Shamik Sengupta

Ralph E. & Rose A. Hoeper Professor
Executive Director, UNR Cybersecurity Center
Associate Professor, Computer Science & Engineering Department
IEEE Senior Member

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Professional Experience

- **Executive Director, (March 2017 - Present)**
  UNR Cybersecurity Center, University of Nevada, Reno
  Reno, Nevada

- **Associate Professor, (July 2017 - Present)**
  Department of Computer Science & Engineering, University of Nevada, Reno
  Reno, Nevada

- **Assistant Professor, (July 2013 - June 2017)**
  Department of Computer Science & Engineering, University of Nevada, Reno
  Reno, Nevada

- **Assistant Professor, (September 2009 - June 2013)**
  Department of Mathematics and Computer Science, John Jay College of Criminal Justice of the City University of New York
  Computer Science PhD Program, The Graduate Center, City University of New York
  New York, NY

- **Postdoctoral Researcher**, (Jan. 2008 - Aug. 2009)
  Department of Electrical and Computer Engineering, Stevens Institute of Technology
  Hoboken, NJ

- **Summer Research Intern**, Broadband Systems Solutions, OSS R&D (Summer 2007)
  C-COR, Beaverton, Oregon

- **Summer Research Intern**, Broadband and Mobile Networking Group (Summer 2005)
  NEC Research Labs, America Inc., Princeton, New Jersey

- **Graduate Research & Teaching Assistant**, (Fall 2003 - Fall 2007)
  School of Electrical Engineering & Computer Science, University of Central Florida, USA

Honors and Awards

- IEEE Senior Member, since 2020.

- Awarded **Ralph E. & Rose A. Hoeper Professorship Award**, 2019.

- Awarded **UNR College of Engineering?s Exceptional Achievement Award** in recognition of outstanding research contributions that have had a transformative impact on the College of Engineering, University of Nevada, Reno, 2018.

- Awarded University of Central Florida **Distinguished Alumnus Award**, Dept of Computer Engineering from University of Central Florida, 2018.

- Awarded **UNR CSE Department Best Researcher Award** from UNR, 2018.

- **Best Research Paper Award**, "Area-Optimized UAV Swarm Network for Search and Rescue Operations", In Proceedings of IEEE CCWC 2020.

- **Best Research Paper Award**, "Dynamic Deployment of UAV-Enabled Floating Access Points For Serving Hot Zones", In Proceedings of The International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS), 2017

- Awarded **UNR CSE Department Best Researcher Award** from UNR, 2016.

- **NSF CAREER** Research Award Grant (2012 - 2017)

- **NSF CICI** Research Award Grant (2018 - 2019)

- **NSF SATC** Research Award Grant (2015 - 2018)

- **NSF RET Site** Research Award Grant (2015 - 2018, 2019-2022)

- **NSF Capacity** Research Award Grant (2015 - 2018, 2017-2020)

- Invited **Visiting Summer Researcher** at Air Force Research Lab, Rome, NY (2014)

- Sengupta's paper on "SpiderRadio: A cognitive radio implementation using IEEE 802.11 components", in IEEE COMSOC BEST READINGS IN COGNITIVE RADIO.
  (http://www.comsoc.org/best-readings/topic/cognitive-radio)

- **"Salute to Scholars"** Honor, CUNY Chancellor's annual fall reception, 2011, 2012

- **Vice-Chair of Mobile Wireless Network (MobIG) special interest group** of the IEEE COMSOC Multimedia Communications Technical Committee

- **Best Research Paper Award**, "A game theoretic framework for distributed self-coexistence among IEEE 802.22 networks", IEEE GLOBECOM 2008

- **National Science Foundation (NSF) Student Travel Award** (2007) in the IEEE Dynamic Spectrum Access Networks (DySPAN) conference

- Nominated for Order of Pegasus award (2007) from School of Electrical Engineering & Computer Science, University of Central Florida

- **Graduate International Travel Award** (2004-2005, 2006-2007) from University of Central Florida

