Salman Siddique Khan

Contact Information

Address: ESB 221, Electrical Sciences Block, IIT Madras, Tamil Nadu, India
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Research Interest

My field of research is Computational Imaging which incorporates designing new imaging systems and computational techniques that extend the capabilities of conventional cameras. In particular, I am interested in developing algorithms based on Optics, Signal Processing and Machine Learning that make these computational imaging systems work.

Education

2018-Present Ph.D.,**Indian Institute of Technology Madras**, India
Department: Electrical Engineering
Advisor: Prof. Kaushik Mitra

2014-2018 BTech(Honors), **National Institute of Technology Rourkela**, India
Department: Electronics and Instrumentation Engineering

Work Experience

Jan-July 2021 Research Associate at Rice University, Houston, Texas, USA
Worked on learning-based design of phase mask for ultra-thin lensless cameras for reconstruction and inference tasks. Also worked on developing physics-inspired neural networks for healthcare applications.

May-Nov 2019 Research Associate at Rice University, Houston, Texas, USA
Worked on design of privacy preserving cameras using learning based techniques.

Summer 2017 Summer Intern at Indian Institute of Space Science and Technology, Trivandrum, India
Developed active learning based image classification and object detection algorithms.

Summer 2016 Summer Intern at Indian Statistical Institute, Kolkata, India
Worked on segmentation of histopathological images.

Publications

Journal Papers

- **Salman S. Khan**, Varun Sundar, Vivek Boominathan, Ashok Veeraraghavan, Kaushik Mitra, **FlatNet: Towards Photorealistic Scene Reconstruction from Lensless Measurements**, IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 2020.

Conference Papers

- Jasper Tan, **Salman S. Khan**, Vivek Boominathan, Jeffrey Byrne, Richard Baraniuk, Kaushik Mitra, Ashok Veeraraghavan, **CAnOPIC: Pre-Digital Privacy-Enhancing Encodings for Computer Vision**, IEEE International Conference on Multimedia and Expo (ICME) 2020, London, UK. **(Oral)**

- **Salman S. Khan**, Adarsh V.R., Vivek Boominathan, Jasper Tan, Ashok Veeraraghavan, Kaushik Mitra, **Towards Photorealistic Reconstruction of Highly Multiplexed Lensless Images**, IEEE International Conference on Computer Vision (ICCV) 2019, Seoul, Korea. **(Oral)**

Achievements And Awards

- Awarded the Qualcomm Innovation Fellowship India 2020-21.
- Awarded Google Travel Grant to attend ICCV 2019 at Seoul, South Korea.
- National Finalist in NIYANTRA 2017 Annual Student Design Contest
- National Finalist in e-Yantra 2016 Robotics Challenge

Teaching Experience

- Teaching Assistant **EE 5176 Computational Photography,** IIT Madras Spring 2021
- Teaching Assistant **EE 6132 Modern Computer Vision,** IIT Madras Fall 2020
- Teaching Assistant **EE 1101 Signals and Systems,** IIT Madras Spring 2020
- Teaching Assistant **EE 5176 Computational Photography,** IIT Madras Spring 2019

Professional Service

Reviewer (Journal)

- OSA Optics Express
- OSA Continuum