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
📅 Sep 2009 – Jun 2013   📍 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

Faculty of Arts & Science Postdoctoral Fellowship
University of Toronto

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

Academic Excellence Awards
Beihang University
Awarded the **National Scholarship** (Top 1%) and the **First Prize Scholarship of Academic Performance** (2010, 2011, 2012).

Objective

Postdoctoral researcher with a Ph.D. in computational methods for visual creation, specializing in 2D/3D geometry, sketch processing, and generative image models. Experienced in analyzing style-adapted LoRA models, developing 2D neural fields with learned discontinuities, and bridging freehand sketches with precise digital representations. Passionate about advancing creative technologies that assist artists through research-driven solutions.

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 12)

- **Chenxi Liu**, Towaki Takikawa, and Alec Jacobson (2024). A LoRA is Worth a Thousand Pictures. Under review. arXiv: 2412.12048 [cs.CV].
- **Chenxi Liu**, Pierre Bénard, Aaron Hertzmann, Shayan Hoshyari. "ConTesse: Accurate Occluding Contours for Subdivision Surfaces". ACM ToG, 2022. US Patent App. 17/466,670.