- **Summer Research Fellowship** (2006) from University of Central Florida

- **First-Class Honors** in B.E. from Jadavpur University, India

Educational Background

- **Ph.D. (Fall 2003 - Fall 2007) (CGPA 3.95/4.0)**
  School of Electrical Engineering and Computer Science, University of Central Florida
  Dissertation title: *An Economic Framework for Resource Management and Pricing in Wireless Networks with Competitive Service Providers* (Advisor: Prof. Mainak Chatterjee)

- **B.E. (First class/Hons.) (June 2002)**
  Department of Computer Science & Engineering, Jadavpur University, Calcutta, India

Research Grants (Funded)

1. **National Science Foundation (NSF) CICI Research Award**, " CICI: CE: Implementing CYBEX-P: Helping Organizations to Share with Privacy Preservation", Amount: $1,018,067; 2018 - 2020. (Role: **Principle Investigator**)

2. **National Science Foundation (NSF) CC* Research Award**, " CC*: Integration-Large: Robust and Predictable Network Infrastructure for Wide-Area Hybrid Sensor Networks", Amount: $998,568; 2020 - 2022. (Role: **Co-Principle Investigator**)

3. **National Science Foundation (NSF) CAREER Research Award**, "Survivability and Self-coexistence in the Battle of Cognitive Radio Network Societies", Amount: $388,113; 2012 - 2018. (Role: **Principle Investigator**)

4. **National Science Foundation (NSF) SATC Research Award** "Establishing market based mechanisms for CYBer security information EXchange (CYBEX)", Amount: $351,578; 2015 - 2019. (Role: **Principle Investigator**)

5. **National Science Foundation (NSF) RET Research Award**, " RET Site: Research Experiences in Cybersecurity for Nevada Teachers (RECNT)", Amount: $599,307; 2019 - 2022. (Role: **Principle Investigator**)

6. **National Science Foundation (NSF) Award**, " Longitudinal Injection of Interdisciplinary Cybersecurity Awareness into Engineering Curricula", Amount: $300,000; 2017 - 2020. (Role: **Principle Investigator**)

7. **National Science Foundation (NSF) REU Research Site Award**, " REU Site: Collaborative Human-Robot Interaction", Amount: $360,000; 2018 - 2021. (Role: **Co-Principle Investigator**)

8. **National Science Foundation (NSF) RET Research Award** "RET Site: Cyber Security Initiative for Nevada Teachers (CSINT)", Amount: $540,000; 2015 - 2019. (Role: **Principle Investigator**)

9. **National Science Foundation (NSF) Capacity Research Award** "Collaborative Research: Capacity building in Cybersecurity-literacy: An inter-disciplinary approach", Amount: $300,000; 2015 - 2017. (Role: **Principle Investigator**). (Collaboration between UNR and TMCC; UNR: $262,534; TMCC: $37,466)

10. **National Science Foundation (NSF) PFI Research Award**, "PFI:BIC: Enhanced Situational Awareness Using Unmanned Autonomous Systems for Disaster Remediation", Amount: $800,000; 2014 - 2017. (Role: Senior Personnel)

11. **US DoE/Mission Support & Test Services, LLC Award/contract**, "Analysis of Software Applications", Amount: $170,479; 2020 - 2021. (Role: Principle Investigator)

12. **US DoE/Mission Support & Test Services, LLC Award/contract**, "Analysis of Software Application", Amount: $33,797; 2019 - 2020L. (Role: Principle Investigator)

13. **Nokia**, "Prototype Implementation of IoT Networks - LTE and WAN Coexistence in Unlicensed Band", Amount: $25,000; 2015. (Role: **Principle Investigator**)

14. **UNR Grant**, UNR Differential Fee Grant Award: "Developing the Next Generation Cybersecurity Workforce at UNR through a Full Spectrum Cybersecurity Zone": Senior Information Security Engineer Position Amount: $113,900/year for 2 years; 2020-2022. (Role: Principle Investigator)

15. **UNR Grant**, UNR Differential Fee Grant Award: "Developing the Next Generation Cybersecurity Workforce at UNR through a Full Spectrum Cybersecurity Zone": Senior Information Security Engineer Position Amount: $118,800/year for 3 years; 2017-2020. (Role: Co-Principle Investigator)

16. **UNR Grant**, "Developing Classroom Infrastructure for Cybersecurity Education" Amount: $21,200; 2017. (Role: **Principle Investigator**)

