Salman Siddique Khan

CONTACT Information ESB 221, Electrical Sciences Block, IIT Madras Chennai, India - 600036
$$\label{lower_loss} \begin{split} & \texttt{Homepage:} siddiquesalman.github.io \\ & \boxtimes \texttt{E-mail:} sk39@smail.iitm.ac.in \end{split}$$

RESEARCH Interest My field of research is Computational Photography and 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 vision, deep learning, signal processing and optics that make these computational imaging systems work.

EDUCATION

Indian Institute of Technology Madras, Chennai, India 2018–2023 (expected)

- Ph.D., Department of Electrical Engineering
- Advisor: Prof. Kaushik Mitra.

National Institute of Technology, Rourkela, India.

2014-2018

• B.Tech., Electronics and Instrumentation Engineering.

Work Experience

Rice Computational Imaging Lab

Jan 2021 – Jul 2021

- Position: Research Associate
- **Topic**: Designing diffractive optics for high-speed lensless imaging.

Rice Computational Imaging Lab

May 2019 - Nov 2019

- Position: Research Associate
- **Topic**: Designing optical and analog components for privacy-enhancing cameras.

Indian Statistical Institute

May 2016 - July 2016

- Position: Intern
- Topic: Random forest based histopathology image segmentation.

SELECTED PUBLICATIONS

- 1. 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.
- 2. 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)

PATENT

 Salman S. Khan, Sanjana Prabhu, Dhruvjyoti Bagadthey, Vivek Boominathan, Ashok Veeraraghavan, Kaushik Mitra, "Reconstructing High Quality Intensity And Absolute Depth From Single-shot Lensless Captures". Submitted.

Honors and Awards

- Awarded the Qualcomm Innovation Fellowship India 2020-21.
- $\bullet\,$ Awarded Google Travel Grant to attend ICCV 2019 at Seoul, South Korea.
- National Finalist in NIYANTRA 2017 Annual Student Design Contest

TEACHING EXPERIENCE

Teaching Assistant

- EE 5176 Computational Photography: Spring 2019, 2021
- \bullet EE 6132 Modern Computer Vision: Fall 2020
- EE 1101 Signals and Systems: Spring 2020
- EE 3110 Probability Foundations for Electrical Engineers: Fall 2021

SERVICE Reviewer

- Optica Optics Express
- Optica Continuum

SKILLS

Python(PyTorch, OpenCV), MATLAB, Blender, LabView.