

# Srimanta MANDAL

## PERSONAL DATA

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DATE OF BIRTH: 02-Oct-1987  
ADDRESS: ESB-320, IPCV Lab, EE. Department, IIT Madras, TN, India  
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EMAIL: [srimantamandal2008@gmail.com](mailto:srimantamandal2008@gmail.com)  
WEB PAGE: <https://srimanta-mandal.github.io/>  
GOOGLE SCHOLAR: <https://scholar.google.co.in/citations?user=spX3QwcAAAAJ&hl=en>

## EDUCATION

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JULY 2017 Ph.D. (converted from MS) in IMAGE PROCESSING  
*School of Computing and Electrical Engineering*  
**Indian Institute of Technology Mandi**, HP, India  
CGPA: 9/10 | Topic: Image Super-resolution  
Thesis: **"Novel Approaches for Super Resolution of Intensity/Range Image Using Sparse Representation"**  
Supervisor: Dr. Anil K. SAO

JULY 2010 Bachelor of Technology in ELECTRONICS & COMMUNICATION ENGINEERING  
*Asansol Engineering College,*  
**West Bengal University of Technology**, WB, India  
CGPA: 8.38/10

## RESEARCH INTERESTS

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Image Processing, Computer vision, Pattern Recognition

## EXPERIENCE

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JUL 2017 - PRESENT	Postdoctoral Fellow at INDIAN INSTITUTE OF TECHNOLOGY MADRAS, TN, India <i>Projects: Improving Visibility of Scene, Image Matching</i> Responsibilities: Literature survey, Implementation of new ideas, Writing manuscripts, Manuscript correction, Presentation
OCT 2010 - JUL 2017 (During Ph.D.)	Teaching Assistant at INDIAN INSTITUTE OF TECHNOLOGY MANDI, HP, India <i>Major Subjects: Digital Image Processing, Digital Signal Processing, Signals &amp; Systems, Computer Organization, Control Systems</i> Responsibilities: Conducting tutorials, Evaluating assignments, Conducting laboratories, Coordinating examinations, Maintaining records of students
SUMMER 2012	Summer Intern at SAMSUNG R&D INSTITUTE, Noida, India <i>Project: Video Scale-up Enhancement.</i> Received pre-placement offer from Samsung as a result of very positive review.

## COMPUTER SKILLS

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Languages: MATLAB, OCTAVE, Basics of ASSEMBLY LANGUAGE using NASM  
Environment: WINDOWS, UBUNTU  
Other Software: PSPICE, L<sup>A</sup>T<sub>E</sub>X, Visio, Excel, Word, PowerPoint

## LANGUAGES

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BENGALI: Mother-tongue  
ENGLISH: Fluent  
HINDI: Basic Knowledge

## PUBLICATIONS IN JOURNALS

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- S. Mandal, A. Bhavsar and A. K. Sao, "Noise Adaptive Super-Resolution from Single Image via Non-Local Mean and Sparse Representation," *Signal Processing*, vol. 132, pp. 134-149, Mar. 2017.
- S. Mandal, A. Bhavsar and A. K. Sao, "Depth Map Restoration from Under-sampled Data," *IEEE Transactions on Image Processing*, vol. 26, no. 1, pp. 119-134, Jan. 2017.
- S. Mandal and A. K. Sao, "Employing structural and statistical information to learn dictionary(s) for single image super-resolution in sparse domain," *Signal Processing: Image Communication*, vol. 48, pp. 63-80, Oct. 2016.
- S. Mandal, S. Thavalengal, and A. K. Sao, "Explicit and implicit employment of edge-related information in super-resolving distant faces for recognition," *Pattern Analysis and Applications*, vol. 19, no. 3, pp. 867-884, Aug. 2016.