17. **UNR Grant**, "Cybersecurity Operational Environment Development for Teaching and Training UNR Students" Amount: $50,200; 2016-2017. (Role: **Principle Investigator**)

18. **USAF, AFMC Air Force Research Laboratory, SUNY IT Visiting Scholar Program**, "Insuring and Incentivizing Cyber Security Information Sharing", Amount: $17,391; 2014. (Role: **Principle Investigator**)

19. **UNR Acquisition of Instructional and Research Equipment (AIRE) Award**, "Sandbox A cyber security instructional infrastructure", Amount: $70,000; 2014. (Role: Co-Principle Investigator)

20. **PSC-CUNY Research Award**, "Investigating The Threats and Vulnerabilities in Cognitive Radio Enabled Dynamic Spectrum Access Networks", Amount: $11,980.40; 2011 - 2012. (Role: Principle Investigator)

21. **National Institute of Justice (NIJ) Research Subaward**, "Cognitive Radio Protocols & Platforms for Dynamic Spectrum Access in Public Safety Bands", (Prime Recipient: Stevens Institute of Technology), Award Amount for John Jay College: $10,000; 2010 - 2011. (Role: Principle Investigator)

22. **PSC-CUNY Research Award**, "Potential Vulnerabilities and Countermeasures in Dynamic Spectrum Access based Wireless Cognitive Radio Networks", Amount: $4,907.93; 2010 - 2011. (Role: Principle Investigator)

23. **NY State Graduate Research Technology Initiative Grant**, "Security and Inter-operability in Cognitive Wireless Networks", Amount: $14,940; 2009 - 2010.

Research Interests

- **Cybersecurity** – Cryptography, Security and privacy in cyber threat information exchange, Anomaly detection, Machine learning, Network security, Covert communications, Honeypot, Spectrum fingerprinting, Sybil attacks, keyless security;

- **Wireless Networking & Mobile Computing** – Unmanned Autonomous Systems, Cognitive radio, Dynamic spectrum access (DSA), D2D communications, Interoperable networks, Testbed implementation, Network design and performance analysis, DSA security, Cross-layer protocol optimization, Wireless mesh, sensor networks;

- **Network economics** – Heterogeneous wireless networking systems, Differentiated service pricing, auction theory, resource management and QoS provisioning;

- **Cross-disciplinary Research** – Applied game theory, Economic theory, Probability, Stochastic process, Anthropology & human-society inspired evolutionary models, Behavioral dynamics;

Research students mentored and graduated (till 2020)

Type of supervision or committee involvement	Students
Doctoral students advised who graduated	6
Doctoral students currently being advised	6
Master students advised who graduated	9
Master students currently being advised	4
Undergraduate research students advised	36
Undergraduate research students being advised	7
Postdoc mentored	3

Courses Taught

- *Graduate Courses*

  - Internet Security (at University of Nevada, Reno)

  - Computer Communication Networks (at University of Nevada, Reno)

  - Special Topics: Application of Game Theory in Cybersecurity (at University of Nevada, Reno)

  - Special Topics: Game Theory in Network Design and Network Security (at University of Nevada, Reno)

  - Wireless Networking and Mobile Computing (at City University of New York)

  - Network Security (at John Jay College, City University of New York)

- Forensic Management of Digital Evidence (at John Jay College, City University of New York)

- Architecture of Secure Operating Systems (at John Jay College, City University of New York)

- Multimedia Network Security (at Stevens Institute of Technology)

- *Undergraduate Courses*

  - Internet Security (at University of Nevada, Reno)

  - Computer Communication Networks (at University of Nevada, Reno)

  - Digital Design (at University of Nevada, Reno)

  - Special Topics: Game Theory in Network Design and Network Security (at University of Nevada, Reno)

  - Computer Networking (at John Jay College, City University of New York)

  - Data Communications and the Internet (at John Jay College, City University of New York)

  - Introduction to Multimedia Networking (at Stevens Institute of Technology)

Patent Invention Disclosure

- **"A Method and Apparatus for Dynamic Spectrum Access"**, United States Patent and Trademark Office. (With K. Hong and R. Chandramouli). Link: https://patents.google.com/patent/US8873580

Testbed Development and Demonstration

- **"DSA enabled Cognitive Radio Networking for First Responders' Critical Networks"**, *The Christian Regenhard Center for Emergency Response Studies*, 2012, New York.

