Zhengqi Li | Curriculum Vitae

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Education

Cornell Tech, Cornell University — **New York, NY**
Ph.D. in computer science, GPA: 4.00/4.00 — *2016–2021*
Advisor: Prof. Noah Snavely

University of Minnesota, Twin Cities — **Minneapolis, MN**
Bachelor of Computer Engineering with High Distinction, GPA: 3.99/4.00 — *2013–2016*

Research Interests

- 3D and 4D computer vision, inverse graphics, image-based rendering

Publications

- **Zhengqi Li**, Simon Niklaus, Noah Snavely, Oliver Wang. Neural Scene Flow Fields for Space-Time View Synthesis of Dynamic Scenes. *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021
- **Zhengqi Li**, Wenqi Xian, Abe Davis, Noah Snavely. Crowdsampling the Plenoptic Function. *European Conference on Computer Vision (ECCV)*, 2020 (**Oral**)
- **Zhengqi Li**, Tali Dekel, Forrester Cole, Richard Tucker, Noah Snavely, Ce Liu, William T. Freeman. MannequinChallenge: Learning the Depths of Moving People by Watching Frozen People. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*
- Wenqi Xian*, **Zhengqi Li***, Matthew Fisher, Jonathan Eisenmann, Eli Shechtman, Noah Snavely. UprightNet: Geometry-Aware Camera Orientation Estimation from Single Images. *International Conference on Computer Vision (ICCV)*, 2019 (* equal contribution)
- **Zhengqi Li**, Tali Dekel, Forrester Cole, Richard Tucker, Noah Snavely, Ce Liu, William T. Freeman. Learning the Depths of Moving People by Watching Frozen People. *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019 (**Oral, Best Paper Honorable Mention**)
- **Zhengqi Li**, Noah Snavely. CGINTRINSICS: Better Intrinsic Image Decomposition through Physically-Based Rendering. *European Conference on Computer Vision (ECCV)*, 2018
- **Zhengqi Li**, Noah Snavely. Learning Intrinsic Image Decomposition from Watching the World. *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018 (**Spotlight**)
- **Zhengqi Li**, Noah Snavely. MegaDepth: Learning Single-View Depth Prediction from Internet Photos. *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018 (Invited to be presented at Bridges to 3D Workshop, CVPR 2018)
- **Zhengqi Li**, Volkan Isler. Large Scale Image Mosaic Construction for Agricultural Applications. *IEEE Robotics and Automation Letters (RA-L)*, 2016
- **Zhengqi Li**, Volkan Isler. Large Scale Image Mosaic Construction for Agricultural Applications. *IEEE International Conference on Robotics and Automation (ICRA)*, 2016
- T. Do, L.C. Carrillo-Arce, **Zhengqi Li**, and Stergios Roumeliotis. High-speed Autonomous Quadrotor Navigation through Image Paths. *Technical Report*, *University of Minnesota, Twin Cities*, 2016

Experience

Learning Geometry, Appearance, and Motion in the Wild

Cornell Graphics and Vision Group — **Cornell Tech**
Advisor: Prof. Noah Snavely — *09/2016–05/2021*

- Research on varieties of topics of inverse graphics for in-the-wild scenarios.

Space-Time View Synthesis of Dynamic Scenes

Research Intern, Adobe Research — **Seattle & NYC**
Collaborators: Oliver Wang, Simon Niklaus — *05/2020–11/2020*

- Research on novel view and time synthesis from monocular videos of complex dynamic scenes.

Learning Object Pose and Shape Reconstruction

Research Intern, Facebook Reality Lab — **MPK**
Collaborator: Prof. Fernando De la Torre — *05/2019–08/2019*

- Research on joint object poses and shape reconstruction from unlabeled videos.

Learning the Depths of Moving People by Watching Frozen People

Intern, Google AI Research — **Cambridge & NYC**
Mentor: Tali Dekel. Teams: Prof. William T. Freeman and Prof. Noah Snavely — *05/2018–02/2019*

- Research on learning the depths of dynamic scenes with moving people from a moving camera.

Project Tango, Google

Multiple Autonomous Robotic Systems (MARS) Laboratory — **UMN**
Advisor: Prof. Stergios Roumeliotis — *08/2014–05/2016*

- Development on vision-aided inertial navigation system (VINS) of Google Project Tango.

Precision Agriculture

Robotic Sensor Networks (RSN) Laboratory — **UMN**
Advisor: Prof. Volkan Isler — *02/2015–09/2015*

- Large scale image mosaicking algorithm for agriculture applications.

Awards

- **Baidu AI Top 100 New Researchers**, Baidu — 2021
- **Google PhD Fellowship**, Google — 2020
- **Adobe Research Fellowship**, Adobe Research — 2020
- **Best Paper Honorable Mention Award**, CVPR 2019 — 2019
- **TA Outstanding Award**, Cornell University — 2017
- **Outstanding Undergraduate Researchers Honorable Mention Award**, Computing Research Association — 2016
- **Dean's List**, College of Science and Engineering, University of Minnesota — 2014-2016
- **National Scholarship of China**, Ministry of Education of China, — 2012

Patent

- Tali Dekel, Cole Forrester, Ce Liu, William Freeman, Richard Tucker, Noah Snavely, **Zhengqi Li**. Depth Determination for Images Captured with a Moving Camera and Representing Moving Features . *US Patent App. 16 / 578,215, 2021*
- Volkan Isler and **Zhengqi Li**. Large scale image mosaic construction for agricultural applications. *US Patent App. 15/415,347, 2018*

Invited Talks

- China Society of Image and Graphics (CSIG) 3DV, 2021
- Sun Yat-Sen University Computer Vision and Graphics Seminar, 2021
- MIT 3D Representations Seminar, 2021
- UCSD Computer Vision and Graphics Seminar, 2021
- NVIDIA GPU Technology Conference (GTC), 2020
- GAMES: Graphics And Mixed Environment Seminar (GAMES), 2019

Other Services

- Technical paper reviewer
  - Computer Vision and Pattern Recognition (CVPR) 2018-2021
  - European Conference on Computer Vision (ECCV) 2018-2020
  - International Conference on Computer Vision (ICCV) 2019-2021
  - International Conference on 3D Vision (3DV) 2018-2021
  - Asian Conference on Computer Vision (ACCV) 2018
  - British Machine Vision Conference (BMVC) 2018
  - International Journal of Computer Vision (IJCV) 2019
  - ACM SIGGRAPH 2021
  - ACM SIGGRAPH Asia 2019
  - IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 2021
  - IEEE Robotics and Automation Letters (RA-L) 2019
  - International Conference on Robotics and Automation (ICRA) 2019-2020
  - International Conference on Intelligent Robots and Systems (IROS) 2020
  - IEEE Transactions on Image Processing (TIP) 2019
  - IEEE VR 2020
- Teaching Assistant
  - CS5787: Deep Learning, Cornell Tech Spring 2019-2020
  - CS5670: Introduction to Computer Vision, Cornell University Spring 2017
  - CS4750/5750: Foundations of Robotics, Cornell University Fall 2016

Computer Skills

- Programming Languages: Python, C/C++, MATLAB, Intel SSE Assembly, ARM NEON Assembly, Java, Lua, HTML, JavaScript, PHP
- Software & Platforms & Libraries: LaTex, GitHub, CUDA, Android Development, Torch, PyTorch, TensorFlow, Eigen, OpenCV, Intel TBB & MKL