

Curriculum Vitae

Prof. Sanjay Dhar Roy

CONTACT	ECE Department, NIT Durgapur, M. G. Avenue, Burdwan, WB, India.	Mobile: +91-9434788166 Tele: +91-9332107814 URL: http://www.nitdgp.ac.in/ece/faculty.php
RESEARCH INTERESTS	Wireless Communications • D2D Communication. • Physical Layer Security. • Cognitive Radio Networks. • Radio Resource Management. • Mobility Management in Heterogeneous Network. • 5G small cell networks. • Machine Learning for Mobility Management	
EDUCATION	NIT Durgapur , Burdwan, WB, India Ph.D. , Wireless Communication, July 2011. • Thesis: <i>Cognitive Radio CDMA Networking with Efficient Radio Resource Management</i>. • Supervisor: Dr. Sumit Kundu, Prof., ECE, NIT Durgapur. M. Tech. , Telecommunication Engineering, July 2008. • Thesis: <i>Analysis of Handoff Algorithms for Mobile Communication Systems</i>. • Supervisor: Dr. S. K. Datta, Prof., ECE, NIT Durgapur. Jadavpur University , Kolkata, WB, India B.E. , Electronics and Telecommunication Engineering, June 1997.	
EXPERIENCE	Professor <i>March, 2026 to present</i> Electronics & Communication Engineering, National Institute of Technology , M G Avenue, Durgapur 713209, Burdwan, WB, India. Associate Professor <i>October 2018 to March 2026</i> Electronics & Communication Engineering, National Institute of Technology , M G Avenue, Durgapur 713209, Burdwan, WB, India. Assistant Professor <i>November 2000 to 2018</i> Electronics & Communication Engineering, National Institute of Technology , M G Avenue, Durgapur 713209, Burdwan, WB, India. Visiting Researcher <i>on July 2009</i>	

Department of Information Engineering,
University of Parma,
Parma, Italy.

Lecturer *August 2000 to October 2000*

Electronics & Communication Engineering,
Birbhum Institute of Engineering and Technology. Suri, Birbhum, WB,
India.

Engineer *July 1997 to January 2000*

Operation & Maintenance,
Usha Fone. Bhubaneswar, Orissa, India.

AWARDS

Scholarships

- Graduate Aptitude Test in Engineering (GATE) scholarship in 2000 from MHRD, Govt. of India, to pursue Master degree in Engineering. All India Rank 202. Percentile Score: 97.67%.
- Stood second in higher secondary examination in my district in 1992. Got national merit scholarship from MHRD, Govt. of India for higher secondary result.
- Secured 79th position in W.B.J.E.E 1993.

SKILLS

Languages

- English.
- Hindi .
- Bengali.

Programming

- MATLAB, L^AT_EX, C, DOS.

SERVICES

Invited Talks

- *Machine Learning for Handoff Management in Wireless Communication Systems*, Workshop cum certification programme on IoT and Autonomous Systems at NIT Manipur, from January 14th to 18th, 2026
- *Chief Guest for our 5th Technical Festival “Brain Maniac-2024”* organized by Camellia Institute of Polytechnic Camellia Institute of Engineering Technology, Budbud, Bypass, Purba Bardhaman, March 2024.
- *Handoff in next Generation Wireless Communication Systems*, Five Days FDP Communications and Antenna Technologies organized by on Thinking and Innovation - Wireless Teaching Learning Centre of Excellence with School of Electronics Engineering of VIT Vellore from 16-Oct-20 to 20-Oct-2023.
- *D2D Communication in 5G*, STUTI (Synergistic Training Program Utilizing the Scientific Technological Infrastructure) One Week Training program on Design and Characterization of Devices and Circuits for Electronic Systems Organized by: Department of Electronics Communication Engineering, National Institute of Technology Durgapur partnered with IIT (ISM) Dhanbad funded by Department of Science and Technology (DST), Government of India , September 19, 2022 – September 25, 2022.
- *Cooperative Cognitive Radio Networks* , Short term training cum internship program on VLSI, Embedded Systems and IoT (VLeSI -2022), 15th

July to 14th August, 2022, ECE department, NIT Durgapur.

