

Curriculum vitae

- Name:** SUSMITA DAS
- Designation:** Professor
- Department:** Electrical Engineering,
- Institution:** National Institute of Technology, Rourkela, Orissa
- Contact Number:** +91-661-2462402 (O)
+91-661-2463402 (R)
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- Email:** sdas@nitrkl.ac.in
- Date of Birth:** 24th June, 1967
- Gender:** Female
- Google scholar link:** <https://scholar.google.co.in/citations?user=wz9EyBIAAAA&hl=en>
- Research Areas:**
Wireless Communication (Advanced 3G, 4G & 5G technologies, URLLC, Adaptive Beamforming, MIMO, OFDM, Cooperative Relaying, UWB Short range applications, Spectrum sensing in Cognitive Radio, Heterogeneous Wireless Network), Digital and Adaptive Signal Processing, Application of Soft Computing Techniques, Development of Algorithms for Signal processing and Communication applications, Machine Learning.
- Courses Taught:**
Communication System Principles, Digital Signal Processing, Signals & Systems, Digital Communication, Wireless Communication, Mobile Radio Channel, Adaptive Signal Processing.

12. Academic Qualification: (Undergraduate Onwards)

Sl.No.	Degree	Year	Subject	Institution
1	B.Sc. Engg. (Hons)	1989	Electrical Engineering	College of Engineering and Technology, Bhubaneswar, Orissa
2	M.Sc. Engg.	1995	Electrical Engineering(Specialization: Electronics System and Communication)	National Institute of Technology, Rourkela, Orissa
3	Ph.D.	2004	Electrical Engineering	National Institute of Technology, Rourkela, Orissa

13. Work Experience (in chronological order)

Sl. No.	Position held	Institution	Period of Employment	
			From	To
1	Professor	NIT Rourkela	02.02.2018	Present
2	Associate Professor	NIT, Rourkela	01.01.2006	02.02.2019
3	Assistant Professor	NIT, Rourkela	22.09.2004	31.12.2005
4	Lecturer(Selection Grade)	NIT, Rourkela	15.02.2004	21.09.2004
5	Lecturer(Senior Scale)	NIT, Rourkela	09.09.1997	14.02.2004

6	Lecturer	NIT, Rourkela	09.09.1991	08.09.1997
7	Research Assistant	CET, Bhubaneswar	06.08.1989	01.09.1991

14. Professional Recognition/ Award/ Prize/ Certificate/ Fellowship received by the member

- Senior Member, IEEE, USA and member, IEEE Communication Society
- Fellow, Institution of Electronics and Telecom Engineers (IETE), India.
- Life Member of Indian Society of Technical Education (ISTE), India
- Fellow, Institution of Engineers (IE), India

15. Ph.D. Thesis Supervision: Guided (Principal Supervisor)

Sl.No.	Student Name	Title of Thesis
1	Kala Praveen Bagadi	On Development of Some Soft Computing Based Multiuser Detection Techniques for SDMA-OFDM Wireless Communication System
2	G. Kiran Kumar	Efficient Power allocation Scheme in Hybrid Decode Amplify Forward Relay based Wireless Cooperative Network.
3	Deepak Rout	Reliability Support and Performance Improvement in UWB-based Wireless Body Area Networks.
4	Deepa Das	Intelligent Approaches for Energy-Efficient Resource Allocation in the Cognitive Radio Network.
5	Manas Rakshit	Real-time medical signals analysis through wireless telemetry based on UWB-WBAN system.
6	Chaudhuri Manoj Kumar Swain	Cellular Design and optimization for QOS in Wireless Communication network (Wi-Max).

Thesis Supervised (PhD): (Co-Supervisor)

Sl.No.	Student Name	Title of Thesis
1	Sonam Shrivastava	Distributed Secondary Control Schemes for Islanded Micro grid.

Current PhD Research Scholars (Principal Supervisor):

Sl.No.	Student Name	Broad area of Research
1	Subhankar Chakrabarti	Statistical modelling, Network Design and Performance Evaluation of Ultra-Dense Heterogeneous Wireless Network
2	Annapurna Pradhan	Ultra Reliable and Low Latency Communication in 5G using Machine Learning.
3	Gyana Ranjan Mati	Adaptive Beamforming in 5G mm Wave communication .
4	Sudipta Mallick	Wireless Communication
5	Kalyan Chakravarthi P (Executive Ph.D.)	Application UAV in IOT Based wireless network.
6	Chiranjibi Samal (Executive Ph.D.)	Advance 5G Prospective.
7	Debasish Surya Narayan Das (Executive Ph.D.)	Wireless Communication-5g & Beyond

