

RUCHIRA NASKAR

Assistant Professor

Department of Information Technology

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PERSONAL INFORMATION

- Date of Birth: 1st October, 1985
- Permanent Address: 67/4 Lake East 6th Road, Kolkata, W.B., India – 700075

RESEARCH INTERESTS

- Digital Forensics
- Multimedia Security
- Cryptography
- Image Processing

ACADEMIC BACKGROUND

- Ph.D. in Computer Science and Engineering,
Indian Institute of Technology, Kharagpur, (July 2010 - July 2014)
Ph.D. Thesis Title: "Reversible Watermarking of Digital Images: Algorithms and Implementation"
Summary of PhD Research:
My Ph.D. research is focused on multimedia content protection through "digital watermarking". Digital watermarking is the act of hiding information in multimedia data (images, audio or video), for the purposes of content protection or authentication. In digital watermarking, the secret information (usually in the form of a bit stream), the watermark, is embedded into a multimedia data (cover data), in such a way, that distortion of the cover data due to watermarking is almost negligible perceptually. In addition, in "reversible watermarking", the cover data restored after the watermark extraction is identical to the original cover data, bit by bit. Reversible watermarking finds widespread use in military and medical applications, where distortion-free recovery of the original data after watermark extraction is of utmost importance. In my Ph.D. research I have mainly focused on the theory behind, as well as implementation of reversible watermarking algorithms for digital images. In my Ph.D. thesis, specifically the following problems have been addressed:
 - (1) Investigating the performance of state-of-the-art reversible watermarking algorithms under specific circumstances, such as an extremely noisy environment, where the cover data is highly vulnerable to get tampered.
 - (2) Investigating the applicability of state-of-the-art reversible watermarking algorithms to areas other than grayscale imagery, such as color imagery, halftone imagery as well as other forms of multimedia, such as audio files.
 - (3) Developing a mechanism to localize tampering in reversibly watermarked multimedia data, to reduce false rejection rate when authentication fails at the receiver side.
 - (4) Reducing runtime requirements of existing reversible watermarking algorithms, which often require very large complex operations to execute.
 - (5) Finally, developing a theoretical evaluation platform for analyzing and evaluating the reversible watermarking algorithms.
- M.Tech in Information Technology
Indian Institute of Technology, Kharagpur, (2008 – 2010)
CGPA: 9.40 / 10.00
M.Tech. Thesis Title: "Hierarchical Secret Sharing and Proactive Renewal of Shares"
- B.Tech in Information Technology
West Bengal University of Technology, (2004 – 2008)
CGPA: 8.34 / 10.00

ACADEMIC POSITION HELD

- **Indian Institute of Engineering Science and Technology, Shibpur (May 2019 – till date)**
Presently I am an Assistant Professor in the Department of Information Technology, Indian Institute of Engineering Science and Technology, Shibpur, where my responsibilities include teaching and research.
- **National Institute of Technology, Rourkela (February 2014 – May 2019)**
From 2014-2019 I had been affiliated as an Assistant Professor in the Department of Computer Science and Engineering, National Institute of Technology, Rourkela, where my responsibilities included teaching and research.

RESEARCH PUBLICATIONS

Patent

1. R. S. Chakraborty, **R. Naskar** and B. Sarkar, "A Method and System for Evaluation of Reversible Watermarking of Digital Images and Audio", Indian patent filed in May 2013 (Ref: 853/KOL/2013).

Copyright

1. **R. Naskar**, V. U. Sameer, R. S. K. Reddy and S. G. Chandra, "A System for Execution and Evaluation of Forensic Source Identification of Digital Images", Indian copyright registered in April 2018 (Registration No.: SW-10532/2018 Dated: 25/04/2018, Diary No.: 16791/2017-CO/SW Dated: 29/11/2017).

Books

1. **R. Naskar**, R. Dixit, V.U. Sameer, "Digital Forensics: Current Trends and Practices", *Stadium Press LLC, USA* (forthcoming)
2. A. Roy, R. Dixit, **R. Naskar** and R. S. Chakraborty, "Digital Image Forensics - Theory and Implementation", *Springer* (forthcoming)
3. **R. Naskar** and R. S. Chakraborty, "Reversible Digital Watermarking: Theory and Practices", *Morgan and Claypool Publishers, USA*, ISBN: 978-1-627-05315-0, 2014.
4. **R. Naskar**, "Secret Sharing in User Hierarchy: Share Generation, Distribution and Renewal", *Lambert Academic Publishing (LAP), GmbH & Co. KG, Germany*, ISBN: 978-3-659-34264-6, 2013.

