Chenxi Liu

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Education

University of British Columbia
Ph.D. in Computer Science
📅 Sep 2016 - Jun 2023   📍 Vancouver BC, Canada
- Advised by Professor Alla Sheffer

Carnegie Mellon University
M.S. in Computer Science
📅 Aug 2013 – Dec 2014   📍 Pittsburgh PA, USA
- GPA: 3.85/4.0

Beihang University
B.Eng. in Computer Science and Technology
📅 Aug 2013 – Dec 2014   📍 Beijing, China
- GPA: 3.83/4.0
- Ranking: 2/188

Skills

Programming
C/C++ • Python • MATLAB • Java

Libraries and Tools
libigl • CGAL • PyTorch • scikit-learn
CUDA • OpenCL • OpenGL
CMake • Git • Shell • LaTeX

Visual Editing
Illustrator • Photoshop • Premiere

Languages
Chinese (Native speaker) • English (Fluent) • Japanese (Conversational)

Honors

Eurographics'24 PhD Thesis Award, Honorable Mention
Eurographics and the Computer Graphics Forum Journal

WiGRAPH Rising Stars'22
ACM Community Group for Women in Computer Graphics Research

Technology Award Winner: Threadsteading
IndieCade'16

National Scholarship
Beihang University
Awarded to top 1% students in academic performance.

The First Prize Scholarship of Academic Performance
Beihang University
Awarded for 2010, 2011, 2012.

Objective

Postdoctoral researcher with a Ph.D. in 2D/3D geometries, focusing on line drawing processing, vector graphics, and non-photorealistic rendering. Currently expanding expertise in generative image models and attribution. Passionate about advancing creative technologies that assist artists, contributing innovative solutions in 2D/3D geometry, vector graphics, and generative image attribution through a research-driven role.

Research and Professional Experience

Postdoctoral Researcher
DGP Lab, University of Toronto
📅 July 2023 – Present   📍 Toronto ON, Canada
- Collaborating with Professor Alec Jacobson on vector graphics and generative art attribution

Research Assistant
Digital Geometry Processing Group, UBC
📅 Sep 2016 – Jun 2023   📍 Vancouver BC, Canada
- Researched processing vector sketches (2D geometry processing)
- Assisted a patent agent for an application
- Resulted in five top-tier papers and one patent application

Research Intern
Adobe Research
📅 May 2020 – Nov 2020   📍 Remote
- Conducted research on non-photorealistic line drawing generation
- Resulted in a patent application and a top-tier journal publication
📅 March 2023 – June 2023   📍 Toronto ON, Canada
- Conducted research on text-to-image generation

Research Associate
Disney Research Pittsburgh
📅 Mar 2015 – Jul 2016   📍 Pittsburgh PA, USA
- Researched quilting pattern generation for CNC quilting machine
- Resulted in a conference paper and an award-winning game

Intern, Software Development Engineer in Test
Microsoft Search Technology Center Asia
📅 Jul 2012 – Sep 2012   📍 Beijing, China
- Developed scripts for search data analysis, identifying a bug during internship

Leadership Experience

Guest Lecturer at UofT
📅 2023
- Led a lecture and coordinated a text-to-image generation assignment for 110 undergrads, under LEAF+ funding

Student Representative at UBC
📅 2018
- Served on Graduate Student Recruiting Committee
- Conducted initial screening of applicant materials

Teaching Assistant at UBC
📅 Parallel Computation, Winter 2 2016; Video Game Programming, Winter 2 2018;
📅 Geometric Modeling, Winter 1 2022

Selected Publications (2 out of 9)

- **Chenxi Liu**, Toshiki Aoki, Mikhail Bessmeltsev, Alla Sheffer. "StripMaker: Perception-driven Learned Vector Sketch Consolidation". ACM ToG, 2023.
- **Chenxi Liu**, Pierre Bénard, Aaron Hertzmann, Shayan Hoshyari. "ConTesse: Accurate Occluding Contours for Subdivision Surfaces". ACM ToG, 2022. US Patent App. 17/466,670.