- **"A Software Driven Dynamic Spectrum Access Radio Prototype"**, *IEEE International Symposium on Dynamic Spectrum Access Networks (DySPAN)*, 2008, Chicago.

- **"Cognitive Radio Protocols and Platform for Dynamic Spectrum Access in Public Safety Bands"**, *National Institute of Justice (NIJ)*, 2008, Colorado. (Joint work with Stevens Institute of Technology)

Selected Talks

- IEEE CCWC 2019, Academic, Conference, "A System Architecture of Cybersecurity Information Exchange with Privacy (CYBEX-P)", 2019. (Paper Presentation)

- Inter-Disciplinary Capacity Building in Cybersecurity in The Colloquium for Information System Security Education (CISSE) 2018. (Paper Presentation)

- Unplugged Robotics as a Platform for Cybersecurity Education in the Elementary Classroom in The Colloquium for Information System Security Education (CISSE) 2018. (Paper Presentation)

- **National Science Foundation (NSF) SHOWCASE Presentation** for our project, CyberCorps(R): "Collaborative Research: Capacity building in Cybersecurity-literacy: An inter-disciplinary approach, Seattle, 2017. (This NSF project was chosen as NSF SHOWCASE).

- **BEST PAPER AWARD** - "Dynamic Deployment of UAV-Enabled Floating Access Points For Serving Hot Zones", In Proceedings of The International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS), 2017.

- Guest Speaker in American Inns of Court group at the United States District Court in Reno (Spring 2017)

- Guest Speaker in Northern Nevada Business Speaker Series (Fall 2017)

- NSF Technology Transfer Presentation in Internet2 Tech Ex 2017 Cybersecurity Research Acceleration Workshop & Showcase for NSF Grant CYBEX, San Francisco, 2017

- NSF Technology Transfer Presentation in Internet2 Tech Ex 2017 Cybersecurity Research Acceleration Workshop & Showcase for NSF Grant CYBERCORPS, San Francisco, 2017

- **"How to sustain in the emerging Cyberspace: A Game Theory Perspective"**, Jadavpur University, India, 2016.

- **"How to sustain in the emerging Cyberspace: A Game Theory Perspective"**, Indian Institutes of Engineering Science and Technology, Shibpur, India, 2016.

- Self-coexistence in cognitive radio networks using multi-stage perception learning, IEEE VTC2013-Fall, 2013. (Paper Presentation)

- **"DSA enabled Cognitive Radio Networking for First Responders' Critical Networks"**, *The Christian Regenhard Center for Emergency Response Studies*, 2012, New York.

- **Tutorial on security in Cognitive Radio Networks: Inter-disciplinary Approach**, *Department of Electrical and Computer Engineering*, Rutgers University, The State University of New Jersey, 2009.

- **Timing covert communications: a method for keyless security**, *IEEE Communications Society*, North Jersey Chapter & *Department of Electrical and Computer Engineering*, New Jersey Institute of Technology, 2008.

- **A game theoretic approach for modeling defense strategies in timing covert channels**, *Department of Electrical and Computer Engineering*, Stevens Institute of Technology, 2008.

Accomplishments as the UNR Cybersecurity Center Executive Director

Summary: The UNR Cybersecurity Center under the leadership of Sengupta, has been strongly supportive of cybersecurity education and research since its establishment. Currently, more than thirty faculty from eight disciplines (Computer Science & Engineering, Criminal Justice, Political Science, Psychology, History, Information Systems, Journalism, Community Health Sciences) and the UNR Chief Information Security Officer are affiliated with the Center as active participants of cybersecurity research and education. Bringing together a large number of faculties from a wide range of disciplines under the UNR Cybersecurity umbrella has been one of the major achievements. The Center is also initiating collaboration opportunities with the industry partners including the Reno Police Department, NV Energy, Nevada National Security Site, Nevada National Guard and Army Research Lab as well as local and global cybersecurity companies such as Vere Software, BlackRidge, SNC, HPE and CISCO. The UNR Cybersecurity Center has continuously strived to excel and win nationally competitive external research grants related to cybersecurity. The success in these funded programs demonstrates evidence of a strong program in cybersecurity at UNR. Recently in 2019, the National Cyber League (NCL) has published official college rankings for the first time, and the University of Nevada, Reno has been recognized as the top school in the nation. The Center also recently initiated multiple cybersecurity education programs including a 30-credit Cybersecurity MS program.

