Suman Bhunia

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Professional Experience

2020–current **Assistant Professor**, *Department of Computer Science and Software Engineering*.
Miami University, Oxford, Ohio USA

2018–2020 **Postdoctoral Researcher**, *Dept. of Computer Science and Engineering*.
Texas A&M University, College Station, USA

2017–2018 **Postdoctoral Scholar**, *Department of Computer Science*.
University of California, Davis, USA

2013–2017 **Research Assistant & Instructor**, *Department of Computer Science and Engineering*.
University of Nevada, Reno, USA

2011–2013 **Research Assistant & Adjunct Lecturer**, *Department of Computer Science*.
City University of New York, New York, USA

2010–2011 **Senior Research Fellow**, *Department of Electronics and Telecommunication Engineering*.
Jadavpur University, Kolkata, India

Education

2013–present **Ph.D. in Computer Science**, *University of Nevada, Reno, USA*, *Thesis:* Defense Against Intelligent Attacker in Cognitive Radio Networks, GPA:4.0/4.0.
Committee: Shamik Sengupta, Murat Yuksel, Mehmet Gunes, Sergiu Dascalu, Sankar Mukhopadhyay

2008–2010 **Masters of Technology in Distributed and Mobile Computing**, *Jadavpur University, Kolkata, India*, *Thesis:* Performance Evaluation of WiMAX Network in Aspect of Modulation and Coding Schemes and Hand-off using OPNET, GPA:8.39/10.
Committee: Dr. Iti Saha Misra and Dr. Salil K. Sanyal

2004–2008 **Bachelor of Technology in Electronics and Communication Engineering**, *West Bengal University of Technology*, Kolkata, India, GPA:8.36/10.

Awards and Fellowships

2018 Outstanding Thesis award from the Department of Computer Science, UNR

2017 Outstanding Graduating Graduate Student, UNR (Awarded only one student in the University)

2016 Outstanding graduate student of Department of Computer Science, UNR

2011–2013 Two year City University of New york science fellowship

2010 Paper entitled "Study of OPNET and performance evaluation of WiMAX network under various terrain conditions in OPNET" won the best student paper award at the National Conference on Microwave and Communication NCMicroCom-2010

2008–2010 Two year full scholarship for M.Tech programme for qualifying Graduate Aptitude Test in Engineering, GATE (All-India basis)

Research Interest

Security Network security, malicious node sensing/detection, cyber-physical security, wireless honeypot, jamming attack, spectrum fingerprinting, IoT Security

Wireless 6G, Cognitive radio, dynamic spectrum access (DSA), cross-layer optimization, ad hoc, unmanned autonomous systems (UAS)

Networking QoS and resource management, Distributed Edge Computing, end-to-end performance, testbed implementation

Courses Taught

CSE 470/570 Ethical Hacking (at Miami University)
CSE 467/567 Computer and Network Security (at Miami University)
CSE 271 Object-Oriented Programming using Java (at Miami University)
CSE 274 Data Abstraction and Data Structures (at Miami University)
CS 446/646 Principles of Computer Operating Systems, (at University of Nevada, Reno)
CS 201 Digital Design Laboratory (at University of Nevada, Reno)
CS 332 Operating System Laboratory (at City College of New York)
CS 102 Introduction to Programming (at City College of New York)

Patent Invention Disclosure

[1] M. R. Khan, M. Yuksel, S. Bhunia, and S. Sengupta, *In-Band Line-of-Sight Discovery for Directional Full-Duplex Transceivers*, U.S. Provisional Patent Application 62/338,953

Peer Reviewed Publications

Journals

[1] A. Altaweel, R. Stoleru, G. Gu, A. K. Maity, and **S. Bhunia**, "On Detecting Route Hijacking Attack in Opportunistic Mobile Networks," *IEEE Transactions on Dependable and Secure Computing*, 2022, (Impact Factor: 6.8).