Book Chapters

1. **R. Naskar**, P. Malviya and R. S. Chakraborty, "Digital Forensics: State-of-the-Art and Open Problems", in Dr. R. Pal (ed.), "Innovative Research in Attention modeling for Computer Vision Applications", *IGI Global*, 2015 (ISBN: 9781466687233 print, ISBN: 9781466687240 e-book).
2. **R. Naskar** and R. S. Chakraborty, "Reversible Watermarking: Theory and Practice", in Dr. B. Issac (ed.), "Case Studies in Secure Computing – Achievements and Trends", *CRC Press*, 2014.
3. **R. Naskar**, R. S. Chakraborty, D. K. Das and C. Chakraborty, "Digital Image Watermarking: Impact on Medical Imaging Applications in Telemedicine", in Dr. R. Srivastava (ed.), "Recent Advances in Computer Vision and Image Processing: Methodologies and Applications", *IGI Global*, 2013.

Journals

1. A. Choudhury, S. Pal, **R. Naskar** and A. Basu, "Computer Vision Approach for Phase Identification from Steel Microstructure", *Engineering Computations*, 2019. (Accepted)
2. R. Dixit and **R. Naskar**, "Region Duplication Detection in Digital Images based on Centroid Linkage Clustering of Key-points and Graph Similarity Matching", *Multimedia Tools and Applications*, *Springer*, 2018, pp. 1-22, doi: 10.1007/s11042-018-6666-1.
3. A. Panda, **R. Naskar** and S. Pal, "Exponential linear unit dilated residual network for digital image denoising", *SPIE Journal of Electronic Imaging*, vol. 27 no. 5, 053024, 2018. doi: 10.1117/1.JEI.27.5.053024.
4. J. Bakas, **R. Naskar** and R. Dixit, "Detection and localization of inter-frame video forgeries based on inconsistency in correlation distribution between Haralick coded frames", *Multimedia Tools and Applications*, *Springer*. doi: 10.1007/s11042-018-6570-8 (Accepted in August 2018).
5. V. U. Sameer and **R. Naskar**, "K-Unknown Models Detection through Clustering in Blind Source Camera Identification", *IET Image Processing*, vol. 12, no. 7, pp. 1204–1213, 2018.
6. R. Dixit and **R. Naskar**, "Copy-Move Forgery Detection utilizing FMT-Log Polar Features", *SPIE Journal of Electronic Imaging*, vol. 27, no. 2, 023007, 2018. doi: 10.1117/1.JEI.27.2.023007.
7. V. U. Sameer and **R. Naskar**, "Eliminating the Effects of Illumination Condition in Feature based Camera Model Identification", *Journal of Visual Communication and Image Representation*, *Elsevier*, vol. 52, no. 2, pp. 24-32, 2018.
8. V. U. Sameer and **R. Naskar**, "Blind Image Source Device Identification - Practicality and Challenges", *International Journal of Information Security and Privacy*, *IGI Global*, vol. 12, no. 3, article 5, 2018.

9. S. Gupta, A. Panda, **R. Naskar**, D. Mishra and S. Pal, "Processing and refinement of steel microstructure images for assisting in computerized heat treatment of plain carbon steel", *SPIE Journal of Electronic Imaging*, vol. 26, no. 6: 063010, 2017.
10. R. Dixit and **R. Naskar**, "Review, Analysis and Parameterization of Techniques for Copy-Move Forgery Detection in Digital Images", *IET Image Processing*, vol. 11, no. 9, pp. 746-759, 2017.
11. R. Dixit, **R. Naskar** and S. Mishra, "A blur-invariant copy-move forgery detection technique with improved detection accuracy utilizing SWT-SVD", *IET Image Processing*, Vol. 11, no. 5, pp. 301-309, 2017.
12. **R. Naskar** and R. S. Chakraborty, "A Technique to Evaluate Upper Bounds on Performance of Pixel-Prediction based Reversible Watermarking Algorithms", *Journal of Signal Processing Systems (Springer)*, vol. 79, no. 3, pp. 1-17, Jun. 2015.
13. **R. Naskar** and R. S. Chakraborty, "A Generalized Tamper Localization Approach for Reversible Watermarking Algorithms", *ACM Transactions on Multimedia Computing Communications and Applications*, vol. 9, no. 3, article 19, Jun. 2013.
14. **R. Naskar** and R. S. Chakraborty, "Histogram-Bin-Shifting based Reversible Watermarking for Color Images", *IET Image Processing*, vol. 7, no. 2, pp. 99-110, Mar. 2013.
15. **R. Naskar** and R. S. Chakraborty, "Performance of Reversible Digital Image Watermarking under Error-prone Data Communication: a Simulation-based Study", *IET Image Processing*, vol. 6, no. 6, pp. 728-737, Aug. 2012.
16. **R. Naskar** and R. S. Chakraborty, "Reversible Watermarking Utilizing Weighted-median based Prediction", *IET Image Processing*, vol. 6, no. 5, pp. 507-520, Jul. 2012.
17. **R. Naskar** and I. Sengupta, "Secret Sharing and Proactive Renewal of Shares in Hierarchical Groups", *International Journal of Computer Science and Information Technology*, vol. 2, no. 3, pp. 160-179, Jul. 2010.