Numbers at a glance (2019-2020)

- Submitted Proposals: There were approximately 24 new research proposals submitted by Cybersecurity Center Faculty to various funding agencies (NSF, DOE, NIH, DoD, Amazon, Facebook, Google) totaling requests of approximately $6.5M.

- Funded Proposals: The new proposals that received funding in the last year were: 11 proposals from federal and private funding agencies (NSF, DoD, Facebook) totaling awards of approximately $2.03M. In addition to the newly funded proposals, the ongoing projects that we worked on in this time period were: 5 projects funded by NSF totaling approximately $2.56M.

- Graduate Training and Completed Theses and Dissertations: 24 PhD and 14 MS students received graduate training in this reporting time period. 3 PhD and 8 MS students completed their PhD dissertations and MS theses and graduated in this reporting time period.

- Services Provided: The UNR Cybersecurity Center not only focuses on research and education, but also focuses equally on community outreach and creating awareness programs through programs such as (1) Research experiences for teachers (2) Middle and high school visits and workshops, (3) Cyber clinics, (4) Annual UNR Cybersecurity Conference, and (5) Collaborations with industry partners.

- Economic Development: While the main focus of UNR Cybersecurity Center is mostly research, education and service/community outreach, the Cybersecurity Center is also investigating economic development/commercialization opportunities in the Northern Nevada region through (1) the Full Spectrum Cybersecurity Zone, (2) Cybersecurity training and awareness programs for the community and (3) Collaboration with startup and established industries in the region.

Other Major Achievements

- **UNR Research Sandbox: Full Spectrum Cybersecurity (FSC) Zone:** The UNR Cybersecurity Center under the leadership role of Sengupta has built a cybersecurity sandbox to enhance hands-on experiences, research and educational opportunities. This sandbox environment ? the Full Spectrum Cybersecurity (FSC) Zone has been instrumental in developing (i) a flexible cybersecurity platform that can be incorporated in a variety of projects and activities (attacks and defense) without disrupting UNR?s domain networks; (ii) a peer-learning interactive experimental area designated a safe and secure environment; and (iii) long term research/education partnerships by making hands-on research/education opportunities easily attainable by students. Industry partners are also a critical component to the continued success of the Zone.

- **Education Programs in Cybersecurity:** The UNR Cybersecurity Center currently offers four cybersecurity programs at UNR: (i) Minor in Cybersecurity (Technical); (ii) Interdisciplinary Minor in Cybersecurity; (iii) Cybersecurity Graduate Certificate and (iv) Cybersecurity MS.

- **Annual Cybersecurity Conference:** Sengupta also organizes Annual Cybersecurity Conference at UNR. The objective is to reach out to the community, industry and government agencies and increase cybersecurity initiatives. The annual conference has been an overwhelming success and attracts 200+ audience from government agencies and local industries.

University Committee Services

- Serving Executive Director of the UNR Cybersecurity Center, University of Nevada, Reno (March 2017 - Present)

- Serving Member, University Core Committee (Fall 2018 - Present)

- Served Chair of the Faculty Evaluation Committee, CSE Dept., University of Nevada, Reno (2017 - 2018)

- Served Faculty Evaluation Committee Member, CSE Dept., University of Nevada, Reno (2016 - 2017)

- Served Chair of the Faculty Search Committee, CSE Dept., University of Nevada, Reno (2016 - Present)

- Served Faculty Search Committee Member, CSE Dept., University of Nevada, Reno (2017 - 2018)

- Served Department Graduate Committee Member, CSE Dept., University of Nevada, Reno (Fall 2013 - Spring 2017)

