# Debashri Roy, PhD

Assistant Professor
Director of Transformative Wireless
System and Technology (TWiST) Lab
University of Texas Arlington

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## Current Research Interests

- **Networked Robotics:** Reinforcement learning for coordination, computation and communication for unmanned autonomous systems; Real-world and emulation study on **automated factory floor in Industry 4.0**.
- **Empowering the Future of Wireless Communication**: Private 5G network, 5G Open RAN Deployment, Testbed design using **srsRAN and OpenAirInterface**.
- **Wireless Digital Twins**: Interactive communication between real and virtual world which provides automates the computation and decrease training overhead; Raytracing based robot navagtion, Simulation and Practical demonstration on **robotics factory floor setup**.
- **Deep Spectrum Learning in NextG Communication**: Deep learning based solutions in wireless spectrum sensing, sharing, signal detection, and RF fingerprinting; Applied research in the **CBRS and sub-6 GHz band**.

## Education

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| 08/15 - 04/20 | ▮ | **Ph.D., Computer Science, University of Central Florida.** Thesis title: *Machine Learning based RF Transmitter Characterization in the Presence of Adversaries.* Advisor: Dr. Mainak Chatterjee. |
| 08/15 - 04/18 | ▮ | **Master of Science, Computer Science, University of Central Florida.** |
| 07/11 - 07/13 | ▮ | **Master of Engineering, Information Technology, Indian Institute of Engineering Science and Technology, Shibpur.** Thesis title: *Study and Design of Algorithms for Optimization in Global Routing for 3D Integrated Circuits.* Advisor: Dr. Prasun Ghosal. |
| 07/05 - 06/09 | ▮ | **Bachelor of Engineering, Information Technology, Indian Institute of Engineering Science and Technology, Shibpur.** |

## Professional Experiences

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| 09/23 - Cur | ▮ | **Assistant Professor** at **The University at Texas Arlington.** Arlington, USA. (Full time) *Department: Computer Science and Engineering.* |
| 04/22 - 08/23 | ▮ | **Research Scientist** at **Northeastern University.** Boston, USA. (Full time) *Supervisor: Prof. Kaushik Chowdhury.* |
| 07/20 - 03/22 | ▮ | **Experiential AI Post-doc** at **Northeastern University.** Boston, USA. (Full time) *Supervisor: Prof. Kaushik Chowdhury.* |
| 05/20 - 06/20 | ▮ | **Research Scientist** at **University of Florida Research and Engineering Education Facility.** Shalimar, USA. (Full time) *Project: RF Antenna Pose and Range Estimation using Deep Learning.* |
| 05/19 - 08/19 | ▮ | Summer Intern at **University of Florida Research and Engineering Education Facility.** Shalimar, USA. (Part time) *Project: GPS Spoofer Detection using Satellite Fingerprinting and GAN Training.* |
| 05/18 - 08/18 | ▮ | Summer Intern at **Intelligent Robotics Inc.** Tallahassee, USA. (Full time) *Project: Detection of Rouge Transmitter in Radio Frequency Machine Learning System.* |

## Professional Experiences (continued)

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| 05/17 - 08/17 | 🔖 | Summer Intern at **University of Florida Research and Engineering Education Facility.** Shalimar, USA. (Part time)<br>*Project: Channel Adaptive Real-time Video Steaming over DSA.* |
| 01/16 - 04/17 | 🔖 | PhD Intern at **Athena-Tek LLC.** Orlando, USA. (Part time)<br>*Areas: LVC (Live Virtual Constructive) Networks- Modeling and Simulation.* |
| 07/13 - 06/15 | 🔖 | Research Scholar at **Indian Institute of Engineering Science and Technology, Shibpur, India**. (Full time)<br>*Project: Performance-centric Design Optimization in 3D Nanoscale Integrated Circuits and Systems.* |

