Shamik Sengupta

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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

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: $986,067; 2018 - 2019. (Role: Principle Investigator)

2. **National Science Foundation (NSF) CAREER Research Award**, "Survivability and Self-coexistence in the Battle of Cognitive Radio Network Societies", Amount: $400,000; 2012 - 2017. (Role: Principle Investigator)

3. **National Science Foundation (NSF) SATC Research Award** "Establishing market based mechanisms for CYBer security information EXchange (CYBEX)", Amount: $329,658; 2015 - 2018. (Role: Principle Investigator)

4. **National Science Foundation (NSF) RET Research Award** "RET Site: Cyber Security Initiative for Nevada Teachers (CSINT)", Amount: $540,000; 2015 - 2018. (Role: Principle Investigator)

5. **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)

6. **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)

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

8. **National Science Foundation (NSF) SATC REU Supplement Award**, Amount: $8,000; 2016-2017. (Role: Principle Investigator)

9. **National Science Foundation (NSF) CAREER REU Supplement Award**, Amount: $14,000; 2016. (Role: Principle Investigator)

10. **National Science Foundation (NSF) CAREER REU Supplement Award**, Amount: $12,000; 2014-2017. (Role: Principle Investigator)

11. **UNR Grant**, "Developing the Next Generation Cybersecurity Workforce at UNR through a Full Spectrum Cybersecurity Zone" Amount: $118,800; 2017-2018. (Role: Co-Principle Investigator)

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

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

14. **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)

15. **UNR Research Enhancement Grant**, Amount: $21,530; 2015 - 2016. (Role: Principle Investigator)

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

17. **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)

18. **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)

19. **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)

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

Research Interests

- **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;
- **Cybersecurity** – Network security, Covert communications, Malicious node sensing/detection, Wireless Honeypot, Spectrum fingerprinting, Sybil attacks, keyless security;
- **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;

Courses Taught

- *Graduate Courses*
  - Internet Security (at University of Nevada, Reno)
  - Computer Communication Networks (at University of Nevada, Reno)
  - Game Theory in Wireless Network Design (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)
  - 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)

Honors and Awards

- **Best CSE Researcher Award** (2016)
- **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
- **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 - 2017)

- **NSF Capacity** Research Award Grant (2015 - 2018)
- 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
- Invited to **National Science Foundation (NSF) proposal review panel**
- **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
- **National Scholarship** Under National Talent search in India

Patent Invention Disclosure

- **"A Method and Apparatus for Dynamic Spectrum Access"**, United States Patent and Trademark Office. (With K. Hong and R. Chandramouli)
- **"In-Band Line-of-Sight Discovery for Directional Full-Duplex Transceivers"**, U.S. Provisional Patent Application 62/338,953, filed May 19, 2016. (With Suman Bhunia, Mahmudur Khan, and Murat Yuksel)

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)

Invited Talks

- **"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.

- **"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.

University Committee Services

- Serving Department Colloquium Committee Chair, CSE Dept., University of Nevada, Reno (Fall 2014 - Present)
- Served Department Colloquium Committee Member, CSE Dept., University of Nevada, Reno (Fall 2013 - Fall 2014)
- Serving Department Graduate Committee Member, CSE Dept., University of Nevada, Reno (Fall 2013 - Present)
- Serving College of Engineering FACE Committee Member, University of Nevada, Reno (Fall 2015 - Present)
- 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)

International Professional Activities

Journal Editor

- Serving editorial board of Elsevier Computer Communications, Area Editor, Elsevier Computer Communications (Spring 2015 - Present).
- Serving editorial board of Springer Computing (Spring 2014 - Present).
- Serving Guest Editor, ELSEVIER Physical Communication Special Issue on Self-optimizing Cognitive Radio Technologies, 2015.
- Serving 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

Track Chair

- Served Track Chair of International Conference on Information Technology (ICIT), 2015, Track 2: Communication Networks and Protocols

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

- MILCOM 2015

Selected Technical Program Committee

- IEEE International Conference on Communications (ICC), '09, '10, '12, '13, '14, '15.
- IEEE Global Communications Conference (GLOBECOM), '08, '09, '10, '12.
- IEEE Military Communications Conference (MILCOM), '08, '10, '11, '12, '13, '14, '15.
- IEEE WoWMoM, '11, '12, '13, '14.
- IEEE Consumer Communications & Networking Conference (CCNC), '14.
- International Wireless Communications and Mobile Computing Conference (IWCMC), '10, '12.
- IEEE 71st Vehicular Technology Conference: VTC2010-Spring, '10.
- IEEE Intl. Symp. on Personal, Indoor and Mobile Radio Communications (PIMRC), '08, '11.
- International Conference on Computer Communications and Networks (ICCCN), '08.

