# Dr. YOUYI ZHENG

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## RESEARCH INTERESTS

- Geometric Modeling
- Imaging
- Human-Computer Interaction

## EDUCATION

| | |
|---|---:|
| **Ph.D, Computer Science** | 2011 |
| | Hong Kong Univ. of Sci. and Tech. |
| **M.Sc, Mathematics** | 2007 |
| | Zhejiang University |
| **B.Sc, Mathematics** | 2005 |
| | Zhejiang University |

## PROFESSIONAL EXPERIENCE

| | |
|---|---:|
| **Researcher (PI)** | Jul. 2017 to present |
| Zhejiang University – Hangzhou, China, 310058 | |
| **Assistant Professor** | Apr. 2015 to Jul. 2017 |
| ShanghaiTech University – Shanghai, China, 200031 | |
| **Postdoctoral Research Associate** | Sep. 2013 to Mar. 2015 |
| Yale University – New Haven, CT, U.S.A. | |
| **Postdoctoral Research Fellow** | Sep. 2011 to Sep. 2013 |
| KAUST – Thuwal, Saudi Arabia | |
| **Research Scholar** | Mar. 2013 to Jun. 2013 |
| University College London – London, U.K. | |
| **Student Intern** | Mar. 2011 to Aug. 2011 |
| Oregon State University – Corvallis, OR, U.S.A. | |
| **Research Associate** | Sep. 2009 to Aug. 2011 |
| Hong Kong University of Science and Technology – Hong Kong | |
| **Summer Software Intern** | May. 2006 to Aug. 2006 |
| Autodesk Inc – Shanghai, China | |

## PUBLICATIONS

- Using Visualization to improve Clustering Analysis on Heterogeneous Information Network.
  W. Wang, Y. Li, X. Liu, F. Wang, Y. Zheng*
  International Conference Information Visualisation 2018.

- 3D Tooth Segmentation and Labeling using Deep Convolutional Neural Networks.
  X. Xu, C. Liu, Y. Zheng*
  IEEE Transactions on Visualization and Computer Graphics 2018.

- iHDViewer: A Visualization Tool for Tracking HD Files.
  W. Wang, X. Luo, Y. Zheng*
  IEEE International Conference on Big Data and Smart Computing 2018.

- Towards Support-free 3D Printing: A Skeletal Approach for Partitioning Models.
  X. Wei, S. Qiu, L. Zhu, R. Feng, J. Xi, Y. Zheng
  IEEE Transactions on Visualization and Computer Graphics. 2017.

- SweepCanvas: Sketch-based 3D Prototyping on a Depth Image.
  Y. Li, X. Luo, Y. Zheng*, P. Xu, H. Fu
  The ACM Symposium on User Interface Software and Technology (UIST) 2017.

- Web3d Learning Platform of Furniture Layout Based on Case Reasoning and Distance Field.
  P. Li, Y. Zheng, J. Jia
  Edutainment 2017 (Best Paper Award).

- Recovering Functional Mechanical Assemblies from Raw Scans.
  M. Lin, T. Shao, Y. Zheng, N. J. Mitra, K. Zhou
  IEEE Transactions on Visualization and Computer Graphics. 2016.

- Directions in Shape Analysis towards Functionality.
  R. Hu, O. van Kaick, Y. Zheng, M. Savva
  SIGGRAPH ASIA 2016 (Course).

- SMARTCANVAS: Context-inferred Interpretation of Sketches for Preparatory Design Studies.
  Y. ZHeng, H. Liu, J. Dorsey, and N. Mitra
  Eurographics 2016.

- An Interactive Approach for Functional Prototype Recovery from a Single RGBD Image.
  Y. Rong, Y. Zheng, T. Shao, Y. Yang, K. Zhou
  Computational Visual Media 2016 (Best Paper Award).

- Ergonomic-based Geometry Exploration and Reshaping.
  Y. Zheng, H. Liu, J. Dorsey, and N. Mitra
  IEEE Transactions on Visualization and Computer Graphics. 2015.

- Imagining the Unseen: Stability-based Cuboid Arrangements for Understanding Cluttered Indoor Scenes.
  T. Shao, A. Monszpart, Y. Zheng, B. Koo, W. Xu, K. Zhou, and N. Mitra
  SIGGRAPH ASIA 2014. (ACM Transactions on Graphics TOG)

- Recurring Part Arrangements in Shape Collections.
  Y. Zheng, D. Cohen-Or, M. Averkiou, and N. Mitra.
  Eurographics 2014 (Best Paper Honorable Mention Award).

- ShapeSynth: Parameterizing Model Collections for Coupled Shape Exploration and Synthesis.
  M. Averkiou, V. Kim, Y. Zheng, and N. Mitra.
  Eurographics 2014.

- SmartVariations: Functional Substructures for Part Compatibility.
  Y. Zheng, N. Mitra, and D. Cohen-Or.
  Eurographics 2013 (Best Paper Honorable Mention Award).

- Coupled Structure-from-Motion and 3D Symmetry Detection for Urban Facades.
  D. Ceylan, N. Mitra, Y. Zheng and M. Pauly.
  ACM Transactions on Graphics TOG 2013.

