CURRICULUM VITAE

Asis Nasipuri, Professor and Chair
Department of Electrical & Computer Engineering
The University of North Carolina at Charlotte
9201 University City Boulevard, Charlotte, NC 28223

Phone: (704)-687-8418
Fax: (704)-687-5588
E-mail: anasipur@uncc.edu
URL: http://www.ece.uncc.edu/~anasipur

EDUCATION:

Ph.D., Electrical & Computer Engineering, University of Massachusetts, Amherst, MA, 1993.

Master of Science, Electrical & Computer Engineering, University of Massachusetts, Amherst, MA, 1990.

Bachelor of Technology (Honors), Electronics & Electrical Communication Engineering, Indian Institute of Technology, Kharagpur, India, 1987.

PROFESSIONAL EXPERIENCE:

Professor, Electrical and Computer Engineering, The University of North Carolina at Charlotte, July 2012 to date.

- *Chair* of the Department of Electrical and Computer Engineering (July 2015 to date) comprising 37 tenured and tenure-track faculty members, 5 full time staff members, and over 900 undergraduate and graduate students.
- *Interim Department Chair* (Aug. 2014 to June 2015) of Electrical and Computer Engineering, comprising of 31 tenured and tenure-track faculty members, 5 full time staff members, and over 725 undergraduate and graduate students.
- *Associate Department Chair* and *Coordinator of Undergraduate Programs* (July 2013 – July 2014), for coordination of the Bachelor of Science in Electrical Engineering (BSEE) and Bachelor of Science in Computer Engineering (BSCpE) programs.
- *Director of Graduate Programs* in Electrical and Computer Engineering (prior to July 2013), to support the PhD and Master of Science programs in the department comprising of approximately 70 and 150 students, respectively.
- Research on wireless sensor networks, with research funding from the NSF, Burkert Engineering, and CAPER.
- Teaching graduate level courses on communications and networking. Supervised over 20 graduate students for their research, including 4 PhD students.
- Professional service activities including the *General Chair of the 2012 ACM MobiHoc* Symposium, editorial board member of *IJAHUC*, and membership in over 15 Technical Program Committees of conferences and symposia.

***Associate Professor*,** Electrical and Computer Engineering, The University of North Carolina at Charlotte, July 2006 to June 2012.

- *Director of Graduate Programs* in Electrical and Computer Engineering (starting July 2006), to support the PhD and Master of Science programs in the department. During this time, the number of PhD students in the department increased from 35 to 65; TA support increased from $225K/year to over $320K/year; and RA support increased from $45K/year to $500K/year, approximately.
- Established research collaboration with the Electric Power Research Institute (EPRI) on design and development of wireless sensor networks for power systems monitoring.

Secured research funding from EPRI and the National Science Foundation on projects involving research and development of sustainable wireless sensor networks for large scale deployments, such as in power plants and substations.

- Professional service activities including grant proposal review panelist, member of over 20 technical program committees of conferences/symposia, journal and dissertation reviewer, and others.
- Supervised research of over 11 graduate students, including two PhD students.

Assistant Professor, Department of Electrical and Computer Engineering, The University of North Carolina at Charlotte, August 2000 to June 2006.

- Received over $280K of research funding from the NSF.
- Developed the Wireless Communications and Networking Laboratory, with emphasis on experimental research on wireless sensor networks and theoretical research on multihop wireless networking.
- Received the *Maxheim Fellowship* award from the William States Lee College of Engineering at UNC Charlotte.
- Professional service as Chair of *IEEE Workshop on Multihop Wireless Networks (MWN)*, and many Technical Program Committees
- Supervised research of over 12 graduate students, including three PhD students (one completed).

Postdoctoral Fellow, Division of Computer Science, University of Texas at San Antonio, May 1998 – August 2000.

- Developed new research directions on mobile ad hoc networks, including multipath routing, multi-channel MAC protocols, and MAC and routing protocols of mobile ad hoc network using directional antennas.
- Undergraduate teaching and Master's student supervision.

Assistant Professor (Jan. 1996 – May 1998) and ***Visiting Lecturer*** (Nov. 1993 – December 1995), Electronics & Electrical Communication Engineering, Indian Institute of Technology, Kharagpur, India.

- Research on wireless channel modeling, bandwidth-efficient modulation schemes, source and channel coding, telecommunications network planning, and optical WDM networks
- Received research funding of over INR 2742K and 100K ECU on wireless communications, source and channel coding, and telecommunication networks planning from national (Indian) and international funding agencies.
- Taught graduate and undergraduate level courses on wireless communications, information theory, optical communications, electronics, signal processing and communication systems.
- Supervised over 6 graduate students.

***Teaching Associate*, *Graduate Research & Teaching Assistant*,** Electrical & Computer Engineering, University of Massachusetts, Amherst, Sept. 1997 – Aug. 2003.

- Research on detection and estimation theory, including sequential detection, non-parametric CFAR detection, and detection with distributed sensors.

- PhD dissertation on distributed non-parametric detection
- MS thesis research of multistage Wilcoxon detector
- Taught an undergraduate course and served as teaching assistant for several courses.

PUBLICATIONS AND RESEARCH

Synopsis:

- *Published over 75 peer reviewed research articles in journals, conference proceedings, and book chapters.*
- *Received over 5000 citations to date, with 6 papers having more than 500 citations each.*
- *Received over $1.32 million of research grants, including over $880,000 as PI.*

Book Chapters:

1. **Asis Nasipuri**, "Mobile Ad Hoc Networks", in *Handbook of RF and Wireless Technologies*, edited by Farid Dowla, Newnes (an imprint of Elsevier), ISBN 0-7506-76, pp. 59 – 100, 2004.
2. **Asis Nasipuri** and Samir R. Das "Multi-channel MAC Protocols for Mobile Ad Hoc Networks", in *Handbook of Wireless and Mobile Computing*, edited by Azzedine Boukerche, Chapman and Hall/CRC Press, ISBN 1-58488-465-7, pp. 99 – 120, 2006.
3. **Asis Nasipuri**, "Localization in Wireless Sensor Networks", in *Algorithms and Protocols in Wireless Ad Hoc and Sensor Networks*, edited by Azzedine Bourkerche, ISBN 978-0-471-79813-2, pp. 341 - 364, 2009.

Journals:

1. A. Pal and **A. Nasipuri**, "Joint Power Control and Routing for Rechargeable Wireless Sensor Networks", *IEEE Access*, Vol. 7, August 27, 2019, pp. 123992 – 124007, DOI: 10.1109/ACCESS.2019.2937894
2. A. Pal and **A. Nasipuri**, "A Joint Routing and Channel Assignment Scheme for Hybrid Wireless-Optical Broadband-access Networks", *Journal of Sensor and Actuator Networks,* 2018, 7(4); doi.org/10.3390/jsan7040044.
3. Md. M. I. Rajib and **A. Nasipuri**, "Predictive Retransmissions for Intermittently Connected Sensor Networks with Transmission Diversity", *ACM Transactions on Embedded Computing Systems (TECS),* Volume 17 Issue 1, November 2017.
4. A. Pal and **A. Nasipuri**, "Distributed Routing and Channel Selection for Multi-Channel Wireless Sensor Networks", Journal *of Sensor and Actuator Networks,* 2017, 6, 10; doi:10.3390/jsan6030010.
5. Amitangshu Pal and **Asis Nasipuri**, "A Quality based Routing Protocol for Wireless Mesh Networks", *Pervasive and Mobile Computing*, Vol. 7, No. 5, October 2011, pp. 611 – 626, Elsevier.
6. Cyrus Taft, Aaron J. Hussey, Teja Kuruganti, John N. Sorge, and **Asis Nasipuri**, "Low-Cost Wireless Sensor Can Improve Monitoring in Fossil-Fueled Power Plants", *POWER Magazine*, vol. 154, no. 2, February 1, 2010, pp. 42 – 45.
7. Amitangshu Pal, Sandeep Adimadhyam, and **Asis Nasipuri**, "QoSBR: A Quality Based routing Protocol for Wireless Mesh Networks", *Springer Lecture Notes in Computer Science, LNCS 5935*, pp. 497-508, January 2010.

