Zhang, Oliver Deussen, Peter Wonka  
Computer Aided Geometric Design, 2016.
16. **Automatic Constraint Detection for Layout Regularization**  
Haiyong Jiang, Liangliang Nan, Dong-Ming Tan, Weiming Dong, Xiaopeng Zhang, Peter Wonka  
IEEE Transactions on Visualization and Graphics, 2016
17. **Non-obtuse Remeshing with Centroidal Voronoi Tessellation**  
Dong-Ming Yan, Peter Wonka  
IEEE Transactions on Visualization and Graphics, 2016.

18. **Capacity Constrained Blue-Noise Sampling on Surfaces**  
Sen Zhang, Jianwei Guo, Hui Zhang, Xiaohong Jia, Dong-Ming Yan, Jun-Hai Yong, Peter Wonka  
Computers and Graphics, 2016.
19. **Reconstructing Building Mass Models from UAV Images**  
Minglei Li, Liangliang Nan, Neil Smith, Peter Wonka  
Computers and Graphics (Proceedings of CAD Graphics), 2015.
20. **Learning Shape Placements by Example**  
Paul Guerrero, Stefan Jeschke, Michael Wimmer, Peter Wonka  
ACM Transactions on Graphics (Proceedings of ACM Siggraph), 2015.
21. **Interactive Design of Probability Density Functions for Shape Grammars**  
Minh Dang, Stefan Lienhard, Duygu Ceylan, Boris Neubert, Peter Wonka, Mark Pauly  
ACM Transactions on Graphics (Proceedings of ACM Siggraph Asia), 2015
22. **Polyhedral Pattern**  
Caigui Jiang, Chengcheng Tang, Amir Vaxman, Peter Wonka, Helmut Pottmann  
ACM Transactions on Graphics (Proceedings of ACM Siggraph Asia), 2015
23. **Interactive Dimensioning of Parametric Models**  
Tom Kelly, Peter Wonka, Pascal Mueller  
Computer Graphics Forum (Proceedings of Eurographics), 2015.
24. **Designing Camera Networks by Convex Quadratic Programming**  
Bernard Ghanem, Yuanhao Cao, Peter Wonka  
Computer Graphics Forum (Proceedings of Eurographics), 2015.
25. **Template Assembly for Detailed Urban Reconstruction**  
Liangliang Nan, Caigui Jiang, Bernard Ghanem, Peter Wonka  
Computer Graphics Forum (Proceedings of Eurographics), 2015.
26. **A Survey of Blue-Noise Sampling and Its Applications**  
Dong-Ming Yan, Jianwei Guo, Bin Wang, Xiaopeng Zhang, Peter Wonka  
Journal of Computer Science and Technology, 30(4), 439-452. 2015.
27. **Fused Multiple Graphical Lasso**  
Sen Yang, Zhaosong Lu, Xiaotong Shen, Peter Wonka, Jieping Ye  
SIAM Journal on Optimization, 2015.
28. **Lasso screening rules via dual polytope projection**  
Jie Wang, Peter Wonka, Jieping Ye  
Journal of Machine Learning Research, 2015.
29. **Robust Rooftop Extraction From Visible Band Images Using Higher Order CRF**  
Er Li, John Femiani, Shibiao Xu, Xiaopeng Zhang, Peter Wonka  
IEEE Transactions on Geoscience and Remote Sensing, 2015.
30. **Shadow Based Rooftop Segmentation In Visible Band Images**  
John Femiani, Er Li, Anshuman Razdan, Peter Wonka  
IEEE J-STARS, 2015.
31. **Inverse Procedural Modeling of Facade Layouts**  
Fuzhang Wu, Dong-Ming Yan, Weiming Dong, Xiaopeng Zhang, Peter Wonka  
ACM Transactions on Graphics (Proceedings of ACM Siggraph), 2014.
32. **Computing layouts with deformable templates**  
Chi-han Peng, Yong-Liang Yang, Peter Wonka  
ACM Transactions on Graphics (Proceedings of ACM Siggraph), 2014.
33. **PushPull++**  
Markus Lipp, Peter Wonka, Pascal Mueller  
ACM Transactions on Graphics (Proceedings of ACM Siggraph), 2014.
34. **Exploring Quadrangulations**  
Chi-han Peng, Michael Barton, Caigui Jiang, Peter Wonka  
ACM Transactions on Graphics, 2014.
35. **Edit Propagation using Geometry Relationship Functions**  
Paul Guerrero, Stefan Jeschke, Michael Wimmer, Peter Wonka  
ACM Transactions on Graphics, 2014.
36. **Procedural Design of Exterior Lighting for Buildings with Complex Constraints**  
Michael Schwarz, Peter Wonka  
ACM Transactions on Graphics, 2014.

37. **Structure Completion for Grid Layouts**  
Lubin Fan, Przemyslaw Musialski, Ligang Liu, Peter Wonka  
ACM Transactions on Graphics (Proceedings of ACM Siggraph Asia), 2014.
38. **Low-Resolution Remeshing using the Localized Restricted Voronoi Diagram**  
Dongming Yan, Guanbo Bao, Xiaopeng Zhang, Peter Wonka  
IEEE Transactions on Visualization and Graphics, 2014.
39. **Unbiased Sampling and Meshing of Isosurfaces**  
Dongming Yan, Johannes Wallner, Peter Wonka  
IEEE Transactions on Visualization and Graphics, 2014.
40. **Parallel Generation of Architecture on the GPU**  
Markus Steinberger, Michael Kenzel, Bernhard Kainz, Joerg Mueller, Peter Wonka, Dieter Schmalstieg  
Computer Graphics Forum (Proceedings of Eurographics). 2014.
41. **On-the-fly Generation and Rendering of Infinite Cities on the GPU**  
Markus Steinberger, Michael Kenzel, Bernhard Kainz, Peter Wonka, Dieter Schmalstieg  
Computer Graphics Forum (Proceedings of Eurographics). 2014.
42. **Automatic Generation of Tourist Brochures**  
Michael Birsak, Przemyslaw Musialski, Peter Wonka, Michael Wimmer  
Computer Graphics Forum (Proceedings of Eurographics). 2014.
43. **Blue-Noise Remeshing with Farthest Point Optimization**  
Dong-Ming Yan, Jianwei Guo, Xiaohong Jia, Xiaopeng Zhang, Peter Wonka  
Computer Graphics Forum (Proceedings of SGP). 2014.
44. **What Makes London Work Like London?**  
Sawsan Al-Halawani, Yongliang Yang, Peter Wonka, Niloy Mitra  
Computer Graphics Forum (Proceedings of SGP). 2014.
45. **Efficient Triangulation of Poisson-disk Sampled Point Sets**  
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