[2] A. Altaweel, C. Yang, R. Stoleru, **S. Bhunia**, M. Sagor, M. Maurice, and R. Blalock, "RSock: A resilient routing protocol for mobile Fog/Edge networks," *Ad Hoc Networks*, vol. 134, p. 102926, 2022, (Impact Factor: 4.8).

[3] **S. Bhunia**, M. Khan, M. Yuksel, and S. Sengupta, "In-band LOS discovery using highly directional transceivers," *Ad Hoc Networks*, vol. 91, p. 101875, 2019, (Impact Factor: 4.8).

[4] M. Khan, **S. Bhunia**, M. Yuksel, and L. Kane, "Line-of-Sight Discovery in 3D Using Highly Directional Transceivers," *IEEE Transactions on Mobile Computing*, 2019, (Impact Factor: 6.1).

[5] **S. Bhunia**, E. Miles, S. Sengupta, and F. Vazquez-Abad, "CR-Honeynet: A Cognitive Radio Learning and Decoy Based Sustenance Mechanism to Avoid Intelligent Jammer," *IEEE Transactions on Cognitive Communications and Networking*, vol. 4, no. 3, pp. 567–581, 2018, (Impact Factor: 6.4).

[6] **S. Bhunia**, P. A. Regis, and S. Sengupta, "Distributed Adaptive Beam Nulling to Survive Against Jamming in 3D UAV Mesh Networks," *Elsevier Computer Networks*, vol. 137, pp. 83–97, 2018, (Impact Factor: 5.5).

[7] S. Mneimneh, **S. Bhunia**, S. Sengupta, and F. Vazquez-Abad, "A game-theoretic and stochastic survivability mechanism against induced attacks in cognitive radio networks," *Elsevier Pervasive and Mobile Computing*, vol. 40, pp. 577–592, 2017, (Impact Factor: 3.8).

[8] **S. Bhunia**, V. Behzadan, P. A. Regis, and S. Sengupta, "Adaptive Beam Nulling in Multihop Ad hoc Networks Against a Jammer in Motion," *Elsevier Computer Networks*, vol. 109, pp.

50 – 66, 2016, special issue on Recent Advances in Physical-Layer Security (Impact Factor: 3.0).

[9] **S. Bhunia**, S. Sengupta, and F. Vázquez-Abad, "Performance Analysis of CR-honeynet to Prevent Jamming Attack Through Stochastic Modeling," *Elsevier Pervasive and Mobile Computing*, vol. 21, pp. 133–149, 2015, (Impact Factor: 3.8).

[10] T. Chakraborty, A. Mukhopadhyay, **S. Bhunia**, I. Misra, and S. Sanyal, "An Optimization Technique for Improved VoIP Performance over Wireless LAN," *Journal of Networks*, vol. 7, no. 3, pp. 480–493, 2012, (Impact Factor: 1.2).

[11] **S. Bhunia**, I. Misra, S. Sanyal, and A. Kundu, "Performance study of mobile WiMAX network with changing scenarios under different modulation and coding," *Wiley International Journal of Communication Systems*, vol. 24, no. 8, pp. 1087–1104, 2011, (Impact Factor: 1.9).

[12] A. Kundu, I. Misra, S. Sanyal, and **S. Bhunia**, "VoIP performance over broadband wireless networks under static and mobile environments," *International Journal of Wireless & Mobile Networks (IJWMN) Vol*, vol. 2, no. 4, 2010, (20 citations).

Conference Proceedings

[1] S. Bhunia, R. Stoleru, A. Haroon, M. Sagor, A. Altaweel, M. Chao, M. K. Maurice, and R. Blalock, "EdgeKeeper: resilient and lightweight coordination for mobile edge clouds," in *2022 IEEE 19th International Conference on Mobile Ad Hoc and Smart Systems (MASS) (IEEE MASS 2022)*, Denver, USA, Oct. 2022, (acceptance rate=29.5%).

[2] M. Sagor, R. Stoleru, A. Haroon, S. Bhunia, M. Chao, A. Altaweel, M. K. Maurice, and R. Blalock, "R-Drive: resilient data storage and sharing for mobile edge clouds," in *2022 IEEE 19th International Conference on Mobile Ad Hoc and Smart Systems (MASS) (IEEE MASS 2022)*, Denver, USA, Oct. 2022, (acceptance rate=29.5%).

