

Curriculum Vitae

Dr. Mrutyunjay Rout

Assistant Professor

Dept. of Electronics & Communication Engg.

National Institute of Technology Jamshedpur

Mobile: +91-8917590346, +91-9861162431

Email: mrutyunjay.ece@nitjsr.ac.in, mrutyunjay.rout@gmail.com

Orcid ID: 0000-0002-8773-1214

Researcher ID: AAB-6205-2019

Webpage: www.nitjsr.ac.in

**Research Interests: Wireless Sensor Networks & IoT,
Digital Signal Processing,
Electronics & Instrumentation**



ACADEMIC CAREERS

- **Doctor of Philosophy (2017)**

Department of Electrical & Electronic Communication Engineering

Indian Institute of Technology, Kharagpur, India

***Thesis Title:** Efficient Deployment of Multi-agent Mobile Wireless Sensing System for Various Coverage Problems*

Supervisor: Dr. Rajarshi Roy, Associate Professor, IIT Kharagpur

- **Master of Technology in Measurement & Instrumentation with C.G.P.A 9.81 (2010)**

Department of Electrical Engineering

Indian Institute of Technology, Roorkee, India

***Thesis Title:** Development of Wireless Sensor Networks for Asset Management*

Supervisor: Dr. H.K. Verma, Professor, IIT Roorkee

- **Bachelor of Engineering in Electronics and Instrumentation Engineering with 79.91% (2002)**

Berhampur University, Odisha, India

- **High School (1995) and Intermediate in Science (1997) passed in 1st division from Odisha State Board**

ACADEMIC ACHIEVEMENTS

- Recipient of MHRD fellowship by the Govt. of India for Ph.D. in E &ECE at IIT Kharagpur.
- **Dr. J.C. Mukhopadhyay Medal** for obtaining highest C.G.P. A in MTech at IIT Roorkee.

- **Late Smt. Uma Goyal Memorial cash prize** for obtaining highest C.G.P. A in MTech at IIT Roorkee.
- Recipient of **GE Foundation Scholar-Leader Scholarship** for excellent academic achievement in 2009.
- Recipient of MHRD fellowship by Govt. of India for M.Tech at IIT Roorkee.
- B.E (E&I) - Honors from Berhampur University, Odisha.

EXPERIENCES

- **Assistant Professor** in the Dept. of Electronics & Communication Engineering at **NIT Jamshedpur** from July 2018 to till date.
- **Assistant Professor** in the Dept. of Instrumentation & Control Engineering at **NIT Jalandhar** from January 2018 to June 2018.
- **Adhoc faculty** at **NIT Jamshedpur** from August 2016 to December 2017.
- **Lecturer** in the Dept. of Electronics & Instrumentation at **SOA University Bhubaneswar**, Odisha, India from August 2006 to July 2008.
- **Lecturer** in the Dept. of Electronics & Instrumentation at **Seemanta Engineering College**, Odisha, India from August 2003 to July 2006.

PUBLICATIONS

- Mrutyunjay Rout and Rajarshi Roy, “**Dynamic Deployment of Randomly Deployed Mobile Sensor Nodes in Presence of Obstacles,**” *Ad Hoc Network Journal Elsevier*, vol. 46, pp. 12-22, 2016. (ISSN: 1570-8705).
- Mrutyunjay Rout and Rajarshi Roy, “**Self-deployment of randomly scattered mobile sensors to achieve target coverage in the presence of obstacles,**” *IEEE Sensors Journal*, vol. 16, no. 14, pp. 5837-5842, 2016. doi: 10.1109/JSEN.2016.2571064. (ISSN: 1530-437X)
- Mrutyunjay Rout and Rajarshi Roy, “**Self-Deployment of Mobile Sensor Nodes to Achieve Barrier Coverage,**” *IEEE Sensors Journal*, vol. 16, no. 18, pp. 6819-6820, 2016. doi: 10.1109/JSEN.2016.2590572. (ISSN: 1530-437X).
- Mrutyunjay Rout and Rajarshi Roy, “**Optimal Wireless Sensor Network Information Coverage Using Particle Swarm Optimization Method,**” *International Journal of Electronics letters*, vol. 5, no. 4, pp. 491-499, 2017. doi: 10.1080/21681724.2017.1279226.
- Mrutyunjay Rout and H.K. Verma, “**Integration of Wireless Sensor Networks and RFID for Effective Management of Library Assets,**” in *Proc. International Conference on Electronic Systems (ICES-2011)*, 2011.

- Mrutyunjay Rout, H. K. Verma, and Subhashree Das, **“Wireless Sensor Networks for Indoor Environment Monitoring using LabVIEW,”** *Special Issue of IJCCT Vol.1 Issue 2, 3, 4; 2010 for International Conference [ACCTA-2010]*, 3-5 August 2010, pp. 305-308.
- Mrutyunjay Rout and H.K. Verma, **“A Test-Bed Application of Analog and Digital Sensors for Wireless Sensor Networks,”** in *Proc. National Conference on Computational Instrumentation (NCCI-2010)*, PP. 134–137, 2010.
- Ashish K. Singh, Yasharth Shukla, Nagendra Kumar and Mrutyunjay Rout, **“Impact of ART and DPC on AODV Routing Environment for Dynamic Network using QualNet 7.1,”** in *Proc. International Conference on Electrical, Electronics and Computer Engineering (UPCON)*, Aligarh, India, Nov. 2019, pp. 1-6, doi: 10.1109/UPCON47278.2019.8980108.
- Ashish Singh, Mrutyunjay Rout and Prashant Shekhar, **“AODV Routing Protocol Performance Analysis for Variable Bit Rate Traffic,”** in *proc. National Conference on Electronics, Communication and Computation (NCECC-2020)*, NIT Jamshedpur.
- Himansu Bhushan Mohapatra and Mrutyunjay Rout, **“Comparative Study of Teaching-Learning-Based Optimization, Artificial Bee Colony and Differential Evolution on Numerical Benchmark Problems,”** in *proc. National Conference on Electronics, Communication and Computation (NCECC-2020)*, NIT Jamshedpur.
- Malay Chakraborty, Surya Shekhar and Mrutyunjay Rout, **“A Comparative Analysis of LEACH and PEGASIS Hierarchical Protocol for Wireless Sensor Networks,”** in *proc. National Conference on Electronics, Communication and Computation (NCECC-2020)*, NIT Jamshedpur.
- Kilaru Sai Venkata Raaman, Cheerla Ganesh and Rout Mrutyunjay, **“Vehicle Tracking and Accident Alert System,”** in *proc. National Conference on Electronics, Communication and Computation (NCECC-2020)*, NIT Jamshedpur.