Conferences

1. S. Roy, A. Panda and **R. Naskar**, "An Automated Ensembled Deep Neural Network Approach towards Accurate Segmentation of Biomedical Images", *IEEE International Conference on Wireless Communications, Signal Processing and Networking, (WiSPNET)*, 2019, Tamil Nadu, India.
2. V. Adabala and **R. Naskar**, "Hand Gesture Recognition Using Convolutional Neural Network", *IEEE International Conference on Wireless Communications, Signal Processing and Networking, (WiSPNET)*, 2019, Tamil Nadu, India.
3. S. Roy, A. Panda and **R. Naskar**, "Unsupervised Ground Truth Generation for Automated Brain EM Image Segmentation", *IEEE International Conference on Signal Processing & Integrated Networks (SPIN)*, 2019, Noida, India.
4. J. Bakas and **R. Naskar**, "A Digital Forensic Technique for Inter-Frame Video Forgery Detection based on 3D CNN", *14th International Conference on Information Systems and Security (ICISS) 2018*, IISc Bangalore. Proceedings published in Lecture Notes in Computer Science (LNCS), vol. 11281, pp. 304-317.
5. J. Bakas, P. Rawat, K. Kokkalla and **R. Naskar**, "Re-compression based JPEG Tamper Detection and Localization using Deep Neural Network, Eliminating Compression Factor Dependency", *14th International Conference on Information Systems and Security (ICISS) 2018*, IISc Bangalore. Proceedings published in Lecture Notes in Computer Science (LNCS), vol. 11281, pp. 318-341.
6. V. U. Sameer, I. Dali and **R. Naskar**, "A Deep Learning based Digital Forensic Solution to Blind Source Identification of Facebook Images", *14th International Conference on Information Systems and Security (ICISS) 2018*, IISc Bangalore. Proceedings published in Lecture Notes in Computer Science (LNCS), vol. 11281, pp. 291-303.
7. J. Bakas, B.A. Kumar and **R. Naskar**, "MPEG Double Compression based Intra-Frame Video Forgery Detection using CNN", *17th IEEE International Conference on Information Technology (ICIT) 2018*, Bhubaneswar India.
8. V. U. Sameer and **R. Naskar**, "Universal Wavelet Relative Distortion: A New Counter Forensic Attack on Photo Response Non-Uniformity based Source Camera Identification", *14th International Conference on Information Security Practice and Experience (ISPEC) 2018*, Tokyo, Japan. Proceedings published in Lecture Notes in Computer Science (LNCS), vol. 11125, pp. 37-49.
9. A. Roy, D. B. Tariang, R. S. Chakraborty and **R. Naskar**, "Discrete Cosine Transform Residual Feature based Filtering Forgery and Splicing Detection in JPEG Images", *Computer Vision and Pattern Recognition Workshops (CVPRW)*, Salt Lake City, Utah, USA, 2018.
10. V. U. Sameer, S. Mukhopadhyay, **R. Naskar** and I. Dali, "Source Camera Identification and Detection in Digital Videos through Blind Forensics", *IEEE International Conference on Recent Trends in Computational Engineering and Technologies (ICRT CET) 2018*, Bengaluru, India.
11. Vijaybhan, **R. Naskar** and S. Chinara, "Identification of Psoriasis Disease In Dermatology Using Machine Learning Technique", *IEEE International Conference on Recent Trends in Computational Engineering and Technologies (ICRT CET) 2018*, Bengaluru, India.