8. **Asis Nasipuri**, Hadi Alasti, Hojoon Kim, "Efficient Performance of a Robust Filter-based Approach for Contour Detection in Wireless Sensor Networks", *Journal of Korean Institute of Information Technology*, Vol. 6., No. 5., pp. 88 ~ 98 , October, 2008.
9. **Asis Nasipuri** and Kai Li, "Multi-sensor Collaboration in Wireless Sensor Networks for Detection of Spatially Correlated Signals", (invited paper) *International Journal of Mobile Network Design and Innovation,* vol. 1, no. 3/4, pp. 215-223, 2006.
10. **A. Nasipuri** and S. R. Das, "Performance of Multi-channel Wireless Ad Hoc Networks", *International Journal of Wireless and Mobile Computing*, Special Issue on Medium Access Control for WLANs, WPANs, Ad Hoc Networks, and Sensor Networks, vol. 1, nos. 3/4, pp. 191-203, 2006.
11. Kai Li and **Asis Nasipuri**, "Performance of a Collaborative Target Detection Scheme for Wireless Sensor Networks", *Lecture Notes in Computer Science: LNCS 2918*, December 2003, Springer.
12. **A. Nasipuri**, R. Castaneda, and Samir R. Das, "Performance of Multipath Routing for On-Demand Protocols in Mobile Ad Hoc Networks", *Mobile Networks (MONET) Journal*, Special Issue on Wireless Multicast and Routing Vol. 6, pp. 339 - 349, 2001.
13. **A. Nasipuri** and S. Tantaratana, "Nonparametric Distributed Detector Using Wilcoxon Statistics", *Signal Processing*, Vol. 57, No.2, March 1997, pp. 139-146, Elsevier Press.
14. **A. Nasipuri** and S. Tantaratana, "Truncated Sequential CFAR Detectors Using Weighted Sign and Weighted Conditional Sign Tests", *Journal of the Franklin Institute*, Vol. 332B, No. 6, pp. 717-734, Elsevier Press, 1995.
15. S. Tantaratana and **A. Nasipuri**, "Two-stage Wilcoxon Detectors Using Conditional Tests", *IEEE Transactions on Information Theory*, Vol. IT-38, No. 3, pp. 1080-1090, May 1992.

International Peer-reviewed Conferences:

1. N. Chuku and **A. Nasipuri**, "Wireless Sensor Localization Using Outlier Detection," *2019 IEEE 16th International Conference on Smart Cities: Improving Quality of Life Using ICT & IoT and AI (HONET-ICT)*, Charlotte, NC, USA, 2019, pp. 080-084.
2. S. Aggarwal and **A. Nasipuri**, "Survey and Performance Study of Emerging LPWAN Technologies for IoT Applications," *2019 IEEE 16th International Conference on Smart Cities: Improving Quality of Life Using ICT & IoT and AI (HONET-ICT)*, Charlotte, NC, USA, 2019, pp. 069-073.
3. A. Tripathi and **A. Nasipuri**, "Information Based Smart RF Energy Harvesting in Wireless Sensor Networks," *2019 IEEE 16th International Conference on Smart Cities: Improving Quality of Life Using ICT & IoT and AI (HONET-ICT)*, Charlotte, NC, USA, 2019, pp. 197-198.
4. M. Yerra, **A. Nasipuri**, and H. Duemmler, "Sequential State Logic for Pneumatic Valve Monitoring using Piezo Film Sensors", Proceedings of *IEEE SoutheastCon*, Charlotte, 30 March - 2 April, 2017.
5. A. Kundu, **A. Nasipuri**, B. Chowdhury, D. Prabhu, K. Mahesh, C. Grafer, D. Ravi, and K. R. Subramanian, "Low Cost Wireless Sensors for Distributed Grid Intelligence and Resiliency", Proceedings of *IEEE SoutheastCon*, Charlotte, 30 March - 2 April, 2017.
6. Md. M. I. Rajib and **A. Nasipuri**, "Minimum Delay Forwarding in Intermittently Connected Sensor Networks" (poster paper), Proceedings of the *11th International*

Conference on Networking, Architecture and Storage (IEEE NAS 2016), August 8-10, 2016, Long Beach, CA. *(Recipient of the Best Poster Award)*

7. Md. M. I. Rajib and **A. Nasipuri**, "A Predictive Retransmission Scheme for Cooperative Routing in Intermittently Connected Sensor Networks", to be presented at the 17th International Conference on Distributed Computing and Networking (ACM ICDCN'16), January 4-7, 2016, Singapore.
8. S. Roy, N. Darak, and **A. Nasipuri**, "Game Theoretic Approach for Joint Power Control and Routing in Wireless Sensor Networks", Proceedings of the *IEEE International Communications Conference – Ad-hoc and Sensor Networking Symposium (ICC'15 (09) AHSN)*, pp. 8335 – 8340, June 8-12, 2015, London, UK.
9. Md. M. I. Rajib and **A. Nasipuri**, "Delay Performance of Intermittently Connected Wireless Sensor Networks with Cooperative Relays", Proceedings of the *IEEE ICC 2015 - Workshop on Green Communications and Networks with Energy Harvesting, Smart Grids, and Renewable Energies,* pp. 9741 – 9746, June 12, 2015, London, UK.
10. S. Roy, N. Darak, and **A. Nasipuri**, "A Game Theoretic Approach for Channel Selection in Multi-channel Wireless Sensor Networks", Proceedings of the *11th IEEE Conference on High-Performance Optical Networks & Emerging/Enabling Technologies (HONET-Pfe)*, Dec. 15 – 17, 2014, Charlotte, NC, pp. 145 – 149.
11. A. Pal and **A. Nasipuri**, "PCOR: A Joint Power Control and Routing Scheme for Rechargeable Sensor Networks", Proceedings of the *IEEE Wireless Communications and Networking Conference (IEEE WCNC'14)*, Istanbul, Turkey, April 6-9, 2014.
12. N. Chuku and **A. Nasipuri**, "Performance Evaluation of an RSSI Based Localization Scheme for Wireless Sensor Networks to Mitigate Shadowing Effects", Proceedings of the *IEEE Wireless Communications and Networking Conference (IEEE WCNC'14),* Istanbul, Turkey, April 6-9, 2014.
13. A. Pal and **A. Nasipuri**, "Lifetime of Asynchronous Wireless Sensor Networks with Multiple Channels and Power Control", Proceedings of the *IEEE Wireless Communications and Networking Conference (IEEE WCNC'14)*, Istanbul, Turkey, April 6-9, 2014.
14. Amitangshu Pal and **Asis Nasipuri**, "DRCS: A Distributed Routing and Channel Selection Scheme for Multi-Channel Wireless Sensor Networks", Proceedings of *IEEE International Workshop on Sensor Networks and Systems for Pervasive Computing (PerSeNS 2013),* March 22, 2013, San Diego, CA**.**
15. Amitangshu Pal and **Asis Nasipuri, "**Effects of Optical Network Unit Placement Schemes for Multi-Channel Hybrid Wireless-Optical Broadband-Access Networks", *International Workshop on Optical Networking (iWON 2013)*, Atlanta, GA, Dec. 9, 2013.
16. Amitangshu Pal, Bonee Soibam and **Asis Nasipuri**, "A Distributed Power Control and Routing Scheme for Rechargeable Sensor Networks", Proceedings of *IEEE SoutheastCon* 2013, Jacksonvile, Florida, USA.
17. Ndubueze Chuku, Amitangshu Pal, and **Asis Nasipuri**, "An RSSI Based Localization Scheme for Wireless Sensor Networks to Mitigate Shadowing Effects", Proceedings of *IEEE SoutheastCon 2013*, Jacksonvile, Florida, USA.
18. Anthony Harris, Jason Anderson, James M. Conrad, Robert Cox, and Asis Nasipuri, "Internal characterization of alkaline batteries: Using impedance spectroscopy for

parameter identification", Proceedings of *IEEE SoutheastCon 2013*, Jacksonvile, Florida, USA.