16. M.Tech. Thesis Supervised

2021	
Subham Panda	CP-less OFDM-SIS with Unique Word to Improve PHY Security and reduce Latency in 5G URLLC services.
Deepak D	Deep Learning Based Channel Estimation in OFDM System
Charuben Masaribhai Vaza	Robust Channel Estimation for 5G Massive MIMO
Tapesh Swami	Intelligent Reflecting Surface Aided MISO Wireless Network
Shaktimaan Debendra Pratap	Performance analysis of NOMA in 5g communications
2020	
Aditya Mishra	Efficient Bandwidth and Latency Management in 5G Wireless Network
Anandu S	An Efficient Context Information Aware Modified Beam Search Strategy for mmWave Bands
Vikash Kumar	Application of Singular Spectrum Analysis in Cognitive Radio Network for Spotting Anomaly.
Mahesh Mohanty	Intelligent Scheduling of Heterogeneous Traffic in 5G Wireless Networks
Rohit Kumar Ekka	Hybrid Beamforming Design for single-user MIMO and multi-user MISO system with known CSI.
2019	
Vangala Sai Preethi	Pilot based Channel Estimation in 4×4 MIMO-OFDM systems.
Anwesh Ghosh	System performance of a multi-hop relay-aided device-to-device communication system.
Ajit Kumar Barla	Improvement of energy efficiency using MIMO-NOMA with multiple users in a cluster.
Chinmayee Majhi	Study of Compressive Sensing Technique Using Different Measurement Matrices for Reconstructing a Composite Sinusoidal Signal.
2018	
Marella Naresh	Study of Fairness Scheduling Schemes in IEEE802.16j Mobile Multihop Relay Network
Kotyada Bangarraju	Analysis Of Device To Device Relay Based Communication Network Capacity In Overlay And Underlay Modes
S Rahul Varma	Performance Analysis Of Quality Of Service For Multicast Traffic Delivery Over WiMAX Network By Subgroup Formation
Ankita Singh	Study And Comparison Of Macrocell Path Loss Prediction Models For Efficient Radio Network Planning
Goura Gobind Padhi	Progressive Image Transmission over OFDM Systems using SPIHT Algorithm
Prasant Kumar Behera	Space -Time Adaptive Processing for MIMO Radar Target Detection
2017	
K Naga Jayant	Study of Sum-rate Optimization in Device-to-Device communication under different resource sharing modes
Abhishek Pisipati	Efficient EPE based Thresholding and Adaptive Coding for Wavelet based ECG Compression
Gugulothu Vinod	Throughput Performance Analysis of an Integrated Mobile WiMAX-DSRC Cellular

Kumar	Network with Adaptive Modulation and Coding Technique
Namita Mallick	Study of throughput based on the impact of propagation effects and traffic patterns in wireless cellular networks
2016	
Kotamreddy Mahesh	Traffic Analysis and Forecasting of WiMAX Network by using ANN, FTS and Data mining Techniques
Chintala Durga Prasad	Reduction Of Energy Consumption And Latency In Cognitive Wban Using Ldpc Error Corrcting Codes
Sakila Hansdah	Implementation Of Channel Estimatiomn Schemes Of Ofdm Systems Using Wicomm-T Board
Sambit Kumar	Real Time Analysis of ECG Signal for Baseline Wander Removal and R Peak Detection Using Discrete Wavelet Transform
Sradhanjali Patra	Optimization of Cooperative Sensing in Cognitive Radio Networks
Sidharta Mohapatra	Application of cognitive radio for smart grid communication
2015	
Rati Dillip Kumar Jalan	Improved Receiver Design For WBAN Employing UWB Based MIMO Scheme
Tatha Divya	Performance Analysis of Hybrid Decode- Amplify-Forward (HDAF) Relaying for Improving Security in Cooperative Wireless Network
B. Prithviraj Kumar	Proposed Technique for Cooperative Spectrum Sensing Optimization through Maximizing the Network Utility and Minimizing the Error Probability
Bishnu Prasad Sahoo	Adaptive Mac Protocol Design For Energy Efficient And Reliable Wban Link
Jhasketan Naik	Analysis of spectrum sensing schemes through TMS320c6713DSK for Cognitive Radio networks
Lipsa Priyadarshini	Development of interference mitigation schemes in 4G using Smart Antennas
2014	
R Tiwari	Performance study of routing protocols in a mobile patient monitoring network.
A D Tera	PSO based power allocation for single and multirelay AF cooperative network.
C Samal	Application of fractional frequency reuse technique for cancellation of interference in heterogeneous cellular network
S Shrivastava	Dynamic-double-threshold energy detection scheme for spectrum sensing under noise uncertainty in cognitive radio systems.
2013	
Ankit Jai Shankar Pal	Performance Characteristics Evaluation for Cooperative Communication.
Subhankar Chakrabarti	Study the Effect of Co-Channel Interference in STC MIMO-OFDM System and Mitigation of CCI using Beamforming Technique
Mahobe, Medhavi	UWB Radio Wireless Communication System Design for Railway Tunnels.
Nayak, Ashish Kumar	Performance Enhancement of DS-UWB Short Range Communication System Using Equalization Techniques.
2012	
Choudhury Sasmita Das	MB-Pulsed-OFDM System using Discrete Wavelet Packet Transform for Short Range Indoor Environment
Sridhar Kondabathini	Wireless Image Transmission over Space-Time Coded MIMO-OFDM System using Punctured Turbo Codes.
Narla Dileep	Localization for an UWB Radio Based Human Motion Tracking System.
Shafeeque I.	A DS UWB System for Wireless Telemedicine.
2011	
Naga Durga Rajesh Boyina	Channel estimation and comparison of fading channels in wireless OFDM based systems

Surykanth Tiwari	Co-Channel Interference Suppression using Adaptive Beam Forming Approach in MIMO-OFDM Systems.
M. V. Chandra Mouli	Narrow Band Interference Mitigation in Multiband OFDM UWB WPAN System Using Adaptive Notch Filter.
Vijaya Kumar Surasura	Performance comparison of Various Multiuser Detection Schemes in MIMO-OFDM Systems.
2010	
Brahmaji Tark	A study of channel estimation techniques in MIMO-OFDM systems in wireless applications.
Paramananda Sharma	Development of neural beamforming algorithms for adaptive antenna array.
Atul Kumar Gupta	Performance analysis of multiband ofdm in a uwb wpan system using IEEE 802.15.3a standard.
2009	
Manidipa Acharya	Parallel Interference Cancellation scheme in DS-SS receivers
A. Kabir Das	Performance analysis of turbo coded OFDM system in wireless communication
Srinivas Ollala	An efficient timing & Frequency synchronisation in OFDM based 802.11a WLAN System.
Sanjay Kumar Mohanty	ICI Power Reduction in OFDM System
2008	
Shankar Ram	A study of adaptive beam forming technique using smart antenna for mobile communication
Anil Ku. Pattanayak	Channel estimation in OFDM System
2007	
Smita Rani Parija	Multi-user detection in CDMA system using neural network approach
Prakash Ku. Ta	Blind channel estimation technique using radial basis function network
2006	
G. Arun kumar	An approach to equalization of digital communication channel using adaptive intelligent networks
2005	
Debajoti Mishra	A neural approach based on Fuzzy accelerated activation function to system identification