12. V.U. Sameer, **R. Naskar**, N. Musthyala and K. Kokkala, "Deep Learning based Counter-Forensic Image Classification for Camera Model Identification", *16th International Workshop on Digital Forensics and Watermarking (IWDW) 2017*, Madgeburg, Germany. Proceedings published in Lecture Notes in Computer Science, vol. 10431, pp. 52-64, 2017.
13. A. Roy, R. S. Chakraborty, V.U. Sameer and **R. Naskar**, "Camera Source Identification Using Discrete Cosine Transform Residue Features and Ensemble Classifier", *IEEE Conference on Computer Vision and Pattern Recognition Workshops (CVPRW) 2017*, Honolulu, Hawaii, USA.
14. D. B. Tariang, A. Roy, R. S. Chakraborty and **R. Naskar**, "Automated JPEG Forgery Detection with Correlation based Localization", *IEEE International Conference on Multimedia and Expo (ICME) 2017*, Hong Kong.
15. N. N. Dafale and **R. Naskar**, "Sensor Pattern Noise based Source Anonymization", *IEEE Third International Conference on Sensing, Signal Processing and Security (ICSSS) 2017*, Chennai, India.
16. P. Sengupta, V.U. Sameer, **R. Naskar** and E. Kalaimannan, "Source Anonymization of Digital Images: A Counter-Forensic Attack on PRNU based Source Identification Techniques", *Annual Conference on Digital Forensics, Security and Law (ADFSL) 2017*, Florida, USA.
17. V.U. Sameer, A. Sarkar and **R. Naskar**, "Copy-Move Forgery Detection Exploiting Statistical Image Features", *IEEE International Conference on Wireless Communications Signal Processing and Networking (WisPNET) 2017*, Chennai, India.
18. R. Dixit, **R. Naskar** and A. Sahoo, "Copy-Move Forgery Detection Exploiting Statistical Image Features", *IEEE International Conference on Wireless Communications Signal Processing and Networking (WisPNET) 2017*, Chennai, India.
19. V.U. Sameer, Sugumaran S., **R. Naskar**, "Digital Forensic Source Camera Identification with Efficient Feature Selection using Filter, Wrapper and Hybrid Approaches", *12th International Conference on Information Systems Security (ICISS 2016)*, Jaipur, India. Proceedings published in Lecture Notes in Computer Science, vol. 10063, pp. 409-425, 2016.
20. A.M. Kandepu and **R. Naskar**, "Classification based Time-Efficient, Blind Source Camera Identification for Videos", *5th IEEE International Conference on Communication and Signal Processing (ICCSP) 2016*, Tamilnadu, India.
21. D.B. Tariang and **R. Naskar**, "Re-Compressed based JPEG Forgery Detection and Localization through Automated Quality Factor Investigation", *International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET) 2016*, Chennai, India.
22. R. Dixit and **R. Naskar**, "DyWT based Copy-Move Forgery Detection with Improved Detection Accuracy", *International Conference on Signal Processing and Integrated Networks (SPIN) 2016*, Noida, India.
23. M. Shandilya, **R. Naskar** and R. Dixit, "Detection of Geometric Transformations in Copy-Move Forgery of Digital Images", *12th IEEE India International Conference INDICON 2015*, New Delhi, India.
24. A. Roy, R. S. Chakraborty and **R. Naskar**, "Reversible Color Image Watermarking in the YCoCg-R Color Space", *11th International Conference on Information Systems Security (ICISS) 2015*, Kolkata, India. Published in Lecture Notes in Computer Science, vol. 9478, pp. 480-498, 2015.
25. A. K. Yadav and **R. Naskar**, "A Tamper Localization Approach for Reversible Watermarking based on Histogram Bin Shifting", *IEEE Power, Communication and Information Technology Conference (PCITC)*, 2015, Bhubaneswar, India.
26. J. Wadhwa, T. Ahemad, **R. Naskar** and R. Dixit, "On Parameterization of Block based Copy-Move Forgery Detection Techniques", *ACM Research in Adaptive and Convergent Systems (RACS) 2015*, Prague, Czech Republic. pp. 125-130, 2015.
27. P. Malviya and **R. Naskar**, "Digital Forensic Technique for Double Compression based JPEG Image Forgery Detection", *International Conference on Information Systems Security (ICISS)*, 2014, Hyderabad, India. Published in Lecture Notes in Computer Science, vol. 8880, pp. 437-447, 2014.
28. **R. Naskar** and R. S. Chakraborty, "On Complexities of Spatial-domain Reversible Watermarking Algorithms", *8th INDIACom: International Conference on Computing for Sustainable Global Development 2014*, New Delhi, India.
29. **R. Naskar**, A. Raju and R. S. Chakraborty, "High Throughput Reversible Watermarking Scheme for Audio based on Redundant Embedding", *International Conference on Signal Processing and Communication (ICSC) 2013*, Noida, Uttar Pradesh, India.
30. P. Nagaraju, **R. Naskar** and R. S. Chakraborty, "Improved Histogram Bin Shifting based Reversible Watermarking", *International Conference on Intelligent System and Signal Processing (ISSP) 2013*, Gujarat, India.
31. **R. Naskar** and R. S. Chakraborty, "Fuzzy Inference Rule based Reversible Watermarking for Digital Images", *International Conference on Information Systems Security (ICISS)*, 2012, Guwahati, India. Published in Lecture Notes on Computer Science, vol. 7671, pp. 149-163, 2012.

