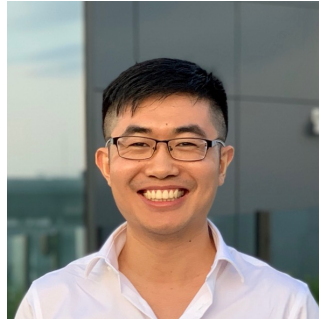


## Computational imaging/photography research at Snap Research



**Jian Wang**  
Snap Research

Tuesday, November 22th, 2022  
Noon ET • [Zoom](#)

### Abstract

We have exciting and real Computational Imaging (CI) and Computational Photography (CP) research problems from our product Snapchat App (a multimedia instant messaging app with 363 million daily active users, Q3, 2022) and future product Snap Spectacles, our industry-leading AR glasses. In this talk, I will introduce some of our research related to these two core products. First, I will talk about CP's image restoration to improve the face image quality and extend the scanning distance of QR code. Second, I will talk about using CP's image manipulation to create interesting effects on photos (we call Snap lenses), like 3d photo, stylization, sketch on cloud, heart rate lens. Third, I will talk about CI, co-design of the hardware and the software, for low-light imaging with flash, resource-limited 3d sensing, and avoidance of transparent glass when wearing an AR glass. Lastly, I will introduce a Sci-fi CI research work, a transparent camera, because other thinking-outside-the-box and useful research works are not allowed to say.

We have several openings for internships in 2023 (Summer, Fall, or Spring). We are responsible for every intern by carefully designing each project to fulfill the intern's interest and expected outcome from the internship. The intern has a chance to have product impact, academic impact (by top-tier research paper), or both. Besides today's talk, our manager Shree Nayar gave a very nice keynote about our other work in ICCP 2022; see <https://tinyurl.com/47xxb5jt>

### Bio

Jian (James) Wang is currently a Senior Research Scientist at Snap Inc. He is mainly interested in Computational Imaging (*e.g.*, novel cameras/sensors/wearables/displays for AR/VR/HCI, active 3d sensing, creative consumer imaging devices), Computational Photography (*e.g.*, image/video restoration/enhancement, image matting and compositing, image and video editing and generation, novel view synthesis, multimedia), and Computer Vision (*e.g.*, physics-based vision, low-level vision, 3d vision). Prior to joining Snap, he obtained his Ph.D. degree from Carnegie Mellon University.

**Host** Professor Qi Guo, guo675@purdue.edu