## PUBLICATIONS IN CONFERENCES

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- S. Mandal, and A. N. Rajagopalan, "Single Noisy Image Super Resolution by Minimizing Nuclear Norm in Virtual Sparse Domain," in *Rameshan R., Arora C., Dutta Roy S. (eds) Computer Vision, Pattern Recognition, Image Processing, and Graphics. NCVPRIPG 2017. Communications in Computer and Information Science, vol 841. Springer, Singapore, 2018*, pp.163-176.
- S. Kumari, S. Mandal, and A. Bhavsar, "Patch Similarity in Transform Domain for Intensity/Range Image Denoising with Edge Preservation," in *Rameshan R., Arora C., Dutta Roy S. (eds) Computer Vision, Pattern Recognition, Image Processing, and Graphics. NCVPRIPG 2017. Communications in Computer and Information Science, vol 841. Springer, Singapore, 2018*, pp.257-268.
- P. Kaur, S. Mandal, and A. K. Sao, "Significance of Magnetic Resonance Image Details in Sparse Representation Based Super Resolution," in *Proceedings of the Annual Conference on Medical Image Understanding and Analysis (MIUA)*, July 2017, pp. 605-615.
- S. Mandal, S. Kumari, A. Bhavsar, and A. K. Sao, "Multi-Scale Image Denoising While Preserving Edges in Sparse Domain," in *Proceedings of the European Workshop on Visual Information Processing (EUVIP)*, Oct. 2016, pp. 1-6.
- S. Mandal, A. Bhavsar, and A. K. Sao, "Super-resolving a single intensity/range image via non-local means and sparse representation," in *Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP)*, Dec. 2014, pp. 1-8.
- S. Mandal, A. Bhavsar, and A. K. Sao, "Hierarchical example-based range-image super-resolution with edge-preservation," in *IEEE International Conference on Image Processing (ICIP)*, Oct. 2014, pp. 3867-3871.

- S. Thavalengal, S. Mandal, and A. K. Sao, "Significance of Dictionary for Sparse Coding Based Pose Invariant Face Recognition," in *Proceedings of the Twentieth National Conference on Communications (NCC)*, Feb. 2014, pp. 1-5.
- S. Mandal and A. K. Sao, "Image De-blurring in Super Resolution Framework," in *Proceedings of the National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG)*, Dec. 2013, pp. 1-4.
- S. Mandal and A. K. Sao, "Edge preserving single image super resolution in sparse environment," in *20<sup>th</sup> IEEE International Conference on Image Processing (ICIP)*, Sept. 2013, pp. 967-971.

## ACHIEVEMENT

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- Travel grant from Indian Institute of Technology Mandi, for presenting at International Conference on Image Processing 2014, Paris, France.

## PROFESSIONAL ACTIVITIES

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- Served as a reviewer for various journals and conferences including  
**Journals:** IEEE Transactions on Cybernetics, IEEE Access, IEEE Signal Processing Letter, Neurocomputing (Elsevier), ISPRS Journal of Photogrammetry and Remote Sensing (Elsevier).  
**Conferences:** National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG-2017), International Conference on Advances in Pattern Recognition (ICAPR-2017), International Conference on Signal Processing and Communications (SPCOM-2014,2018), Workshop on Signal Processing, Image Processing and Pattern Recognition (SIPR-2015).
- IEEE Graduate Student Member in Delhi Section of Asia and Pacific Region.

## INVITED TALKS

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JANUARY 2014	"IMAGE SUPER-RESOLUTION: AN OVERVIEW" <i>MCKV Institute of Engineering (in association with IEEE Kolakta section), Kolkata, India.</i>
DECEMBER 2013	"A GLIMPSE OF DIGITAL IMAGE PROCESSING" <i>Bells Institute of Management &amp; Technology, Shimla, India.</i>

## CONFERENCES/WORKSHOPS ATTENDED

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DECEMBER 2014	The Ninth Indian Conference on Vision, Graphics and Image Processing (ICVGIP'14) <i>Indian Institute of Science Bangalore, India.</i>
OCTOBER 2014	IEEE International Conference on Image Processing (ICIP'14) <i>CNIT, la Défense, Paris, France.</i>
FEBRUARY 2014	National Conference on Communications (NCC'14) <i>Indian Institute of Technology Kanpur, India.</i>
DECEMBER 2013	National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG'13) <i>Indian Institute of Technology Jodhpur, India.</i>
DECEMBER 2012	The Eighth Indian Conference on Vision, Graphics and Image Processing (ICVGIP'12) <i>Indian Institute of Technology Bombay, India.</i>
NOVEMBER 2011	International Conference on Image Information Processing (ICIIP'11) <i>Jaypee University of Information Technology, Shimla, India.</i>
DECEMBER 2010	Workshop on Image and Speech Processing ( WISP'10 ) <i>International Institute of Information Technology, Hyderabad, India.</i>

## REFERENCES

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References can be provided on request