- Served Chair of the Department Colloquium Committee, CSE Dept., University of Nevada, Reno (Fall 2014 - Spring 2016)

- Served Department Colloquium Committee Member, CSE Dept., University of Nevada, Reno (Fall 2013 - Fall 2014)

- Served College of Engineering FACE Committee Member, University of Nevada, Reno (Fall 2015 - Spring 2017)

- Served Major Program Coordinator for Undergraduate Computer & Information Systems (CIS) Major, Math. & Comp. Sc. Department, John Jay College of City University of New York, (Spring 2010 - Spring 2013)

- Served Department Curriculum Committee member, Math. & Comp. Sc. Department, John Jay College of City University of New York, (Fall 2011 - Spring 2013)

Outreach and Engagement

- Organizing Annual UNR Cybersecurity Conference, 2019 & 2020

- GSA Knowledge Forum Panel, GSA. 2017. Leading and Presenting the GSA Knowledge Forum Panel (Spring 2017). ?Cybersecurity: What does it take to defend ourselves??

- K-12 Outreach: Collaborating with Northern Nevada Middle and High Schools for creating cybersecurity and computer science emphasized curriculum in the schools

- Judge: UNR GSA Spring Awards

- Nevada Bound: Lab tours and presentations to K-12 students visiting the UNR campus

- IEEE member

- IEEE Northern Nevada Section Treasurer, IEEE Northern Nevada Section. (2014 - 2017)

- College of Engineering Student Recruitment Reception Presentation in Sacramento (Spring 2017), COEN. 2017.

- Meet, Greet & Eat with the AVPR, AVPR. 2017. Conducted collaboration opportunities discussion with Faculties from various disciplines in Meet, Greet & Eat with the AVPR

- Collaborated with NY City Science and Engineering Fair program (NYCSEF) - a summer internship opportunity for high school students to work in the research lab with undergraduate and graduate students

Media Appearances and Interviews

- Cybersecurity leaders gather to discuss challenges, build relationships in Reno
  (News link: https://mynews4.com/news/local/cybersecurity-leaders-gather-to-discuss-challenges-build-relationships), 2020.

- University of Nevada, Reno Hosts Inaugural Cybersecurity Conference, 2019 (Channel 2 news coverage: https://www.ktvn.com/story/40241433/university-of-nevada-reno-hosts-inaugural-cybersecurity-conference) — (News 4 & Fox 11 news coverage: https://mynews4.com/news/local/university-of-nevada-reno-hosts-cyber-security-conference)

- Hoeper Professorship recognizes two College of Engineering faculty, Shamik Sengupta and Krishna Pagilla were honored with the professorship (News Link: https://www.unr.edu/nevada-today/news/2019/hoeper-professorships-2019), 2019.

- University's cybersecurity program scores high in increasing popularity and success
  (News Link: https://www.unr.edu/nevada-today/news/2019/cybersecurity-programs), 2019.

- Privacy preserved data sharing leads to a proactive approach to cyber threats, University cybersecurity grant works to better safeguard the cyber landscape (News Link: https://www.unr.edu/nevada-today/news/2018/cybex-grant), 2018.

- Appeared for 2017 University of Nevada, Reno Foundation Banquet Media Coverage Video, (2017).

- Shamik Sengupta — Knowledge in a Nanosecond, University of Nevada, Reno
  (Link: https://www.youtube.com/watch?v=nu2cXKdeEl4), 2016

- Cyber Security Center gets boost from National Science Foundation grants, Assistant Professor Shamik Sengupta brings in $1.1 million to support research, outreach and teaching, (Link: https://www.unr.edu/nevada-today/news/2015/shamik-sengupta), 2015.

International Professional Activities

Journal Editor

- Serving editorial board of Elsevier Computer Communications, Area Editor, Elsevier Computer Communications (Spring 2015 - Present).

- Served Guest Editor, IETE Technical Review, 2017.

- Served Guest Editor, ELSEVIER Physical Communication Special Issue on Self-optimizing Cognitive Radio Technologies, 2015.

- Served Lead Guest Editor, International Journal of Distributed Sensor Networks, Special Issue on Cognitive Radio Enabled Wireless Sensor Networks and Survivability Challenges, 2015.