17. Publications (List of papers published in SCI/SCOPUS Journals, in year wise descending order).

1. Chaudhuri Manoj Kumar Swain, and Susmita Das, "Proposed Prediction Framework for Improving the Accuracy of Path Loss Models of WiMAX Network." Wireless Personal Communications 117.2: 1079-1101, 2021.
2. Manas Rakshit, and Susmita Das (2021) "Wavelet Sub-Bands Features-based ECG Signal Quality Assessment Scheme for Computer-aided Monitoring System", IETE Journal of Research, 1-10, 07 Mar 2021.
3. Manas Rakshit, and Susmita Das, "Hybrid approach for ECG signal enhancement using dictionary learning-based sparse representation", IET Science, Measurement & Technology, vol.13, no.3, pp.381 – 391, IET, May 2019.
4. Chaudhuri Manoj Kumar Swain, and Susmita Das, "Coverage probability analysis of WiMAX network under additive white Gaussian noise and predicted empirical path loss model", International Journal of Electrical, Electronic and Communication Sciences,

vol.13, no.5, pp.2513, World Academy of Science, Engineering and Technology, April 2019.

5. Manas Rakshit, and Susmita Das, "Electrocardiogram beat type dictionary based compressed sensing for tele cardiology application", *Biomedical Signal Processing and Control*, vol.47, pp.207--218, Elsevier, January 2019.
6. Sonam Shrivastava, Bidyadhar Subudhi, and Susmita Das, "Noise-resilient voltage and frequency synchronization of an autonomous Microgrid", *IET Generation Transmission and Distribution*, vol.13, no.2, pp.189-200, The Institution of Engineering Technology, January 2019.
7. Subhankar Chakrabarti, and Susmita Das "Poisson point process-based network modelling and performance analysis of multi-hop D2D chain relay formation in heterogeneous wireless network", *International Journal of Communication Networks and Distributed Systems*, vol.22, no.1, pp.98-122, Inderscience 2019.
8. Sonam Shrivastava, Bidyadhar Subudhi, and Susmita Das, "Distributed voltage and frequency synchronisation control scheme for islanded inverter-based microgrid", *IET Smart Grid*, vol.1, no.2, pp.48-56, The Institution of Engineering Technology, August 2018.
9. Deepak Kumar Rout, and Susmita Das, "Channel models for body surface communications in Ultra wideband-based wireless body area networks", *Wireless Personal Communications*, vol.100, no.4, pp.1263-1275, Springer, June 2018.
10. Chaudhuri Manoj Kumar Swain, and Susmita Das, "Estimation of path loss model for a 2.65 GHz mobile WiMAX network deployed in a sub-urban environment with regression techniques", *Wireless Personal Communications*, vol.99, no.1, pp.283–297, Springer, March 2018.
11. Manas Rakshit, and Susmita Das, "An efficient ECG denoising methodology using empirical mode decomposition and adaptive switching mean filter", *Biomedical Signal Processing and Control*, vol.40, pp.140-148, Elsevier, February 2018.
12. Shrivastava, Sonam, Bidyadhar Subudhi, and Susmita Das, "Distributed voltage and frequency synchronisation control scheme for islanded inverter-based microgrid", *IET Smart Grid*, vol.1, no.2, pp.48-56, The Institution of Engineering Technology 2018.
13. Deepa Das, David W. Matolak, and Susmita Das, "Spectrum occupancy prediction based on functional link artificial neural network (FLANN) in ISM band", *Neural Computing and Applications*, vol.29, no.12, pp.1363-1376, Springer London 2018.
14. Deepa Das and Susmita Das, "Intelligent resource allocation scheme for the cognitive radio network in the presence of primary user emulation attack", *IET Communications*, vol.11, no.15, pp.2370 - 2379, The Institution of Engineering and Technology, October 2017.
15. Deepa Das and Susmita Das, "An intelligent resource management scheme for SDF-based cooperative spectrum sensing in the presence of primary user emulation attack", *Computers and Electrical Engineering*, vol.69, pp.555-571, Elsevier, July 2017.
16. Deepa Das and Susmita Das, "A novel approach for cognitive radio application in 2.4-GHz ISM band", *International Journal of Electronics*, vol.104, no.5, pp.792-804, Taylor and Francis Ltd. 2017.