32. **R. Naskar** and R. S. Chakraborty, "Lossless Secret Image Sharing based on Generalized-LSB Replacement", *ACM Research in Applied Computation Symposium (RACS)*, San Antonio, Texas, USA, 2012.
33. **R. Naskar** and R. S. Chakraborty, "Reversible Image Watermarking through Coordinate Logic Operation based Prediction", *International Conference on Information Systems Security (ICISS)* 2011, Kolkata, India. Published in *Lecture Notes on Computer Science*, vol. 7093, pp. 190-203, 2011.
34. **R. Naskar** and R. S. Chakraborty, "Lossless Data Hiding for Halftone Color Images", *IEEE International Conference on Image Information Processing (ICIIP)* 2011, Shimla, Himachal Pradesh, India.
35. S. Bandyopadhyay, **R. Naskar** and R. S. Chakraborty, "Reversible Watermarking Using Priority Embedding through Repeated Application of Integer Wavelet Transform", *International Conference on Security Aspects in Information Technology, High-performance Computing and Networking (InfoSecHiComNet)* 2011, Haldia, West Bengal, India. Published in *Lecture Notes in Computer Science*, vol. 7011, pp. 45-56, 2011.
36. S. Bandyopadhyay, **R. Naskar** and R. S. Chakraborty, "Reversible Digital Watermarking using Integer Wavelet Transform", *Proceedings of International Conference on Scientific Paradigm Shift in Information Technology and Management (SPSITM)* 2011, Kolkata, India.

RESEARCH FUNDING

- **Project Title:** "Digital Image Forensics in the Context of a Connected India: Algorithms and Implementation"
Funding Agency: Dept. of Science and Technology (DST), Govt. of India
Scheme: Interdisciplinary Cyber Physical Systems (ICPS) Programme
PI: Dr. Rajat Subhra Chakraborty, Dr. Ruchira Naskar
Duration: 3 years (Sanctioned in March 2019)
- **Project Title:** "Development of a Digital Forensic System for Blind Source Camera Identification of Contentious Images using Machine Learning"
Funding Agency: Council of Scientific and Industrial Research (CSIR), Govt. of India
Scheme: Extra Mural Research
PI: Dr. Ruchira Naskar
Duration: 3 years (August 2017 – August 2020)
- **Project Title:** "Detection of Cyber Forgery in Multimedia Data through Blind Digital Forensics"
Funding Agency: Board of Research in Nuclear Sciences (BRNS), DAE, Govt. of India
Scheme: Young Scientist Research Award
PI: Dr. Ruchira Naskar
Duration: 3 years (November 2016 - November 2019)
- **Project Title:** "Digitization of steel microstructure images, modelling of plain carbon steel microstructure evolution during heat treatment using cellular automata and phase field modeling methods, and development of a software tool for providing guidance in designing heat treatment process using machine learning based classification techniques"
Funding Agency: Science and Engineering Research Board (SERB), DST, Govt. of India
Scheme: Early Career Research
PI: Dr. Ruchira Naskar
Co-PI: Dr. Snehanshu Pal
Duration: 3 years (August 2016 - August 2019)
- **Project Title:** "Image Source Device Identification and Authentication based on Machine Learning Techniques"
Funding Agency: Media Asia Lab, Dept. of Electronics and Information Technology (DEITY), Govt. of India
Scheme: Visveswaraya PhD Scheme
PI: Dr. Ruchira Naskar
Duration: 5 years (July 2015 - June 2020)
- **Project Title:** "Development of Software for Cyber Crime Detection"
Funding Agency: Technical Education Quality Improvement Programme-II (TEQIP-II), NIT Rourkela
PI: Dr. Ruchira Naskar
Duration: 1 year (November 2014 - October 2015)