[3] A. Prentosito, M. Skoczen, L. Kahrs, and S. Bhunia, "Case study on a session hijacking attack: The 2021 cvs health data breach," in *Mobile Web and Intelligent Information Systems (MobiWis)*, 2022, pp. 93–105, (acceptance rate=35%).

[4] J. Qian, Z. Gan, J. Zhang, and S. Bhunia, "Analyzing socialarks data leak-a brute force web login attack," in *2022 4th International Conference on Computer Communication and the Internet (ICCCI)*. IEEE, 2022, pp. 21–27.

[5] J. Nadjar, Y. Liu, J. Salinas, and S. Bhunia, "A case study on the multi-vector data breach on astoria," in *2022 4th International Conference on Computer Communication and the Internet (ICCCI)*. IEEE, 2022, pp. 51–57.

[6] L. Rizkallah, N. Potter, K. Reed, D. Reynolds, M. Salman, and S. Bhunia, "Red toad, blue toad, hacked toad?" in *2022 IEEE World AI IoT Congress (AIIoT)*. IEEE, 2022, pp. 379–386, (acceptance rate=41.3%).

[7] C. Faircloth, G. Hartzell, N. Callahan, and S. Bhunia, "A study on brute force attack on t-mobile leading to sim-hijacking and identity-theft," in *2022 IEEE World AI IoT Congress (AIIoT)*. IEEE, 2022, pp. 501–507, (acceptance rate=41.3%).

[8] D. Redding, J. Ang, and S. Bhunia, "A case study of massive API scrapping: Parler data breach after the capitol riot," in *7th International Conference on Smart and Sustainable Technologies 2022 (SpliTech 2022)*, Split, Bol, Croatia, Jul. 2022, (acceptance rate=48%).

[9] A. M. Pitney, S. Penrod, M. Foraker, and S. Bhunia, "A systematic review of 2021 microsoft exchange data breach exploiting multiple vulnerabilities," in *7th International Conference on Smart and Sustainable Technologies 2022 (SpliTech 2022)*, Split, Bol, Croatia, Jul. 2022, (acceptance rate=48%).

[10] K. Kiesel, T. G. Deep, A. Flaherty, and S. Bhunia, "Analyzing Multi-Vector ransomware attack on accellion file transfer appliance server," in *7th International Conference on Smart and Sustainable Technologies 2022 (SpliTech 2022)*, Split, Bol, Croatia, Jul. 2022, (acceptance rate=48%).

[11] E. Caroscio, J. Paul, J. Murray, and **S. Bhunia**, "Analyzing the ransomware attack on dc metropolitan police department by babuk," in *IEEE International Systems Conference (SysCon)*, 2022, (acceptance rate=67.1%).

[12] J. Vazquez-Estrada, **S. Bhunia**, M. Khan, Y. Qian, and N. T. Huu, "Neighbor discovery in a lora assisted multi-transceiver free-space-optical network," in *IEEE Wireless Communications and Networking Conference (WCNC)*, 2022.

[13] P. A. Regis, **S. Bhunia**, A. N. Patra, and S. Sengupta, "Deep-learning assisted cross-layer routing in multi-hop wireless network," in *2021 IEEE 7th World Forum on Internet of Things (WF-IoT)*. IEEE, 2021, pp. 35–39.

[14] L. Sterle and **S. Bhunia**, "On solarwinds orion platform security breach," in *2021 IEEE SmartWorld, Ubiquitous Intelligence & Computing, Advanced & Trusted Computing, Scalable Computing & Communications, Internet of People and Smart City Innovation (SmartWorld/SCALCOM/UIC/ATC/IOP/SCI)*. IEEE, 2021, pp. 636–641.

[15] B. Gibson, S. Townes, D. Lewis, and S. Bhunia, "Vulnerability in massive api scraping: 2021 linkedin data breach," in *2021 International Conference on Computational Science and Computational Intelligence (CSCI)*. IEEE, 2021, pp. 777–782, (acceptance rate=24%).