17. Deepa Das and Susmita Das, "A novel approach for energy-efficient resource allocation in double threshold-based cognitive radio network", *International Journal of Communication Systems*, vol.30, no.9, John Wiley and Sons Ltd 2017.
18. Deepa Das and Susmita Das, "Adaptive resource allocation scheme for cognitive radio vehicular ad-hoc network in the presence of primary user emulation attack", *IET Networks*, vol.6, no.1, pp.5-13, Institution of Engineering and Technology 2017.
19. Manas Rakshit, and Susmita Das, "An efficient wavelet-based automated R-peaks detection method using Hilbert transform", *Biocybernetics and Biomedical Engineering*, vol.37, no.3, pp.566-577, Elsevier 2017.
20. Deepa Das and Susmita Das, "An intelligent approach for resource allocation in the cognitive radio vehicular ad hoc network", *Transactions on Emerging Telecommunications Technologies*, vol.28, no.8, pp.3159, Wiley Blackwell 2017.
21. Chaudhuri Manoj Kumar Swain, and Susmita Das, "Effects of threshold based relay selection algorithms on the performance of an IEEE 802.16j mobile multi-hop relay (MMR) WiMAX network", *Digital Communications and Networks*, vol.4, no.1, pp.58-68, Elsevier 2017.
22. Kiran Kumar Gurralla, and Susmita Das, "Minimized SER and QOS Based Power Allocation Strategies for Multi HDAF Relay Cooperative Network", *Wireless Personal Communications*, vol.96, no.1, pp.779-798, Springer New York LLC 2017.
23. Kiran Kumar Gurralla, and Susmita Das, "Performance study of hybrid decode-amplify-forward (HDAF) relaying scheme for physical layer security in wireless cooperative network", *International Journal of Communication Systems*, vol.30, no.8, John Wiley and Sons Ltd 2017.
24. Deepak Kumar Rout, and Susmita Das, "Reliable communication in UWB body area networks using multiple hybrid relays", *Wireless Networks*, vol.23, no.8, pp.2555-2570, Springer New York LLC 2017.
25. Deepa Das and Susmita Das, "Optimal resource allocation for soft decision fusion-based cooperative spectrum sensing in cognitive radio networks", *Computers and Electrical Engineering*, vol.52, pp.362-378, Elsevier Ltd, May 2016.
26. Deepak Kumar Rout, and Susmita Das, "Multi-relay cooperative body surface communications in ultra-wideband body area networks", *Computers and Electrical Engineering*, vol.50, pp.111-124, Elsevier Ltd, February 2016.
27. Deepak Kumar Rout, and Susmita Das, "Hybrid Relaying in Ultra-Wideband Body Area Networks", *Wireless Personal Communications*, vol.86, no.2, pp.435-449, Springer 2016.
28. Kiran Kumar Gurralla, and Susmita Das, "Maximized Channel Capacity Based Power Allocation Technique for Multi Relay Hybrid Decode-Amplify-Forward Cooperative Network", *Wireless Personal Communications*, vol.87, no.3, pp.663-678, Springer New York LLC 2016.
29. Deepak Kumar Rout, and Susmita Das, "Narrowband interference mitigation in body surface to external communication in UWB body area networks using first-order Hermite pulse", *International Journal of Electronics*, vol.103, no.6, pp.985-1001, Taylor and Francis Ltd. 2016.

30. Deepak Kumar Rout, and Susmita Das, "Performance of amplify forward and decode forward cooperative strategies for body surface communications in UWB Body Area Networks", *International Journal of Communication Systems*, vol.29, no.5, pp.916-928, John Wiley and Sons Ltd 2016.
31. Bagadi K Praveen, Susmita Das, A. Visalakshi, "Recent trends in multiuser detection techniques for SDMA--OFDM communication system", *physical communication*, vol.20, pp.93--108, Elsevier 2016.
32. Deepa Das and Susmita Das, "A Survey on Spectrum Occupancy Measurement for Cognitive Radio", *Wireless Personal Communications*, vol.85, no.4, pp.2581-2598, Springer New York LLC 2015
33. Kiran Kumar Gurralla, and Susmita Das, "Hybrid decode-amplify-forward (HDAF) scheme in distributed Alamouti-coded cooperative network", *International Journal of Electronics*, vol.102, no.5, pp.725-741, Taylor and Francis Ltd. 2015.
34. Deepak Kumar Rout, and Susmita Das, "Multiple Narrowband Interference Cancellation in High Data Rate UWB Body Area Networks using Hybrid Hermite Pulses", *International Journal of Wireless Information Networks*, vol.22, no.3, pp.252-261, Springer New York LLC 2015.
35. Deepak Kumar Rout, and Susmita Das, "Multiple narrowband interference mitigation using hybrid Hermite pulses for body surface to external communications in UWB body area networks", *Wireless Networks*, pp.1-16, Springer New York LLC 2015.
36. Bagadi K Praveen, Susmita Das, "Minimum symbol error rate multiuser detection using an effective invasive weed optimization for MIMO/SDMA-OFDM system", *International Journal of Communication Systems*, vol.27, no.12, pp.3837-3854, John Wiley and Sons Ltd, December 2014.
37. S. Shrivastava, R. Tiwari, and S. Das, "Dynamic-double-threshold energy detection scheme under noise varying environment in cognitive radio system", *International Journal of Computer Applications in Technology*, vol.87, no.14, foundation of computer science 2014.
38. Deepak Kumar Rout, and Susmita Das, "Interference mitigation in wireless body area networks using modified and modulated MHP", *Wireless Personal Communications*, vol.77, no.2, pp.1343-1361, Springer 2014.
39. Bagadi K Praveen, Susmita Das, "Multiuser detection in SDMA-OFDM wireless communication system using complex multilayer perceptron neural network", *Wireless Personal Communications*, vol.77, no.1, pp.21-39, Springer 2014.
40. Bagadi K Praveen, Susmita Das, "Efficient complex radial basis function model for multiuser detection in a space division multiple access/multiple-input multiple-output--orthogonal frequency division multiplexing system", *IET Communications*, vol.7, no.13, pp.1394--1404, iet digital library 2013.
41. Bagadi K Praveen, Susmita Das, "Neural network-based adaptive multiuser detection schemes in SDMA-OFDM system for wireless application", *Neural Computing and Applications*, vol.23, no.3-4, pp.1071-1082 2013.

