

## Salman Siddique Khan

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CONTACT INFORMATION	ESB 221, Electrical Sciences Block, IIT Madras Chennai, India - 600036	Homepage: <a href="https://siddiquesalman.github.io">siddiquesalman.github.io</a> ✉ E-mail: <a href="mailto:sk39@smail.iitm.ac.in">sk39@smail.iitm.ac.in</a>
RESEARCH INTEREST	My field of research is Computational Photography and Computer Vision. I work on 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, and optics that make these computational imaging systems work.	
EDUCATION	<b>Indian Institute of Technology Madras</b> , Chennai, India	2018–2023 (expected)
	<ul style="list-style-type: none"><li>• Ph.D., Department of Electrical Engineering</li><li>• Advisor: Prof. <a href="#">Kaushik Mitra</a>.</li></ul>	
	<b>National Institute of Technology</b> , Rourkela, India.	2014–2018
	<ul style="list-style-type: none"><li>• B.Tech., Electronics and Instrumentation Engineering.</li></ul>	
WORK EXPERIENCE	<b>NEC Labs America</b>	June 2022 – Dec 2022
	<ul style="list-style-type: none"><li>• <b>Position:</b> Research Intern</li><li>• <b>Topic:</b> Designing cameras that perform optical encryption.</li><li>• <b>Mentor:</b> Dr. Francesco Pittaluga, Dr. Manmohan Chandraker.</li></ul>	
	<b>Rice Computational Imaging Lab</b>	Jan 2021 – Jul 2021
	<ul style="list-style-type: none"><li>• <b>Position:</b> Research Associate</li><li>• <b>Topic:</b> Designing diffractive optics for high-speed lensless imaging.</li><li>• <b>Mentor:</b> Dr. Ashok Veeraraghavan.</li></ul>	
	<b>Rice Computational Imaging Lab</b>	May 2019 – Nov 2019
	<ul style="list-style-type: none"><li>• <b>Position:</b> Research Associate</li><li>• <b>Topic:</b> Designing optical and analog components for privacy-enhancing cameras.</li><li>• <b>Mentor:</b> Dr. Ashok Veeraraghavan.</li></ul>	
	<b>Indian Statistical Institute</b>	May 2016 – July 2016
	<ul style="list-style-type: none"><li>• <b>Position:</b> Intern</li><li>• <b>Topic:</b> Random forest based histopathology image segmentation.</li><li>• <b>Mentor:</b> Dr. Angshuman Paul.</li></ul>	
SELECTED PUBLICATIONS	<ol style="list-style-type: none"><li>1. Atreyee Saha, <b>Salman S. Khan</b>, Sagar Sehrawat, Sanjana Prabhu, Shanti Bhattacharya, Kaushik Mitra, “<b>LWGNet: Learned Wirtinger Gradients for Fourier Ptychographic Phase Retrieval</b>”, European Conference on Computer Vision (ECCV) 2022, Tel Aviv, Israel.</li><li>2. Dhruvjyoti Bagadthey, Sanjana Prabhu, <b>Salman S. Khan</b>, Tony Fredrick, Vivek Boominathan, Ashok Veeraraghavan, Kaushik Mitra, “<b>FlatNet3D: Intensity And Absolute Depth from Single-shot Lensless Capture</b>”, Journal of the Optical Society of America A (JOSA A) 2022.</li></ol>	

	<ol style="list-style-type: none"> <li>3. <b>Salman S. Khan</b>, Varun Sundar, Vivek Boominathan, Ashok Veeraraghavan, Kaushik Mitra, <b>“FlatNet: Towards Photorealistic Scene Reconstruction from Lensless Measurements”</b>, IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 2020.</li> <li>4. Jasper Tan, <b>Salman S. Khan</b>, Vivek Boominathan, Jeffrey Byrne, Richard Baraniuk, Kaushik Mitra, Ashok Veeraraghavan, <b>“CAnOPIC: Pre-Digital Privacy-Enhancing Encodings for Computer Vision”</b>, IEEE International Conference on Multimedia and Expo (ICME) 2020, London, UK. <b>(Oral)</b></li> <li>5. <b>Salman S. Khan</b>, Adarsh V.R., Vivek Boominathan, Jasper Tan, Ashok Veeraraghavan, Kaushik Mitra, <b>“Towards Photorealistic Reconstruction of Highly Multiplexed Lensless Images”</b>, IEEE International Conference on Computer Vision (ICCV) 2019, Seoul, Korea. <b>(Oral)</b></li> </ol>
PATENT	<ol style="list-style-type: none"> <li>1. <b>Salman S. Khan</b>, Sanjana Prabhu, Dhruvjyoti Bagadthey, Vivek Boominathan, Ashok Veeraraghavan, Kaushik Mitra, <b>“Reconstructing High Quality Intensity And Absolute Depth From Single-shot Lensless Captures”</b>. Submitted.</li> </ol>
HONORS AND AWARDS	<ul style="list-style-type: none"> <li>• Awarded the Qualcomm Innovation Fellowship India 2020-21.</li> <li>• Awarded Google Travel Grant to attend ICCV 2019 at Seoul, South Korea.</li> <li>• National Finalist in NIYANTRA 2017 Annual Student Design Contest</li> </ul>
TEACHING EXPERIENCE	<b>Teaching Assistant</b> <ul style="list-style-type: none"> <li>• <b>EE 5176 Computational Photography</b>: Spring 2019, 2021, 2022</li> <li>• <b>EE 6132 Modern Computer Vision</b>: Fall 2020</li> <li>• <b>EE 1101 Signals and Systems</b>: Spring 2020</li> <li>• <b>EE 3110 Probability Foundations for Electrical Engineers</b>: Fall 2021</li> </ul>
SERVICE	<b>Reviewer</b> <ul style="list-style-type: none"> <li>• IEEE Transactions on Pattern Analysis and Machine Intelligence</li> <li>• IEEE Open Journal of Signal Processing</li> <li>• Optica Optics Express</li> <li>• Optica Continuum</li> <li>• IEEE Winter Conference on Applications of Computer Vision</li> </ul>
SKILLS	Python(PyTorch, OpenCV), MATLAB, Blender, LabView.