Honghua Li

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Ph.D. in Computer Graphics
GrUVi Lab, Simon Fraser University

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http://honghuali.github.io

Research Interests

- Shape Compaction: Collapsing principle analysis, Stackabilization, Foldabilization
- Geometry Processing: Shape optimization, Segmentation, Topology blending
- Style Analysis: Style-content separation, Style transfer
- 3D Content Creation

Education

- **Simon Fraser University** — Burnaby, Canada
  Ph.D. Computing Science — *2010 - 2015*
  - China Scholarship Council Four-Year Ph.D. Scholarship
  - Dissertation: Shape Compaction via Stacking and Folding
  - Advisor: Prof. Hao (Richard) Zhang
  - Committee: Prof. Daniel Cohen-Or, Prof. Ze-Nian Li, Prof. Karan Singh, Prof. Ping Tan, Prof. Mark Drew
  - GPA: 4.0/4.3
- **National University of Defence Technology** — Changsha, China
  Master Program Computing Science, B.Sc. Computing Science — *2004 - 2010*
  - Promoted to Ph.D. program w/o M.Eng degree (an honor for top 8% students)
  - B.Sc. Thesis: 3D Point Clouds Editing Based on Parameterization
  - Advisor: Prof. Shiyao Jin
  - GPA: 3.78/4.0

Work Experience

- **Simon Fraser University** — Burnaby, Canada
  Research Assistant (Supported by iWonder Inc.) — *Sep. 2012 - Dec. 2012*
  - Topics: iOS app development, 3D interaction for shape assembly
  - Faculty: Hao(Richard) Zhang
- **Simon Fraser University** — Burnaby, Canada
  Teaching Assistant — *Sep. 2010 - Aug. 2014*
  - Courses: Data Structure, Intro. to Computer Architecture, Intro. to Computer Graphics
  - Faculty: David G. Mitchell, Tony Dixon, Hao Zhang, Ping Tan

Publications

1. **Honghua Li** and Hao Zhang, "Shape Compaction", in *Perspectives in Shape Analysis*, Dagstuhl Seminar, editors: M. Breu, A. Bruckstein, P. Maragos, and S. Wuhrer, to appear.

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

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

4. 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).

5. **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* (presented on Eurographics 2014), 32(6), 77-88, 2013.

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

7. 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).

8. Hao Fang, Zhi-Quan Cheng, **Hong-Hua Li**, Jun Li, Yin chen and Gang Dang, "2D Shape Deformation and Registration Using Structural Graph Nodes", the 23rd International Conference on Computer Animation and Social Agents (CASA 2010), short paper.

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

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

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

12. **Honghua Li**, Zhiquan Cheng, Jun Li, 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)

Academic Presentations

- **Eurographics 2014** — Strasbourg, France
  Curve style analysis in a set of shapes — *Apr. 2014*
- **Siggraph Asia 2012** — Singapore
  Stackabilization — *Dec. 2012*

Technique Skills

- **Proficient** (used on daily basis for large projects): C++, Qt, OpenGL, 3ds Max, Key Shot, LaTeX
- **Competent** (moderate-sized projects): C, Objective C, PHP, HTML, Matlab
- **Familiar** (small programs): Python, Java, Maya

Awards & Honors

- SFU Presidents PhD Scholarship — Aug. 2014
- Travel and Minor Research Award, SFU — Mar. 2014
- Runner-up of FAS Faculty Heat of 3MT Competition, SFU — Feb. 2014
- SFU Graduate Fellowship — Jan. 2013
- Travel and Minor Research Award, SFU — Dec. 2012
- SFU Graduate Fellowship — Sep. 2012
- SFU Graduate Fellowship — Sep. 2011
- China Scholar Council 4-year Ph.D. Scholarship — Sep. 2010
- Bronze Medal of Graduate English Debating Competition at NUDT — 2009
- NUDT Fund of Innovation (¡ 3%) — 2009
- Bronze Medal of Undergraduate Contest in Computer Works, Hunan — 2008
- Galaxy First-Class Scholarship (¡ 2%), CS, NUDT — 2008
- Galaxy Second-Class Scholarship (¡ 2%), CS, NUDT — 2007
- Second Prize of Mathematic Contest in Modeling, Hunan Zone — 2006
- Outstanding Student, CS, NUDT — 2005-2009

References

- **Hao (Richard) Zhang** — Burnaby, Canada
  Simon Fraser Univesity — *haoz@cs.sfu.ca*
- **Daniel Cohen-Or** — Tel Aviv, Israel
  Tel Aviv University — *dcor@tau.ac.il*
- **Ariel Shamir** — Herzliya, Israel
  Interdisciplinary Center — *arik@idc.ac.il*
- **Karan Singh** — Toronto, Canada
  University of Toronto — *karan@dgp.toronto.edu*
- **Ping Tan** — Burnaby, Canada
  Simon Fraser Univesity — *pingtan@sfu.ca*