Honghua Li

Curriculum Vitæ

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Academic Position

Staff Algorithm Engineer (2018 – now)
Avatar Creation and Animation, CAD Symbol Spotting, Indoor Scene Reconstruction.
XR Lab, Alibaba Damo Academy

Research Scientist (2015 – 2017)
Geometry Modeling, 3D Fabrication, Scene Synthesis, and Robotics.
Interdisciplinary Research Center, Shandong University

Education

Ph.D. in Computing Science (2010 – 2015)
Simon Fraser University, Canada
Advisors: Hao (Richard) Zhang, and Daniel Cohen-Or
Dissertation: *Shape Compaction via Stacking and Folding*

BS/Master in Computer Science (2004 – 2010)
National University of Defense Technology, China

Publications

1. Zhiwen Fan*, Lingjie Zhu*, Honghua Li, Xiaohao Chen, Siyu Zhu, Ping Tan (*equal contribution)
   FloorPlanCAD: A Large-Scale CAD Drawing Dataset for Panoptic Symbol Spotting
   International Conference on Computer Vision (ICCV 2021).

2. Chuan Fang, Shuai Ding, Zilong Dong, Honghua Li, Siyu Zhu, Ping Tan
   Single-Shot is Enough: Panoramic Infrastructure Based Calibration of Multiple Cameras and 3D LiDARs
   IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2021).

3. Luwei Yang, Ziqian Bai, Chengzhou Tang, Honghua Li, Yasutaka Furukawa, and Ping Tan
   SANet: Scene Agnostic Network for Camera Localization
   International Conference on Computer Vision (ICCV 2019).

4. Xuelin Chen*, Honghua Li*, Chi-Wing Fu , Hao Zhang, Daniel Cohen-Or, Baoquan Chen
   (*joint first authors)
   3D Fabrication with Universal Building Blocks and Pyramidal Shells
   ACM Transactions on Graphics (SIGGRAPH Asia 2018).

5. Rui Ma*, Honghua Li*, Changqing Zou, Zicheng Liao, Xin Tong, Hao Zhang (*joint first authors)
   Action-Driven 3D Indoor Scene Evolution
   ACM Transactions on Graphics (SIGGRAPH Asia 2016), 35(6).

6. Changqing Zou, Tianfan Xue, Xiaojiang Peng, Honghua Li, Baocheng Zhang, Ping Tan, Jianzhuang Liu
   An Example-Based Approach to 3D Man-made Object Reconstruction from Line Drawings
   Pattern Recongnition 2016.

7. Hao Li, Guowei Wan, Honghua Li, Andrei Sharf, Kai Xu, Baoquan Chen
   Mobility Fitting Using RANSAC 4D
   Computer Graphics Forum (SGP 2016), 35(5).

8. Honghua Li, and Hao Zhang, *Shape Compaction*
Book chapter in **Perspectives in Shape Analysis**, Dagstuhl Seminar, 2015.
Editors: M. Breu, A. Bruckstein, P. Maragos, and S. Wuhrer.

9. Honghua Li*, Ruizhen Hu*, Ibraheem Alhashim, and Hao Zhang (*joint first authors)
Foldabilizing Furniture
ACM Transactions on Graphics (SIGGRAPH 2015), 34(6).

10. Ruizhen Hu, Honghua Li, Hao Zhang and Daniel Cohen-Or
Approximate Pyramidal Shape Decomposition
ACM Transactions on Graphics (SIGGRAPH Asia 2014), 33(6).

11. Ibraheem Alhashim, Honghua Li, Kai Xu, Junjie Cao, Rui Ma, Hao Zhang
Topology-Varying 3D Shape Creation via Structural Blending
ACM Transactions on Graphics (SIGGRAPH 2014), 33(4).

12. Honghua Li, Hao Zhang, Yanzhen Wang, Junjie Cao, Ariel Shamir and Daniel Cohen-Or
Curve Style Analysis in a Set of Shapes
Computer Graphics Forum (Eurographics 2014), 32(6).

13. Honghua Li, Ibraheem Alhashim, Hao Zhang, Ariel Shamir and Daniel Cohen-Or
Stackabilization
ACM Transactions on Graphics (SIGGRAPH Aisa 2012), 31(6).

14. Kai Xu, Honghua Li, Hao Zhang, Daniel Cohen-Or, Yueshan Xiong, and Zhi-Quan Cheng
Style-Content Separation by Anisotropic Part Scales
ACM Transactions on Graphics (SIGGRAPH Aisa 2010), 29(5).