19. A. Pal and **A. Nasipuri**, "A distributed channel selection scheme for multi-channel wireless sensor networks" (poster abstract), Proceedings of the thirteenth *ACM international symposium on Mobile Ad Hoc Networking and Computing (ACM MobiHoc '12),* pp. 263 - 264, ACM, New York, 2012.
20. J. M. Anderson, R. W. Cox, **A. Nasipuri**, and J. M. Conrad, "An adaptive approach for determining ambient energy availability in rechargeable wireless sensor networks", *7th Annual Energy Harvesting Workshop and the 2nd Annual CEHMS Conference, Blacksburg, VA. August 7 – 9, 2012.*
21. Amitangshu Pal and **Asis Nasipuri**, "JRCA: A Joint Routing and Channel Assignment Scheme for Wireless Mesh Networks", accepted for presentation at the 30th *IEEE International Performance Computing and Communications Conference (IEEE IPCCC 2011)*, November 17 - 19, 2011.
22. Siddharth Kamath and **Asis Nasipuri**, "Integrated Load Balanced and Energy Aware Routingin Large Scale Wireless Sensor Networks", accepted for presentation at the 30th *IEEE International Performance Computing and Communications Conference (IEEE IPCCC 2011)*, November 17 - 19, 2011.
23. Amitangshu Pal and **Asis Nasipuri**, "Performance Analysis of IEEE 802.11 Distributed Coordination Function in Presence of Hidden Stations under Non-saturated Conditions with Infinite Buffer in Radio-over-Fiber Wireless LANs", Proceedings of the 18th *IEEE International Workshop on Local and Metropolitan Area Networks (IEEE LANMAN 2011)* July 18, 2011.
24. Amitangshu Pal and **Asis Nasipuri**, "GSQAR: A Quality Aware Anycast Routing Protocol for Wireless Mesh Networks", Proceedings of *IEEE Global Telecommunications Conference (GLOBECOM)*, pp. 1 – 5, December 6 – 10, 2010.
25. **A. Nasipuri**, R. Cox, J. M. Conrad, L. Van der Zel, B. Rodriguez, and R. McKosky, "Design considerations for a large-scale wireless sensor network for substation monitoring", Proceedings of the *IEEE 35th Conference on Local Computer Networks (LCN),* pp. 866 – 873, 5th *IEEE International Workshop on Practical Issues in Building Sensor Network Applications (SenseApp'10)*, October 10 - 14, 2010.
26. Aaron Hussey, **Asis Nasipuri**, John N. Sorge, and Robert Cox, "Feasibility of Using a Wireless Mesh Sensor Network in a Coal-Fired Power Plant", Proceedings of the *IEEE Southeast Conference (SoutheastCon)*, March 18-21, 2010, pp. 384-389.
27. Rohit Kale, Nripendra Singh, Hadi Alasti, **Asis Nasipuri**, Robert Cox, James Conrad, Luke Van der Zel, Bienvenido Rodriguez, Ralph McKosky, and Joseph Graziano, "Design and Implementation of a Wireless Node for Advances Sensor Processing and Network Integration", Proceedings of the *IEEE Southeast Conference (SoutheastCon)*, March 18-21, 2010, pp. 390-393.
28. **Asis Nasipuri**, Hadi Alasti, Priya Puthran, Robert Cox, James Conrad, and Luke Van der Zel, "Vibration Sensing for Equipment's Health Monitoring in Power Substations using Wireless Sensors", Proceedings of the *IEEE Southeast Conference (SoutheastCon),* March 18-21, 2010, pp. 268-271.

29. Amitangshu Pal and **Asis Nasipuri**, "A Quality Aware Anycast Routing Protocol for Wireless Mesh Networks", Proceedings of the *IEEE Southeast Conference (SoutheastCon)*, March 18-21, 2010, pp. 451-454.

30. Cyrus Taft, John N. Sorge, Aaron J. Hussey, **Asis Nasipuri** and Teja Kuruganti, "Low-Cost Wireless Sensor Testing in a Fossil Power Plant", Proceedings of the 19th *ISA POWID/EPRI Controls and Instrumentation Conference*, Chicago, IL, May 12-14, 2009.

31. Hadi Alasti and **Asis Nasipuri**, "Spatio-Temporal Monitoring using Contours in Large-scale Wireless Sensor Networks", Proceedings of the Second *ACM International Workshop on Foundations of Wireless Ad Hoc and Sensor Networking and Computing (FOWANC'09)*, New Orleans, LA, May 18, 2009.

32. **Asis Nasipuri**, Robert Cox, Hadi Alasti, Luke Van der Zel, Bienvenido Rodriguez, Ralph McKosky, and Joseph A. Graziano, "Wireless Sensor Network for Substation Monitoring: Design and Deployment", Proceedings of *the 6th ACM Conference on Embedded Networked Sensor Systems (SenSys'08)*, pages 365-366, November 5 – 7, 2008.

33. Hadi Alasti, William A. Armstrong, and **Asis Nasipuri**, "Performance of a Robust Filter-based Approach for Contour Detection in Wireless Sensor Networks", Proceedings of the *16th IEEE International Conference on Computer Communications and Networks (ICCCN'07)*, August 13 – 16, 2007.

34. T. Cassen, K. R. Subramanian, Jeffrey Alexander, Drew Linderman, and **A. Nasipuri**. 2007, "A visual learning engine for interactive generation of instructional materials", *SIGCSE Bull.* 39, 3 (June 2007), 319-319. DOI=10.1145/1269900.1268886 http://doi.acm.org/10.1145/1269900.1268886.

35. Vamsee K. Boda, **Asis Nasipuri**, and Ivan Howitt, "Design Considerations for a Wireless Sensor Networks for Locating Parking Spaces", Proceedings of *IEEE SoutheastCon2007*, March 22 – 25, 2007.

36. **Asis Nasipuri** and Ribal El Najjar, "Experimental Evaluation of an Angle Based Indoor Localization System", Proceedings of the *Second IEEE International Workshop on Wireless Network Measurement (WiNMee 2006)*, co-located with *WiOpt 2006*, April 3, 2006, Boston, MA.

37. **Asis Nasipuri** and Kai Li, "Collaborative Detection of Spatially Correlated Signals in Sensor Networks", Proceedings of the 2005 *International Conference on Telecommunication Systems Modeling and Analysis*, Nov 17-20, Dallas, Texas, ISBN 0-9716253-3-6.

38. Teresa A. Dahlberg, **Asis Nasipuri**, and Craig Taylor, "Explorebots: A Mobile Network Experimentation Testbed", accepted for presentation and publication in the Proceedings of the ACM *Workshop on Experimental Approaches to Wireless Network Design and Analysis (E-WIND)*, pp. 76 – 81, August 2005.

39. Swapnil Patil, Samir Das, and **Asis Nasipuri**, "Serial Data Fusion Using Space-filling Curves in Wireless Sensor Networks", in Proceedings of the *IEEE International Conference on Sensor and Ad Hoc Communications and Networks (SECON 2004)*, pp. 182 – 190, October 4-7, 2004.

40. Saurabh Mishra and **Asis Nasipuri**, "An Adaptive Low Power Reservation Based MAC Protocol for Wireless Sensor Networks", in Proceedings of the *Workshop on Multihop Wireless Networks (MWN)*, held in conjunction with the *IEEE International Performance,*

Computing, and Communications Conference (IPCCC'04), April 15-17, 2004, Phoenix, AZ.