42. Bagadi K Praveen, Susmita Das, "Neural network-based multiuser detection for SDMA-OFDM system over IEEE 802.11n indoor wireless local area network channel models", *International Journal of Electronics*, vol.100, no.10, pp.1332-1347 2013.
43. Deepa Das and Susmita Das, "Primary user emulation attack in cognitive radio networks: A survey", *IRACST-International Journal of Computer Networks and Wireless Communications*, vol.3, no.3, pp.312--318 2013.
44. Susmita Das, "A novel concept of embedding orthogonal basis function expansion block in a neural equalizer structure for digital communication channel", *Neural Computing and Applications*, vol.21, no.3, pp.481-488 2012.
45. Bagadi K Praveen, Susmita Das and S. K, "Image transmission over space time coded MIMO-OFDM system with punctured turbo codes", *International Journal of Computer Networks and Wireless Communications*, vol.51, no.15, *Foundation of computer science* 2012.
46. Susmita Das, "Performance of fuzzy logic-based slope tuning of neural equaliser for digital communication channel", *Neural Computing and Applications*, vol.21, no.3, pp.423-432 2012.
47. Bikramaditya Das, Susmita Das, "Suppression of narrowband interference in impulse radio based high data rate UWB WPAN communication system using NLOS channel model", *World Academy of Science, Engineering and Technology*, vol.77, no.5, pp.701-705, May 2011.
48. Bagadi K Praveen, Susmita Das "Comparative analysis of various multiuser detection techniques in SDMA-OFDM system over the correlated MIMO channel model for IEEE 802.16n", *World Academy of Science, Engineering and Technology*, vol.77, pp.620-624 2011.
49. Bikramaditya Das, Susmita Das, "A MB-pulsed-OFDM system using discrete wavelet packet transform for short range indoor wireless environment", *Journal of advances in computer networks*, vol.2, no.3, pp.129--139, springer 2010.
50. Ch. S. Das, Bikramaditya Das, Susmita Das, "Efficacy of multiband OFDM approach in high data rate Ultra wideband WPAN physical layer standard using realistic channel models", *International Journal of Computer Applications*, vol.2, no.2, pp.81--87, Springer 2010.
51. Bikramaditya Das, Susmita Das, "Interference cancellation schemes in UWB systems used in wireless personal area network based on wavelet based pulse spectral shaping and transmitted reference UWB using AWGN channel model", *International Journal of Computer Applications*, vol.2, no.2, pp.88--92, Springer 2010.
52. Susmita Das, and Kala Praveen Bagadi, "MIMO-OFDM channel estimation using pilot carries", *International Journal of Computer Applications*, vol.2, no.3, pp.81--88, Springer 2010.
53. Susmita Das, Kala Praveen Bagadi, and Srabani Mohapatra, "Performance improvement of OFDM system by peak to average power reduction through pulse shaping technique", *International Journal of Computer Applications (IJCT)*, vol.01, pp.202-206, IJCT 2010.

54. Susmita Das and Bikramaditya Das, "Multiple Narrowband and Wideband Interference Suppression in Transmitted Reference Wavelet based Pulse spectral shaping for UWB communication system", *International Journal of Computer Applications (IJCA)*, 2(2), 88-92, 2010.
55. Susmita Das, Bikramaditya Das, "A Comparison Study of Time domain Equalization Technique using Ultrawide band Receivers Performance for high data rate WPAN system", *International Journal of Computer Networks & Communications (IJCNC)*, 2(4), 2010
56. R.Dash, B.Subudhi, S.Das and A.Mishra, "Neural network and wavelet techniques for detection of interturn short circuit fault in stator winding of an induction motor," *International Journal on power system optimization and control*, 1(2), 57-63, 2009.
57. Susmita Das, "Development of Hybrid ANN Structure for Performance Enhancement of Adaptive Channel Equalizers in Communication Systems", *International Journal of Computing & Mathematical Applications*, 2(1-2), 215-227, 2008.

18. Publications in Conference Proceedings:

1. A. Pradhan, S. Das, "Reinforcement Learning based resource allocation for adaptive transmission and retransmission scheme for URLLC in 5G," in International conference on Machine Learning and Computational Intelligence, IRNet, Springer, 2021.
2. Anandu S, Gyana Ranjan Mati and Susmita Das, "A Context Information Enhanced Multilevel Beam Search Procedure for mmWave Bands," *2020 IEEE REGION 10 CONFERENCE (TENCON)*, 2020, pp.97-101, doi: 10.1109/TENCON50793.2020.9293717.
3. Gyana Ranjan Mati and Susmita Das, "An Improved Codebook Training Procedure using Compressed Sensing in mmWave Hybrid Beamforming," *2020 IEEE REGION 10 CONFERENCE(TENCON)*, 2020, pp.468-472, doi:10.1109/TENCON50793.2020.9293838.
4. A. Pradhan, S. Das, "Joint Preference Metric for Efficient Resource Allocation in Co-Existence of eMBB and URLLC," in 12th International Conference on COMMunication Systems & NETWORKS (COMSNETS). IEEE, 2020, pp. 1-3.
5. Chaudhuri Manoj Kumar Swain and Susmita Das "Coverage probability analysis of WiMAX network under additive white Gaussian noise (AWGN) and predicted empirical path loss model" in *21st International Conference on Wireless Communications and Networks (ICWCN), San Francisco*, 2019, pp. 485-490.
6. Chakrabarti, Subhankar, and Susmita Das. "Poisson Point Process Study of the Functionality of Inband Overlay Device to Device Communication." *2017 14th IEEE India Council International Conference (INDICON)*. IEEE, 2017.
7. Shrivastava, Sonam, Bidyadhar Subudhi, and Susmita Das. "Consensus-based voltage and frequency restoration scheme for inertia-less islanded microgrid with communication latency." *Region 10 Conference, TENCON 2017-2017 IEEE*. IEEE, 2017.
8. G.Vinod Kumar, Chaudhuri Manoj Kumar swain, Susmita Das, "Throughput Performance Analysis of an Integrated Mobile WiMAX-DSRC Cellular Network with Adaptive Modulation and Coding technique", 2nd IEEE International Conference On

Recent Trends in Electronics, Informatics & Communication Technology(RTEICT),SVCE,Bangalore,2017.

