Honghua Li

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Visiting Scholar
School of Computing Science
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Research Interests

- Man-made object analyzing and modeling — Shape compaction, Mobility
- Digital geometry processing — Segmentation, Topology blending, Correspondence
- Style and content analysis — Style-content separation, Style transfer
- Scene analysis — Scene understanding, Scene synthesis

Education

- **Simon Fraser University** — Burnaby, Canada
  Ph.D. in Computing Science — *Sep. 2010 - Apr. 2015*
  - Dissertation: Shape compaction via stacking and folding
  - Supervisor: Dr. Hao(Richard) Zhang
  - Co-supervisor: Dr. Daniel Cohen-Or
  - GPA: 4.0/4.3
- **National University of Defense Technology** — Changsha, China
  B.Sc. and Master Program in Computing Science — *Sep. 2004 - Jan. 2010*
  - Promoted to the Ph.D. program w/o M.Eng degree (an honor for top 8% students)
  - B.Sc. Thesis: 3D Point Clouds Editing Based on Parameterization
  - Supervisor: Prof. Shiyao Jin
  - GPA: 3.78/4.0

Work Experience

- **Shandong University** — Jinan, China
  Visiting Scholar — *Sep. 2015 - present*
  - Focus: Mobility analysis, Scene understanding and modeling
- **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. 2012*
  - Courses: Data Structure, Intro. to Computer Architecture, Intro. to Computer Graphics
  - Faculty: David G. Mitchell, Tony Dixon, Hao Zhang, Ping Tan

Technical Skills

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

Awards & Honors

- SFU President's 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
- 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

Research Publications

[1] **Honghua Li**, Ruizhen Hu, Ibraheem Alhashim, and Hao Zhang, "Foldabilizing Furniture", *ACM Transactions on Graphics* (SIGGRAPH 2015), 34(6).

[2] **Honghua Li** and Hao Zhang, "Shape Compaction", Book chapter in *Perspectives in Shape Analysis*, Dagstuhl Seminar, editors: M. Breu, A. Bruckstein, P. Maragos, and S. Wuhrer.

[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] 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.

[9] 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)

[10] **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)

[11] **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 Talks

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

References

- **Hao (Richard) Zhang** — haoz@cs.sfu.ca
  Simon Fraser University — *Canada*
- **Daniel Cohen-Or** — dcor@tau.ac.il
  Tel Aviv University — *Israel*
- **Ariel Shamir** — arik@idc.ac.il
  Interdisciplinary Center — *Israel*
- **Ping Tan** — pingtan@sfu.ca
  Simon Fraser University — *Canada*
- **Baoquan Chen** — baoquan.chen@gmail.com
  Shandong University — *China*
- **Andrei Sharf** — asharf@gmail.com
  Ben Gurion University — *Israel*