

Sanjib Sur

Contact Details

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Research Interests

Wireless Systems and Architectures, Millimeter-Wave Communications and Networks, Internet of Things (IoT) Connectivity and Sensing Systems.

Education

University of Wisconsin–Madison, WI, USA Fall 2013 – Summer 2018

Ph.D. in Electrical and Computer Engineering

Nominated for the Wisconsin Distinguished Graduate Fellowship for *Outstanding Graduate Work*

- Thesis: Scalable and Ubiquitous Millimeter-Wave Networks and Applications
- Advisor: Xinyu Zhang

Bengal Engineering and Science University, WB, India Fall 2007 – Spring 2011

Bachelor of Engineering in Computer Science and Engineering

Recipient of the **President of India Gold Medal** for *Outstanding Academic Achievement*

- Thesis: Error Free Deployment and Enhanced Security Strategies in Wireless Sensor Networks
- Advisor: Sipra Das Bit

Employment

University of South Carolina, SC Fall 2018 – Present

Assistant Professor

University of Wisconsin–Madison, WI Fall 2013 – Summer 2018

Graduate Research Assistant

Hewlett Packard Labs, Palo Alto, CA Summer 2015 – Fall 2017

Research Associate in the IoT & Edge Lab

Texas Instruments Summer 2011 – Summer 2013

Design Engineer in the Open Multimedia Applications Platform Group

Texas Instruments, Bangalore, India Summer 2010

Software Engineering Intern in the HD Video Engineering Group

Honors and Awards

NSF CAREER Award 2022

Best Poster Runner-up Award, ACM HotMobile 2022

Junior Researcher Award, Department of Computer Science and Engineering, University of South Carolina 2021

Best Poster Honorable Mention (Second Place), ACM UbiComp 2021

Best Poster Award, ACM HotMobile 2021

Best Poster Runner-up Award, ACM HotMobile 2021

ASPIRE II Award, University of South Carolina	2020
Travel Grant Award for NSF CSR-NeTS PI Workshop	2019
Nominated by the ECE department for the Wisconsin Distinguished Graduate Fellowship	2017
President of India Gold Medal , Bengal Engineering and Science University <i>For outstanding academic achievement</i>	2012
University Silver Medal , Bengal Engineering and Science University <i>Ranked 1st in academic department</i>	2011
Student Travel Grant Award	
• ACM MobiCom	2016
• USENIX NSDI	2016
• ACM MobiSys	2014

Extramural Grants

1. **NSF CAREER, PI,** 05/2022 - 04/2027
 – *Project title:* “CAREER: Vision and Learning Augmented D-Band Networking and Imaging”
 – Award amount: \$560,000
2. **NSF MRI, Co-PI,** 10/2020 - 09/2023
 – *Project title:* “MRI: Acquisition of Omnipercipient Chamber for Gathering Ground Truth and Enabling Research on Smart and Connected Things”
 – *PI:* Prof. Srihari Nelakuditi, University of South Carolina; *Co-PI:* Prof. Stacy Fritz, University of South Carolina;
Co-PI: Prof. Nikolaos Vitzilaios, University of South Carolina; *Co-PI:* Prof. Guoan Wang, University of South Carolina;
 – Award amount: \$730,286
3. **NSF CNS Core, PI,** 10/2019 – 09/2023
 – *Project title:* “CNS Core: Small: Software-Hardware Reconfigurable Systems for Mobile Millimeter-Wave Networks”
 – *Co-PI:* Prof. Srihari Nelakuditi, University of South Carolina; *Co-PI:* Prof. Guoan Wang, University of South Carolina
 – Award amount: \$547,967
4. **IEEE MTT-S Undergraduate Fellowship, PI,** 01/2022 - 12/2022
 – *Project title:* “Vision-Aided Through-Obstruction Handheld Imaging on 5G Smart Devices”
 – *Undergraduate student:* Jacqueline Schellberg
 – Award amount: \$2,500
5. **Vista Medical Equipment Gift, PI** 03/2022
 – Amount: \$1,540
6. **Texas Instruments Equipment Grant, PI** 08/2018
 – Amount: \$3,990

Intramural Grants

1. **USC ASPIRE II, PI,** 07/2020 – 06/2023
 – *Project title:* “In-Home Mobility Impairment Assessment and Feedback using 5G Wireless Signals and Voice-Assistants”
 – *Co-PI:* Prof. Stacy Fritz, University of South Carolina; *Co-PI:* Prof. J Benjamin Jackson, University of South Carolina; *Co-PI:* Prof. Souvik Sen, University of South Carolina; *Co-PI:* Prof. Srihari Nelakuditi, University of South Carolina;
 – Award amount: \$99,707
2. **USC Magellan Undergraduate Research Grant, PI,** 05/2022 - 04/2023
 – *Project title:* “Millimeter-Wave Imaging on 5G Handheld Smart Devices”