## Active Research Funding

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| NSF | 🔖 | MEDUSA: Mid-band Environmental Sensing Capability for Detecting Incumbents during Spectrum Sharing, *National Science Foundation Spectrum and Wireless Innovation enabled by Future Technologies* (**NSF SWIFT**) Program, Nov. 2022- Oct. 2025, Co-PI. **Total Funding: $750,000; Roy's share: $160,000**. |
| UT | 🔖 | The Rising STARs Award, *The University of Texas System,* Sep. 2023- Aug. 2026, PI. **Total Funding: $170,000; Roy's share: $170,000**. |
| UTA | 🔖 | CoE Research Experiences for Undergraduates, ' Finding Waldo in the Citizen Broadband Radio Service (CBRS) Band', *The University of Texas Arlington,* Oct. 2023- April. 2024, PI. **Total Funding: $2,000; Roy's share: $2,000**. |
| | 🔖 | CSE Research Experiences for Undergraduates, 'Empowering the Future of Wireless Communications: A Comprehensive Exploration of srsRAN for 5G Open RAN Deployment and Beyond', *The University of Texas Arlington,* Jan. 2024- May. 2024, PI. **Total Funding: $1,500; Roy's share: $1,500**. |
| | 🔖 | CSE Research Experiences for Undergraduates, 'Analyzing the Sensor Modality Selection for Competitive and Cooperative Service Robots', *The University of Texas Arlington,* Jan. 2024- May. 2024, PI. **Total Funding: $1,500; Roy's share: $1,500**. |

## Awards and Achievements

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| Awards | 🔖 | **IEEE Senior Member**, Nov 2022. |
| | 🔖 | Doctoral Research Support Award from College of Graduate Studies of University of Central Florida, USA, 2019 ($\sim$$5000). |
| | 🔖 | Best Paper Runner-up award, IEEE International Performance, Computing, and Communications Conference, USA, 2018. |
| | 🔖 | NSF Student Travel Grant, IEEE Global Communications Conference, USA, 2019 ($\sim$$1200). |
| | 🔖 | NSF Student Travel Grant, IEEE International Symposium on Dynamic Spectrum Access Networks, USA, 2019 ($\sim$$800). |
| Fellowship | 🔖 | Presentation Fellowship from University of Central Florida, USA, 2019 ($\sim$$500). |
| Scholarship | 🔖 | GATE Scholarship from Ministry of Human Resource Development (MHRD), India, August 2011- June 2013. |

## Research Publications

**Summary:** h-index = 12, i10-index = 15, citations = 539, with total of 17 journal/magazine papers, 19 conference/symposium papers, 2 book chapters, 5 provisional patents. All metrics retrieved from Google Scholar in February 2024.

### Selected Journal Articles

1. Batool Salehi, **Debashri Roy**, Tong Jian, Chris Dick, Stratis Ioannidis, & Kaushik Chowdhury. (2024, January). Omni-CNN: A Modality-agnostic Neural Network for mmWave Beam Selection. *IEEE Transactions on Vehicular Technology*. doi:10.1109/TVT.2024.3351053

2. Batool Salehi*, Utku Demir*, **Debashri Roy**, Suyash Pradhan, Stratis Ioannidis, & Kaushik Chowdhury. (2024). Multiverse at the Edge: Interacting Virtual and Real Worlds for Automative Wireless Beamforming. *IEEE Transactions on Networking.* [Accepted].

3. Nasim Soltani, Jifan Zhang, Batool Salehi, **Debashri Roy**, Robert Nowak, & Kaushik Chowdhury. (2024, January). Learning from the Best: Active Learning for Wireless Communications. *IEEE Communications Magazine.* doi:https://doi.org/10.48550/arXiv.2402.04896

4. **Debashri Roy**, Batool Salehi, Stella Banou, Subhramoy Mohanti, Guillem Reus-Muns, Mauro Belgiovine, … Kaushik Chowdhury. (2023, March). Going Beyond RF: A Survey on how AI-enabled Multimodal Beamforming will Shape the NextG Standard. *Elsevier Computer Networks.* doi:10.1016/j.comnet.2023.109729

5. Nasim Soltani, **Debashri Roy**, & Kaushik Chowdhury. (2023). PRONTO: Preamble Overhead Reduction with Neural Networks for Coarse Synchronization. *IEEE Transactions on Wireless Communications.* doi:10.1109/TWC.2023.3256961

6. Subhramoy Mohanti, **Debashri Roy**, Mark Eisen, Dave Cavalcanti, & Kaushik Chowdhury. (2023, April). L-NORM: Learning and Network Orchestration at the Edge for Robot Connectivity and Mobility in Factory Floor Environments. *IEEE Transactions on Mobile Computing.* doi:10.1109/TMC.2023.3266643