- Interactive Images: Cuboid-proxies for Smart Image Manipulation.
  Y. Zheng, X. Cheng, M.-M. Cheng, K. Zhou, S.-M. Hu, and N. Mitra.
  ACM Transactions on Graphics TOG 2012 (SIGGRAPH).

- Pairwise Harmonics for Shape Analysis.
  Y. Zheng, C.-L. Tai, Eugene Zhang, and Pengfei Xu.
  IEEE Transactions on Visualization and Computer Graphics. 2012.

- Dot Scissor: A Single-Click Interface for Mesh Segmentation.
  Y. Zheng, C.-L. Tai, and O. K.-C. Au.
  IEEE Transactions on Visualization and Computer Graphics. 2011.

- Mesh Segmentation with Concave-Sensitive Fields.
  O. K.-C. Au, Y. Zheng, M. Chen., P. Xu, and C.-L. Tai.
  IEEE Transactions on Visualization and Computer Graphics. 2011.

- Bilateral Normal Filtering for Mesh Denoising.
  Y. Zheng, H. Fu., O. K.-C. Au, and C.-L. Tai.
  IEEE Transactions on Visualization and Computer Graphics. 2011.

- Component-wise Controllers for Structure-Preserving Shape Manipulation.
  Y. Zheng, H. Fu., D. Cohen-Or, O. K.-C. Au, and C.-L. Tai.
  Eurographics 2011.

- Mesh Decomposition with Cross-Boundary Brushes.
  Y. Zheng and C.-L. Tai.
  Eurographics 2010.

- Electors Voting for Fast Automatic Shape Correspondence.
  O. K.-C. Au, C.-L. Tai, D. Cohen-Or, Y. Zheng, and H. Fu.
  Eurographics 2010.

## ACADEMIC SERVICES

**Associate editor**                                             2017 - present
- The Visual Computer (Springer);

**Program committee member**                                     2013 - present
- Pacific Graphics 2018 – Hong Kong;
- CAD & CG 2015 – Xi'an, China;
- International Conference on Pattern Recognition 2014 – Stockholm, Sweden;
- Computer & Graphics 2013 – Hong Kong.

**Paper reviewer**                                               2008-present
- ACM Siggraph, ACM Siggraph Asia, Eurographics, Pacific Graphics, Computer Graphics Forum, IEEE The Visual Computer, ICPR, IEEE TVCG.

## ACADEMIC TALKS

**Invited Talk 2015**                                            *HKUST, Hong Kong.*
- *Smart Geometry*.

**Siggraph 2012**                                                *Los Angeles, CA, U.S.A.*
- *Interactive Images*: Cuboid-proxies for Smart Image Manipulation.

**Eurographics 2011**                                            *Bangor University, Wales, U.K.*
- Component-wise Controllers for Structure-Preserving Shape Manipulation.

**Eurographics 2010**                                            *Linköping University, Norrköping, Sweden*
- Mesh Segmentation with Cross-Boundary Brushes.

## Awards

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|---|---|
| **China Young 1000 Talents.** | 2016 |
| **Eurographics Best Paper Honorable Mention Award.** | 2014 |
| **Eurographics Best Paper Honorable Mention Award.** | 2013 |
| *The European Association for Computer Graphics – Barcelona* | |
| **Overseas Research Award** | 2011 |
| *Hong Kong University of Science and Technology – Hong Kong* | |
| **Champion of the 1st University Cyber Game, Starcraft** | 2009 |
| *Hong Kong University of Science and Technology – Hong Kong* | |
| **Postgraduate Scholarship** | 2007-2011 |
| *Hong Kong University of Science and Technology – Hong Kong* | |
| **Third Class Scholarship** | 2002-2004 |
| *Zhejiang University – Hangzhou, China* | |
| **Freshman Scholarship (top 10 out of 5000 new students)** | 2001 |
| *Zhejiang University – Hangzhou, China* | |
| **First Prize in National Contest on Mathematics** | 2000 |
| *Xiangshan High School – Ningbo, China* | |
| **Second Prize in National Contest on Physics** | 2000 |
| *Xiangshan High School – Ningbo, China* | |
| **Silver Medal Prize in "Hope-Cup" National Contest on Mathematics** | 1999 |
| *Xiangshan High School – Ningbo, China* | |

## Languages

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| English | Proficient |
| Mandarin | Native |
| Cantonese | Competent |

## References

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|---|---|---|
| Julie Dorsey | Yale University | julie.dorsey@yale.edu |
| Niloy J. Mitra | University College London | n.mitra@cs.ucl.ac.uk |
| Chiew-Lan Tai | Hong Kong Univ. of Sci. & Tech. | taicl@cse.ust.hk |
| Daniel-Cohen Or | Tel Aviv University | dcor@tau.ac.il |
| Hongbo Fu | City University of Hong Kong | hongbofu@cityu.edu.hk |
| Oscar Kin-Chung Au | City University of Hong Kong | kincau@cityu.edu.hk |