Maitreya Suin

Image Processing and Computer Vision Lab
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Education

2017–Present **MS+PhD in Image Processing and Computer Vision**.
Indian Institute of Technology Madras, Chennai, India
Research Advisor: Prof. A.N. Rajagopalan
CGPA: 8.5

2013–2015 **Bachelor of Engineering, Electronics and Communication Engineering**.
Institute of Engineering and Management, Kolkata, India
CGPA: 9.04

Research Areas

- Image Processing
- Computer Vision
- Natural Language Processing
- Deep Learning
- Reinforcement Learning
- CUDA Programming

Publication

CVPR-21 **Maitreya Suin** and A.N. Rajagopalan, "Gated Spatio-Temporal Attention-Guided Video Deblurring," Accepted at International Conference on Computer Vision and Pattern Recognition (CVPR), 2021.

JSTSP-21 **Maitreya Suin**, Kuldeep Purohit, and A.N. Rajagopalan, "Degradation Aware Approach to Image Restoration Using Knowledge Distillation ,"

2020 Kuldeep Purohit, Kranthi Kumar Rachavarapu, **Maitreya Suin**, and A.N. Rajagopalan, "Aperture-Hierarchical Attentive Reconstruction Network for Light-Field Spatial and Angular Super-resolution ," (Under Review).

CVPR-20 **Maitreya Suin**, Kuldeep Purohit, and A.N. Rajagopalan, "SpatiallyAttentive Patch-Hierarchical Network for Adaptive Motion Deblurring ," Accepted at International Conference on Computer Vision and Pattern Recognition (CVPR), 2020.

AAAI-20 **Maitreya Suin**, and A.N. Rajagopalan, "An Efficient Framework for Dense Video Captioning," Accepted at Thirty-fourth AAAI Conference on Artificial Intelligence (AAAI), 2020 (**ORAL**).

ICCVW-19 Kuldeep Purohit, **Maitreya Suin**, Praveen Kandula, and A.N. Rajagopalan, "Depth-guided Dense Dynamic Filtering Network for Bokeh Effect Rendering," Accepted at International Conference on Computer Vision (ICCV) workshop on Advances in Image Manipulation (AIM), 2019.

Co-authored Workshop Proceedings

ECCV-20 AIM 2020 challenge on Efficient SR: Report.

ECCV-20 AIM 2020 Relighting Challenge: Report.

CVPR-20 Ntire 2020 challenge on image and video deblurring: Report.

ICCV-19 AIM 2019 Challenge on Real-world Super-resolution: Methods and Results.

ICCV-19 AIM 2019 Challenge on Image Demoireing: Methods and Results.

ICCV-19 AIM 2019 Challenge on Bokeh Effect Synthesis: Methods and Results.

CVPR-19 NTIRE 2019 Challenge on Image Colorization: Report.

CVPR-19 NTIRE 2019 Image Dehazing Challenge: Report.

Conferences and workshops attented

Conference AAAI 2020, New York, USA.

Workshops Workshop on Computational Brain Research by Center for Computational Brain Research(CCBR), IIT Madras (2019.)

Awards and Achievements

1 2^{nd} Runner up of the Image Relighting challenge (Track 3) of AIM Workshop (ECCV) 2020.

2 Received travel grant from Google Research to attend the Thirty-fourth AAAI Conference on Artificial Intelligence (AAAI), 2020, New York, USA.

3 1^{st} Runner up of the Bokeh Effect and Image SR Challenges, AIM workshop (ICCV) 2019.

4 Winner of the Image Colorization Challenge in NTIRE: New Trends in Image Restoration and Enhancement, CVPR 2019.

5 Doctoral Studies - funded by Govt. of India, Ministry of Human Resource Development.

Professional Service

1 Served as a reviewer in Transactions on Pattern Analysis and Machine Intelligence (TPAMI).

1 Served as a reviewer in The Association for the Advancement of Artificial Intelligence (AAAI).

1 Served as a reviewer in IEEE Transactions on Image Processing (TIP).

Teaching Assistant

1 Deep Learning for Imaging under Prof. A.N. Rajagopalan and Prof. Kaushik Mitra.

2 Image Signal Processing under Prof. A.N. Rajagopalan.

3 Modern Computer Vision under Prof. A.N. Rajagopalan and Prof. Kaushik Mitra.

4 Wireless Networks under Prof. Venkatesh T.G.

Recent Courseworks and Projects

Courses Reinforcement Learning. Deep Learning, Image Signal Processing, Photometry and Geometry Based Computer Vision, Applied Linear Algebra, Probability Foundations, Digital Signal Processing, Estimation Theory.

Projects **B.Tech Project, IEM (2016)**: Remote electrical appliances control system based on DTMF of mobile phone.

Technical Skills

Languages Python, MATLAB, CUDA programming, C/C++, Latex.

Libraries PyTorch ,Tensorflow, Torch, MatConvNet, OpenCV, Gym-OpenAI, Lua (familiar), Caffe (Familiar).

References

1 **Prof. A.N. Rajagopalan**.
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Department of Electrical Engineering
Indian Institute of Technology Madras

2 **Prof. Kaushik Mitra**.
Assistant Professor
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