- *IoT Enabled Wireless Communication Systems*, FDP on Emerging Trends in IoT Enabled Wireless Communication, 8-12 August, 2022, Haldia Institute of Technology, WB, India.
- *D2D Communication in 5G*, Recent Advancement of System Design Towards 5G Communication (RASDT5C 2021), 11 - 13 January, 2021, Haldia Institute of Technology, WB, India.
- *Role of Skill Development on Sustainable Employment*, Science City auditorium, Kolkata organized by CET(I), 2014.
- *Introduction to Opportunistic Mobile Networks and Its Applications (IOMNA)*, CSE department, NIT Durgapur, 2014.
- *Co-operative Communication and Cognitive Radio Networks*, PSG Tech, Coimbatore, 2013.
- *Cooperative Spectrum Sensing in Cognitive Radio Network*, ETSET, BUIE, Bankura, 2013.
- *Cooperative Spectrum Sensing in Cognitive Radio Network*, RTMWCS, BCET, Durgapur, 2012.
- *Computer Design*, Winter School, VLSI Systems Design, Durgapur, 2009.

Session Chair

- *IEEE ICSPCC -2012*, The Hong Kong Polytechnique Univ., Hong Kong, 2012.
- *International conference ICICA 2014*, NIT Durgapur, W.B., India, 2014.
- *IEEE Microcom 2016*, NIT Durgapur, W.B., India, 2016.

Reviewer

IEEE TVT, IEEE Systems Journal, IEEE CL, IEEE NL, IEEE SPL, IEEE Access, IET Communications, Electronics Letters, International Journal of Communication Systems (Wiley), International Journal of Distributed Sensor Networks (InderScience), Advances in Electrical Engineering (Hindawi), International Journal of Electronics (Taylor and Francis), PIER, Computers in Biology and Medicine, Elsevier, Computers and Electrical Engineering, Elsevier, International Journal of Distributed Sensor Networks, Advances in Electrical Engineering, Hindawi, IEEE CONNECT, IEEE SPCOM, IEEE ICC, IEEE VTC, IEEE WCNC, IEEE GlobeCom, IEEE PIMRC, IEEE WiMob, NCC 2016, McGrawhill, PHI, Oxford University Press, Cengage Learning, Cambridge University Press, Pearson Education, etc.

Membership of Professional Bodies

IEEE (US), IAENG.

Organizational Activities

- *Review Editor for Wireless Communication*, Frontiers in Communications and Networks
- *Associate Editor*, International Journal of Wireless Communication, Bioinfo Publications, ISSN: 2231-3559
- *Co-ordinator*, Workshop, LabView and USRP, ECE Department, NIT Durgapur, 2015.
- *Co-ordinator*, Seminar, Information Theoretic Approach to Wireless Communication (as part of EAP), Durgapur, 2014.
- *Co-ordinator*, Seminar, Recent Advances in Information Theory & Its Applications (as part of ITRA project activity), Durgapur, 2014.

- *Co-ordinator*, Workshop, Advanced Wireless Communication and Networking (AWCN), NIT Durgapur, 2013.
- *Co-ordinator*, Seminar, Internet of Things (as part of I-I-I), NIT Durgapur, 2013.
- *Member*, Seminar, WCN, Durgapur, 2008.
- *Member*, TPC: NCC 2018, ICAC3'14, EICE 2014, ICAECC 2014, CA-SoN 2014, WICT 2014, 2013 IEEE Symposium on Wireless Technology and Applications (ISWTA), KiSE'13 (International Symposium on Knowledge-intensive Software Engineering, SPIN 2014 (Noida), WICT 2013, WICT 2012, WICT 2011, CSNT 2013 (Gwalior), SocProS 2011, CICON 2012 (Mathura), CICON 2011, ACNCN 2012, CSNT 2012 (Rajkot), NCCCS 2012 (BCREC, Durgapur).