9. Rakshit M, Das S. "An Improved EMD based ECG Denoising Method using Adaptive Switching Mean Filter", Signal Processing and Integrated Networks (SPIN), 2017 4th International Conference on Signal Processing and Integrated Networks IEEE, Noida, 2017.
10. Pisipati A, Rakshit M, Das S. "Efficient EPE based Thresholding and Adaptive Coding for Wavelet based ECG Compression", 2nd IEEE International Conference On Recent Trends In Electronics Information & Communication Technology, May 19-20, 2017, IEEE, India, 2017.
11. Namita Mallik, Subhankar Chakrabarti and Susmita Das,"Study of Throughput based on the Impact of Propagation Effects and Traffic Patterns in Wireless Cellular Networks",2nd IEEE International Conference On Recent Trends In Electronics Information & Communication Technology, May 19-20, 2017, IEEE, India, 2017.
12. Chakrabarti, Subhankar, and Susmita Das. "Poisson point process based performance analysis of D2D enabled heterogeneous wireless network." India Conference (INDICON), 2016 IEEE Annual. IEEE, 2016.
13. Chaudhuri Manoj Kumar Swain,Susmita Das, "Study and Impact of Relay Selection Schemes on Performance of an IEEE 802.16j Mobile Multihop Relay(MMR) WiMAX Network", 4th International Conference Adv.Comput. Networking, Informatics(ICACNI), NIT Rourkela, 2016.
14. Chaudhuri Manoj Kumar Swain and Susmita Das, "Development of an empirical Pathloss models for a deployed 2.63 GHz wimax network in a rural environment", 2015 IEEE Power, Communication and Information technology conference (PCITC), Bhubanswar (Accepted).
15. Deepak Kumar Rout and Susmita Das, "Hybrid Relaying for Sensor to External Communication in Multi Relay Body Area Networks," in proceedings of 2015 IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (IEEE SPICES), Kozhikode, 19-21 Feb 2015.
16. Rati Dilip Kumar Jalan, Deepak Kumar Rout and Susmita Das, "Performance Enhancement of MIMO/UWB based Wireless Body Area Network" 2015 IEEE conference Global conference on Communication Technologies (GCCT2015).
17. Bishnu Prasad Sahoo and Susmita Das, "Peer to peer topology based energy harvesting protocol for WBAN" 2015 IEEE conference Global conference on Communication Technologies (GCCT2015).
18. T Divya, K K Gurralla, and Susmita Das "Performance analysis of hybrid decode amplify forward relaying for improving security in cooperative wireless network", 2015 IEEE conference Global conference on Communication Technologies (GCCT2015).
19. B Prithviraj Kumar, Deepa Das, and Susmita Das, "Cooperative spectrum sensing optimization through maximizing the network utility and minimizing the error probability" 2015 IEEE conference Global conference on Communication Technologies (GCCT2015).
20. Deepak Kumar Rout and Susmita Das, "Hybrid Relaying for Sensor to External Communication in Multi Relay Body Area Networks," in proceedings of 2015 IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (IEEE SPICES), Kozhikode, 19-21 Feb 2015