- Served Guest Editor for Eurasip Journal on Wireless Communications and Networking, Special Issue on Advances in 4G Wireless and Beyond, 2013.

NSF Panel

- Serving in NSF proposal review panel

Workshop Chair

- Workshop Chair of International Workshop on Security, Privacy, and Trust for Emergency Events (EmergencyComm 2020), Co-located with SecureComm 2020.

Track Chair

- Track Co-Chair IEEE CCNC 2021, Track 7: Security, Privacy, Blockchains and Content Protection, IEEE CCNC 2021.

- Served Track Chair of International Conference on Information Technology (ICIT), '15, '16.

Vice-Chair of Mobile Wireless Network (MobIG)

- Served Vice-Chair of Mobile Wireless Network (MobIG) special interest group of the IEEE COMSOC Multimedia Communications Technical Committee

Symposium Co-Chair

- Served Symposium Co-Chair for the Cooperative and Cognitive Networks Symposium in the 6th International Wireless Communications & Mobile Computing Conference (IWCMC 2010), Caen, France.

Workshop Co-Chair

- First IEEE International Workshop on Cognitive Radio and Networks (CRNETS), 2008 in conjunction with IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Sep. 2008, Cannes, France (With Prof. Ekram Hossain, University of Manitoba and Dr. Soodesh Buljore, Motorola, France)

Session Chair

- The International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS), 2017.

- IEEE MILCOM 2015.

Selected Technical Program Committee

- IEEE International Conference on Communications (ICC), 2009-2010, 2012-2015, 2018-2021.

- IEEE Military Communications Conference (MILCOM), 2010-2012, 2014, 2015-2019.

- IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM), 2011-2020.

- IEEE Global Communications Conference (GLOBECOM), 2008-2010, 2012.

- IEEE Consumer Communications & Networking Conference (CCNC), 2014.

- IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), 2017-2019.

- IEEE TENSYMP 2017 - "Technologies for Smart Cities", 2017.

- International Wireless Communications & Mobile Computing Conference (IWCMC), 2012, 2020.

- IEEE 71st Vehicular Technology Conference: VTC2010-Spring, '10.

- Intl. Conference on Computer Communications and Networks (ICCCN), '08.

- IEEE Intl. Symp. on Personal, Indoor and Mobile Radio Commn., PIMRC, 2011, 2015-2020.

- IEEE MASS 2015 Workshop on Content-Centric Networking, '15.

- Asia-Pacific Conference on Communications (APCC), 2016.

- International Symposium on Wireless Communication Systems (ISWCS), 2015-2020.

- International Conference on Advances in Computing, Communications and Informatics (ICACCI), 2018.

- International Conference on Control, Electronics, Renewable Energy, and Communications (ICCEREC), 2017-2018.

- International Conference on Wireless Communications and Signal Processing, 2017.

- International Conference on Signals and Systems (ICSigSys), 2017-2019.

- International Conference on Connected Vehicles and Expo (ICCVE), 2013-2014.

- Annual Wireless Days Conference, 2019.

- 6G Wireless Summit, 2020.

- IEEE International Symposium on Local and Metropolitan Area Networks (LANMAN), 2020.

- International Conference on Computing, Networking and Communications (ICNC), 2020.

- International Conference on Computing and Network Communications (CoCoNet), 2019-2020.

- IEEE Asia Pacific Conference on Wireless and Mobile (APWiMob), 2021.

Publicity Chair/Co-Chair

- First IEEE Workshop on Smart Service Systems (SmartSys) 2016

- IEEE Consumer Communications & Networking Conference (CCNC) 2014

- IEEE Workshop on Mobile Video Delivery (MoViD) 2008, 2009, 2010

Selected Journal/Conference Reviewer

- IEEE Transactions on Mobile Computing, IEEE/ACM Transactions on Networking, IEEE Transactions on Wireless Communications., IEEE Transactions on Communications, IEEE Transactions on Vehicular Technology, IEEE Transactions on Multimedia, IEEE Communications Surveys and Tutorials, IEEE Journal on Selected Areas in Comm. (SI: Non-cooperative Behavior in Networking), IEEE Journal on Selected Areas in Communications Series on Green Communications and Networking (JSAC-SGCN), IEEE J-SAC Special Issue on Wireless Video Transmission, Elsevier Computer Communications, Elsevier Computer Networks, Elsevier Ad Hoc Networks, Elsevier Pervasive and Mobile Computing, IEEE Transactions on Cognitive Communications and Networking, IEEE Transactions on Dependable and Secure Computing, IEEE Transactions on Industrial Informatics, IEEE Transactions on Information Forensics and Security, IEEE Access.

