

# Jianwei Guo

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## Education and Research Experiences

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| 09.2011–06.2016 | <b>Institute of Automation, Chinese Academy of Sciences</b> | <b>NLPR</b>                                    |
|                 | Ph.D., Computer Applications Technology                     |  |
| 04.2015–01.2016 | <b>University of Konstanz, Germany</b>                      | <b>Computer Graphics and Media Informatics</b> |
|                 | Visiting Scholar Ph.D. in Computer Graphics                 |  |
| 04.2014–01.2015 | <b>Shenzhen Institute of Advanced Technology, CAS</b>       | <b>Visual Computing Research Center</b>        |
|                 | Visiting Ph.D. in Computer Graphics                         |  |
| 09.2007–07.2011 | <b>Shandong University</b>                                  | <b>School of Software</b>                      |
|                 | B.S. in Digital Media Technology                            |  |

## Professional Services

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1. **International Program Committee:** IEEE CAD/Graphics 2019
2. **Paper Review for International Conferences:** ACM Siggraph 2018, ACM Siggraph Asia 2017, Pacific Graphics 2017, High-Performance Graphics 2017, CAD/Graphics 2019
3. **Paper Reviewer for International Journals:** IEEE Transactions on Visualization and Computer Graphics (TVCG), Computer Graphics Forum (CGF), Computer Aided Design (CAD), Computer Aided Geometric Design (CAGD), etc

## Publications

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*First or corresponding author:*

1. **Jianwei Guo**, Shibiao Xu, Dong-Ming Yan, Zhanglin Cheng, Marc Jaeger, Xiaopeng Zhang. Realistic Procedural Plant Modeling from Multiple View Images. *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 2019. (SCI)
2. **Jianwei Guo**, Fan Ding, Xiaohong Jia, Dong-Ming Yan. Automatic and high-quality surface mesh generation for CAD models. *Computer-Aided Design*, Volume 109, Pages 49-59, 2019. (SCI)
3. Hanyu Wang, **Jianwei Guo**(Joint first authors), Dong-Ming Yan, Weize Quan, Xiaopeng Zhang, Learning 3D Keypoint Descriptors for Non-Rigid Shape Matching. *European Conference on Computer Vision (ECCV)*, 2018. (EI)
4. **Jianwei Guo**, Dong-ming Yan, Xiaopeng Zhang, Oliver Deussen, Peter Wonka. Tetrahedral Meshing via Maximal Poisson-disk Sampling. *Computer Aided Geometric Design*, 2016, 43:186-199. (SCI)
5. Abdalla G. M. Ahmed; **Jianwei Guo**(Joint first authors); Dong-Ming Yan; Jean-Yves Franceschi; Xiaopeng Zhang; Oliver Deussen, A Simple Push-Pull Algorithm for Blue-Noise Sampling, *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 2017, 23(12):2496-2508. (SCI)
6. **Jianwei Guo**, Dong-ming Yan, Xiaohong Jia, Xiaopeng Zhang. Efficient Maximal Poisson-disk Sampling and Remeshing on Surfaces, *Computers & Graphics*, 2015, 46:72-79. (SCI) **Honorable Mention Best Paper Award**
7. **Jianwei Guo**, Dong-ming Yan, Guanbo Bao, Weiming Dong, Peter Wonka, Xiaopeng Zhang \*. Efficient Triangulation of Poisson-disk Sampled Point Sets, *The Visual Computer*, 2014, 30(6-8): 773-785. (SCI)
8. **Jianwei Guo**, Dong-ming Yan, Er Li, Weiming Dong, Peter Wonka, Xiaopeng Zhang. Illustrating the Disassembly of 3D Models, *Computers & Graphics*, 2013, 37(6), 574-581. (SCI)
9. **Jianwei Guo**, Zhanglin Cheng, Shibiao Xu, and Xiaopeng Zhang. Realistic Procedural Plant Modeling Guided by

- 3D Point Cloud. *In Proceedings of ACM SIGGRAPH Posters*, 2017. (EI)
10. Yiqun Wang, **Jianwei Guo\***, Dong-Ming Yan, Kai Wang, and Xiaopeng Zhang. A Robust Local Spectral Descriptor for Matching Non-Rigid Shapes with Incompatible Shape Structures. *In Proceedings of IEEE CVPR*, 2019. (EI)
  11. Lei Yi, Hongjun Li, **Jianwei Guo\***, Oliver Deussen, Xiaopeng Zhang. Tree Growth Modeling Constrained by Growth Equations, *Computer Graphics Forum*, 2018, 37: 239–253. (SCI)
  12. Weize Quan; Dong-Ming Yan; **Jianwei Guo\***; Weiliang Meng; Xiaopeng Zhang, Maximal Poisson-disk sampling by sampling radius optimization, *ACM SIGGRAPH Asia Poster*, 2016. (EI)
  13. Zhongqi Wu, **Jianwei Guo\***, Jun Xiao, Xiangyong Zeng, Ying Wang, Dong-Ming Yan. Interactive Segmentation of Scanned Mechanical Models Based on Quadratic Surfaces Fitting, *ChinaGraph*, 2018, **Best Paper Award**.