[16] J. Huddleston, P. Ji, S. Bhunia, and J. Cogan, "How vmware exploits contributed to solarwinds supply-chain attack," in *2021 International Conference on Computational Science and Computational Intelligence (CSCI)*. IEEE, 2021, pp. 760–765, (acceptance rate=24%).

[17] M. H. N. Ba, J. Bennett, M. Gallagher, and S. Bhunia, "A case study of credential stuffing attack: Canva data breach," in *2021 International Conference on Computational Science and Computational Intelligence (CSCI)*. IEEE, 2021, pp. 735–740, (acceptance rate=24%).

[18] J. Rudie, Z. Katz, S. Kuhbander, and S. Bhunia, "Technical analysis of the nso group's pegasus spyware," in *2021 International Conference on Computational Science and Computational Intelligence (CSCI)*. IEEE, 2021, pp. 747–752, (acceptance rate=24%).

[19] A. Murthy, C. Green, R. Stoleru, **S. Bhunia**, C. Swanson, and T. Chaspari, "Machine learning-based irrigation control optimization," in *Proceedings of the 6th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation*, 2019, pp. 213–222.

[20] **S. Bhunia** and S. Sengupta, "Implementation of interface agility for duplex dynamic spectrum access radio using usrp," in *Military Communications Conference (MILCOM)*. doi: 10.1109/MILCOM.2017.8170844, 2017, pp. 762–767.

[21] S. Bhunia and S. Sengupta, "Distributed Adaptive Beam Nulling to Mitigate Jamming in 3D UAV Mesh Networks," in *2017 International Conference on Computing, Networking and Communications (ICNC)*. IEEE, 2017, (acceptance rate 29%).

[22] P. A. Regis, **S. Bhunia**, and S. Sengupta, "Enhancing Performance and Longevity of Multi-radio Multi-channel HetNets through Dynamic Path-assignment," in *2017 International Conference on Computing, Networking and Communications (ICNC)*. IEEE, 2017, (acceptance rate 29%).

[23] **S. Bhunia**, M. Khan, S. Sengupta, and M. Yuksel, "LOS Discovery for Highly Directional Full Duplex RF/FSO Transceivers," in *Military Communications Conference (MILCOM)*, 2016.

[24] M. Khan, **S. Bhunia**, M. Yuksel, and S. Sengupta, "LOS Discovery in 3D for Highly Directional Transceivers," in *Military Communications Conference (MILCOM)*, 2016.

[25] P. A. Regis, **S. Bhunia**, and S. Sengupta, "Implementation of 3D Obstacle Compliant Mobility Models for UAV Networks in Ns-3," in *Proceedings of the Workshop on Ns-3*, ser. WNS3 '16, 2016, pp. 124–131.

[26] **S. Bhunia**, V. Behzadan, and S. Sengupta, "Enhancement of spectrum utilization in non-contiguous DSA with online defragmentation," in *Military Communications Conference, MILCOM*. IEEE, 2015, pp. 432–437.

[27] **S. Bhunia**, V. Behzadan, P. Regis, and S. Sengupta, "Performance of Adaptive Beam Nulling in Multihop Ad-Hoc Networks under Jamming," in *High Performance Computing and Communications (HPCC), 2015 IEEE 7th International Symposium on Cyberspace Safety and Security (CSS), 2015 IEEE 12th International Conferen on Embedded Software and Systems (ICESS), 2015 IEEE 17th International Conference on*. IEEE, 2015, pp. 1236–1241, (acceptance rate=30%).

[28] **S. Bhunia**, S. Sengupta, and F. Vazquez-Abad, "CR-Honeynet: A Learning & Decoy Based Sustenance Mechanism against Jamming Attack in CRN," in *Military Communications Conference (MILCOM), 2014 IEEE*. IEEE, 2014, pp. 1173–1180, (7 citations).