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 Transactions on Wireless Communications, IEEE Transactions on Multimedia, IEEE Transactions on Communications, IEEE Transactions on Vehicular Technology, IEEE Communications Surveys and Tutorials, IEEE Journal on Selected Areas, Elsevier Computer Networks, Elsevier Computer Communications, IEEE Transactions on Cognitive Communications and Networking
- IEEE INFOCOM, IEEE WoWMoM, IEEE DySPAN, IEEE GLOBECOM, IEEE ICC, IEEE MASS, IEEE PIMRC, IEEE WCNC

K-12 Outreach

- 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

Research Publications (Peer-Reviewed)

Journal Papers Accepted/Published

1. S. Mneimneh, S. Bhunia, F. Vazquez-Abad and **S. Sengupta**, "A Game-Theoretic and Stochastic Survivability Mechanism against Induced-Attacks in Cognitive Radio Networks", To appear in Elsevier Pervasive and Mobile Computing, 2017.

2. D. Tosh, **S. Sengupta**, C. Kamhoua, K. Kwiat, "Establishing Evolutionary Game Models for CYBer security information EXchange (CYBEX)", Accepted. To appear in Elsevier Journal of Computer and System Sciences, 2016.

3. S. Bhunia, V. Behzadan, P. A. Regis and **S. Sengupta**, "Adaptive Beam Nulling in Multihop Ad Hoc Networks Against Jammer in Motion", To appear in Elsevier Computer Networks, 2016.

4. S Bhunia, **S Sengupta** and F Vazquez-Abad, "Performance Analysis of CR-Honeynet to prevent Jamming Attack through Stochastic Modeling", *Elsevier Pervasive and Mobile Computing*, Volume 21, August 2015, Pages 133-149.

5. S. Anand, **S. Sengupta**, K. Hong, K. P. Subbalakshmi, R. Chandramouli and H. Cam, "Exploiting Channel Fragmentation and Aggregation/ Bonding to Create Security Vulnerabilities", *IEEE Transactions on Vehicular Technology*, vol.63, no.8, pp. 3867-3874, Oct. 2014.

6. S. Anand, **S. Sengupta**, and R. Chandramouli, "Price-Bandwidth Dynamics for WSPs in Heterogeneous Wireless Networks", *Elsevier Physical Communication*, vol. 12, pp. 63-78, 2014.

7. K. Hong, **S. Sengupta** and R. Chandramouli, "SpiderRadio: A Cognitive Radio Implementation using IEEE 802.11 Components", *IEEE Transactions on Mobile Computing*, vol. 12, no. 11, pp. 2105-2118, 2013.

8. S. Bhattacharjee, **S. Sengupta**, M. Chatterjee, "Vulnerabilities in cognitive radio networks: A survey", *Elsevier Computer Communications*, vol. 36, issue 13, pp. 1387-1398, 2013.

9. **Shamik Sengupta** and K.P. Subbalakshmi, "Open Research Issues in Multi-hop Cognitive Radio Networks", *IEEE Communications Magazine*, vol.51, no. 4, pp. 168-176, 2013.

10. **Shamik Sengupta**, Swastik Brahma, Mainak Chatterjee and Sai Shankar N, "Self-coexistence Among Interference-aware IEEE 802.22 Networks with Enhanced Air-interface", *Elsevier Pervasive and Mobile Computing*, vol. 9, issue 4, pp. 454-471, 2013.

11. S. Anand, **S. Sengupta**, K. Hong and R. Chandramouli, "Power Control Game in Multi-Terminal Covert Timing Channels", *IEEE Journal on Selected Areas in Communications - Game Theory in Wireless Communications*, vol. 30, issue 1, pp. 44-53, 2012.

12. Yi Tan, **Shamik Sengupta** and K. P. Subbalakshmi, "The Primary User Emulation Attack in Dynamic Spectrum Access Networks: A Game Theoretic Approach", *IET Communications*, vol. 6, issue 8, pp. 964-973, May 2012.

