

Maitreya Suin

Education

- 2017–present **MS + PhD**, Image Processing and Computer Vision, *Indian Institute of Technology*, Madras,
Research Advisor: Prof. A.N.Rajagopalan.
CGPA - 8.59
- 2012–2016 : **Bachelor of Technology**, *Electronics and Communication Engineering*, Institute of Engineering
and Management, Kolkata.
CGPA - 9.04

Research Areas

- Computer Vision, Adaptive Neural Network Design, Image and Video Enhancement, Image Inpainting, Deep/Deep-Reinforcement Learning, Natural Language Processing.

Publications

- ICCV-2021** **Maitreya Suin**, Kuldeep Purohit and A.N. Rajagopalan, *Distillation Guided Image Inpainting*, International Conference on Computer Vision, 2021.
- ICCV-2021** Kuldeep Purohit, **Maitreya Suin**, A.N. Rajagopalan and Vishnu Naresh Boddeti, *Spatially-Adaptive Image Restoration using Distortion-Guided Networks*, International Conference on Computer Vision, 2021.
- CVPR-2021** **Maitreya Suin** and A.N. Rajagopalan, *Gated Spatio-Temporal Attention-Guided Video Deblurring*, Conference on Computer Vision and Pattern Recognition, 2021.
- CVPR-2020** **Maitreya Suin**, Kuldeep Purohit and A.N. Rajagopalan, *Spatially-Attentive Patch-Hierarchical Network for Adaptive Motion Deblurring*, Conference on Computer Vision and Pattern Recognition, 2020.
- AAAI-2020** **Maitreya Suin** and A.N. Rajagopalan, *An Efficient Framework for Dense Video Captioning*, (Oral) Thirty-Fourth AAAI Conference on Artificial Intelligence, 2020.
- JSTSP** **Maitreya Suin**, Kuldeep Purohit and A.N. Rajagopalan, *Degradation Aware Approach to Image Restoration Using Knowledge Distillation*, IEEE Journal of Selected Topics in Signal Processing. Impact Factor: 6.856
- ICCVW-2019** Kuldeep Purohit, **Maitreya Suin**, Praveen Kandula and A.N. Rajagopalan, *Depth-guided Dense Dynamic Filtering Network for Bokeh Effect Rendering*, International Conference on Computer Vision Workshop, 2019.
- Under Review**
- 2022 Kuldeep Purohit, Kranthi Kumar R., **Maitreya Suin**, and A.N. Rajagopalan, *Aperture-Hierarchical Attentive Reconstruction Network for Light-Field Spatial and Angular Super-resolution*, Under review at IEEE Transactions on Computational Imaging (**TCI**).

Co-Authored Workshop Proceedings

- CVPRW** NTIRE 2021 Challenge on Depth Guided Image Relighting: Report.
- CVPRW** NTIRE 2021 Challenge on Image Deblurring: Report.
- ECCVW** AIM 2020 challenge on rendering realistic bokeh.

ECCVW AIM 2020 challenge on image extreme inpainting.
ECCVW AIM 2020 challenge on efficient super-resolution: Methods and results.
ECCVW AIM 2020: Scene relighting and illumination estimation challenge.
CVPRW NTIRE 2020 challenge on image and video deblurring: Report.
ICCVW AIM 2019 Challenge on Real-world Super-resolution: Methods and Results.
ICCVW AIM 2019 Challenge on Image Extreme Super-Resolution: Methods and Results.
ICCVW AIM 2019 Challenge on Image Demoireing: Methods and Results.
ICCVW AIM 2019 Challenge on Bokeh Effect Synthesis: Methods and Results.
CVPRW NTIRE 2019 Challenge on Image Colorization: Report.
CVPRW NTIRE 2019 Image Dehazing Challenge Report.

Awards and Achievements

- Our research work has been featured on *Ministry of Education, India* and *News Websites*.
- Our team from IPCV Lab, IITM developed Mixed-reality segment for the *2020 Virtual Convocation of IIT Madras*.
- Winner of the Image Colorization Challenge in **NTIRE**: New Trends in Image Restoration and Enhancement, **CVPR** 2019.
- 1st Runner up of the Bokeh Effect and Image SR Challenges, AIM workshop (**ICCV**) 2019.
- 2nd Runner up of the Image Relighting challenge (Track 3) of AIM Workshop (**ECCV**) 2020.
- Received **travel grant from Google Research** to attend the Thirty-fourth AAAI Conference on Artificial Intelligence (**AAAI**), 2020, New York, USA.

Experiences

- Served as a reviewer in TPAMI, IJCV, AAAI, TIP.
- Attended ICCV-'21, CVPR-'21, CVPR-'20, AAAI-'20 conferences.
- Attended workshop on Computational Brain Research by CCB, IIT Madras (2019).
- Served as teaching assistant for Deep Learning, Image Signal Processing, Modern Computer Vision courses under Prof. A.N. Rajagopalan and Prof. Kaushik Mitra.

Skills

Programming Python, C/C++, CUDA programming, MATLAB.

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

Recent Course-works

- Reinforcement Learning, Deep Learning, Image Processing, Geometry and Photometry-based Computer Vision, Linear Algebra, Probability Foundations, Digital Signal Processing, Adaptive Signal Processing.

References

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 Electrical Engineering
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Dr. Kaushik Mitra
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