- *Undergraduate student*: Jacqueline Schellberg
 - Award amount: \$2,500
3. **USC Magellan Undergraduate Research Grant, PI,** 05/2022 - 04/2023
 - *Project title*: “Generating Global Indoor Point Clouds Using 5G Millimeter-Wave Technology”
 - *Undergraduate student*: Zachary Young
 - Award amount: \$2,500
 4. **USC Magellan Undergraduate Research Grant, PI,** 01/2022 - 12/2022
 - *Project title*: “5G Millimeter-Wave Enabled At-Home Human Silhouette Estimation”
 - *Undergraduate student*: Edward Sitar
 - Award amount: \$3,000
 5. **USC Magellan Undergraduate Research Grant, PI,** 01/2022 - 12/2022
 - *Project title*: “Drone-based Multimodal Surveying for Outdoor 5G Millimeter-Wave Picocell Placement”
 - *Undergraduate students*: Ian McDowell, Rahul Bulusu
 - Award amount: \$6,000
 6. **USC Magellan Undergraduate Research Grant, PI,** 01/2021 – 05/2021
 - *Project title*: “Visual Data Augmented 5G Millimeter-Wave Picocell Placement”
 - *Undergraduate student*: Timothy Dayne Hooks
 - Award amount: \$2,500

Research Supervision

Ph.D. Students

1. Zhuangzhuang Gu, University of South Carolina Fall 2022 – Present
2. Reza Tavasoli, University of South Carolina Fall 2021 – Present
3. Pingping Cai, University of South Carolina Spring 2021 – Present
4. Aakriti Adhikari, University of South Carolina Fall 2020 – Present
 - Travel Grant Award, ACM MobiSys, 2022
 - Invited to Participate in the ACM Grace Hopper Celebration Conference, CSE at USC, 2020 – 2021
5. Hem Regmi, University of South Carolina Fall 2020 – Present
 - Travel Grant Award, ACM SIGMETRICS, 2022
 - ACM HotMobile Best Poster Award, 2021
 - ACM HotMobile Best Poster Runner-Up Award, 2021
6. Moh Sabbir Saadat, University of South Carolina Spring 2019 – Present
 - ACM HotMobile Best Poster Runner-Up Award, 2021

M.S. Students

1. Ian McDowell, University of South Carolina Fall 2022 – Present
2. Heiru Wu, University of South Carolina Fall 2018
3. Long He, University of South Carolina Fall 2018

Undergraduate Students

1. Abdullah Alawfi, University of South Carolina Summer 2022 – Present
2. Joshua Fugate, University of South Carolina Summer 2022
3. Nicholas Junker, University of South Carolina Spring 2022 – Present
4. Siri Avula, University of South Carolina Spring 2022 – Present
 - Invited to Participate in the ACM Grace Hopper Celebration Conference, CSE at USC, 2022
5. Zachary Young, University of South Carolina Fall 2021 – Spring 2022
 - Magellan Scholar Award, VPR Office at USC, 2022

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| 6. Rahul Bulusu, University of South Carolina | Fall 2021 – Present |
| <ul style="list-style-type: none"> ● ACM HotMobile Best Poster Runner-up Award, 2022 ● Magellan Scholar Award, VPR Office at USC, 2022 | |
| 7. Edward Sitar, University of South Carolina | Spring 2021 – Present |
| <ul style="list-style-type: none"> ● Travel Grant Award, ACM MobiSys, 2022 ● Magellan Scholar Award, VPR Office at USC, 2022 | |
| 8. Jackie Schellberg, University of South Carolina | Spring 2021 – Present |
| <ul style="list-style-type: none"> ● IEEE MTT-S Undergraduate Scholarships, 2022 ● Magellan Scholar Award, VPR Office at USC, 2022 ● ACM UbiComp Best Poster Honorable Mention (Second Place), 2021 ● Invited to Participate in the ACM Grace Hopper Celebration Conference, CSE at USC, 2021 | |
| 9. Ian McDowell, University of South Carolina | Spring 2021 – Summer 2022 |
| <ul style="list-style-type: none"> ● ACM HotMobile Best Poster Runner-Up Award, 2022 ● Magellan Scholar Award, VPR Office at USC, 2022 | |
| 10. Lance Kevin, University of South Carolina | Fall 2020 – Summer 2021 |
| 11. Stephen Baione, University of South Carolina | Spring 2021 – Summer 2021 |
| 12. Ian Urton, University of South Carolina | Fall 2020 |
| 13. Timothy Dayne Hooks, University of South Carolina | Fall 2020 – Summer 2021 |
| <ul style="list-style-type: none"> ● Employment: Heron Systems ● ACM HotMobile Best Poster Award, 2021 ● Magellan Scholar Award, VPR Office at USC, 2021 | |
| 14. Austin Hetherington, University of South Carolina | Summer 2020 |
| 15. Austin Staton, University of South Carolina | Fall 2018 |
| 16. Chuanyi Zhang, Undergraduate intern, University of Wisconsin–Madison | Summer 2016 |
| 17. Ran Xu, Undergraduate intern, University of Wisconsin–Madison | Summer 2015 |