21. Deepa Das and Susmita, "Interference-aware power allocation in soft decision fusion (SDF) based cooperative spectrum sensing," in proceedings of 2014 Annual IEEE India Conference (INDICON), pp.1,6, 11-13 Dec. 2014
22. Kiran Kumar Gurrala, Susmita Das, "Minimized SER based power allocation for multi HDAF relay cooperative network using Differential evolution algorithm", in proceedings of 2014 Annual IEEE India Conference (INDICON), Dec 2014.
23. Deepak Kumar Rout and Susmita Das, "Multiple Narrowband Interference Mitigation in UWB Body Area Networks for Body Surface Communications," 2014 International Conference on Medical Imaging, m-Health and Emerging Communication Systems (MedCom), 182-188, Greater Noida, 7-8 Nov 2015
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26. Deepa Das, Susmita Das, "Eigenvalue Detection Based Method to Mitigate PUEA in Cognitive Radio Networks", IEEE ANTS 2013, Chennai, India, 15th-18th Dec 2013.
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28. Kiran Kumar Gurrala, and Susmita Das "Performance study of hybrid decode-amplify-forward (HDAF) scheme in distributed Alamouti coded cooperative network," *Advances in Computing, Communications and Informatics (ICACCI), International Conference on* , vol., no., pp.271,276, 22-25 Aug. 2013.
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58. S.Das and J.K.Satapathy, " New Approches for Performance Enhancement of Adaptive equalisers Based on Recurrent Neural Network Framework", Published in the Proceedings of National Conference on Recent Advances in Power, Signal Processing and Control held at Dept. of Electrical Engg., NIT, Rourkela.
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60. Susmita Das, "Performance Enhancement of Conventional Recurrent Neural Network Equalisers in Digital Communication Channel Based on fuzzy logic approach", Published in the Proceedings of First International Conference on Frontier Technologies- Need for the Industry, Business and Education, 6-8 september 2006, Organised by ISTE Chapter, Adhiyamaan Engineering College, Hosur, Tamilnadu
61. Susmita Das, Shankar Ram, Anil Kumar Pattanayak, " A Comparative Study of Adaptive Beamforming Techniques Used by Smart Antennas in Mobile communication", Published in the Proceedings of National conference on Smart communication Technologies and Industrial Informatics,3-4 February 2007, organised by National Institute of Technology, Rourkela, Orissa
62. Susmita Das, "Development of Hybrid ANN Structures for Performance Enhancement of Adaptive Channel Equalisers", Published in IEEEExplore & Proceedings of IEEE CS Press, ICCIMA' 07, 13-15 December 2007, Mepco Schlenk Engineering College, Sivakasi, Tamilnadu, India
63. Susmita Das, "Design of Adaptive Channel Equaliser on Neural Framework Using Fuzzy Logic Based Multilevel Sigmoid Slope Adaptation", Proceedings of IEEE Xplore & Proceedings of International Conference on Signal Processing, Communications and Networking (ICSCN 2008), 4 - 6 January 2008, Madras Institute of Technology Chennai, India
64. Srabani Mohapatra, Sanjay Mohanty and Susmita Das, "Performance Analysis of Channel Estimation methods in Wireless OFDM Systems Based on Pilot Subcarrier Arrangement", Published in the Proceedings of CICCRA-2008, March 10-11, NIT, Rourkela
65. Susmita Das, "Smart Antenna Design for Wireless Communication using Adaptive Beamforming Approach", Proceedings IEEE TENCON 2008, IEEE Region 10 Conference, 19-21 Nov. 2008, Page(s):1 - 5 , University of Hyderabad
66. Sanjay Mohanty and Susmita Das, "A Comparative Study of Pulse Shaping Functions for ICI Power Reduction in OFDM System", Proceedings of Annual IEEE India Conference, INDICON 2008, Volume 2, Page(s):312 – 316 , 11-13 Dec. 2008, IIT Kanpur
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68. Srabani Mohapatra and Susmita Das, " Performance Analysis of Turbo Coded OFDM System in Wireless Communication beyond 3G", Published in the Proceedings of National Conference on Advancement in Wireless Technologies and its Applications(AWTA-2008), ISBN: 978-81 907196-9-8, Pg. 90-95, December 18-19, 08, Organised by Electronics Engg. Dept., SVNIT, Surat.
69. Srabani Mohapatra, Susmita Das "A Study on OFDM System and its Performance Analysis" Proceedings of the National conferences on National Conference on Emerging Trends in Computing and Communication (ETCC-08), page 81-84, Dec 30-31, 2008, organized by NIT Hamirpur.
70. Srabani Mohapatra, Susmita Das " Analysis of pulse shaping techniques of reducing inter-carrier interface performance enhancement in OFDM system" accepted for publication of the National conferences on NCACI-2009.,organized by Silicon Institute of Technology, Bhubaneswar, Orissa.

19. Books/Reports/Chapters/General articles etc.

Sl. No	Title	Publisher	Year of Publication
1.	Design of Adaptive Equalizer Structures in Neural Network Paradigm: Development based on both feedforward and recurrent neural topologies of reduced structural complexity	(ISBN: 978-3-8383-2104-2) Published by LAP LAMPBERT ACADEMIC publishing AG & Co.KG, Germany.	2010
2.	A Novel Transform Domain based Hybrid Recurrent Neural Equalizer for Digital Communication Channel”, Electronic Engineering and Computing Technology	Book Series: Lecture Notes in Electrical Engineering (LNEE), (ISBN: 978-90-481-8775-1(Print), 978-90-481-8776-8(online), vol.60, Pg. 129-139) Publisher: Springer	1 st Edition, April 2010

20. List of Projects implemented

Sl. No.	PI	Title of the project and duration	Amount and Year	Funding Agency
1	PI	Real Time medical signals analysis through wireless telemetry based on WBAN system-5 Years.	29,75,000.00 (2015)	DEITY (Visvesvaraya PhD Scheme)
2	Co-PI	National mission project on education through ICT, development of suitable pedagogical methods for various classes of intellectual caliber & research in e-learning – course development for mobile communications –Pilot phase over, in MAIN PHASE	Rs. 10 Lakhs (pilot phase) 2009 onwards and now Main Phase Cont.	MHRD Collaborated with IIT Kharagpur.
3	PI	Design of Efficient Schemes for PAPR reduction in OFDM based 4G Wireless Applications	75,000/- Decem2008- Decem 2009	Institution of Engineers, India

21. Best paper awards received:

Sl. No.	Authors	Title	Conference	Year
1.	Annapurna Pradhan and Susmita Das.	Reinforcement Learning based resource allocation for adaptive transmission and retransmission scheme for URLLC in 5G.	International conference on Machine Learning and Computational Intelligence, IRNet, Springer, Bhubaneswar, India	2019
2.	Chaudhuri Manoj Kumar Swain and Susmita Das	Coverage probability analysis of WiMAX network under additive white Gaussian noise (AWGN) and predicted empirical path loss model	21 st International Conference on Wireless Communications and Networks (ICWCN), San Francisco	2019
3	Kala Praveen Bagadi,	Comparision of Neural based Multiuser Detection Techniques	System Proceedings of IEEE SCES 2012 MNNIT, Allahabad, India	2012