[29] **S. Bhunia**, X. Su, S. Sengupta, and F. Vázquez-Abad, "Stochastic model for Cognitive Radio Networks under jamming attacks and honeypot-based prevention," in 15^{th} *International Conference on Distributed Computing and Networking (ICDCN)*. Springer, Jan 2014, (10 citations).

[30] S. Das, S. Barman, and **S. Bhunia**, "Performance Analysis of IEEE 802.11 Rate Adaptation Algorithms Categorized Under Rate Controlling Parameters," in *Proceedings of the 2014 International Conference on Information and Communication Technology for Competitive Strategies*. ACM, 2014, p. 8.

[31] **S. Bhunia** and S. Sengupta, "Feasibility of channel hopping in jamming attack," *IEEE TCSIM Newsletter*, no. 19, pp. 2–5, 2013.

[32] E. Troja, K. Ezirim, and **S. Bhunia**, "Route aware dynamic channel scheduling and selection for multi-hop cognitive radio networks," in *IEEE* 78^{th} *Vehicular Technology Conference, VTC 2013-Fall*. IEEE, 2-5 September 2013.

[33] A. Mukhopadhyay, T. Chakraborty, **S. Bhunia**, I. Misra, and S. Sanyal, "Study of enhanced voip performance under congested wireless network scenarios," in *International Conference on Communication Systems and Networks (COMSNETS)*. IEEE, 2011, (9 citations).

[34] T. Chakraborty, A. Mukhopadhyay, **S. Bhunia**, I. Misra, and S. Sanyal, "Analysis and enhancement of qos in cognitive radio network for efficient voip performance," in *World Congress on Information and Communication Technologies (WICT)*. IEEE, 2011.

[35] A. Mukhopadhyay, T. Chakraborty, **S. Bhunia**, I. Misra, and S. Sanyal, "An adaptive jitter buffer playout algorithm for enhanced voip performance," in *International Conference on Advances in Computing and Information Technology (ACITY)*. Springer, 2011.

[36] T. Chakraborty, A. Mukhopadhyay, **S. Bhunia**, I. Misra, and S. Sanyal, "Optimizing voip call in diverse network scenarios using state-space search technique," in *International Conference on Advances in Computing and Information Technology (ACITY)*. Springer, 2011, pp. 231–242.

[37] A. Kundu, **S. Bhunia**, I. Misra, and S. Sanyal, "Comparison of voip performance over wimax, wlan and wimax-wlan integrated network using opnet," in *International Conference on Wireless and Mobile Networks*. Springer, 2010.

[38] **S. Bhunia**, A. Kundu, I. Misra, and S. Sanyal, "Reducing hand-off latency in wimax network using cross layer information," in *International Conference on Advances in Computer Engineering (ACE)*. IEEE, 2010, pp. 346–348.

Short Papers and Posters

[1] **S. Bhunia**, R. Stoleru, A. Haroon, M. Sagor, A. Altaweel, M. Chao, M. Maurice, and R. Blalock, "Poster: Edgekeeper–resilient and lightweight coordination for mobile edge computing systems," in *20th ACM International Conference on Mobile Systems, Applications, and Services (ACM MobiSys)*, 2022.

[2] J. Vazquez-Estrada, **S. Bhunia**, M. Khan, Y. Qian, and N. T. Huu, "Neighbor discovery in a multi-transceiver free-space-optical ad hoc network," in *2022 IEEE 19th Annual Consumer Communications & Networking Conference (CCNC)*. IEEE, 2022, pp. 509–510.

Research Grant Proposal Preparation

TAMU Prepared a part of the proposal, "Deploying Defenses for Cellular Networks Using the AWARE Testbed", submitted to DHS in 2019

TAMU Prepared a part of the proposal, "DAAR: Drone-Augmented Augmented Reality for Cyber-Human Physical Systems", submitted to NSF CPS in 2019

UC Davis Prepared a part of the proposal, "Building Low-Power Wide Area Networking Systems for Smart City IoT Applications", submitted to NSF ICE-T in 2018

UNR Helped my advisor writing in a proposal, "Efficient Spectrum Access Utilizing Unmanned Autonomous Systems", submitted to NSF EARS in 2014

Research Projects

2018-2020 **Secured Edge Computing for Disaster Response Network**, *Postdoctoral research*.
- Design EdgeKeeper- A distributed coordination scheme for Edge Network to facilitate Security, Naming and Service discovery in Opportunistic network.
- Implementing EdgeKeeper using Java and Android that utilizes Zookeeper, GNS, etc.