TEACHING

Courses Taught: Graduate Level

- Error Control Coding (Spring 2012, 2014)
- Information and Coding Theory (Spring 2013)
- Probability and Random Processes (Fall 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021)

Courses Taught: Undergraduate Level

- Computer Architecture and Organization (Spring 2006 - 14)
- Analog Communication (Fall 2012 - 21)
- Wireless Communication (Fall 2010-11)
- Analog Electronic Circuits (Spring 2000)
- Optical Communication (Fall 2000-2009)
- Pulse and Digital Circuits (Spring 2000-11)
- Basic Electronics (Spring, Fall 2020-2021)
- Probability theory for engineering applications (Open Elective), Spring 2023-25
- Mobile Communication (Open Elective), Fall 2025
- Communication System I, Spring 2025, 2026

Laboratories Attached With

- Design & Simulation Lab
- Basic Electronics Lab
- Analog Communication Lab
- Digital Electronics Lab
- Advanced Communication Lab
- Simulation Lab

Supervision: Ph.D. Thesis

- Srinivas Nallagonda, Performance of Cooperative Spectrum sensing based Cognitive Radio Network in Fading Channels, Awarded.
- B. Prasad, Cognitive Relay Networks with Energy Harvesting, Awarded.
- A. Bhowmick, Cognitive Radio Networks with Spectrum Sensing and Energy Harvesting, Awarded.
- S. Biswas, Enhancing energy efficiency of 802.15.4 networks using relays, Awarded.
- K. Yadav, Efficient Spectrum Utilization for Cognitive Radio Network (CRN) with Distributed Detection in Spectrum Sensing, Awarded.
- P. Maji, Uncoordinated Cooperative Communication Schemes with Security Enhanced Energy Efficient Relays, Awarded.

- S. Reddy Vamshidhar Reddy, Mobility Management in Integrated Heterogeneous Network
- S. Mondal, Studies on Energy Harvesting Multihop Cognitive Relay Networks, Awarded.
- S. Ghosh, UAV-assisted Energy Aware Multi-hop D2D Networks for Disaster Management
- A. Baranwal, Energy harvesting Enabled NOMA Networks with Half/Full Duplex Cooperative Relaying for Secured Transmission
- A . Das, Secrecy and reliability study of IRS enabled cognitive cooperative Communication for D2D network
- P. Sahu, Structural health monitoring using WSNs.
- D. Nayak, Studies on Handoff in Cellular V2X Network
- V. Kumari, ML based RRM for Wireless Systems

Supervision: Master's Thesis

- Sai Kumar Rapolu, *Design and implementation of PLL for WLAN application*, 2025
- S. Joshi, *Handover mechanisms for D2D communication*, 2023
- Samyat Sahoo, , 2022.
- Ranjeet Kishore Bal, , 2022.
- V. Shaw, *Studies on Handoff and Coding Performance in 5G Networks*, 2020.
- S. Dey, *Throughput Performance Analysis of Cognitive M2M Communication*, 2018.
- B. Sharma, *D2D Communication with Radio Resource Management for Disaster Relief and Machine Type Communication* , 2018.
- V. Patil, *Spectrum Sensing in Cognitive Radio Network*, 2017.
- C. Thakur, *Throughput Performance of Cognitive Device to Device Communication Undelaying Cellular Networks*, 2017.
- R. Samanta, *Performance Analysis of Cooperative Underlay Cognitive Radio Energy Harvesting Relay Network*, 2017.
- A. Kumar, *Secure Bidirectional Communication via Energy Harvesting Untrusted AF Relays*, 2017.
- V. Panjwani, *Outage and Throughput Analysis of Cognitive Radio Femto Cell Networks*, 2016.
- K. Chandra, *Outage Performance of a Secondary User in an Underlay Cognitive Cooperative Energy Harvesting Relay Network*, 2016.
- S. Ghosh, *Studies on Cooperative Spectrum Sensing with Clustering and Relaying*, 2016.
- M. Das, *Some Studies on Cyclostationary based Spectrum Sensing in CR Network*, 2016.
- D. Goswami, *Energy Modelling for Relay Assisted 802.15.4 WSN*, 2015.
- S. Gupta, *Performance of Double Threshold based Cooperative Spectrum Sensing*, 2015.
- J. Biswas, *Studies on Handoff Algorithms in LTE Networks*, 2014.
- S Reddy. Vamshidhar Reddy, *Vertical Handoff Algorithms for Integrated Heterogeneous Networks*, 2013.
- Sravan Kumar Bhandari, *Performance of Cooperative Spectrum Sensing*, 2013.
- A. Chakravarthi M, *Studies on Outage and Capacity Analysis in CR MIMO Networks*, 2012.
- A. Sadhukhan, *Performance of Handoff Algorithms for Future Generation*

Cellular Networks, 2012.