41. Ivan Howitt, Gail-Joon Ahn, Teresa Dahlberg, **Asis Nasipuri**, Yuliang Zheng, "Context & Environmental Aware Wireless Sensor Networks for Reconfigurable Manufacturing Systems," in Proceeding of the *CIRP 2nd International Conference on Reconfigurable Manufacturing*, August 2003.
42. **Asis Nasipuri** and Kai Li, "A Directionality based Location Discovery Scheme for Wireless Sensor Networks", in Proceedings of the *First ACM International Workshop on Wireless Sensor Networks and Applications (WSNA'02),* pp. 105 – 111, held in conjunction with *ACM Mobicom'02*, September 28, 2002.
43. **Asis Nasipuri**, Kai Li, and Uma Reddy Sappidi, "Power Consumption and Throughput in Mobile Ad Hoc Networks using Directional Antennas", in Proceedings of the *IEEE International Conference on Computer Communication and Networks (ICCCN2002),* pp. 620 – 626, October 14-16, 2002, Miami, Florida.
44. Kai Li and **Asis Nasipuri**, "Modeling MAC Performance in Mobile Ad Hoc Network Simulations", in Proceedings of the *Communication Networks and Distributed Systems Modeling and Simulation Conference (CNDS '02),* January 27-31, 2002, San Antonio, Texas.
45. Nitin Jain, Samir R. Das, and **Asis Nasipuri**, "A Multichannel CSMA MAC Protocol with Receiver-Based Channel Selection for Multihop Wireless Networks", in Proceedings of the *IEEE International Conference on Computer Communication and Networks (ICCCN2001)*, Phoenix, AZ, October 2001*,* pp. 432 – 439.
46. **Asis Nasipuri**, Ryan Burleson, Benjamin Hughes, and Johnny Roberts, " Performance of a Hybrid Routing Protocol for Mobile Ad Hoc Networks", in Proceedings of the *IEEE International Conference on Computer Communication and Networks (ICCCN2001),* Phoenix, AZ, October 2001.
47. **Asis Nasipuri** and Samir R. Das, "Multichannel CSMA with Signal Power-Based Channel Selection for Multihop Wireless Networks", in Proceedings of the *IEEE Fall Vehicular Technology Conference (VTC 2000)*, pp. 211 – 218, Boston, September 2000.
48. **Asis Nasipuri**, Shengchun Ye, and Robert E. Hiromoto, "A MAC Protocol for Mobile Ad Hoc Networks Using Directional Antennas", in Proceedings of the *IEEE Wireless Communications and Networking Conference (WCNC 2000),* pp. 1214 - 1219 vol.3, Chicago, September 2000.
49. **Asis Nasipuri**, Jothsna Mandava, Hanumantha Manchala, and Robert E. Hiromoto, "On-Demand Routing Using Directional Antennas in Mobile Ad Hoc Networks", in Proceedings of the *IEEE International Conference on Computer Communication and Networks (ICCCN2000),* pp. 535 – 541, October, 2000, Las Vegas.
50. Sushil Gote, **Asis Nasipuri**, and Aloknath De, "Source-Aided Error Concealment in Packetized Voice Communication", Proceedings of the *International Conference on Communications, Computers, and Devices (ICCCD-2000)*, Indian Institute of Technology, Kharagpur, India, December 2000.
51. **Asis Nasipuri**, Jun Zhuang and Samir R. Das, "A Multichannel CSMA MAC Protocol for Multihop Wireless Networks", in Proceedings of the *IEEE Wireless Communications and Networking Conference (WCNC'99),* pp. 1402 - 1406 vol.3, New Orleans, September, 1999.

52. **Asis Nasipuri** and Samir R. Das, "On-Demand Multipath Routing for Mobile Ad Hoc Networks", in Proceedings of the *IEEE International Conference on Computer Communication and Networks (ICCCN'99),* Boston, October, 1999, pp. 64 - 70.
53. R. Gangopadhyay, **Asis Nasipuri**, G. Gopalkrishnan, and P. T. Kulkarni, "Transmission Performance of Multiwavelength Ring Networks with Embedded Logical Wheel", Proceedings of the *Asia-Pacific Conference on Communications (APCC/ICCS'98),* Singapore, November 1998.
54. **Asis Nasipuri** and Ranjan Gangopadhyay, "Performance of CPFSK with Fractional-bit Differential Detection in Mobile Fading Channels", Proceedings of the *International Conference on Computers and Devices for Communications (CODEC),* Science City, Calcutta, India, January 1998.
55. **Asis Nasipuri**, R. Gangopadhyay, and Sachin Doshi, "Studies on WDM Ring Networks", Proceedings of the *National Conference on Communications,* I.I.T., Powaii, Bombay, January 1998.
56. K. V. Martin, **Asis Nasipuri**, and Ranjan Gangopadhyay, "Simulation Studies on DS/SSMA Communication Systems with RAKE Receiver in Mobile Fading Channels", Proceedings of *INCURSI-96,* Burdwan University, India, January 1996.
57. **Asis Nasipuri** and Sawasd Tantaratana, "Nonparametric Distributed Detection Using Wilcoxon Statistics", Proceedings of the *Conference on Information Sciences and Systems*, The Johns Hopkins University, March 1993.
58. **Asis Nasipuri** and Sawasd Tantaratana, "Some Results on Distributed Detectors Using Wilcoxon Statistics", Proceedings of *30th Annual Allerton Conference on Communications,* Controls & Computing, University of Illinois at Urbana-Champaign, Sept. 1992.
59. Sawasd Tantaratana and **Asis Nasipuri**, "Two-stage Wilcoxon Detectors Using Conditional Wilcoxon Tests", Proceedings of the *Conference on Information Sciences & Systems*, Princeton University, NJ, May 1990.

Technical Reports and Significant Unrefereed Publications:

1. **Asis Nasipuri,** "Substation-wide monitoring through applications of networked wireless sensor devices: Phase-1: Prototype development of a wireless mesh sensor network for temperature sensing", *Technical report,* EPRI, Palo Alto, CA, 2007, 1013934.
2. **Asis Nasipuri,** "Substation-wide monitoring through applications of networked wireless sensor devices: Phase-2: Scalability and sustainability studies", *Technical report*, EPRI, Palo Alto, CA, 2007, 1013934.
3. **Asis Nasipuri**, "Program on technology innovation: Wireless mesh sensor network for fossil plant monitoring", *Technical report*, EPRI, Palo Alto, CA, 2009, 1016188.
4. **Asis Nasipuri**, K. R. Subramanian, Hilary Inyang, and William Armstrong, "REMS: Remotely Operating Environmental Monitoring System for High-Hazard and Inaccessible Regiosn", presented at the *International Conference on Energy, Environment and Disasters (INCEED 2005)*, July 2005.
5. **Asis Nasipuri**, Kalpathi Subramanian, Vincent Ogunro, John L. Daniels, and Helene A. Hilger, "Development of a Wireless Sensor Network for Monitoring a Bioreactor Landfill", presented at *Geo Congress 2006*, February 2006.

Provisional Patent:

1. Asis Nasipuri, "Method for Position Location in Wireless Sensor Networks Using Multiple Rotating Antenna Beams", U.S. Provisional Patent, filed June 2002.