	Susmita Das.	for DMA based Wireless communication .		
4	Bagadi. K.Praveen, Susmita Das.	Training based channel estimation for SISO/MIMO OFDM systems.	Proceeding of National Conference on Emerging Technological Trends(NCETT 2010), Bhopal, India.	2010

22. Professional Activities:

- Chaired a Technical Session in the National conference in “Smart communication technologies and Industrial Informatics”, 3-4 February, 2007 at EE Department, NIT, Rourkela with 50 participants.
- Chaired a Technical Session (Neural network & its applications) in IEEE Computer society sponsored Conference (ICCIMA-2007) in Decem,2007, Shivakasi, TN.
- Chaired a Technical Session (Technology Development) in International Conference at Hosur, Tamil Nadu in August, 2006.
- Visited Wireless Communication Lab, Electrical Engineering Dept., George Washington University, Washington DC, USA from 16 - 31 March, 2006 under International Training facility provided by TEQIP NIT Rourkela and delivered an invited talk on Adaptive Channel Equalization.
- Editorial Board of International Journal of Next Generation Networks(IJNGN)-ISSN: 0975-7023 (Online), ISSN:0975-7252(Print), ACADEMY & INDUSTRY RESEARCH COLLABORATION CENTER (AIRCC).
- Paper Reviewer for IEEE Transaction of Neural Networks and Reviewer for Applied Soft Computing Journal, Springer.
- Chaired a Technical session in International Conference by World Academy of Science, Engineering and Technology, June 2011, Paris, France.
- Presented an invited technical talk on “Reliable Communication in UWB-Body Area Network” in Dept. Of Electrical Engineering, University of South Carolina, USA in 29th September, 2014.
- Presented an invited technical talk on “Broadband for Sustainable Development” on World Telecommunication and formation Society Day on May 17, 2014.
- Ph. D. Thesis Examiner in Manipal Institute of Technology, Manipal, JNTU, Hyderabad.
- Session Chair in IEEE INDICON-2016, 16th -18th December, 2016, IISc Bangalore.
- Attended IEEE 5G Summit Kolkata, SENSES Hotel, Sector V, Salt Lake, Kolkata 700091, India, March 17-18, 2017.
- Attended IEEE Women in Engineering Conference in San Hose, USA, May 2017.
- Paper Reviewer of IEEE Transaction of Wireless Communication, Wiley, International Journal of Electronics, Taylor & Francis, IET Communication.
- Presented a talk on "Artificial Intelligence & 5G Communication Technology" in AICTE Sponsored Short Term Training Program On Artificial Intelligence and 5G Communication Technology October 26-31,2020, Organized by: Department of Electronics & Communication Engineering Poornima College of Engineering, Jaipur

23. Short term course and Conference Organised:

- Organized Short-term Course in “**Advanced Signal Processing and Communication Technology**” during 18-22 December, 2006 at EE Dept., NIT, Rourkela.
- Organized a National conference in “**Smart communication technologies and Industrial Informatics**” during 3-4, February, 2007 at EE Department, NIT, Rourkela.
- Organized AICTE-MHRD staff development program on **Advanced control & signal Processing techniques with applications**, 29th October-11th November, 2008 at EE Dept., NIT, Rourkela.
- Short Term Course (Coordinator) on **Recent Trends in Wireless Communication (RTWC-2016)** from 01 Oct to 02 Oct, 2016, EE Dept. NITRKL.
- Workshop (Coordinator) on **Prevention of Sexual Harassment and gender Sensitization at Workplace (PSHGSW-2016)** from 26 October 2016.
- MHRD GIAN Program (Coordinator) on **Characterizing and Modelling Wireless Channels (CMWC-2017)** from 06 Jun, 2017 to 10 Jun, 2017.
- STC (Co-Coordinator) on **Recent Trends in Medical Signal and Image Processing (RTMSIP-2017)** from 25 Mar-26 Mar, 2017.
- Organized Short Term Course (Coordinator) on “**Futuristic wireless communication and IoT-5G and beyond**” from 07 to 11 Nov, 2020, EE Dept. NITRKL.

24. Major Administrative Responsibilities at NIT, Rourkela

- Dean Faculty Welfare, NIT Rourkela from July 2019 to July 2021.
- Chairman, ACoFaR, from July 2019 to July 2021
- Head of the Department, EE Dept., NIT Rourkela from July 2018 to June 2019.
- Nodal Officer (Space Technology Incubation Center, ISRO)- NIT Rourkela from March 2021 onwards
- Member, Purchase Committee, Computer Center
- Chairman, Medical Advisory Committee from July 2019 to July 2021.
- Chairman, IGRC, from July 2019 to July 2021 & Continuing
- Member, DPC, February 2019
- Chairman, Technical Committee, Smart Classroom under TEQIP-III
- Equity coordinator, TEQIP-III, NIT Rourkela
- Coordinator, Signal Processing & Communication Group of EE Dept.
- Member, Departmental Academic Committee, DRC, DAPOC (Chairman).
- Vice President, Literary & Cultural Society, Student Activity Centre from December, 2013.
- Asst. Warden, KMS Hall of Residence from June 2007 to June 2009.
- Member of Electrical Construction Committee June 2009-2011.
- Member of Telephone Exchange Purchase Committee June 2011-Continuing.
- Chairman, Summer Internship Programme-2015.
- Chairman, Committee to examine Safety Practices of Electrical Estate Section.
- Member, Alumni Reunion 2015, Centre for Alumni Relation and Resource Union Generation.
- Member, organizing Committee Alumni Reunion 2015, Centre for Alumni Relations and Resource Generation.
- PIC, Rotaract Club, Student Activity Center.
- Faculty Advisor of AIESEC chapter of NIT Rourkela.