INVITED TECHNICAL TALKS

- On “Wearable Wireless Body Area Network for Health care” for AICTE sponsored ATAL program on “Workshop on Wearable Devices (WWD-2020)” at NIT Jamshedpur, India on 18th December 2020.
- On “Introduction to Wireless Sensor Technology” for AICTE sponsored ATAL program on “Faculty Development Program on Sensor Technology” at NIT Jamshedpur, India on 4th October 2020.
- On “Smart Sensors and its Importance in IoT” for AICTE sponsored ATAL program on “Faculty Development Program on IoT” at NIT Jamshedpur, India on 9th May 2020.
- On “Smart Sensors, WSNs and IoT” for One Day Seminar on “Emerging Areas of Computing, Communication and Applications in Internet of Things (CCIOT19)”, at Amity University, Jharkhand, India on 12th November 2019.

- On “Smart and Intelligent Sensors” for AICTE sponsored ATAL program on “Short Term Training Program on IoT” at NIT Jamshedpur, India on 12th October 2019.
- On “LabVIEW used for Library Asset Management” for National Workshop on “Applications of NI LabVIEW in Electronics & Communication Engineering (ANECE-2019)” at NIT Jamshedpur, India on 11th June 2019.

COURSES TAUGHT

UG

- Signals and Systems, Digital Signal Processing, Digital Electronics, Basic Electronics, Electronics Measurement and Instrumentation.

PG

- Adaptive Signal Processing, Wireless Sensor Networks

SUPERVISING STUDENTS

PhD

- Mr. Himanshu Bhusan Mohapatra, (July 2019-In Progress)
Topic: Optimization of Barrier Coverage in Mobile Sensor Network
- Mr. Alok Kumar (September 2020-In Progress)
Topic: Bio Medical Signal Processing

MTech

- Mr. Malay Chakraborty, (In Progress)
Title of Dissertation: A Computational Geometry Based Approach to Solve Barrier Coverage Problem in Wireless Sensor Networks.
- Mr. Janmejey Kumar, (In Progress)
Title of Dissertation: Development of Wearable Wireless Body Area Network for Health Monitoring of The Elderly and Disabled
- Mr. Ashish Kumar Singh, (2020)
Title of Dissertation: Post Silicon Validation of Client CPU SOC- Multimedia Workload
- Mr. Avinash Kumar, (2020)
Title of Dissertation: Design of Linear-Phase Digital FIR Filter using Optimization Techniques

BTech Project Supervised: More than 20 Projects

REVIEWER FOR JOURNALS

- IEEE Sensor Journal
- IEEE Communication Letters

RESPONSIBLE POSITIONS

- Warden, NIT Jamshedpur
- NSS Coordinator, NIT Jamshedpur
- Departmental Time Table In-charge
- P/I of DSP and Communication Lab
- Member of Admission Committee constituted for admission for the year 2019-2020
- Committee Member of NIRF ranking

CONFERENCES/SEMINARS/WORKSHOPS ORGANIZED

- National Conference on “**Electronics, Communication and Computation-2020 (NCECC-2020)**”, (Under TEQIP-III), 5th -6th September, 2020, NIT Jamshedpur, Jharkhand, India.
- National Workshop On “**Applications of NI LabVIEW in Electronics & Communication Engineering (ANECE-2019)**”, (Under TEQIP-III), 7th -12th June, 2019, NIT Jamshedpur, Jharkhand, India.

SKILLS

- Software Packages: MATLAB, LabVIEW
- Computer Languages: C' Programming
- Additional Courses Taken: DSP Tools & Practice from IIT Kharagpur, India.
Instrumentation & Signal Processing from NIT Jalandhar, Panjab, India.
- Languages Known: English (S/R/W); Hindi (S/R/W); Oriya

PERSONAL DATA

Father's Name : Sankarsan Rout
Date of Birth : 29.02.1980
Gender : Male
Category : General
Permanent Address : Dr. Mrutyunjay Rout
C/o Sankarshan Rout
At- Chahalima
PO- Sarasankha
Via- Soro
Dist- Balasore
PIN 756045
Present Address : Dr. Mrutyunjay Rout
Assistant Professor
Dept. of ECE
NIT Jamshedpur
Jamshedpur,
Jharkhand 831014
Marital status : Married

REFERENCES

- Dr. Rajarshi Roy, Associate Professor, Dept. of E&ECE, IIT Kharagpur, India, Email: royr@ece.iitkgp.ernet.in, Phone: +91-9163310306.
- Dr. H.K Verma, Former Deputy Director, IIT Roorkee, India, Email: hkvfee@gmail.com, Phone: +91-9412070882.