Invited Talks:

- "*Design Challenges for Low Power Wireless Sensor Networks*", Department of Electrical and Computer Engineering, Florida International University, Miami, FL, January 17, 2020.
- "*Design Challenges for Low Power Wireless Sensor Networks*", Indian Statistical Institute, July 17, 2018.
- "*Design Considerations for Reliable Communication in Intermittently Connected Sensor Networks*", Department of Computer Science, Jadavpur University, Kolkata, India, July 12, 2016.
- "*Rechargeable Sensor Networks: Design Issues and Protocol Development*", presented at Jadavpur University, Kolkata, India, July 21, 2014. Organized by the Computer Chapter, IEEE Calcutta Section and Dept. of Computer Science & Engineering, Jadavpur University.
- *"Wireless Sensor Networks: Theory and Application Development",* half-day tutorial in IEEE Southeast Conference (SoutheastCon 2010), Charlotte-Concord, NC, March 18, 2010.
- *"Achieving Energy Efficiency in Wireless Sensor Networks"*, half-day tutorial in Refresher course on Wireless Ad Hoc and Sensor Networks, sponsored by the University Grants Commission, India. Jadavpur University, Kolkata, India, January 6, 2010.
- *"Wireless Mesh Sensor Network in a Sub-station",* presented at the Fleet-Wide Monitoring Interest Group (FWMIG) meeting organized by EPRI, May 14, 2008, Concord, NC.
- "*Signal Processing in Wireless Sensor Networks*", presented at Jadavpur University, Kolkata, India, October 12, 2007. This lecture was jointly organized by the Computer Chapter, IEEE Calcutta Section and Dept. of Computer Science & Engineering, Jadavpur University.
- "*Signal Processing in Wireless Sensor Networks*", presented at Indian Institute of Technology, Kharagpur, India, October 10, 2007.
- *"Wireless Monitoring at a Sub-station"*, presented at the Fleet-wide Monitoring Interest Group Meeting, EPRI, Embassy Suites – Convention Center, Concord, October 25-27, 2007.
- *"Wireless Mesh Sensor Network for Monitoring at a Sub-station"*, presented at the Utility Wireless & RFID Technology Conference for the Power Industry, August, 2007.
- "*An Angle based Localization Scheme for Wireless Sensor Networks*", presented at the School of Information Technology at IIT, Mumbai, India, October 2006.
- *"Application Development with Wireless Sensor Networks"*, Workshop on Wireless and Mobile Computing, IEEE Computer Chapter, Kolkata, India, June 2005.
- "*Research Issues on Wireless Sensor Networks*", IEEE Chapter, Indian Institute of Technology, Kharagpur, July 2004.
- "*Wireless Sensor Networking*", Center for Mobile Computing, Jadavpur University, organized by Computer Chapter, IEEE Calcutta Section, India, July 2004.
- "Medium Access Control Protocols for Wireless Multi-Hop Networks", The University of Texas at San Antonio, March 1999.

- "Medium Access Control Protocols for Wireless Multi-Hop Networks", Texas A&M University, College Station, Texas, Nov. 1998.
- "*Personal Communication Systems*", Interim Test Range of the Defense Research & Development Organization, Chandipur, India. Oct. 1997.
- "*Personal Communication Systems*", Short course on Personal Multimedia & Broadband Communications and Networks, Indian Institute of Technology, Kharagpur, India. July 1995.
- "*Personal Communication Systems*", Short course on Personal Communication Services, Indian Institute of Technology, Kharagpur, India. July 1996.
- "*Wavelength division multiplexed ring networks*", Workshop on Wavelength Routed Optical Networks, Indian Institute of Technology, Kharagpur, India. Nov. 1997.

Research Contracts:

1. *"Wireless Sensor Network for Valve Monitoring"*, supported by Burkert Contromatic Corporation, $131,448, A. Nasipuri (PI), R. Cox, J. Conrad, and B. Rodriguez-Medina, February 13, 2015 – December 31, 2016.
2. *"Critical Infrastructure of the Distribution Grid",* supported by Center for Advanced Power Engineering Research (CAPER), $48,450, B. Chowdhury (PI), **A. Nasipuri**, K. R. Subramanian, and C. Lim. Jan. 1, 2015 to Dec. 31, 2016.
3. *"NeTS:GOALI: Towards Adaptability to Variations of Renewable Energy in Large Scale Rechargeable Wireless Sensor Networks",* National Science Foundation (NSF), $300,017, **A. Nasipuri (PI)**, J. Conrad, R. Cox, L. Van der Zel, A. Phillips. September 1, 2011 to August 31, 2014.
4. *"Scalability and Sustainability Issues of Wireless Mesh Sensor Network for Substation Monitoring"*, supported by the Electric Power Research Institute (EPRI), $120,354, **A. Nasipuri (PI)**, J. Conrad and R. Cox. September 15 to December 31, 2011.
5. *"Wireless Mesh Sensor Network for Fossil Plants Monitoring"*, supported by the Electric Power Research Institute (EPRI), $56,779, **A. Nasipuri (PI),** J. Conrad and R. Cox. February 25 to January 31, 2009.
6. *"Wireless Mesh Sensor Network for Power Systems Monitoring"*, supported by the Electric Power Research Institute (EPRI), $178,490, **A. Nasipuri (PI),** I. L .Howitt, and J. Conrad. September 1, 2006 to December 31, 2008.
7. "*CISE Research Resources: Experimental Testbed for Mobile Network Protocols*", supported by the National Science Foundation (NSF), $100,000, T. Dahlberg (PI), **A. Nasipuri,** E. El-Kwae, and G. Ahn, (EIA-013079), Sept. 2001 to February 2005.
8. "*Multi-channel CSMA Protocols*", NSF subcontract from University of Cincinnati, $54,784, **A. Nasipuri (PI)**, from grant "*Collaborative Proposal: Protocols for Mobile, Ad Hoc Networks*", (ANI-9973147), S. R. Das (PI) and **A. Nasipuri**, University of Texas at San Antonio, $157,772, Oct. 1999 to Sept. 2003.
9. *"Power Efficient Protocols for Mobile Ad Hoc Networks", NSF Research Experience for Undergraduates (REU)* supplement, $14,250, **A. Nasipuri (PI),** July 2001 to Sept. 2002.
10. "*Development of a Wireless Sensor Network Prototype for Supervision and Control of Bioreactor Landfills*", supported by the University of North Carolina at Charlotte, $6000, **A. Nasipuri (PI)** and V. Ogunro, 2004 – 2005.

11. "*Studies of the Interplay of Source & Channel Coder Parameters for use in Digital Satellite Communications*", supported by the Indian Space Research Organization (ISRO), Bangalore, India, INR 500,000, **A. Nasipuri (PI),** S. Chakrabarti and R. Gangopadhyay, March 1998 to Feb 2000, at I.I.T. Kharagpur, India.
12. "*Design of Advanced Wavelength-Routed Optical Networks*", supported by the European Community, Brussels, 100,000 ECU, R. Gangopadhyay (PI), **A. Nasipuri**, and D. Datta, August 1996 to July 1998, at I.I.T., Kharagpur, India.
13. "*Development of Tools for Telecommunications Network Planning"*, supported by NORTEL Technologies, Canada, INR 30,000, D. Datta (PI), P. K. Biswas, and **A. Nasipuri**, July 1996 to June 1997, at I.I.T., Kharagpur, India.
14. "Advanced Radio & Multimedia Communications", supported by the All India Council of Technical Education (AICTE), New Delhi, INR 1,400,000, R. V. Rajakumar (PI), **A. Nasipuri,** and others, Feb. 1996 to Jan. 1999, at I.I.T., Kharagpur, India.
15. "*System Using Digital FM Linear Modulation with Discriminator Detection*", supported by the Defense Research & Development Organization (DRDO), New Delhi, India, INR 812,400, R. Gangopadhyay (PI), and **A. Nasipuri**, June 1994 – December 1996, I.I.T., Kharagpur, India.

ADMINISTRATIVE AND PROFESSIONAL SERVICE:

Synopsis:

- *Interim Department Chair of Electrical and Computer Engineering, since August 2014.*
- *Served as the Associate Department Chair and Coordinator of Undergraduate Programs in Electrical and Computer Engineering, 2013 – 2014.*
- *Served as the Director of Graduate Programs of Electrical and Computer Engineering, 2006 – 2013.*
- *Served in many departmental, college, and university committees.*
- *Extensive professional service, including General Chair of ACM MobiHoc 2012, reviewer of journal and conference papers, NSF panelist, and member of over 25 technical program committees of conferences and symposia.*

University Administration:

Department Chair, ECE Department (Aug. 2014 to present).