Teaching Experience

Course Instructor

1. CSCE 416: Introduction to Computer Networks
 - Instructor for a course on introduction to fundamental concepts in the design and implementation of computer networks, their protocols, and applications.
Fall 2022, Fall 2021, Fall 2020, Fall 2019
2. CSCE 790: Topics in Information Technology
 - Wireless and Mobile Systems for the IoT: Instructor for a special topics course on state-of-the-art systems' research on the Internet of Things (IoT).
Spring 2022, Spring 2021, Spring 2020
 - Millimeter-Wave Networking and Application: Designed a new special topics course on introduction to the state-of-the-art in millimeter-wave networking and applications.
Fall 2018
3. CSCE 313: Embedded Systems
 - Instructor for a course on fundamentals of embedded systems: hardware and software components, interface design, and co-design.
Spring 2020
4. CSCE 791: Seminar in Advances in Computing
 - Instructor for a course on technical writing and presentations in major computing research areas.
Fall 2020

Guest Lecturer

1. CSCE 791: Seminar in Advances in Computing, University of South Carolina
 - Bringing Scalable Millimeter-Wave Networks and Applications to the Masses Spring 2022
 - Towards Scalable and Ubiquitous Millimeter-Wave Wireless Networks Fall 2018
 - Towards Scalable and Ubiquitous Millimeter-Wave Networks and Applications Spring 2019
2. ELCT 861: Advances in Electromagnetics, University of South Carolina
 - Pushing the Limits of Hand-held Millimeter-Wave Imaging Spring 2021

Teaching Assistant

1. ECE 454: Mobile Computing Laboratory, University of Wisconsin–Madison Fall 2016

Thesis Committee Members

Ph.D. Dissertation

1. Safi Shams Muhtasimul Hoque, University of South Carolina 2022 – Present
Advisor: Prof. Alphan Sahin
2. Zeenat Afroze, University of South Carolina 2022 – Present
Advisor: Prof. David Matolak
3. Ivan Panchenko, University of South Carolina 2021 – Present
Advisor: Prof. Jason Bakos
4. Phani Krishna Penumarthy, University of South Carolina 2019 – 2020
Advisor: Prof. Srihari Nelakuditi
5. Nozhan Hosseini, University of South Carolina 2019 – 2020
Advisor: Prof. David Matolak
6. Jinwen Liu, University of South Carolina 2019 – 2020
Advisor: Prof. David Matolak

Journal Publications

Underlined are my direct advisees. Updated information available at <https://syrex.cse.sc.edu/publications/>

- JP1. MiShape: Accurate Human Silhouettes and Body Joints from Commodity Millimeter-Wave Devices
Aakriti Adhikari, Hem Regmi, **Sanjib Sur**, Srihari Nelakuditi
Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), 2022
(CORE Ranking: A*)
- JP2. DeepPCD: Enabling AutoCompletion of Indoor Point Clouds with Deep Learning
Pingping Cai, **Sanjib Sur**
Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), 2022
(CORE Ranking: A*)
- JP3. Argus: Predictable Millimeter-Wave Picocells with Vision and Learning Augmentation
Hem Regmi, **Sanjib Sur**
Proceedings of the ACM on Measurement and Analysis of Computing Systems (POMACS/SIGMETRICS), 2022
(CORE Ranking: A*)
- JP4. Order of FIB Updates Seldom Matters: Fast Reroute and Fast Convergence with Interface-Specific Forwarding
Phani Krishna Penumarthy, Aaron Pecora, **Sanjib Sur**, Jason M O’Kane, Srihari Nelakuditi
Elsevier High-Confidence Computing (HCC), 2022
- JP5. SquiggleMilli: Approximating SAR Imaging on Mobile Millimeter-Wave Devices
Hem Regmi, Moh Sabbir Saadat, **Sanjib Sur**, Srihari Nelakuditi
Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), 2021
(CORE Ranking: A*)

Conference Publications

Underlined are my direct advisees. Updated information available at <https://syrex.cse.sc.edu/publications/>