- S. K. Balam, *Studies on Cognitive Radio Network with Beacon*, 2012.
- S. Mondal, *Studies on Admission and Power Control in CDMA based Cognitive Radio Network*, 2010.
- S. Nallagonda, *Studies on Forward Link Data Services in Cellular CDMA*, 2009.

Supervision: Undergraduate Projects

- Vedant Singh, Pratik Kumar, Mohit Kumar *Machine Learning with SNR Threshold for Classification*
- Prasad Badiger, *Intelligent Handover Management in 5G Cellular Networks*, 2025
- Om Jaiswal, *D2D Handover in Vehicular Communication for 5G and 6G*, 2024
- Ishika Bhaniramka, *Optimization of Speed and Network Deployment for Reliable V2I Communication in the Presence of Handoffs and Interference*, 2024
- Mriganka Mondal, Arunava Sardar, Mohit Kumar *Machine Learning with SNR Threshold for Classification*
- Prasad Badiger, *HO in a D2D Communication Network*
- K. Karmakar and K. Sai Charan, *Simulation of Improved Road Safety using CV2X model in Python 3*, 2022.
- Y. Bishoi, *i*, 2022.
- D. Shyamlee, Bathula Rohit Kumar Reddy, *Dual Connectivity NR*, 2021.
- S. Sweta Padma, A. Banik, *Resource Allocation in D2D Communication*, 2020.
- N. Hazra, *Energy efficiency and data accuracy in D2D communication*, 2020.
- P. Naveen Kumar, *An Overview of Device to Device Communication and its offloading mechanism in LTE Networks*, 2020.
- U. Ghosh et. al., *Resource Matching in a Two Tier Heterogeneous Cellular Network*, 2019.
- A. Bakshi et. al., *Simulation of Fractional Frequency Reuse Using Python*, 2019.
- A. Pradhan et. al., *Implementation of Relay Hopper Model for Reliable Communication of IoT Devices in LTE Environment through D2D link*, 2018.
- S. Sarkar Mitra et. al., *Resource Allocation and Power Control for Device to Device Communication with IoT integration*, 2017.
- M. Agarwal et. al., *Analysis on Device to Device Communication Under Power Control Schemes*, 2017
- A. K. Tripathi et. al., *Spectrum sensing techniques in cognitive radio networks*, 2017.
- P. Kumar et. al., *Interference Mitigation using Uplink Power Control for Two-Tier Femtocell Networks*, 2016.
- A. Mohanto et. al., *Functionality Analysis of Centralized CR Network with Integrated Femtocell*, 2016.
- S. Bhattacharjee et. al., *Applications of Game Theory in Cognitive Radio Networks*, 2016.
- N. Sambit Suman et. al., *Survey of Telemedicine using Cognitive Radio Network*, 2014.
- A. Agarwal et. al., *Interference Based Call Admission Control in CDMA*

Based Cognitive Radio Network, 2011.

- P. Parida, *Studies on Rateless Codes and their Performance in CDMA based Multimedia Broadcast Network*, 2010.

PhD Thesis Examination

- Anna University 2019.
- Charotar University, Gujrat, 2022
- VTU, Belagavi, 2022
- SRM University, 2026

External Paper Setter

- Information Theory & Coding, Integral University 2015.
- Digital Electronics (IEC-305) Integral University, Lucknow, India 2014.
- Information Theory & Coding, Integral University 2014.
- Fiber Optics Communication, Mizoram University 2010.

Administrative Duties

- Head of the Department, Electronics and Communication Engineering, 13.06.2024-11.06.2026.
- PhD Co-ordinator, ECE Department, June, 2026 onwards.
- Warden, Hall 4, 2016 to 2019.
- Member, TEQIP (Equity action plan), 2010 to till now .
- UG Coordinator, ECE Department, NIT Durgapur, 2011 to 2016.
- Member, Central Class Routine Committee, 2014 to 2016.
- Convenor, Committee for Continuing Education including short term courses, workshops, seminar, conferences, 2014 to 2016.