- Administration and academic leadership for the Department of Electrical and Computer Engineering that currently comprises 37 tenured and tenure-track faculty members, 5 full time staff members, and over 900 undergraduate and graduate students.
- Coordinate and lead efforts on modifications to the curricula for undergraduate programs in electrical engineering and computer engineering for continuous improvement.
- Developed a new Master of Science in Computer Engineering program to deliver graduate education in an area of increasing technical demand.
- Hired 14 new faculty members in ECE between 2014 to 2019, adding to the expertise in strategic areas of importance such as machine learning, computer vision, hardware security, ultra-low power devices and circuits, and next generation communication networks.

- Manage the departmental annual budget of approximately $1M for supporting teaching assistants, faculty startup, adjunct instructors, laboratory development and maintenance, equipment purchases, contracted services, travel, and special projects such as laboratory development.
- Provide leadership to the ECE coordinators, which currently comprise of the associate chair/undergraduate coordinator, graduate director, and research coordinator.
- Coordinate activities for tenure and promotion of faculty members in the department for the 2014-2015 cycle.
- Provide leadership on space management at the department's new home in the Energy Production and Infrastructure Center (EPIC) building that was built on 2012.
- Effectively hired skilled professionals into new and vacated staff positions, including two new professional advisors and a business services coordinator, with appropriate revisions of the responsibilities of all administrative staff positions in the department.
- Implemented plans to foster an environment for increasing research productivity by incentivizing research-active faculty through a balanced teaching load, summer support for research, and research equipment support.
- Develop the ECE department's five-year strategic plan for 2015-2020.
- Develop plans for the newly formed outreach committee.
- Coordinated efforts for successful ABET accreditation of the electrical engineering and computer engineering programs in 2016.
- Work with the Dean of the College of Engineering on working towards the mission of the college and that of the University of North Carolina at Charlotte.

Associate Chair and Coordinator of Undergraduate Programs (2013 – 2014).

- Coordination of the Bachelor of Science in Electrical Engineering (BSEE) and Bachelor of Science in Computer Engineering (BSCpE) programs and course schedule development.
- Restructure the ECE undergraduate advising structure: The role of advising was changed from all faculty members to a smaller subset of faculty members to serve as undergraduate advisors. Also a team of mentors were selected for career advising.
- Mobilize the UG committee for course/curriculum planning: I got the UG committee involved to resolve some pending problems with courses.
- Form an ABET committee: To review our tasks for continuous improvement.
- Outreach planning: This year, we hosted several open houses and school visits, in addition to departmental tours during EXPLORE events.
- Initiated planning for modification of ECE UG laboratory classes
- Worked with faculty on other course/curriculum modifications

Director of Graduate Programs, ECE Department (2006 – 2013)

- Administration of the PhD and Master of Science programs in the department comprising of approximately 70 and 150 students, respectively.

- Contributed to the growth of ECE's doctoral program from 35 to 65 students through active recruitment efforts, utilization of the new GASP program, and investing in efforts for increasing students funding.
- Restructured the MSEE program to provide multiple options with thesis, project, and course options.
- Modified the Ph.D. qualifying examination format to include a Research Aptitude Test to demonstrate aptitude for successful research productivity.
- Provided leadership for the development of the graduate concentration on Power and Energy Systems for MSEE.

University Committee Memberships, UNC Charlotte (Selected List):

- Chair of Search Committee for the Belk-Woodward Distinguished Professor of Engineering, 2018-2019.
- Member of Future of Faculty Committee (2017- present)
- Member of Task Force for Best Practices in Graduate Education (2010-2011)
- Member of Faculty Research Grants Committee (2008 – 2009)
- Member of the Faculty Council (2003 – 2005)
- Member of the Graduate Council (2002 – 2004)
- Member of University Research Computing Steering Committee, 2003 – 2005.
- Member of the Faculty Advisory Library Committee (2001–2003)

College Committee Memberships, College of Engineering, UNC Charlotte:

- Chair of the Engineering Graduate Committee (2008 – 2009)
- Chair of the Reassignment of Duties Committee (2004 – 2005)
- Member of the Academic Policy and Curriculum Committee (2004 – 2005)
- Member of the Curriculum Committee (2004 – 2005)
- Member of the ECE Chair Search Committee (2003 – 2004)
- Member of the Computer Committee (2000–2002).

Departmental Committee Memberships, Electrical & Computer Engineering, UNC Charlotte

- Chair of Graduate Committee (2006 – 2013)
- Member of Awards Committee
- Member of Publicity Committee
- Member of the Strategic Planning Committee (2004 – 2005)
- Member of the Graduate Committee (2004 – 2005)
- Member of the Departmental Tenure and Promotion Review Committee (2003–04, 2007-09)
- Chair of the Faculty Search Committee (2000–2002)

Professional Service:

- ***General Chair,*** *ACM MobiHoc'12,* the Thirteenth ACM International Symposium of Mobile Ad Hoc Networking and Computing.
- ***Publicity co-chair*****,** The 18th IEEE International Workshop on Local and Metropolitan Area Networks (*LANMAN 2011*), October 13 – 14, 2011, Chapel Hill, NC.
- ***Technical Program Chair****,* IEEE Workshop on Multi-hop Wireless Networks *(MWN'04)*, held in conjunction with the IEEE International Performance, Computing and Communications Conference *(IPCCC),* April 14 - 17, 2004, Phoenix, AZ.
- ***Member of Editorial Board*****,** International Journal of Ad Hoc and Ubiquitous Computing (IJAHUC), Inderscience Publishers.
- ***Reviewer of Journal papers:*** IEEE Trans. On Wireless Communications, IEEE Trans. On Mobile Computing, IEEE Trans. On Computers, IEEE Journal on Selected Areas in Communications, IEEE Trans. on Parallel and Distributed Systems, IEEE Trans. on Vehicular Technology, IEEE Multimedia Journal, IEEE Trans. on Communications, Signal Processing Journal, ACM Mobile Computing and Communications Review, EURASIP Journal on Applied Signal Processing, Wireless Communications & Mobile Computing Journal, Wireless Networks Journal, International Journal of Computers and Applications, International Journal of Wireless and Mobile Computing, The Telecommunications Systems Journal.
- ***Reviewer of Conference papers:*** IEEE GLOBECOM, IEEE INFOCOM, ACM MobiHoc, IEEE ICCCN, ACM MsWIM, ISPACS, IEEE ICC, IEEE VTC, IEEE ICDCN, IEEE WCNC, and many others.
- ***Grant Proposal Reviewer:*** Served in NSF panels for CISE (NeTS, NeTSE) and CCF/CIF, South Carolina DEPSCoR.
- ***Textbook reviewer:*** Textbooks on wireless communications, digital signal processing, and analog & digital communications from Morgan Kaufman/Elsevier, Academic Press, Prentice-Hall, Cambridge University Press, Oxford University Press.
- ***Member of Technical Program Committees*** (selected list):
  - IEEE International Conference on Applications and Innovations in Mobile Computing, Feb 27 – March 1, 2014, Kolkata, India.
  - IEEE International Conference on Communications (ICC), Ad Hoc and Sensor Networking Symposium, June 2014, Sydney, Australia.
  - International Conference on Distributed Computing and Networking (ICDCN 2008), 2 - 5 January, 2014, Pilani, India.
  - IEEE International Conference on Mobile Computing and Ubiquitous Networking (ICMU 2014), January 6-8, 2014, Singapore.
  - IEEE Conference on Global Communications (GLOBECOM), Ad Hoc and Sensor Networking Symposium, December 2013, Atlanta, GA.
  - IEEE International Conference on Communications (ICC), Ad Hoc and Sensor Networking Symposium, June 2013, Budapest, Germany.
  - IEEE International Conference on Communications (ICC), Ad Hoc and Sensor Networking Symposium, June 2012, Ottawa, Canada.