13. Santhanakrishnan Anand, **Shamik Sengupta**, and Rajarathnam Chandramouli, "MASPECT: A Distributed Opportunistic Channel Acquisition Mechanism in Dynamic Spectrum Access Networks" *IET Communications Special Issue on Cognitive Communications*, vol. 6, issue 8, pp. 872-882, May 2012.

14. Mukundan Venkataraman, **Shamik Sengupta**, Mainak Chatterjee, and Raja Neogi, "Designing a Collector Overlay Architecture for Fault Diagnosis in Video Networks", *Elsevier Computer Communications*, vol. 35, issue 4, pp. 418-430, Feb 2012.

15. Yi Tan, **Shamik Sengupta**, and K.P. Subbalakshmi, "Analysis of Coordinated Denial-of-Service Attacks in IEEE 802.22 Networks", *IEEE JSAC Special Issue on Cognitive radio Networking and Communications*, vol. 29, issue 4, pp. 890-902, 2011.

16. **Shamik Sengupta**, Kai Hong, R. Chandramouli and K. P. Subbalakshmi, "SpiderRadio: A Cognitive Radio Network with Commodity Hardware and Open Source Software", *IEEE Communications Magazine*, vol. 49, issue 3, pp. 101-109, 2011.

17. **Shamik Sengupta**, Mainak Chatterjee and Kevin Kwiat, "A Game Theoretic Framework for Power Control in Wireless Sensor Networks", *IEEE Transactions on Computers*, Feb. 2010, Vol. 59, No. 2, pp. 231-242.

18. **Shamik Sengupta** and Mainak Chatterjee, "An economic framework for dynamic spectrum access and service pricing", *ACM/IEEE Transactions on Networking*, Aug. 2009, Vol. 17, No. 4, pp. 1200-1213.

19. **Shamik Sengupta**, Santhanakrishnan Anand, Kai Hong and Rajarathnam Chandramouli, "On Adversarial Games in Dynamic Spectrum Access Networking based Covert Timing Channels", *ACM Mobile Computing and Communications Review (MC2R)*, Special Issue on Cognitive Radio Technologies and Systems, 2009.

20. **Shamik Sengupta**, Santhanakrishnan Anand, Mainak Chatterjee and Rajarathnam Chandramouli, "Dynamic Pricing for Service Provisioning and Network Selection in Heterogeneous Networks", *Elsevier Physical Communication (PHYCOM) Journal*, Special issue on Cognitive Radio: Algorithms & System Design, vol. 2, pp. 138-150, 2009.

21. Wenjing Wang, **Shamik Sengupta** and Mainak Chatterjee, "Scheduling for End-to-End Performance in Multi-rate CDMA/HDR Systems", *Elsevier Physical Communication (PHYCOM) Journal*, vol. 1, issue 4, pp. 277-287, Dec. 2008.

22. **Shamik Sengupta**, Mainak Chatterjee and Samrat Ganguly, "Improving quality of VoIP streams over WiMax", *IEEE Transactions on Computers*, vol. 57, pp. 145-156, Feb. 2008.

23. **Shamik Sengupta** and Mainak Chatterjee, "Designing Auction Mechanisms for Dynamic Spectrum Access", *ACM/Springer Mobile Networks and Applications (MONET)*, Special issue on Cognitive Radio Oriented Wireless Networks and Communications, 2008.

24. Mainak Chatterjee, **Shamik Sengupta**, and Samrat Ganguly, "Feedback based Real-time Streaming over WiMax", *IEEE Wireless Communications Magazine*, vol. 14, no. 1, pp. 64-71, Feb. 2007.

25. Jaideep Sarkar, **Shamik Sengupta**, Mainak Chatterjee and Samrat Ganguly, "Differential FEC and ARQ for Radio Link Protocols", *IEEE Transactions on Computers*, vol. 55, no. 11, pp. 1458-1472, Nov. 2006.

Conference Papers Accepted/Published

1. Paulo Regis and **Shamik Sengupta**, "Distributed Split-Path Routing Strategy for Multi-hop Mesh Networks", To appear in IEEE MILCOM, 2017.

2. Iman Vakilinia, Deepak Tosh and **Shamik Sengupta**, "3-way Game Model for Privacy-Preserving Cybersecurity Information Exchange Framework", To appear in IEEE MILCOM, 2017.

3. Iman Vakilinia and **Shamik Sengupta**, "A Coalitional Game Theory Approach for Cybersecurity Information Sharing", To appear in IEEE MILCOM, 2017.