BOOKS

- B6. **Alok Baranwal, S. Dhar Roy, Sumit Kundu.** *Full-Duplex Energy Harvesting-Based Cooperative NOMA Network*, 5G and Beyond Wireless Communications, CRC Press, 2024
- B5. **P.Ghosh, S. Dhar Roy, Sumit Kundu.** *Cooperative NOMA with Hybrid PTS-Based Energy Harvesting Relay*, 5G and Beyond Wireless Communications, CRC Press, 2024
- B4. **S. Dhar Roy.** *Cognitive Radio CDMA Networking with Radio Resource Management: Performance of CR-CDMA Networks with Efficient Radio Resource Management Schemes.* LAP Lambert Academic Publishing, Germany, August 2011, pages: 216. (ISBN: 978-3845429670)
- B3. **S. Dhar Roy.** *Analysis and Design of Handoff Algorithms.* LAP Lambert Academic Publishing, Germany, September 2011, pages: 260. (ISBN: 978-3846506509)
- B2. S. Nallgonda, **S. Dhar Roy**, S. Kundu, G. Ferrari, and R. Raheli. *Co-operative spectrum sensing with censoring of cognitive radios and MRC based fusion in fading and shadowing channels," chapter contribution in Software-Defined and Cognitive Radio Technologies for Dynamic Spectrum Access and Management* edited by N. Kaabouch and W. Chen Hu, IGI Global, October, 2014.
- B1. S. Nallgonda, **S. Dhar Roy**, S. Kundu, G. Ferrari, and R. Raheli. *Cooperative spectrum sensing with censoring of cognitive radios in fading channels," chapter contribution in Cognitive Communications and Cooperative*

HetNet Coexistence edited by F. Bader and M. G. Di Benedetto, Springer, February, 2014.

- SELECTED JOURNAL PAPERS
- J36. S. Ghosh, B. Panigrahi, Sanjay Dhar Roy and Sumit Kundu. On Providing Energy Harvested Multi-Hop D2D Communication with UAV Bridge in Disaster Area . *Wireless Personal Communication, Springer*, 2024.
 - J35. Pranabesh Maji, Kuldeep Yadav, Sanjay Dhar Roy and Sumit Kundu. Secrecy and throughput performance of an energy harvesting hybrid cognitive radio network with spectrum sensing. *Wireless Networks, Springer*, 2019.
 - J34. [1] Soumi Basu, Anish Pradhan and Sanjay Dhar Roy. Radial Sub-band Allocation with Downlink Interference Mitigation in Macro-Femto Environment. *WPC, Springer*, 2019.
 - J33. S. Sharma, S. D. Roy and S. Kundu. Secrecy Outage of a multi-relay Cooperative Communication Network with Accumulation of Harvesting Energy at Relays. *IET Communication*, 2019.
 - J32. S. Sharma, S. D. Roy and S. Kundu. Secrecy Performance of a Multi-Antenna Multiple-Relay Network with Energy Harvesting. *IET Communication*, 2019.
 - J31. S. Biswas, S.D. Roy, A. Chandra. Single CCA for IEEE 802.15.4 networks: A cross layer energy model. *IET Networks*, 2018.
 - J30. Pranabesh Maji, Sanjay Dhar Roy and Sumit Kundu. PHY Layer Security in Cognitive Radio Network with Energy Harvesting relay and Jamming in the Presence of Direct Link. *IET Communication*, 2018.
 - J29. S. Sharma, S. D. Roy and S. Kundu. Secrecy Performance of a Two-way communication Network with Two Half-Duplex DF Relays. *IET Communication*, 2018.
 - J28. S. Sharma, S. D. Roy and S. Kundu. Secrecy Outage in a Two-hop Decode and Forward Relay Network with Accumulated Harvested Energy. *Physical Communication, Elsevier*
 - J27. Soumen Mandal, **S. Dhar Roy**, Sumit Kundu. Closed-Form Outage Probability Expressions for Multihop Cognitive Radio Network with Best Path Selection Schemes in RF Energy Harvesting Environment. *WPC, Springer*, 2018
 - J26. Soumen Mandal, **S. Dhar Roy**, Sumit Kundu. Primary behaviour based Energy Harvesting Multihop Cognitive Radio Network. *IET Communications*, 2017
 - J25. Srinivas Nallagonda, Sanjay Dhar Roy, Sumit Kundu, Gianluigi Ferrari and Riccardo Raheli. Censoring-based Cooperative Spectrum Sensing with Improved Energy Detectors and Multiple Antennas in Fading Channels. *IEEE Transactions on Aerospace and Electronic Systems*, 2017
 - J24. Abhijit Bhowmick, Kuldeep Yadav, Sanjay Dhar Roy and Sumit Kundu. Throughput of an Energy Harvesting Cognitive Radio Network based on Prediction of Primary User. *IEEE Transactions on Vehicular Technology*, 2017