- IEEE Conference on Global Communications (GLOBECOM), Ad Hoc and Sensor Networking Symposium, December 2011, Houston, TX.
- International Conference on Distributed Computing and Networking (ICDCN 2008), 2 - 5 January, 2011, Bangalore, India.
- IEEE Conference on Global Communications (GLOBECOM), December 2010, Miami, FL.
- IEEE Southeast Conference, March 2010, Charlotte, NC.
- High Capacity Optical Networks and Enabling Technologies (HONET) Conference, 2010.
- IEEE Vehicular Technology Conference (VTC 2008-Spring), 11 – 14 May, 2008, Marina Bay, Singapore.
- International Conference on Distributed Computing and Networking (ICDCN 2008), 5 – 8 January, 2008, Kolkata, India.
- IEEE Conference on Global Communications (GLOBECOM), Wireless Ad Hoc, Sensor Networks, and Mesh Networks Symposium, Nov. 30 – Dec. 4, 2008, New Orleans, LA.
- IEEE International Workshop on performance and Management of Wireless and Mobile Networks, 15 – 18 October, 2007, Dublin, Ireland.
- ICC Wireless Ad Hoc and Sensor Networks Symposium, 24 – 28 June, 2007, Glasgow, Scotland, UK.
- IEEE Conference on Global Communications (GLOBECOM), Ad Hoc and Sensor Networking Symposium, 26 – 30 November, 2007, Washington, DC.
- International Conference on Distributed Computing and Networking (ICDCN), Indian Institute of Technology, Guwahait, India, December 27 – 30, 2006.
- IEEE GLOBECOM Wireless Ad Hoc and Sensor Networks – Towards Anytime Anywhere Internetworking Symposium, 2006.
- International Wireless Communications and Mobile Computing Conference (IWCMC) - Symposium on Next Generation Mobile Networks (NGMN 2006), July 3 – 6, 2006, Vancouver, Canada.
- The 11th International Conference on Parallel and Distributed Systems (ICPADS-05), July 2005, Japan.
- First IEEE International Workshop on Performance and Management of Wireless and Mobile Networks, November 2005, Sydney, Australia.
- Symposium on Wireless Sensor Networks (WSN05), June 2005, Hawaii, USA.
- Workshop on Internet Compatible QoS in Ad hoc Wireless Networks (IC-QAWN), January 3 – 6, 2005, Cairo, Egypt.
- IEEE International Conference on Computer Communication and Networks (IC3N), 2003, Dallas
- International Workshop on Distributed Computing (IWDC), 2003, Kolkata, India.
- IEEE International Conference on Computer Communication and Networks (IC3N), 2002, Miami

- International Symposium on Communications and Information Technology (ISCIT), October 23 – 25, 2002, Pattaya, Thailand.
- ACM International Workshop on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWIM), September 28, 2002, Atlanta.
- IEEE International Conference on Computer Communication and Networks (IC3N), 2001, Phoenix
- IEEE International Conference on Computer Communication and Networks (IC3N), 2000, Las Vegas.

MENTORING AND INSTRUCTIONAL EXPERIENCE:

Synopsis:

- *Served as the major advisor for research of over 30 graduate students.*
- *Served as the supervisor of over 16 undergraduate senior projects.*
- *Taught over 60 semester-long courses covering over 10 different undergraduate courses and 7 different graduate courses.*
- *Developed two new graduate courses which were added to the catalog.*

Visiting Scholars:

- Dr. Sarbani Roy, Assistant Professor, Jadavpur University, India, Fulbright Senior Research Fellow, 2013 – 2014.
- Dr. John D'Souza, National Institute of Technology, Surathkal, Karnataka, India, 2008.
- Dr. Ho Joon Kim, Jeonju University, 2007.

PhD Dissertation Supervision:

- Md. Majharul Islam Rajib, "Design Considerations for Intermittently Connected Energy Harvesting Wireless Sensor Networks", University of North Carolina at Charlotte, May 2018.
- Amitangshu Pal, "Dynamic Routing with Cross-layer Adaptations for Multi-hop Wireless Networks", University of North Carolina at Charlotte, December 2013
- Hadi Alasti, "Level Based Sampling Techniques for Energy Conservation in Large Scale Wireless Sensor Networks", University of North Carolina at Charlotte, December 2009.
- Kai Li. "Protocols for Mobile Ad Hoc Networks", University of North Carolina at Charlotte, December 2002.
- Ndubueze Chuku, "Development and Evaluation of RSSI-Based Localization Schemes for Wireless Sensor Networks to Mitigate Shadowing Effects", May 2020 (expected).
- Shobhit Aggarwal, tentative title "Design Considerations for Scalable Low Power Wide Area Networks", in progress.

M.S. Thesis Supervision: (selected list)

- Mithun Yerra, "Design and Implementation of Sequential State Logic for Pneumatic Valve Monitoring Using Piezo Film Sensors", May 2016.

- Natwar Darak, "Game Theoretic Approaches for Channel Selection, Power Control, and Routing in Wireless Sensor Networks", December 2014.
- Sayali Shrirang Nimkar, "Adaptive Duty Cycling for Rechargeable Wireless Sensor Networks", December 2014.
- Kushal Sarkara, M.S. thesis title "High Frequency Vibration Sensing and On-board Frequency Analysis in Low Power Wireless Sensor Motes", May 2012.
- Siddharth Kamath, M.S. thesis title "Load Balanced and Energy Aware Routing for Large Scale Wireless Sensor Networks", May 2011
- Rohit Kale, M.S. thesis title "Energy Aware Store and Forward Scheme for Rechargeable Sensor Networks", May 2010
- Sandeep Adimadhyam, thesis title "QoS based Centralized Routing in Wireless Hybrid Networks", May 2008
- Vamsee K. Boda, M.S. thesis title "Vehicle Detection Using Wireless Sensor Networks", December 2007
- William R. Armstrong, M.S. thesis title "Localized Contour Detection in Wireless Sensor Networks", The University of North Carolina at Charlotte, August 2005.
- Saurabh Mishra, M.S. thesis title "An Adaptive Low Power Reservation Based Medium Access Control Protocol for Wireless Sensor Networks", The University of North Carolina at Charlotte, December 2003.
- Uma Reddy Sappidi, M.S. thesis title "Medium Access Control of Mobile Ad Hoc Networks using Directional Antennas", The University of North Carolina at Charlotte, December 2003.
- Jai Mondhe, M.S. thesis title "Multichannel MAC Protocol with Cooperative Channel Selection for Ad Hoc Networks", The University of North Carolina at Charlotte, December 2003.
- Jun Zhuang, M.S. thesis title "Multi-channel MAC Protocol with Memory based Channel Selection in Multi-hop Wireless Networks", The University of Texas at San Antonio, 1999.
- Sushil Gote, Master of Technology thesis title "Software for Evaluation and Design of Joint Source and Channel Coding in Satellite Channels", Indian Institute of Technology, Kharagur, India, 1997.
- M. Jayasekhar, Master of Technology thesis title "Performance of Differential Detection on Mobile Wireless Channels", Indian Institute of Technology, Kharagur, India, 1997.
- K. V. Martin, Master of Technology thesis title "Performance of DS/SSMA Communication Systems with RAKE Receiver in Mobile Fading Channels", Indian Institute of Technology, Kharagur, India, 1995.

M.S. Project Supervision: (selected list)

- Thomas Perkins, "RF Channel Emulation and Characterization Using the Agilent N5106A PXB Baseband Generator", December 2014.
- Aashish Bhargav Nath Aita, "Analyzing the QoS by USRPN200 and Exploring Different Approaches", June 2014.

