

XI HAN

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EDUCATION

Department of Computer Science, Stony Brook University	Aug 2019 – Present
Ph.D. in Computer Science (In progress, expected by Spring 2026) GPA: 3.9/4.0	
Department of Computer Science and Technology, Tsinghua University	Aug 2015 – Jul 2019
B.E. in Computer Science and Technology GPA: 3.25/4.0	

PUBLICATIONS

- **Xi Han**, Fei Hou, Hong Qin, “UGrid: An Efficient-And-Rigorous Neural Multigrid Solver for Linear PDEs”, In Proceedings of the *Forty-first International Conference on Machine Learning (ICML)*, 2024.
- Song-Hai Zhang, Ruilong Li, Xin Dong, Paul Rosin, Zixi Cai, **Xi Han**, Dingcheng Yang, Hao-Zhi Huang and Shi-Min Hu, “Pose2Seg: Detection Free Human Instance Segmentation”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.

WORK EXPERIENCE

Computer Graphics Lab

Stony Brook University Research Assistant Teaching Assistant	Aug 2019 – Present
Advisor: Hong Qin, Professor at Department of Computer Science, Stony Brook University	
➤ Conducted research in intelligent modeling. Involved concepts: differentiable vector graphics, PDE-based modeling, etc.	
➤ Implemented multiple advanced research projects. Involved techniques: PyTorch C++/CUDA extension, GPU-based PDE solvers, CUDA kernel profiling and fine-tuning, etc.	
➤ Hosted lectures on OpenGL programming with C++/Python, the implementation details of computer graphics applications and algorithms, and the state-of-the-art research topics on graphics and physics-based modeling.	

Computer Graphics and Animation Lab

University of Texas at Dallas Research Assistant	Sep 2018 – Nov 2018
Advisor: Xiaohu Guo, Professor at Department of Computer Science, University of Texas at Dallas	
➤ Worked on the 3D face reconstruction project with a local Samsung research lab, applying convolutional neural networks in PyTorch.	
➤ Configured a Linux workstation for deep learning purposes from zero and deployed neural network models on it.	
➤ Constructed a human face model dataset for further research purposes.	

Graphics and Geometric Computing Group

Tsinghua University Research Assistant	Jan 2017 – Jul 2019
Advisor: Song-Hai Zhang, Professor at Department of Computer Science and Technology, Tsinghua University	
➤ Deployed a MobileNet module on IOS platform with Apple’s CoreML framework, and delivered an IOS app for a human segmentation (in Swift and Objective C++).	
➤ Optimized the model used in the app (increased accuracy and added key point recognition) and achieved 10x speedup in FPS.	

SKILLS

- Computer programming, computer graphics, machine learning, and Linux system skills.
 - ❑ Expertise in programming languages: C/C++ (OOP, STL, Metaprogramming, and Concurrency), CUDA, and Python.
 - ❑ Expertise in frameworks: PyTorch (including profiling and fine-tuning of C++/CUDA extensions) and OpenGL.
 - ❑ Other proficiencies in languages: Bash/CMake, MATLAB, Java, Objective C/C++, Swift and Assembly.
- Teaching skills:
 - ❑ A wealth of experience in teaching both undergraduate and graduate courses in C++/Python and Computer Graphics.
- Language Proficiencies:
 - ❑ Chinese (Mandarin) (Native speaker).
 - ❑ English (Proficient for working scenarios. TOEFL: 106/120; GRE: 324/340 + Writing 3.5).
 - ❑ Japanese (Sufficient for basic working scenarios. JLPT: N1 173/180, N2 169/180).