- J23. Abhijit Bhowmick, Kuldeep Yadav, Sanjay Dhar Roy and Sumit Kundu. Multi slot-throughput tradeoff in an improved energy detector based faded cognitive radio network. *Wireless Networks, Springer*, 2017
- J22. Abhijit Bhowmick, Sanjay Dhar Roy, Sumit Kundu. Multi-slot Based Spectrum Sensing with Improved Energy Detector for Cognitive Radio Network in Presence of Rayleigh Fading. *International Journal of Computers and Electrical Engineering, Elsevier*, 2016
- J21. Srinivas nallagonda, Aniruddha Chamdra, Sanjay Dhar Roy and Sumit Kundu. Analytical performance of soft data fusion aided spectrum sensing in hybrid terrestrial-satellite networks, *International Journal of Satellite Communications and Networking, Wiley*, 2016
- J20. Nallagonda, S., Chandra, A., Roy, S. D., Kundu, S., Kukolev, P., Prokes. Detection performance of cooperative spectrum sensing with hard decision fusion in fading channels. *International Journal of Electronics, Taylor Francis*, 2016
- J19. Abhijit Bhowmick, **S. Dhar Roy**, Sumit Kundu. Sensing Throughput Trade-off for an Energy Efficient Cognitive Radio Network under Faded Sensing and Reporting Channel. *IJCS Wiley*, 2015.
- J18. Abhijit Bhowmick, **S. Dhar Roy**, Sumit Kundu. Throughput of a Cognitive Radio Network with Energy-Harvesting based on Primary User Signal. *IEEE Wireless Communications Letters*, 2015.
- J17. Abhijit Bhowmick, A. Chandra, **S. Dhar Roy**, Sumit Kundu. Double threshold based cooperative spectrum sensing for a cognitive radio network with improved energy detectors. *IET Communications*, 9(18): 2216-2226 2015.
- J16. Joydev Ghosh, **S. Dhar Roy**, Sumit Kundu. Qualitative analysis for coverage probability and energy efficiency in cognitive-femtocell networks under macrocell infrastructure *Electronics Letters (IET/ IEEE)*, 2015.
- J15. Srinivas Nallagonda, Shravan Kumar Bandari, **S. Dhar Roy**, Sumit Kundu. Performance of Weighted Fusion Based Spectrum Sensing Schemes in Fading Channels. *Journal of Computational Engineering (Hindawi)*, 2013: 2013.
- J14. S Reddy Vamshidhar Reddy, **S. Dhar Roy**. Optimum Required Overlapping Ratio of Adjacent Radio Cells of WLAN. *Int. J. of Wireless and Mobile Computing (Inder Science)*, 7: 599-607 2014.
- J13. Abhijit Bhowmick, Srinivas Nallagonda, **S. Dhar Roy**, Sumit Kundu. Cooperative Spectrum Sensing with Double Threshold and Censoring in Rayleigh Faded Cognitive Radio Network. *Wireless Personal Communication, Springer (US)*, 2015.
- J12. Srinivas Nallagonda, Aniruddha Chandra, **S. Dhar Roy**, Sumit Kundu. Detection Performance of Cooperative Spectrum Sensing with Hard Decision Fusion in Fading Channels. *International Journal of Electronics (Taylor & Francis)*, 2015.