- Sindhura Gaddam, "Performance Study of Adaptive Low Power Listening with Collection Tree Protocol", May 2014.
- Ravi Teja Kondupalli, "Adaptive Sampling for Rechargeable Sensor Networks", May 2014.
- Harish Santhanam, "Solar Energy Harvesting with Maximum Power Point Tracking for Rechargeable Wireless Sensor Networks", December 2013.
- Sandeep Reddy Gagalapally, "Estimation of Battery State of Charge in Low Power Wireless Sensor Networks", December 2013.
- Dewang Lahariya, "Centralized Power Control and Routing for Rechargeable Wireless Sensor Networks", December 2013.
- Samyuktha Paritala, Moving Beacon Assisted Localization in Wireless Sensor Networks, August 2011.
- Ipsita Dipanweeta, "Minimum Energy Power Control in Wireless Sensor Networks", December 2011 (expected)
- Priyanka Lingayat, "Health Monitoring of Wireless Mesh Sensor Networks", 2009
- Priya Hariharan Puthran, "Current Consumption Analysis of Wireless Sensor Nodes used for Health Monitoring of Substation Equipment", 2009.
- Ardha Srinivas, "Robust vehicle detection using magnetic signatures", 2008.
- Nripendra Singh, "Development of a high performance sensing node for wireless sensor networks", 2008.
- Raed Abou Fakher, "Issues in Designing Wireless Mesh Networks for ISP", 2006.
- Sumanth Kumar Peppala, "Security in Bluetooth", 2005.
- Chin Hsing Kuo, "IEEE 802.15.4: A Summary of Features and Applications", 2004.
- Zeid Hakim Al-Kadi, "Wireless Community Networks", 2003.
- Niraj Jalan, "Group Mobility Model for Ad Hoc Wireless Networks", 2003.
- Chulwoo Part, "A Survey of Location Discovery Schemes in Wireless Sensor Networks", 2003.
- Rennie Loila, "The Performance of GMSK in Multipath Fading Channels", 2002.

Undergraduate Senior Projects Supervised: (selected list)

- Christopher English, Elizabeth Hurtado, Galo Lopez, David Monts, and Daniel Simoneaux, "Sound Integrated Shower System" (*First Place winner of Fall Senior Design Expo, 2014*)
- Steven McLean, Matthew Tindall, and Daniel Cromer, "UNCC Temperature monitor – automatic wireless temperature monitoring control for smart homes", May 2011.
- Daniel Edelman and Ahmed Alhakeem, "UNCC Wireless Soil monitor – automatic soil moisture monitoring and control of sprinkler system", May 2011.
- Ryan Ernest, Nathan Holder, Troy Isik, and Chad Leonard, "EPRI Robotic Positioning for Nondestructive Examination of Wind Turbine Blades", May 2010.

- Scott Koryanta, Brian Carroll, and Matthew Newberry, "UNCC RFID system", December 2009. *(Second Prize winner in the College of Engineering)*
- Adam Magee, NaShaune Simmons, Seth Blyden Arthur Carroll, "Implementation of controller for an Unmanned Ground Vehicle", for Defense Technologies, Inc. May 2008.
- Peter Rached, "Implementation of a Localization scheme for Remote Applications of Wireless Sensor Networks", Dec. 2006.
- Chase Edwards, "Implementation of a Localization scheme for Remote Applications of Wireless Sensor Networks", Dec. 2006.
- Parker Jamison, "Experimental Evaluation of Performance Wireless Ad Hoc vs. Mesh Networks", December 2006.
- Abdulaziz Al-Naemi, "Implementation of a Powerline Communication System", Dec. 2006.
- Huong Pham and Tuan Ho, "Wireless Control robotic Vehicle for Fire Emergency Rescue", Dec. 2005.
- John Filipi, "Sensor Network Visualization", co-advised with Dr. Subramanian, Dec. 2005.
- Jeffrey Alexander and Drew Linderman, "Visual Instructional Tools", co-advised with Dr. Subramanian, Dec. 2005.
- Christopher Mack, Steven Yip, and Trung Nguyen, "Wireless Robots", 2005.
- Brian Toothman, Jerry Zacharias, Fred Cupo and Barret Fischer, "An Intelligent Traffic Guidance System for University Parking Services", 2004.
- Andrew Penrod, Umang Jokhakar, and Michael Horsky, "A Hardware Prototype for a Position Estimation System", 2003.
- Ribal El Najjar, "WiSeNet: an On-the-fly Deployable Intrusion Detection System", 2003. *(Published in IEEE WinMee, 2006)*
- Hesham Alsarhan and Zeid Al-Kadi, "Simulation and Performance Evaluation of a Hybrid Routing Protocol", 2002.
- Ryan Burleson, Benjamin Hughes, and Johnny Roberts, "Modeling and Simulation of Mobility Patterns in Mobile Ad Hoc Networks", 2001. *(Published in IEEE ICCCN, 2001)*
- Joshua A Foster, "A Visualization Tool for a Routing Performance Evaluation of Mobile Ad Hoc Networks", 2001.

New Courses Developed:

- ***ECGR-6120/8120 Wireless Communications and Networking*:** A graduate course on wireless and mobile communication systems with a focus on cellular systems. Formally approved to be included in the UNC Charlotte catalog in 2003.
- ***ECGR-6189/8189 Wireless Sensor Networks*:** A graduate level course on the principles of wireless sensor networking with emphasis on laboratory projects. Formally approved to be included in the UNC Charlotte catalog in 2011.

Courses taught:

- Fundamentals of Electrical Engineering, UMass Amherst, 1993

- Mobile Communications and Fading, I.I.T., Kharagpur, India, 1994 – 1997.
- Digital Signal Processing, I.I.T., Kharagpur, India, 1994 – 1997.
- Basic Electronics, I.I.T., Kharagpur, India, 1994 – 1997.
- Information Theory and Coding, I.I.T., Kharagpur, India, 1995 – 1997.
- Optical Communications, I.I.T., Kharagpur, India, 1997 – 1998.
- Communication Systems, University of Texas at San Antonio, 2000.
- Wireless Communications and Networks, UNC Charlotte, 2001 – 2005
- Data Communications and Networking, UNC Charlotte, 2001 – 2005
- Electronics-II, UNC Charlotte, 2001
- Advanced Theory of Communications-I, UNC Charlotte, 2001 – 2010
- Signals and Systems, UNC Charlotte, 2002 – 2009
- Data Communications and Networking-II, 2011 -2019
- Analog and Digital Communications, UNC Charlotte, 2006 – 2011
- Wireless Sensor Networks, UNC Charlotte, 2006 – 2018
- Intro to Engr. Pract. & Princ for Electrical and Computer Engineering (recitations), UNC Charlotte, 2014 – 2020

PROFESSIONAL RECOGNITION:

- Member of Phi Kappa Phi
- Senior Member of IEEE, Communication Society
- Member of ACM.
- Recognition of Service Award for contributions to ACM as General Chair of MobiHoc'12: The Thirteenth ACM International Symposium on Mobile Ad Hoc Networking and Computing, June 11 – 14, 2012.
- Certificate of earning 30 professional development hours in the ABET Institute for the Development of Excellence in Assessment Leadership, Baltimore, MD, August 2013.
- Maxheim Fellowship award recipient from the College of Engineering at UNC Charlotte, in recognition of outstanding contributions to education and research as a junior faculty member, 2004. Includes a $5000 grant.
- Nominated for Graduate Teaching Excellence award, The William States Lee College of Engineering, 2003.
- Best poster award 11th International Conference on Networking, Architecture and Storage (IEEE NAS 2016).
- Invited speaker in IEEE Computer Chapter, Kolkata, in 2014 and 2007.
- National Talent Search Scholarship from the National Council of Educational Research & Training, New Delhi, India, 1980 – 1987.