4. Suman Bhunia and **Shamik Sengupta**, "Implementation of Interface Agility for Duplex Dynamic Spectrum Access Radio Using USRP", To appear in IEEE MILCOM, 2017.

5. Alisha Thapaliya and **Shamik Sengupta**, "Understanding the Feasibility of Machine Learning Algorithms in a Game Theoretic Environment for Dynamic Spectrum Access", In Proceedings of The International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS), 2017.

6. Amar Patra and **Shamik Sengupta**, "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. **(Best Paper Award)**

7. Iman Vakilinia, Deepak Tosh and **Shamik Sengupta**, "Attribute Based Sharing in Cybersecurity Information Exchange Framework", In Proceedings of The International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS), 2017.

8. Iman Vakilinia, Deepak Tosh and **Shamik Sengupta**, "Privacy-Preserving Cybersecurity Information Exchange Mechanism", In Proceedings of The International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS), 2017.

9. P. Regis, S. Bhunia and **Shamik Sengupta**, "Enhancing Performance and Longevity of Multi-radio Multi-channel HetNets through Dynamic Path-assignment", In Proceedings of International Conference on Computing, Networking and Communications (ICNC), 2017.

10. S. Bhunia and **Shamik Sengupta**, "Distributed Adaptive Beam Nulling to Mitigate Jamming in 3D UAV Mesh Networks", In Proceedings of International Conference on Computing, Networking and Communications (ICNC), 2017.

11. S. Bhunia, M. Khan, **S. Sengupta**, M. Yuksel, "LOS Discovery for Highly Directional Full Duplex RF/FSO Transceivers", In Proceedings of IEEE MILCOM, 2016.

12. M. Khan, S. Bhunia, M. Yuksel, **S. Sengupta**, "LOS Discovery in 3D for Highly Directional Transceivers", In Proceedings of IEEE MILCOM, 2016.

13. M. Rahman, S. Mathew, M. Yuksel, **S. Sengupta**, "A Device-to-Device Service Sharing Middleware for Heterogeneous Wireless Networks", In Proceedings of IEEE LANMAN 2016.

14. Paulo Alexandre Regis, Suman Bhunia and **Shamik Sengupta**, "Implementation of 3D Obstacle Compliant Mobility Models for UAV networks in ns-3", In Proceedings of the ACM Workshop on ns-3 (WNS3 '16), pp. 124-131.

15. D. Tosh, **S. Sengupta**, S. Mukhopadhyay, C. Kamhoua, K. Kwiat, "Game Theoretic Modeling to Enforce Security Information Sharing among Firms", In Proceedings of IEEE CSCloud, 2015.

16. C. Kamhoua,, A. Martin, D. Tosh, K. Kwiat, C. Heitzenrater, **S. Sengupta**, "Cyber-threats Information Sharing in Cloud Computing: A game Theoretic Approach", In Proceedings of IEEE CSCloud, 2015.

17. Suman Bhunia, Vahid Behzadan, **Shamik Sengupta**, "Enhancement of Spectrum Utilization in Non-Contiguous DSA with Online Defragmentation", In Proceedings of IEEE MILCOM, 2015.

18. M. Jafari, **S. Sengupta**, H. La, "Adaptive Flocking Control of Multiple Unmanned Ground Vehicles by Using a UAV", In Proceedings of 11th International Symposium on Visual Computing (ISVC), Las Vegas, Nevada, USA, 2015.

19. Suman Bhunia, Vahid Behzadan, Paulo Alexandre Regis, **Shamik Sengupta**, "Performance of Adaptive Beam Nulling in Multihop Ad Hoc networks under Jamming", In Proceedings of IEEE 2015 ICESS/CSS, New York, USA, Aug 24-26, 2015.

20. D.K. Tosh, M. Molloy, **S. Sengupta**, C. Kamhoua, and K. Kwiat, "Cyber-Investment and Cyber-Information Exchange Decision Modeling", In Proceedings of IEEE 2015 ICESS/CSS, New York, USA, Aug 24-26, 2015.

21. D. Tosh, **S. Sengupta**, C. Kamhoua, K. Kwiat, and A. Martin, "An Evolutionary Game-Theoretic Framework for Cyber-threat Information Sharing", In Proceedings of IEEE ICC 2015.

22. D. Tosh and **S. Sengupta**, "Heterogeneous Access Network(s) Selection in Multi-Interface Radio Devices", In Proceedings of 12th IEEE International Workshop on Managing Ubiquitous Communications and Services, in conjunction with IEEE PerCom 2015.