- J11. Aniruddha Chandra, Anirban Chattopadhyay, Kalyan Sharma, Sanjay Dhar Roy, **S. Dhar Roy**, Sumit Kundu. Bit Error Rate of RS Coded BFSK in Broadband Powerline Channels with Background Nakagami and Impulsive Noise. *Physical Communication, Elsevier*, 14: 14-23 2015.
- J10. Srinivas Nallagonda, **S. Dhar Roy**, Sumit Kundu. Cooperative Spectrum Sensing with Censoring of Improved Energy Detector based Cognitive Radios in Rayleigh Faded channel. *International Journal of Wireless Information Networks (IJWI), Springer*, 20(1): 74-88 2014.
- J9. **S. Dhar Roy**, S Reddy Vamshidhar Reddy. Signal Strength Ratio Based Vertical Handoff Decision Algorithms in Integrated Heterogeneous Networks. *Wireless Personal Communication, Springer (US)*, 77(4): 2565-2585 2014.
- J8. Srinivas Nallagonda, Aniruddha Chandra, **S. Dhar Roy**, Sumit Kundu. Performance of improved energy detector based cooperative spectrum sensing over Hoyt and Rician faded channels. *IEICE Communication Express*, 2(7): 319-324 July 2013.
- J7. **S. Dhar Roy**, Sumit Kundu, Gianluigi Ferrari, and Riccardo Raheli. On Spectrum Sensing in Cognitive Radio CDMA Networks with Beamforming. *Physical Communication (Elsevier)*, Vol. 9:73-87 2013.
- J6. **S. Dhar Roy**, Sumit Kundu, Gianluigi Ferrari, and Riccardo Raheli. Cognitive Radio CDMA Networking with Spectrum Sensing. *International Journal of Communication Systems (Wiley)*, 2(7): 319-324 July 2013.
- J5. Srinivas Nallagonda, **S. Dhar Roy**, Sumit Kundu. Performance Evaluation of Cooperative Spectrum Sensing Scheme with Censoring of Cognitive Radios in Rayleigh Fading Channel. *Wireless Personal Communications (Springer)*, 1-16, Jun. 2012.
- J4. **S. Dhar Roy**, P. Parida, Sumit Kundu. Multimedia Broadcast and Multicast Services in WCDMA Network with LDPC Code and Raptor Code. *International Journal of Electronics (Taylor & Francis)*, Accepted December 2012.
- J3. **S. Dhar Roy**, Sumit Kundu. Performance of Data Services in Cellular CDMA in Presence of Soft handoff and Packet Combining. *Radio Engineering Journal (Brno University of Technology, Czech Republic)*, 19(10): 17-22 April 2010.
- J2. **S. Dhar Roy**, Sumit Kundu. Forward link data services with beamforming and soft handoff in Cellular CDMA. *Engineering Letters (US)*, 17(2): 63-72 June 2009.
- J1. **S. Dhar Roy**, Sumit Kundu. Performance analysis of Cellular CDMA in presence of beam forming and soft handoff. *Journal on Progress in Electromagnetic Research (PIER)*, 88(x): 73-89 2008.

