

## Research Interests

My research interests focus on the intersection of traditional artist drawing workflows with computational methods. More specifically, I am interested in making computers understand line drawings and generate stylized images based on digital models.

## Education

Sep 2016 – present	<b>University of British Columbia</b> Ph.D. in Computer Graphics. Advised by Prof. Alla Sheffer.
Aug 2013 – Dec 2014	<b>Carnegie Mellon University</b> M.S. in Computer Science.
Sep 2009 – Jun 2013	<b>Beihang University</b> B.Eng. in Computer Science and Technology. Ranking: 2/188.

## Publications

**Chenxi Liu**, Enrique Rosales, and Alla Sheffer. Strokeaggregator: Consolidating raw sketches into artist-intended curve drawings. *ACM Transaction on Graphics*, 37(4), 2018

**Chenxi Liu**, Jessica Hodgins, and James McCann. Whole-cloth quilting patterns from photographs. In *Proceedings of the Symposium on Non-Photorealistic Animation and Rendering*, NPAR '17, July 2017

Lea Albaugh, April Grow, **Chenxi Liu**, James McCann, Gillian Smith, and Jennifer Mankoff. Threadsteading: Playful interaction for textile fabrication devices. In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems*, pages 285–288. ACM, 2016

## Honors

Oct 2016	<b>Technology Award Winner: Threadsteading</b> IndieCade'16.
Nov 2011	<b>National Scholarship (Top 1% in Academic Performance)</b> Ministry of Education of the People's Republic of China.
Dec 2012, 2011, 2010	<b>The First Prize Scholarship of Academic Performance</b> Beihang University.

## Research & Professional Experience

Sep 2016 – Present	<b>Digital Geometry Processing Group, Imager Lab, UBC</b> Research Assistant. Advised by Prof. Alla Sheffer. Conducting research on the artistic creation tools. Published one paper in SIGGRAPH.
Mar 2015 – Jul 2016	<b>Textile Lab, Disney Research Pittsburgh</b> Research Associate. Supervised by Dr. James McCann & Prof. Jessica Hodgins. Conducted research on automatic quilting pattern generation using CNC quilting machine and graph theory. Resulting in one paper in NPAR. Reverse engineered a CNC embroidery machine and programmed a game utilizing the machine control. Resulting in an extended abstract in CHI and an award-winning game presented in three conferences.
Jul 2014 – Aug 2014	<b>CMU Graphics Lab</b> Research Assistant. Advised by Prof. Kayvon Fatahalian. Built a visualization module for a lighting control framework using Arnold.
Jul 2012 – Sep 2012	<b>Microsoft Search Technology Center Asia</b> Intern, Software Development Engineer in Test. Wrote scripts to gather statistical data and create analyses from search engine logs.
Aug 2011 – Dec 2011	<b>Laboratory for Information Security and Intelligent Information Processing, Beihang University</b> Research Assistant. Advised by Prof. Zhoujun Li. Built a tool to capture exception messages for further analyses. Manually analyzed software flaws for exploitations.

## Talks & Exhibition

Aug 2018	<b>SIGGRAPH'18</b> Conference Presenter: Strokeagggregator: Consolidating raw sketches into artist-intended curve drawings.
Jul 2017	<b>NPAR'17</b> Conference Presenter: Whole-cloth quilting patterns from photographs.
Mar 2016	<b>Alt.Ctrl.GDC, Game Developers Conference</b> Exhibitor: Threadstading. (Game also attended CHI Interactivity, 2016. IndieCade, 2016)

## Teaching Experience

Winter 2, 2018	<b>CPSC436D@UBC: Video Game Programming</b> Graduate Teaching Assistant, Instructor: Prof. Alla Sheffer.
Winter 2, 2016	<b>CPSC418@UBC: Parallel Computation</b> Graduate Teaching Assistant, Instructor: Prof. Mark Greenstreet.

## Services

2018	<b>Graduate Student Recruiting Committee</b> Student Representative of Computer Graphics.
2016 – 2017	<b>AMORE Seminar</b> Imager Lab seminar organizer.

## Skills

Programming: C/C++, MATLAB, Python, Java.  
Library: CUDA, OpenCL, OpenGL.