7. Utku Demir*, Suyash Pradhan*, Richard Kumahia, **Debashri Roy**, Stratis Ioannidis, & Kaushik Chowdhury. (2023, May). Digital Twins for Maintaining QoS in Programmable Vehicular Networks. *IEEE Networks Magazine.* doi:10.1109/MNET.014.2300116

8. Batool Salehi, Guillem Reus-Muns, **Debashri Roy**, Zifeng Wang, Tong Jian, Jennifer Dy, … Kaushik Chowdhury. (2022). Deep Learning on Multimodal Sensor Data at the Wireless Edge for Vehicular Network. *IEEE Transactions on Vehicular Technology.* doi:10.1109/TVT.2022.3170733

9. **Debashri Roy**, Tathagata Mukherjee, Alec Riden, Jared Paquet, Eduardo Pasiliao, & Erik Blasch. (2022). GANSAT: A GAN and SATellite Constellation Fingerprint-based Framework for GPS Spoof-Detection and Location Estimation in GPS Deprived Environment. *IEEE Access*, *10*, 45485–45507. doi:10.1109/ACCESS.2022.3169420

10. **Debashri Roy**, Yuanyuan Li, Tong Jian, Peng Tian, Kaushik R. Chowdhury, & Stratis Ioannidis. (2022). Multi-modality Sensing and Data Fusion for Multi-vehicle Detection. *IEEE Transactions on Multimedia*, 1–16. doi:10.1109/TMM.2022.3145663

11. Jerry Gu, Batool Salehi, **Debashri Roy**, & Kaushik R. Chowdhury. (2022). Multimodality in mmWave MIMO Beam Selection using Deep Learning: Datasets and Challenges. *IEEE Communications Magazine*, 1–7. doi:10.1109/MCOM.002.2200028

12. Mauro Belgiovine, Kunal Sankhe, Carlos Bocanegra, **Debashri Roy**, & Kaushik R. Chowdhury. (2021). Deep Learning at the Edge for Channel Estimation in Beyond-5G Massive MIMO. *IEEE Wireless Communications Magazine*, *28*(2), 19–25. doi:10.1109/MWC.001.2000322

13. Muthukumaran Ramasubramanian, Chaity Banerjee, **Debashri Roy**, Tathagata Mukherjee, & Eduardo Pasiliao. (2021). Exploiting Spatio-Temporal Properties of I/Q Signal Data using 3D Convolution for RF Transmitter Identification. *IEEE Journal of Radio Frequency Identification*, 1–1. doi:10.1109/JRFID.2021.3051901

14. **Debashri Roy**, Tathagata Mukherjee, Mainak Chatterjee, & Eduardo Pasiliao. (2020). Adaptive Streaming of HD and 360 Degree Videos over Software Defined Radios. *Elsevier Pervasive and Mobile Computing*, *67*, 101215. doi:https://doi.org/10.1016/j.pmcj.2020.101215

15. **Debashri Roy**, Tathagata Mukherjee, Mainak Chatterjee, Erik Blasch, & Eduardo Pasiliao. (2020). RFAL: Adversarial Learning for RF Transmitter Identification and Classification. *IEEE Transactions on Cognitive Communications and Networking*, *6*(2), 783–801. doi:10.1109/TCCN.2019.2948919

16. **Debashri Roy**, Tathagata Mukherjee, & Mainak Chatterjee. (2019). Machine Learning in Adversarial RF Environments. *IEEE Communications Magazine*, *57*(5), 82–87. doi:10.1109/MCOM.2019.1900031

17. **Debashri Roy**, Mainak Chatterjee, & Eduardo Pasiliao. (2017). Video Quality Assessment for Inter-vehicular Streaming with IEEE 802.11p, LTE, and LTE Direct Networks over Fading Channels. *Elsevier Computer Communications*, *118*(100), 69–80. doi:https://doi.org/10.1016/j.comcom.2017.09.010

18. **Debashri Roy**, Prasun Ghosal, & Saraju P. Mohanty. (2015). FuzzRoute: A Thermally Efficient Congestion-Free Global Routing Method for Three-Dimensional Integrated Circuits. *ACM Transaction of Design Automation Electronic Systems, 21*(1), 1–38. doi:`10.1145/2767127`

## Selected Conference Proceedings

1. Suyash Pradhan, **Debashri Roy**, Batool Salehi, & Kaushik Chowdhury. (2024, May). COPILOT: Cooperative Perception using Lidar for Handoffs between Road Side Units. In *IEEE International Conference on Computer Communications (INFOCOM)*. [Accepted].