SELECTED PAPERS IN CONFERENCE	C22. S. Nallagonda, S. Dhar Roy , S. Kundu, G. Ferrari, R. Raheli. Cooperative Spectrum Sensing with Censoring of Cognitive Radios with Majority Logic Fusion in Hoyt Fading . <i>IEEE ANTS-2013</i> , IIT Bombay, Dec. 2013.
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- C21. S. Nallagonda, S. K. Bandari, **S. Dhar Roy**, S. Kundu. On Performance of Cooperative Spectrum Sensing based on Improved Energy Detector with Multiple Antennas in Hoyt Fading Channel. *IEEE INDICON*, IIT Bombay, Dec. 2013.
- C20. S. Nallagonda, A. Chandra, , **S. Dhar Roy**, S. Kundu. On Performance of Cooperative Spectrum Sensing based on Improved Energy Detector with Multiple Antennas in Hoyt Fading Channel. *IEEE INDICON*, IIT Bombay, Dec. 2013.
- C19. B. Prasad, A. Roy, **S. Dhar Roy**, S. Kundu. Effects of Primary User Interference and Channel Estimation Errors on Ergodic Capacity of Secondary User. *IEEE TENCON*, Bangkok, Oct. 2014.
- C18. Abhijit Bhowmick, Srinivas Nallagonda, **S. Dhar Roy**, S. Kundu. Spectrum Sensing with Censoring of Double Threshold Based Cognitive radios in Rayleigh Fading. *IEEE NCC*, IIT Kanpur, India, Feb. 2014.
- C17. Binod Prasad, **S. Dhar Roy**, S. Kundu. Outage Performance of Cognitive Relay Network with Imperfect Channel Estimation Under Proactive DF Relaying. *IEEE NCC*, IIT Kanpur, India, Feb. 2014.
- C16. Binod Prasad, **S. Dhar Roy**, S. Kundu. Outage and SEP of Secondary User with Imperfect Channel Estimation and Primary user interference . *IEEE CONNECT*, IISc, Bangalore, India, Jan. 2014.
- C15. Abhijit Bhowmick, **S. Dhar Roy**, S. Kundu. A Hybrid Cooperative Spectrum Sensing for Cognitive Radio Networks in Presence of Fading . *IEEE NCC*, IIT, India, Feb. 2015.
- C14. S. Nallagonda, **S. Dhar Roy**, S. Kundu, G. Ferrari, and R. Raheli. Cooperative spectrum sensing with censoring of cognitive Radios in Rayleigh Fading Under Majority Logic Fusion. *IEEE NCC*, IIT Delhi, India, Feb. 2013.
- C13. S. Nallagonda, **S. Dhar Roy**, S. Kundu, G. Ferrari, and R. Raheli. Performance of MRC Fusion-based Cooperative spectrum sensing with censoring of cognitive Radios in Rayleigh Fading Channels. *IEEE IWCMC*, Cagliari, Sardinia, Italy, July 2013.
- C12. S. Nallagonda, **S. Dhar Roy**, S. Kundu. Cooperative spectrum sensing with censoring of cognitive Radios and improved energy detector under LRT fusion. *IEEE INDICON*, Kolkata, Dec. 2012.
- C11. S. Nallagonda, A. Chandra, **S. D. Roy**, S. Kundu. Performance of cooperative spectrum sensing in Hoyt fading channel under hard decision fusion rules. *IEEE CODEC*, Kolkata, Dec. 2012.
- C10. S. Nallagonda, **S. Dhar Roy**, S. Kundu, G. Ferrari, and R. Raheli. Cooperative spectrum sensing with censoring of cognitive Radios in Rayleigh Fading Under Majority Logic Fusion. *IEEE NCC*, IIT Delhi, India, Feb. 2013.
- C9. **S. Dhar Roy**, A. Sadhukhan. Received Signal Strength Based Vertical Handoff Algorithm in 3G Cellular Network. *IEEE ICSPCC*, The Hong Kong Polytechnique Univ., Hong Kong, August 2012.

- C8. **S. Dhar Roy**, A. Sadhukhan. On the Data Performance of Tactical WLAN with Signal Strength Ratio Based Handoff Algorithms . *IEEE NCC*, IIT Kharagpur, Feb. 2012.
- C7. S. Nallagonda, **S. Dhar Roy**, S. Kundu. Cooperative Spectrum Sensing with Censoring of Cognitive Radios in Rayleigh Fading Channel . *IEEE NCC*, IIT Kharagpur, Feb. 2012.
- C6. S. Nallagonda, **S. Dhar Roy**, S. Kundu, G. Ferrari, and R. Raheli. Cooperative spectrum sensing with censoring of cognitive Radios in Rayleigh Fading Under Majority Logic Fusion. *IEEE NCC*, IIT Delhi, India, Feb. 2013.
- C5. **S. D. Roy**, Sumit Kundu, Gianluigi Ferrari and Riccardo Raheli. Performance Evaluation of Cognitive Radio CDMA Networks with Spectrum Sensing. *IEEE ICC Workshop*, South Africa, May. 2010.
- C4. **S. D. Roy**, S. Kundu. Performance of Cognitive Radio CDMA Networks with Secondary User Removal in Spectrum Underlay. *IEEE ICCS*, Singapore, Nov. 2010.
- C3. **S. D. Roy**, S. Kundu. On the Data Services of Secondary User with Primary Exclusive Region. *IEEE ANTS*, IIT Bombay, Dec. 2010.
- C2. Abhishek Tibrewala, Debjyoti Pramanick, **S. D. Roy**, A. Chandra. Signal Strength Ratio based Handoff Algorithms for Cellular Networks. *IEEE INDICON*, Kanpur, Dec. 2008.
- C1. **S. D. Roy**, A. Chandra . Closed-form analysis for performance evaluation of soft handoff. *IEEE INDICON*, Kanpur, 2: 301–306, Dec. 2008.

OTHER
INFORMATIONS

Personal Details

- **Date of Birth:** 6th April, 1974.
- **Nationality:** Indian (by birth).
- **Sex:** Male.
- **Marital Status:** Married.
- **Parental Status:** Two children (male).

REFERENCES

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