

Shumian Xin

✉ xinshumian@gmail.com • 🌐 shumianxin.github.io • in shumianxin

Experience

- **NVIDIA** Santa Clara, CA, USA
Senior Product Manager, Cosmos
Aug 2026 – Present
 - Working on world foundation model platform for physical AI
- **Adobe** San Jose, CA, USA
Computer Scientist, Emerging Products Group (Nextcam)
Jan 2023 – Aug 2026
 - Core contributor to Project Indigo, an experimental iOS camera app that reached 1 million downloads in four weeks
 - Owned computational photography and generative AI features from problem definition through launch, defining success criteria and aligning stakeholders on quality and performance tradeoffs
- **Google** Mountain View, CA, USA
Research Intern, Google Camera
May – Nov 2020
 - Improved robustness of post-capture effects under real-world capture conditions using Pixel dual-pixel sensors for single-shot defocus estimation and deblurring
 - Defined deliverables and evaluation with the team and delivered an optimization approach that jointly estimates defocus and reconstructs an all-in-focus image

Education

- **Carnegie Mellon University** Pittsburgh, PA, USA
Ph.D. in Robotics
Aug 2017 – Dec 2022
Advisors: Prof. Ioannis Gkioulekas and Prof. Srinivasa Narasimhan
 - Built end-to-end computational imaging systems and evaluation pipelines; work recognized with the **CVPR 2019 Best Paper Award** and **Microsoft Research PhD Fellowship finalist** distinction
 - Developed non-line-of-sight reconstruction methods that recover occluded objects from indirect light transport, with potential applications in robotics and autonomy, search and rescue, and inspection in obstructed environments*M.S. in Electrical and Computer Engineering* Aug 2015 – Dec 2016
- **Xi'an Jiaotong University** Xi'an, China
B.S. in Electrical Engineering and Automation
Sep 2011 – Jun 2015
Enrolled in the Special Class for the Gifted Young of China

Selected Publications

- **Large-Scale Light Field Synthesis from Videos Enables Geometrically Consistent Bokeh Editing**
Haoming Cai, Zhoutong Zhang, Christopher Metzler, **Shumian Xin**
ECCV, 2026
- **Learning to Refocus with Video Diffusion Models**
SaiKiran Tedla, Zhoutong Zhang, Xuaner Zhang, **Shumian Xin**
SIGGRAPH Asia, 2025 Conference Track
- **Defocus Map Estimation and Deblurring from a Single Dual-Pixel Image**
Shumian Xin, Neal Wadhwa, Tianfan Xue, Jonathan T. Barron, Pratul P. Srinivasan, Jiawen Chen, Ioannis Gkioulekas, Rahul Garg
ICCV, 2021 **Oral Presentation**
- **A Theory of Fermat Paths for Non-Line-of-Sight Shape Reconstruction**
Shumian Xin, Sotiris Nousias, Kiriakos N. Kutulakos, Aswin C. Sankaranarayanan, Srinivasa G. Narasimhan, Ioannis Gkioulekas
CVPR, 2019 **Oral Presentation, Best Paper Award out of >5000 submissions**