2017–2018 **Security in cyber-physical system**, *Postdoctoral research*.
- Designed BF-IoT - a Wireless fingerprint-based authentication mechanism in IoT.
- Securing privacy leakage in Bluetooth based IoT network.
- Design authentication mechanisms in Voice based personal assistant such as Alexa.

2013-2017 **Jamming Avoidance in Dynamic Spectrum Access Networks**, *PhD Dissertation*.
- Explored honeynet-based defense mechanism for cognitive radio networks under jamming attack.
- Designed stochastic learning mechanism to perceive attacker's strategy by wireless fingerprint.
- Formulated queue model with fixed vacation to analyze traffic behavior of cognitive radios.

The effectiveness of the proposed mechanism has been evaluated on a state-of-the-art high spectrum agile radio testbed comprising several USRP software defined radios which are controlled using open source GNURadio.

2015-present **Neighbor Discovery in Directional Communication**, *Lead Student*.
- Proposed line-of-sight (LOS) discovery methods for mobile nodes with full directional transceivers. Works both for directional RF and free-space-optics (FSO) networks.
- Modified helix equations to optimize neighbor discovery scanning in 3D.

This work has been evaluated with a prototype built with an off-the-shelf robot car, IR transceivers and Raspberry Pi as the controller. In addition, one patent application has been filed in collaboration with M Khan and Dr. M Yuksel.

2015-2016 **Jamming Avoidance Multihop 3D UAS Mesh Networks**, *Lead Student*.
- Examined the performance of adaptive beam nulling as a mitigation technique against jamming attacks in multihop ad hoc networks.
- Proposed Kalman filter based tracking model to predict movement of the jammer with discrete DoA estimation; and optimized the beam null region based on stochastic model.
- Built 3D mobility model for UAVs in ns3.

2010-2011 **Enhance Performance of Voice Service for Congested Networks**, *Research Fellow*.
- Proposed optimization mechanism for SIP based VoIP service over wireless networks.
- Proposed effective adaptive jitter playout buffer algorithm for real-time application.
- Built MAC layer for cognitive radio in OPNET using Proto-C.
- Designed cross Layer optimization model of VoIP end-to-end QoS over cognitive radio.

2009-2010 **Real Time Traffic over WiMAX**, *Masters Dissertation*.
- Evaluated performance of WiMAX under mobility, pathloss models, traffic type and scheduling.
- Investigated VoIP service in WiMAX, WiFi and integrated WiMAX-WiFi networks.
- Reduced hand-off delay for WiMAX network by integrating MAC and mobile-IP.

Testbed Development and Demonstration

2015-present **Dynamic Spectrum Access Testbed with GNURadio**.
- Implemented frequency agile cognitive radio testbed using USRP, GNU Radio.
- Inspected performance for channel aggregation, fragmentation, jamming attacks etc.
- Implemented full duplex transmission using single radio device.
- Implemented dynamic spectrum selection in multi hop mesh networks.

2013-2014 **Mobile Frequency agile Testbed**.
- Built on top of Atheros chips and ath5k as the WiFi driver.
- Investigated pseudo random channel hopping to mitigate jamming.