2. **Debashri Roy**, Vini Chaudhury, Chineneye Tassie, Chad M Spooner, & Kaushik R. Chowdhury. (2023, May). ICARUS: Learning on IQ and Cycle Frequencies for Detecting Anomalous RF Underlay Signals. In *IEEE International Conference on Computer Communications (INFOCOM)*.

3. Guillem Reus-Muns, Kubra Alemdar, Sara Garcia Sanchez, **Debashri Roy**, & Kaushik Chowdhury. (2023, October). AirFC: Designing Fully Connected Layers for Neural Networks with Wireless Signals. In *International Symposium on Theory, Algorithmic Foundations, and Protocol Design for Mobile Networks and Mobile Computing (MobiHoc)*.

4. Jerry Gu, Batool Salehi, Snehal Pimple, **Debashri Roy**, & Kaushik R. Chowdhury. (2023, May). TUNE: Transfer Learning in Unseen Environments for V2X mmWave Beam Selection. In *IEEE International Conference on Communications (ICC)*.

5. Jerry Gu, Liam Colins, **Debashri Roy**, Aryan Mokhtari, Sanjay Shakkottai, & Kaushik R. Chowdhury. (2023, June). Meta-learning for Image-guided Millimeter-wave Beam Selection in Unseen Environments. In *International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*.

6. Tong Jian, **Debashri Roy**, Batool Salehi, Nasim Soltani, Kaushik R. Chowdhury, & Stratis Ioannidis. (2023, May). Communication-Aware DNN Pruning. In *IEEE International Conference on Computer Communications (INFOCOM)*.

7. Amr Salah Kassab, Stella Banou, **Debashri Roy**, & Kaushik R. Chowdhury. (2022, December). FERST: A Full ECG Reception System for User Authentication using Two-stage Deep Learning. In *IEEE Global Communications Conference (GLOBECOM)* (pp. 873–878). doi:`10.1109/GLOBECOM48099.2022.10001694`

8. Batool Salehi, Jerry Gu, **Debashri Roy**, & Kaushik R. Chowdhury. (2022). FLASH: Federated Learning for Automated Selection of High-band mmWave Sectors. In *IEEE International Conference on Computer Communications (INFOCOM)* (pp. 1719–1728). doi:`10.1109/INFOCOM48880.2022.9796865`

9. Nasim Soltani*, Vini Chaudhury*, **Debashri Roy**, & Kaushik R. Chowdhury. (2022, December). Finding Waldo in the CBRS Band: Signal Detection and Localization in the 3.5 GHz Spectrum. In *IEEE Global Communications Conference (GLOBECOM)*.

10. Alec Riden, **Debashri Roy**, Tathagata Mukherjee, & Eduardo Pasiliao. (2021, October). DeePOE: Deep Learning for Position and Orientation Estimation. In *26th IEEE Asia Pacific Conference on Communications* (pp. 235–242). doi:`10.1109/APCC49754.2021.9609872`

11. Guillem Reus-Muns, Batool Salehi, **Debashri Roy**, Tong Jian, Zifeng Wang, Jennifer Dy, … Kaushik Chowdhury. (2021). Deep Learning on Visual and Location Data for V2I mmWave Beamforming. In *IEEE International Conference on Mobility, Sensing and Networking (MSN)* (pp. 559–566). doi:`10.1109/MSN53354.2021.00087`

12. Sayanta Seth, **Debashri Roy**, & Murat Yuksel. (2020). Spectrum Sharing Secondary Users in Presence of Multiple Adversaries. In *International Conference on NETwork Games COntrol and oPtimization* (pp. 125–135). Springer International Publishing.