15. Hao Fang, Zhi-Quan Cheng, Hong-Hua Li, Jun Li, Yin chen, and Gang Dang
2D Shape Deformation and Registration Using Structural Graph Nodes
International Conference on Computer Animation and Social Agents, short paper, 2010.

16. Z.-Q. Cheng, W. Jiang, G. Dang, R. Martin, J. Li, H. Li, Y. Chen, Y. Wang, B. Li, K. Xu, and S. Jin
Non-rigid Registration in 3D Implicit Vector Space
In Proc. of Shape Modeling International, Aix-en-Provence, France, 2010.

17. Jun Li, Zhiquan Cheng, Honghua Li, and Shiyao Jin
An algorithm of Laplacian-based 3D surface registration
Journal of System Simulation, Vol. 21 Suppl. 1, pp. 113-117, 2009. (In Chinese)

18. Honghua Li, Zhiquan Cheng, Jun Li, and Shiyao Jin
Mesh Dense Correspondence Computation based on Harmonic Field
Journal of System Simulation, Vol. 21 Suppl. 1, pp. 6-9, 2009. (In Chinese)

19. Honghua Li, Zhiquan Cheng, Jun Li, and Shiyao Jin
3D Surface Correspondence based on SIFT Features of Depth Image
Journal of System Simulation, Vol. 21 Suppl. 1, pp. 15-19, 2009. (In Chinese)

Professional Service

Program Committee: ICVRV 2017

Reviewer:
SIGGRAPH 2016, SIGGRAPH Asia 2017, Eurographics 2015, 2017, 2018
Graphics Interface 2014, Graphical Models 2015, Computer Graphics 2016, ICVRV 2017 Machine Vision and Application 2018

Work Experience

Machine Vision and Graphics Scientist, July – Dec 2017
Rentong Intelligence Inc., Shenzhen, China
Topics: 2D and 3D object recognition and localization for industrial robotics

3D Modeling Scientist, July 2015 – Dec 2016
Avatar Technology Inc., Changsha, China
Topics: 3D human body model acquisition

Research Assistant, Sep 2012 – Dec 2012
Simon Fraser University iWonder Inc., Canada
Topics: Interactive mobile application for 3D shape assembly on iOS Faculty: Hao (Richard) Zhang

Teaching Assistant, Sep 2010 – Aug 2014
Simon Fraser University, Canada
Courses: Data Structure, Computer Architecture, Computer Graphics Faculty: David G. Mitchell, Tony Dixon, Hao Zhang, and Ping Tan

Awards & Honors

2014	President's PhD Scholarship, SFU
2014	Travel and Minor Research Award, SFU
2014	Runner-up of FAS Faculty Heat of 3MT Competition, SFU
2013	Graduate Fellowship, SFU
2012	Travel and Minor Research Award, SFU
2012	Graduate Fellowship, SFU
2011	Graduate Fellowship, SFU
2010	China Scholar Council 4-year PhD Scholarship
2009	Bronze Medal of Graduate English Debating Competition, NUDT
2009	Fund of Innovation(<3%), NUDT
2008	Bronze Medal of Undergraduate Contest in Computer Works, Hunan
2008	Galaxy First-Class Scholarship (<2%), NUDT
2007	Galaxy Second-Class Scholarship (<2%), NUDT
2006	Second Prize of Mathematic Contest in Modeling, Hunan
2005–2009	Outstanding Student, NUDT

Press

Asian Pacific Post, 2015
Fold your toaster into a pocket-square

SFU News, 2015
Computing science grad finds way to create compact furniture

3DPrint.com, 2015
Chinese researchers aim to fold up your whole room with 3D printed, foldable furniture

South China Morning Post, 2015
Move over IKEA: Space-saving foldable furniture may be just a mouse click away

References

Hao (Richard) Zhang Simon Fraser Univesity, Canada
Daniel Cohen-Or Tel Aviv University, Israel
Baoquan Chen Shandong University, China
Ariel Shamir Interdisciplinary Center, Israel
Andrei Sharf Ben-Gurion University, Israel
Karan Singh University of Toronto, Canada
Ping Tan Simon Fraser Univesity, Canada
Xin Tong Microsoft Research Asia, China
Chi-Wing Fu Chinese University of Hong Kong, Hong Kong