ACADEMIC ACHIEVEMENTS

- Recipient of "Young Scientist Research Award" (2016) by Board of Research in Nuclear Sciences (BRNS), Department of Atomic Energy (DAE), Govt. of India.
- Recipient of "Early Career Research Award" (2016) by Science and Engineering Research Board (SERB), Department of Science and Technology (DST), Govt. of India.
- Invited to deliver a talk on "Digital Content Protection through Reversible Watermarking" at the 18th International Symposium on VLSI Design and Test (VDAT), July 2014, Coimbatore, India.
- Invited to chair a session on "FPGA and Hardware Acceleration" at 18th International Symposium on VLSI Design and Test (VDAT), 2014.
- Winner of the 1st IDRBT Doctoral Colloquium (2011), conducted by Institute for Development & Research in Banking Technology (IDRBT), established by the Reserve Bank of India, for a personal presentation on Ph.D. research proposal. Award includes of Rs. 50,000 cash prize and citation.
- Recipient of "Foreign Travel Fellowship Award" by Department of Science and Technology, Govt. of India, to attend *ACM RACS'12* conference in San Antonio, Texas (USA).
- Invited to attend the 2011 Women in Technology and Science Meet, GE Bangalore.
- Selected to participate in the "Summer School on Security and Privacy (2011)" organized by Microsoft Research India.
- Recipient of Intellectual Ventures (India) Invention Award for invention titled "Reversible Watermarking of Color Images by Histogram-Bin-Shifting of Color Components" (Invention ID: IN-815068).
- Secured 99.79 percentile and All India Rank 11 in GATE (IT) 2008.
- Ranked 2nd in Master of Technology (M.Tech) in the School of Information Technology, Indian Institute of Technology, Kharagpur, batch 2008-2010.
- Received MHRD (India) scholarship in engineering from July 2008 to June 2010.
- Received Institute Ph.D. Scholarship, Indian Institute of Technology, Kharagpur, from July 2010 to October 2013.
- Qualified the Junior Research Fellowship (JRF) Selection Test for admission to Ph.D. Program of Indian Statistical Institute (ISI), Kolkata, 2010.

PROFESSIONAL ACTIVITIES

- Journal Reviewer
IET Image Processing, IET Computer Vision
- Conference Reviewer
ICISS 2017, ICISS 2016, RACS 2016, SPACE 2014, ICISS 2014, ICACC 2014, ACM RACS 2012
- Program Committee Member
ICISS 2017, DaSAA 2016, CGVIS 2017, ICISS 2016, RACS 2016, ICISS 2015, SPACE 2015, ACC 2015, NGCT 2015
- Organized and acted as the convener of "National Workshop on Software Quality Assurance" during July, 2015 at National Institute of Technology, Rourkela, India.

ADMINISTRATIVE ACTIVITIES

- Assistant Warden, KMS Hall of Residence, NIT Rourkela (September 2017 – till date)
- PIC, Digital Forensic Research Laboratory, Dept of CSE, NIT Rourkela (August 2016 – till date)
- Member, Departmental Academic Committee (DAC), CSE, NIT Rourkela (July 2017 – till date)
- PIC, Students' Activity Center, NIT Rourkela (August 2016 – September 2018)
- Faculty Advisor, M.Tech., CSE, NIT Rourkela (July 2015 – May 2017)
- Co-ordinator of M.Tech. (Software Engineering), CSE, NIT Rourkela (July 2016 – till date)
- Member, Departmental Purchase Committee (DPC), CSE, NIT Rourkela (August 2016 – July 2017)
- Co-ordinator NAAC/NBA Committee, NIT Rourkela (Institute Level Committee) (June 2015 – May 2017)