13. **Debashri Roy**, Tathagata Mukherjee, Mainak Chatterjee, & Eduardo Pasiliao. (2019a, December). Defense against PUE Attacks in DSA Networks using GAN based Learning. In *IEEE Global Communications Conference (GLOBECOM)* (pp. 1–6). doi:`10.1109/GLOBECOM38437.2019.9014014`

14. **Debashri Roy**, Tathagata Mukherjee, Mainak Chatterjee, & Eduardo Pasiliao. (2019b, April). Detection of Rogue RF Transmitters using Generative Adversarial Nets. In *IEEE Wireless Communications and Networking Conference (WCNC)* (pp. 1–7). doi:`10.1109/WCNC.2019.8885548`

15. **Debashri Roy**, Tathagata Mukherjee, Mainak Chatterjee, & Eduardo Pasiliao. (2019c, November). Primary User Activity Prediction in DSA Networks Using Recurrent Structures. In *IEEE International*

*Symposium on Dynamic Spectrum Access Networks (DySPAN)* (pp. 1–10). doi:10.1109/DySPAN.2019.8935716

16. **Debashri Roy**, Tathagata Mukherjee, Mainak Chatterjee, & Eduardo Pasiliao. (2019d, December). RF Transmitter Fingerprinting Exploiting Spatio-temporal Properties in Raw Signal Data. In *IEEE International Conference on Machine Learning and Applications (ICMLA)* (pp. 89–96). doi:10.1109/ICMLA.2019.00023

17. **Debashri Roy**, Tathagata Mukherjee, Mainak Chatterjee, & Eduardo Pasiliao. (2018, November). Adaptive Video Encoding and Dynamic Channel Access for Real-time Streaming over SDRs. In *IEEE International Performance Computing and Communications Conference (IPCCC)* (pp. 1–9). [Best Paper Runner-up Award]. doi:10.1109/PCCC.2018.8710795

18. **Debashri Roy**, Prasun Ghosal, & Saraju P. Mohanty. (2014, July). FuzzRoute: A Method for Thermally Efficient Congestion Free Global Routing in 3D ICs. In *IEEE Computer Society Annual Symposium on VLSI (ISVLSI)* (pp. 71–76). doi:10.1109/ISVLSI.2014.52

19. **Debashri Roy** & Prasun Ghosal. (2013, July). A Fuzzified Approach Towards Global Routing in VLSI Layout Design. In *IEEE International Conference on Fuzzy Systems (FUZZ-IEEE)* (pp. 1–8). doi:10.1109/FUZZ-IEEE.2013.6622477

## Book Chapters

1. **Debashri Roy**, Tathagata Mukherjee, & Eduardo Pasiliao. (2021). Exploiting Spatio-temporal Correlation in RF Data using Deep Learning. In *Deep Learning Applications, Volume 2* (pp. 143–172). Springer. doi:10.1007/978-981-15-6759-9_7

2. Chandan Bandyopadhyay, Shalini Parekh, **Debashri Roy**, & Hafizur Rahaman. (2020). Improving the Designs of ESOP-Based Reversible Circuits. In *Design and Testing of Reversible Logic* (pp. 49–64). doi:10.1007/978-981-13-8821-7_4

## Patents Filed

1. **Debashri Roy**, Tathagata Mukherjee, Mainak Chatterjee, & Eduardo Pasiliao. (U.S. Patent 2020, March). Transmitter Identification Using Adversarial Networks and IQ Data. Status: Provisional Patent Application (62/993,748).

2. **Debashri Roy**, Tathagata Mukherjee, Mainak Chatterjee, Erik Blasch, & Eduardo Pasiliao. (U.S. Patent 2020, March). Adversarial Learning for RF Transmitter Identification and Classification. Status: Provisional Patent Application (62/993,751).

3. Kaushik Chowdhury & **Debashri Roy**. (U.S. Patent 2022, February). FLASH: Federated Learning for Automated Selection of High-band mmWave Sectors. Status: Provisional Patent Application (63/314,336).

4. Kaushik Chowdhury & **Debashri Roy**. (U.S. Patent 2023, January). System for Software-Based Emulation of Wireless Communication Environments for Autonomous Vehicles. Status: Provisional Patent Application (63/441,175).

5. Tathagata Mukherjee, Eduardo Pasiliao, **Debashri Roy**, Alec Riden, & Jared Paquet. (U.S. Patent 2020, November). GANSAT: A GAN and SATellite Constellation Signal-based Framework for Detecting GPS Spoofers. Status: Provisional Patent Application (63/086, 126).