- IEEE INFOCOM, IEEE WoWMoM, IEEE DySPAN, IEEE GLOBECOM, IEEE ICC, IEEE MASS, IEEE PIMRC, IEEE WCNC

Research Publications (Peer-Reviewed)

Journal Papers Accepted/Published

1. S. Maskey, S. Badsha, **S. Sengupta**, "Reputation-based Miner Node Selection in Blockchain-based Vehicular Edge Computing", IEEE Consumer Electronics Magazine, 2021.

2. S. Maskey, S. Badsha and **S. Sengupta**, "ALICIA: Applied Intelligence in Blockchain based VANET: Accident Validation as a Case Study", Elsevier Information Processing and Management, 2021.

3. N. Bhusal, R. Shukla, M. Gautam, M. Benidris, and **S. Sengupta**, "Deep Ensemble Learning-based Approach to Real-time Power System State Estimation", Elsevier International Journal of Electrical Power & Energy Systems, 2021.

4. I. Vakilinia and **S. Sengupta**, "Vulnerability market as a public good auction with privacy preservation". Elsevier Computers and Security Journal, vol. 93, 2020.

5. Sowmya Kudva, Shahriar Badsha, **S. Sengupta**, Ibrahim Khalil, Albert Zomaya, "Towards Secure and Practical Consensus for Blockchain based VANET", (Accepted). Elsevier Information Sciences, 2020.

6. Raj Shukla, and **S. Sengupta**, "Scalable and Robust Outlier Detector using Hierarchical Clustering and Long Short-Term Memory (LSTM) Neural Network for Internet of Things", (Accepted). Elsevier Internet of Things: Engineering Cyber Physical Human Systems, vol. 9, 2020.

7. Raj Shukla, and **S. Sengupta**, "COP: An integrated Communication, Optimization, and Prediction unit for smart Plug-in Electric Vehicle Charging", (Accepted). Elsevier Internet of Things: Engineering Cyber Physical Human Systems, vol. 9, 2020.

8. Iman Vakilinia, and **S. Sengupta**, "Fair and Private Rewarding in a Coalitional Game of Cybersecurity Information Sharing", IET Information Security, vol. 13, pp. 530-540, 2019.

9. Amar Nath Patra, Paulo Alexandre Regis, and **S. Sengupta**, "Distributed Allocation and Dynamic Reassignment of Channels in UAV Networks for Wireless Coverage", Elsevier Pervasive and Mobile Computing, vol. 54, pp. 58-70, 2019.

10. Amar Nath Patra, Paulo Alexandre Regis, and **S. Sengupta**, "Dynamic Self-Reconfiguration of Unmanned Aerial Vehicles to Serve Overloaded Hotspot Cells", Elsevier Computer and Electrical Engineering, vol. 75, pp. 77-89, 2019.

11. S. Bhunia, M. Khan, M. Yuksel and **S. Sengupta**, "In-Band LOS Discovery Using Highly Directional Transceivers", Elsevier Ad Hoc Networks Journal, vol. 91, 2019.

12. I. Vakilinia, and **S. Sengupta**, "A Coalitional Cyber-Insurance Framework for a Common Platform", in IEEE Transactions on Information Forensics and Security, vol. 14, no. 6, pp. 1526-1538, June 2019.

13. D. Tosh, **S. Sengupta**, C. Kamhoua, K. Kwiat, "Establishing Evolutionary Game Models for CYBer security information EXchange (CYBEX)", in Elsevier Journal of Computer and System Sciences, vol. 98, pp. 27-52, December 2018.

14. 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", in IEEE Transactions on Cognitive Communications and Networking, vol. 4, no. 3, pp. 567-581, Sept. 2018.

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