Student Advisement

Masters Student Thesis Advising

2022–2023 **Jesica Vasquez**, *MS student*, Miami University.
Topic: Secure Neighbor Discovery Protocol for Free Space Optical Communication Netowrk

2022–2023 **Nick Perry**, *MS student*, Miami University.
Topic: Crossfire Attack Detection in 6G Mobile EdgeComputing

2021–2023 **Monu Chaudhary**, *MS student*, Miami University.
Topic: NFT Based Fan Card For Athelets

2020–2022 **Angela Famera**, *MS student*, Miami University.
Topic: Bio-Inspired Botnet Detection

Undergrad Student Researcher

2021–2022 Sam Kuhbander
2022–2022 Daniel Cruz
2020–2021 Sara Grimes
2020–2021 Nam Hoang
2021–2011 Huy Nguyen
2020–2021 Yicheng Qian
2020–2021 Ryan Schuerkamp
2020–2021 Tom Deep

Senior Capstone projects

2022–2023 Close bid Auction using Blockchain for Ambulance Hiring
2022–2023 Peer to Peer Review System using Blockchain
2021–2022 Blockchain based First Responder Application
2020–2021 Distributed Storage for First Responders Network
2020–2021 Digital Triage Management Application

International Professional Activities

Session Chair at International Conferences

2022 19th IEEEAnnual Consumer Communications & Networking Conference (CCNC 2022), Las Vegas, USA, session: "WiP5: Autonomous vehicles"

2015 International Symposium on Cyberspace Safety and Security (IEEE CSS) 2015, New York, USA. Track - Active Defense Techniques and Systems

Member of Technical Program Committee

CCNC IEEE Consumer Communications & Networking Conference – 2021, 2022
ICDCN International Conference on Distributed Computing and Networking – 2022
MILCOM Military Communications Conference – 2017, 2018, 2019, 2021, 2022
ASONAM Advances in Social Networks Analysis and Mining – 2021
MASS IEEE International Conference on Mobile Ad-Hoc and Smart Systems – 2020
GameSec Conference on Decision and Game Theory for Security – 2017
ICIT International Conference on Information Technology – 2015, 2016

Selected Journal/Conference Reviewer

Journals Computer Communications (Elsevier), Physical Communication (Elsevier), Pervasive and Mobile Computing (Elsevier), Future Generation Computer Systems (Elsevier), International Journal of Communication Systems (Wiley), Wireless Communications and Mobile Computing (Wiley), International Journal of Distributed Sensor Networks (Hindawi)

Conferences IEEE INFOCOM, IEEE Globecom, IEEE ICC, IEEE MILCOM, ISCIT, IEEE WoWMoM

Leadership and Committee Experience

2021–present Advisor to Miami University Cybersecurity Club. Formed with students from my classes.
2021–present Member of Cybersecurity Committee at the department of CSE.
2014-2017 Elected thrice as a college of engineering representative at UNR Graduate Student Association.
2015-2017 Elected twice as the chair of the clubs and organizations committee of UNR GSA

2014-2017 Serving budget committee of UNR GSA

2014-2017 Serving judicial committee of UNR GSA

2014-2015 Founding vice president of Computer Science Graduate Student Club, UNR

2013-2015 Elected twice as the vice president of Indian Student Organization, UNR

References

PhD Advisor **Dr. Shamik Sengupta**, *Ralph E.& Rose A. Hoeper Professor and Executive Director of UNR Cybersecurity Center*, Department of Computer Science and Engineering, University of Nevada, Reno. `http://www.cse.unr.edu/~shamik/`.
Email: ssengupta@unr.edu, Tel: (775) 784-6953

Thesis Committee Member **Dr. Murat Yuksel**, *Associate Professor*, Department of Electrical and Computer Engineering, University of Central Florida (UCF), `http://www.ece.ucf.edu/~yuksem/`.
Email: murat.yuksel@ucf.edu, Tel: (407) 823-4181

Department Chair **Dr. Eric R. Bachmann**, *Professor*, Department of Computer Science and Software Engineering, Miami University, Ohio.
Email: bachmaer@miamioh.edu, Tel: (513) 529-0786

Collaborator **Dr. Arthur Carvalho**, *Dinesh & Ila Paliwal Innovation Chair & Associate Professor*, Department of Information Systems & Analytics, Miami University, `https://arthurcarvalho.info/`.
Email: carvalag@miamioh.edu, Tel: (513) 529-7162