## Submitted Articles

1. Batool Salehi, **Debashri Roy**, Mark Eisen, Amit Baxi, Dave Cavalcanti, & Kaushik Chowdhury. (2023). DARWIN: Digital Twin Assisted Robot Navigation and WIreless Network Management. In *IEEE Transactions on Mobile Computing*. Submitted 10/20/23.

2. Jerry Gu, Suyash Pradhan, Utku Demir, **Debashri Roy**, & Kaushik Chowdhury. (2023). SMART: Sim2Real Meta-Learning-based Training for mmWave Beam Selection in V2X Networks. In *IEEE Transactions on Mobile Computing*. Submitted 12/18/23.

3. Batool Salehi, **Debashri Roy**, Jerry Gu, Chris Dick, & Kaushik Chowdhury. (2022). FLASH-and-Prune: Federated Learning for Automated Selection of High-band mmWave Sectors using Model Pruning. In *IEEE Transactions on Mobile Computing*. Submitted 08/10/22.

# Miscellaneous Experiences

## Editorial Board

2022-cur    ▮   Area Editor in Elsevier Computer Communications journal (IF: 3.167).

2021-cur    ▮   Associate Editor in Elsevier Software Impact journal.

2024-cur    ▮   Associate Editor in Tsinghua Science and Technology journal.

## Organizing Committee

2025    ▮   Publicity Co-chair at IEEE Consumer Communications & Networking Conference (CCNC).

2024    ▮   Unclassified Technical Program Co-chair at IEEE Military Communications Conference (MILCOM).

       ▮   PhD Forum Co-chair at IEEE International Conference on Smart Computing (SMART-COMP).

       ▮   Publication Chair at IEEE International Symposium on Dynamic Spectrum Access Networks (DySPAN).

       ▮   Publicity Co-chair at IEEE Consumer Communications & Networking Conference (CCNC).

2023    ▮   EDAS Chair at IEEE Military Communications Conference (MILCOM).

       ▮   Track Co-chair at IEEE International Conference on Mobility, Sensing and Networking (MSN).

       ▮   Publicity Co-chair at IEEE Consumer Communications & Networking Conference (CCNC).

       ▮   Session Chair at IEEE International Conference on Computer Communications (INFOCOM).

2022    ▮   Publicity Co-chair at IEEE Consumer Communications & Networking Conference (CCNC).

2021    ▮   Member of 'Women in AI' panel at the NSF AI Edge Institute.

       ▮   Web Chair at IEEE International Symposium on Dynamic Spectrum Access Networks (DySPAN).

       ▮   Session Chair at IEEE International Conference on Computer Communications (INFOCOM).

       ▮   Poster Co-chair at IEEE International Symposium on Local and Metropolitan Area Networks (LANMAN).

2019    ▮   Member of Graduate Grade Appeal Committee, University of Central Florida.

## Panels

2024    ▮   Reviewer for National Science Foundation 'CCF: Communications and Information Foundations (CIF)' program, March, 2024.

       ▮   Panelist on the topic of "The Graduate School Experience" at the OurCS@DFW event, February, 2024.

## Board Member

2023    ▮   'Vice Chair' at AI/ML Section SIG IEEE Technical Committee on Cognitive Networks.

2022    ▮   'Mentoring Co-Chair' at IEEE ComSoc N2Women Board.

       ▮   Member of 'Women in AI and Networking' Panel in AI Edge Institute.

## TPC Member

MobiHoc 22-24    ▮   In ACM International Symposium on Theory, Algorithmic Foundations, and Protocol Design for Mobile Networks and Mobile Computing.

LCN 24    ▮   In IEEE Conference on Local Computer Networks (LCN).

# Miscellaneous Experiences (continued)

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| ICC 24 | ▪ In 'Cognitive Radio & AI-Enabled Networks' at IEEE International Conference on Communications. |
| | ▪ In Workshop on 'Next Generation Spectrum Sharing Technology' at IEEE International Conference on Communications. |
| DCOSS-IoT 24 | ▪ In IEEE Conference on Distributed Computing in Smart Systems and the Internet of Things. |
| MILCOM 23 | ▪ IEEE Military Communications Conference. |
| ICC 21-24 | ▪ In 'Mobile and Wireless Networks Symposium' at IEEE International Conference on Communications. |
| CCNC 21-24 | ▪ In IEEE 'Consumer Communications & Networking Conference'. |
| ICDCS 22-23 | ▪ In 'Internet of Things and Cyber Physical Systems' at IEEE International Conference on Distributed Computing Systems. |
| LANMAN 22-24 | ▪ In IEEE International Symposium on Local and Metropolitan Area Networks. |
| VTC 22-23 | ▪ In various tracks at IEEE 95th Vehicular Technology Conference. |
| ICCCN 22-21 | ▪ In 30th IEEE 'International Conference on Computer Communications and Networks'. |
| DySPAN 21 | ▪ In IEEE International Symposium on Dynamic Spectrum Access Networks. |
| CCGrid 21-22 | ▪ In 'Serverless To sErvE moRe at Scale' workshop at ACM CCGrid. |