#### **Other Publications:**

14. Lei Ma, **Jianwei Guo**, Dong-Ming Yan, Hanqiu Sun, Yanyun Chen. Instant Stippling on 3D Scenes. *Computer Graphics Forum*, 2018. (SCI)
15. Abdalla G. M. Ahmed, Hane Perrier, David Coeurjolly, Victor Ostromoukhov, **Jianwei Guo**, Dong-Ming Yan, Hui Huang and Oliver Deussen, Low-Discrepancy Blue Noise Sampling, *ACM Transactions on Graphics (TOG)*, 2016, 35(6): 247. (SCI)
16. Dong-ming Yan, **Jianwei Guo**, Xiaohong Jia, Xiaopeng Zhang, Peter Wonka. Blue-Noise Remeshing with Farthest Point Optimization, *Computer Graphics Forum*, 2014, 33(5): 167-176. (SCI)
17. Sen Zhang, **Jianwei Guo**, Hui Zhang, Xiaohong Jia, Dong-ming Yan, Jun-Hai Yong, Peter Wonka. Capacity Constrained Blue-Noise Sampling on Surfaces. *Computers & Graphics*. 2016, 55: 44-54. (SCI)
18. Dong-ming Yan, **Jianwei Guo**, Bin Wang, Xiaopeng Zhang, Peter Wonka. A Survey of Blue-Noise Sampling and Its Applications, *Journal of Computer Science and Technology*, 30(4), 439-452, 2015. (SCI)
19. Xavier Bonaventura, **Jianwei Guo**, Weiliang Meng, Miquel Feixas, Xiaopeng Zhang, Mateu Sbert. 3D shape retrieval using viewpoint information-theoretic measures, *Computer Animation and Virtual Worlds*, 2015, 26(2):147-156. (SCI)
20. Weiliang Meng, **Jianwei Guo**, Xavier Bonaventura, Mateu Sbert, Xiaopeng Zhang, Shape exploration of 3D heterogeneous models based on cages, *Multimedia Tools and Applications*, 2016(5):1-22. (SCI)
21. Yiqun Wang, Dong-Ming Yan, Xiaohan Liu, Chengcheng Tang, **Jianwei Guo**, Xiaopeng Zhang, Peter Wonka. Isotropic Surface Remeshing without Large and Small Angles. *IEEE Transactions on Visualization & Computer Graphics*, 2018. (SCI)
22. Yuxin Mao, Lifang Wu, Dong-Ming Yan, **Jianwei Guo**, Chang Wen Chen, Baoquan Chen. Generating hybrid interior structure for 3D printing. *Computer-Aided Geometric Design*, 2018. (SCI)
23. Quan, Weize, **Guo, Jianwei**, Yan, Dong-Ming, et al. Analyzing Surface Sampling Patterns Using the Localized Pair Correlation Function. *Computational Visual Media*, 2016, 2(3):219-230. (EI)
24. Quan Weize, **Guo Jianwei**, Zhang Xiaopeng, Yan Dong-ming. Improved quadric surfaces recognition from scanned mechanical models. *Computer Aided Drafting, Design and Manufacturing*, 2016, 26(4):9 (EI)
25. Xinying Liu, Weiliang Meng, **Jianwei Guo**, Xiaopeng Zhang: A survey on processing of large-scale 3D point cloud. *In: Edutainment 2016. LNCS*, vol. 9654, pp. 267–279. Springer, Cham (2016). (EI)
26. You Lei, Feng Yan, **Guo Jianwei**, Ye Juntao, Tang Shouzheng, Song Xinyu, Construction of Closed, Global Convexity and G2 Continuity Curve, *Journal of Computer-Aided Design & Computer Graphics*, 29 (12 ):2216-2224, 2017. (EI)

## **Patents**

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1. **Jianwei Guo**, Dong-ming Yan, Weiliang Meng, Xiaopeng Zhang, Weiming Dong. An automatic disassembling method for assembly models. China Patent for invention, Grant Number: ZL201310225943.X.
2. Dong-ming Yan, **Jianwei Guo**, Xiaopeng Zhang. Remeshing method based on maximal Poisson-disk sampling. China Patent for invention, Grant Number: ZL201410437581.5.
3. Dong-ming Yan, **Jianwei Guo**, Xiaopeng Zhang. Method for sampling Isosurfaces and generating high-quality triangular mesh. China Patent for invention, Grant Number: ZL201410080539.2,
4. Dong-ming Yan, **Jianwei Guo**, Xiaopeng Zhang. Method for generating blue noise meshes on basis of farthest point optimization. China Patent for invention, Grant Number: ZL201410283442.1.
5. Dong-ming Yan, **Jianwei Guo**, Weize Quan, Xiaopeng Zhang. Tetrahedral meshing method and system based on maximal Poisson-disk sampling. China Patent for invention, Grant Number: ZL201610031891.6
6. Xiaopeng Zhang, Hongjun Li, **Jianwei Guo**, Mingrui Dai, Jia Liu. Method for rebuilding tree model based on point cloud and data driving. China Patent for invention, Grant Number: ZL201410131203.4.
7. Dong-ming Yan, Weize Quan, **Jianwei Guo**, Xiaopeng Zhang. Remeshing method for non-obtuse angles based on Voronoi diagram. China Patent for invention, Grant Number: ZL201510680027.4.
8. Weiliang Meng, Dong-ming Yan, Weize Quan, **Jianwei Guo**, Xiaopeng Zhang. A method and system of 2D constant radius Maximal Poisson-disk sampling with fixed points. China Patent for invention, Grant Number: ZL201610563518.5

## Awards

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| 2018       | Best Paper Award   | ChinaGraph 2018   |
| 2017       | Excellent Ph.D Dissertation Award  | China Simulation Fedration                              |
| 2017       | First Prize of Science and Technology Award of Shaanxi Provincial Higher Education | Shaanxi Provincial Department of Education              |
| 2014, 2016 | Outstanding Student Award  | University of Chinese Academy of Sciences               |
| 2014       | Honorable Mention Best Paper Award   | Shape Modeling International (SMI) 2014                 |
| 2010       | National Scholarship   | Ministry of Education of the People's Republic of China |
| 2008, 2009 | National Encouragement Scholarship   | Ministry of Education of the People's Republic of China |
| 2008, 2010 | First Prize Scholarship, Excellent student   | Shandong University                                     |