23. K. Ezirim, L. Liu, P. Ji and **S. Sengupta**, "Distributed and Cheat-Proof Spectrum Contention Scheme for IEEE 802.22 WRAN Networks", In Proceedings of IEEE WCNC 2015.

24. S. Liu, **S. Sengupta**, S. Louis, "Evolving defensive strategies against iterated induction attacks in cognitive radio networks," in Proceedings of IEEE Congress on Evolutionary Computation (CEC), pp.3109-3115, 2015.

25. Suman Bhunia, **Shamik Sengupta** and Felisa Va zquez-Abad, "CR-Honeynet: A learning & decoy based Sustenance Mechanism Against Jamming Attack in CRN", In Proceedings of IEEE MILCOM, pp. 1173-1180, 2014.

26. Suman Bhunia, Xing Su, **Shamik Sengupta** and Felisa Va zquez-Abad, "Stochastic model for Cognitive Radio Networks under jamming attacks and honeypot-based prevention", 15th International Conference on Distributed Computing and Networking (ICDCN), 2014.

27. D. Tosh and **S. Sengupta**, "Self-coexistence in cognitive radio networks using multi-stage perception learning," *IEEE VTC2013-Fall*, 2013.

28. K. Ezirim, E. Troja, and **S. Sengupta**, "Sustenance against RL-based Sybil attacks in Cognitive Radio Networks using Dynamic Reputation Systems", *IEEE MILCOM*, 2013.

29. K. Ezirim, **S. Sengupta** and E. Troja, "(Multiple) Channel Acquisition and Contention Handling Mechanisms for Dynamic Spectrum Access in a Distributed System of Cognitive Radio Networks", *International Conference on Computing, Networking and Communications (ICNC) Workshop on Computing, Networking and Communications*, 2013.

30. E. Troja, K. Ezirim, **S. Sengupta** and M. Hannon, "Performance evaluation of RODEO: ROute DEgradation Optimization for the Multi-Hop Dynamic Spectrum Access Networks", *International Conference on Computing, Networking and Communications (ICNC) Workshop on Computing, Networking and Communications*, 2013.

31. Yi Tan, Kai Hong, **Shamik Sengupta**, and K.P. Subbalakshmi, "Using Sybil Identities for Primary User Emulation and Byzantine Attacks in DSA Networks", *IEEE GLOBECOM*, 2011.

32. Yi Tan, **Shamik Sengupta**, and K.P. Subbalakshmi, "Human Society Inspired Dynamic Spectrum Access Networks: The Effect of Parochialism", *IEEE GLOBECOM*, 2011.

33. S. Anand, K. Hong, R. Chandramouli, **S. Sengupta** and K.P. Subbalakshmi, "Security Vulnerability due to Channel Aggregation/Bonding in LTE and HSPA+ Networks", *IEEE GLOBECOM*, 2011.

34. Yi Tan, Kai Hong, **Shamik Sengupta**, and K.P. Subbalakshmi, "Spectrum Stealing via Sybil Attacks in DSA Networks: Implementation and Defense", *IEEE ICC*, 2011.

35. Santhanakrishnan Anand, Kai Hong, **Shamik Sengupta** and Rajarathnam Chandramouli, "Is Channel Fragmentation/Bonding in IEEE 802.22 Networks Secure?" *IEEE ICC*, 2011.

36. Yi Tan, **Shamik Sengupta** and K. P. Subbalakshmi, "Competitive Spectrum Trading in Dynamic Spectrum Access Markets: A Price War", *IEEE Globecom*, pp. 1-5, Dec. 2010.

37. Santhanakrishnan Anand, **Shamik Sengupta**, and Rajarathnam Chandramouli, "An Attack-Defense Game Theoretic Analysis of Multi-Band Wireless Covert Timing Networks", *IEEE INFOCOM*, San Diego, CA, 2010.

38. Kai Hong, **Shamik Sengupta**, and Rajarathnam Chandramouli, "Cross-layer MAC enabling virtual link for multi-hop routing in wireless ad hoc networks", *IEEE International Conference on Communications (ICC)* 2010.

39. Kai Hong, **Shamik Sengupta**, and Rajarathnam Chandramouli, "SpiderRadio: An incumbent sensing implementation for cognitive radio networking using IEEE 802.11 devices", *IEEE International Conference on Communications (ICC)* 2010.

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