## Reviewer

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| Journal | ▪ IEEE Journal on Selected Areas in Communications, IEEE Transactions on Communications, IEEE Transactions on Wireless Communications, IEEE Transactions on Networking, IEEE Transactions on Mobile Computing, IEEE Transactions on Vehicular Technology, IEEE Transactions on Information Forensics & Security, IEEE Transactions on Cognitive Communications and Networking, IEEE Transactions on Intelligent Transportation Systems, IEEE Transactions on Industrial Informatics, IEEE Internet of Things Magazine, IEEE Communications Magazine, IEEE Communications Letters, IEEE Networking Letters, Elsevier Pervasive and Mobile Computing, Elsevier Computer Communications, Elsevier Computational and Structural Biotechnology. |
| Conference | ▪ IEEE INFOCOM 21, Wi-DroIT 20, IEEE ICC 20, IEEE TSP 20, ICDCN 20, IEEE DySPAN 19, ACM MMSYS 19, ACM NOSSDAV 18, 19, ACM SIGMM 17, IEEE ISVLSI 14, 15. |

## Tutorial

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| ACMSE 22 | ▪ Practical Use of SDR for Machine Learning in RF Environments. |

## Technical Talks

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| WiCyS 22 | ▪ Invited talk in Women in CyberSecurity organization. |
| AI-EDGE 22 | ▪ Invited paenslist in NSF AI-EDGE Institution summer internship program. |
| ICMLA 19 | ▪ RF Transmitter Fingerprinting Exploiting Spatio-temporal Properties in Raw Signal Data. |
| DySPAN 19 | ▪ Primary User Activity Prediction in DSA Networks Using Recurrent Structures. |
| IPCCC 18 | ▪ Adaptive Video Encoding and Dynamic Channel Access for Real-time Streaming over SDRs. |
| GRCon 18 | ▪ GNURadio Support for Real-time Video Streaming over a DSA Network. |
| FUZZ IEEE 13 | ▪ A Fuzzified Approach Towards Global Routing in VLSI Layout Design. |

## Mentorships

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| 08/23 - cur | ▪ Mentoring 3 PhD students, 1 MS students, and 7 undergraduate students director of Transformative Wireless System and Technology (TWiST) Lab, The University of Texas Arlington, USA. |

## Miscellaneous Experiences (continued)

07/20 - 08/23    Mentored 1 postdoctoral fellow, 10 PhD students, and 3 MS students at Next GEneration NEtworks and SYStems Lab, Northeastern University, USA.

08/21 - 12/21    Mentored one minority undergraduate student as part of WeSupport Tier 2 mentorship program, Northeastern University, USA.

08/20 - 12/20    Mentored 'NU Huskies' team (ranked **3rd**) in ITU AI/ML in 5G Challenge ['Beamselection' track], Northeastern University, USA.

01/20 - 06/20    Mentored 3 graduate students from University of Alabama, Huntsville, USA.

01/10 - 04/19    Mentored 2 undergraduate students in L.E.A.R.N Undergraduate Research Program in University of Central Florida.

Summer 18, 19    Mentored 2 graduate summer interns in University of Florida Research and Engineering Education Facility. Shalimar, USA.

## PhD Dissertation Committee

2023-cur    Sanjvni Rana, CSE Department, UTA, Supervisor: Gautam Das.

2024-cur    Hoang Vuong, CSE Department, UTA, Supervisor: Cesar Torres.

## Teaching Interests

Graduate    Applied Machine Learning, Advanced Computer Networking, Wireless Communication, Futuristic Networks.

Undergraduate    Computer Networks, Communication Systems, Object Oriented Programming, Operating Systems.