



Dr. Aditya Acharya, Ph.D.

Name : Dr. Aditya Acharya

Designation: Associate Professor

Department: Department of Electronics & Communication
Engineering
(JOINED THE INSTITUTE IN 2006)

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RESEARCH INTERESTS

- ✓ Image enhancement and restoration
- ✓ Image up-sampling and super-resolution
- ✓ Efficient fuzzy composite predictive scheme for effectual 2-D up-sampling of images for multimedia applications.
- ✓ Composite High Frequency Predictive Scheme for Efficient 2-D Up-scaling Performance
- ✓ Enhancement of dark images for efficient night vision
- ✓ Sustainable technologies for environment, forest, agriculture etc.

Academic Qualifications

Ph. D. (Engg), National Institute of Technology Rourkela, India
M. Tech. (Communication System Engg), KIIT University, Odisha
B.E . (Electrical & Elecrtonics Engg), Bangalore University, Karnataka
Specialisation: Image and Video Processing

Teaching Experience/Industrial Experience/Research Experience

- ✓ Teaching experience-14 years
- ✓ Research experience-3years (Research Scholar at NIT Rourkela)

PUBLICATIONS

JOURNAL & CONFERENCES:

- [1] **A. Acharya** and S.Meher, "Efficient fuzzy composite predictive scheme for effectual 2-D up-sampling of images for multimedia applications," Journal of Visual Communication and Image Representation, **Elsivier**, vol. 44, pp. 156-186, April 2017.
- [2] **A. Acharya** and S.Meher, "Composite High Frequency Predictive Scheme for Efficient 2-D Up-scaling Performance," Multimedia Tools and Applications, **Springer**, pp. 1-37, January 2017.
- [3] G. Sahoo and **A. Acharya**, "An Efficient Fusion based Up-sampling Technique for Restoration of Spatially Compressed Images," International Journal on Information Theory, vol. 4, pp. 1-9, January 2015.
- [4] **A. Acharya** and S.Meher, "Region adaptive unsharp masking based DCT interpolation for efficient video intra frame up-sampling." IJCA Special Issue on Electronic Design and Signal Processing ICEDSP(3):29-33, February 2013. Published by Foundation of Computer Science, New York, USA.
- [5] **A. Acharya** and S.Meher, "Robust video denoising for better subjective evaluation," in proceeding of IEEE International Conference on Image and Information Processing (ICIIP-2011), Shimla, Nov. 2011.
- [6] **A. Acharya** and S.Meher, "An efficient, adaptive unsharp masking based interpolation for video intra frame up-sampling," in Proc. IEEE Asia Pacific Conference on Postgraduate Research in Microelectronics and Electronics, Dec. 2012.
- [7] **A. Acharya** and S.Meher, "Region adaptive unsharp masking based Lanczos3 interpolation for video intra frame up-sampling," in Proc. IEEE Int. Conf. on Sensing Technology, Dec. 2012.
- [8] **A. Acharya** and S.Meher, "Region adaptive unsharp masking based DCT interpolation for efficient video intra frame up-sampling," in Proc. Int. Conf. on Electronic Design and Signal Processing, Dec. 2012.
- [9] **A. Acharya** and S.Meher, "No reference fuzzy unsharp masking based DCT interpolation for better 2-D up-sampling," in Proc. IEEE International Conference on Fuzzy Systems, ISI Calcutta, Hyderabad, July 2013.
- [10] **A. Acharya** and S.Meher, "Region based Laplacian post-processing for better 2-D up-sampling," in Proc. Of annual IEEE International Conference INDICON, IIT Bombay, Dec. 2013.
- [11] **A. Acharya** and S.Meher, " Local adaptive Laplacian for better 2-D up-sampling," in Proc. 2nd International Symposium on Computer, Communication, Control and Automation (3CA 2013), Singapore, Dec. 2013.
- [12] **A. Acharya** and S. Meher, "Prediction Error based Sharpening Scheme for Efficient 2-D Up-sampling Performance," in Proc. IEEE International Conference on Electrical, Electronics, Signals, Communication and Optimization (EESCO), Vishakapatnam, Jan. 2015.
- [13] **A. Acharya** and S. Meher, "An Improved Image Super-resolution using Local Adaptive Unsharp Masking," in Proc. IEEE International Conference on Electrical, Electronics, Signals, Communication and Optimization (EESCO), Vishakapatnam, January 2015.
- [14] **A. Acharya** and S. Meher, " Error based Sharpening for Efficient 2-D Up-scaling Performance ," in Proc. Of annual IEEE International Conference INDICON, New Delhi, Dec. 2015.

Book Chapter/
Paper Reviewed

1. **A. Acharya** and S. Meher, “Region adaptive unsharp masking based Lanczos-3 interpolation for 2-D up-sampling: Crisp-rule versus fuzzy-rule based approach,” Sensing Technology: Current Status and Future Trends II Smart Sensor, Measurement and Instrumentation, **Springer** International Publishing, vol. 8, pp. 47-73, 2014.
2. Towards an Objective Benchmark for Video Completion”, Signal, Image and Video Processing, Springer, 2018.
3. “The Bi-harmonic Eigenface”, Signal, Image and Video Processing, Springer, 2018.