- CP1. A Case for Line-Of-Sight Blockage Detection as a Primitive in Millimeter-Wave Networks
Sanjib Sur, Srihari Nelakuditi
Invited paper at IEEE International Conference on Mobile Ad-Hoc and Smart Systems (MASS), 2022
- CP2. mmSleep: Monitoring Sleep Posture from Commodity Millimeter-Wave Devices
Aakriti Adhikari, Siri Avula, Sanjib Sur
ACM International Conference on Mobile Systems, Applications, and Services (MobiSys), 2022
- CP3. SSCense: A Millimeter-Wave Sensing Approach for Estimating Soluble Sugar Content of Fruits
Reza Tavasoli, Sanjib Sur, Srihari Nelakuditi
ACM International Conference on Mobile Systems, Applications, and Services (MobiSys), 2022
- CP4. Accurate Device Self-Tracking for Robust Millimeter-Wave Imaging on Handheld Smart Devices
Jacqueline Schellberg, Sanjib Sur
ACM International Conference on Mobile Systems, Applications, and Services (MobiSys), 2022
- CP5. A Millimeter-Wave Wireless Sensing Approach for At-Home Exercise Recognition
Edward Sitar, Moh Sabbir Saadat, Sanjib Sur
ACM International Conference on Mobile Systems, Applications, and Services (MobiSys), 2022
- CP6. Towards Deep Learning Augmented Robust D-Band Millimeter-Wave Picocell Deployment
Hem Regmi, Sanjib Sur
ACM International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS), 2022
- CP7. Argus: Predictable Millimeter-Wave Picocells with Vision and Learning Augmentation
Hem Regmi, Sanjib Sur
ACM Joint International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS/PERFORMANCE), 2022
(23 out of 106 submissions, acceptance ratio: 21.7%)
- CP8. mmFlow: Facilitating At-Home Spirometry with 5G Smart Devices
Aakriti Adhikari, Austin Hetherington, Sanjib Sur
IEEE International Conference on Sensing, Communication and Networking (SECON), 2021
(37 out of 140 submissions, acceptance ratio: 26.4%)
- CP9. MilliPose: Facilitating Full Body Silhouette Imaging from Millimeter-Wave Device
Aakriti Adhikari, Sanjib Sur
ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp), 2021
- CP10. ViSAR: A Mobile Platform for Vision-Integrated Millimeter-Wave Synthetic Aperture Radar
Jacqueline M Schellberg, Sanjib Sur
ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp), 2021
(**Best Poster Honorable Mention**)
- CP11. AutoPCD: Learning-Augmented Indoor Point Cloud Completion
Pingping Cai, Edward Sitar, Sanjib Sur
ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp), 2021
- CP12. Bringing Temperature-Awareness to Millimeter-Wave Networks
Moh Sabbir Saadat, Sanjib Sur, Srihari Nelakuditi
ACM International Conference on Mobile Computing and Networking (MobiCom), 2020
- CP13. MilliCam: Hand-held Millimeter-Wave Imaging
Moh Sabbir Saadat, Sanjib Sur, Srihari Nelakuditi, Parmesh Ramanathan
Invited paper at IEEE International Conference on Computer Communications and Networks (ICCCN), 2020
- CP14. A Case for Temperature-Aware Scheduler for Millimeter-Wave Devices and Networks
Moh Sabbir Saadat, Sanjib Sur, Srihari Nelakuditi
IEEE International Conference on Network Protocols (ICNP), 2020
(31 out of 184 submissions, acceptance ratio: 16.8%)

- CP15. Practical Privacy Protection for Audio Sensing Against Multi-Microphone Adversaries
 Chuhan Gao, Kassem Fawaz, **Sanjib Sur**, Suman Banerjee
The 19th Privacy Enhancing Technologies Symposium (PETS), 2019
 (15 out of 71 submissions, acceptance ratio: 21.1%)
- CP16. Towards Scalable and Ubiquitous Millimeter-Wave Wireless Networks
Sanjib Sur, Ioannis Pefkianakis, Xinyu Zhang, Kyu-Han Kim
ACM International Conference on Mobile Computing and Networking (MobiCom), 2018
 (42 out of 190 submissions, acceptance ratio: 22.1%)
- CP17. WiFi-Assisted 60 GHz Wireless Networks
Sanjib Sur, Ioannis Pefkianakis, Xinyu Zhang, Kyu-Han Kim
ACM International Conference on Mobile Computing and Networking (MobiCom), 2017
 (35 out of 186 submissions, acceptance ratio: 18.8%)
- CP18. Demo: WiFi-Assisted 60 GHz Wireless Networks
Sanjib Sur, Ioannis Pefkianakis, Xinyu Zhang, Kyu-Han Kim
ACM International Conference on Mobile Computing and Networking (MobiCom), 2017
- CP19. Towards WiFi-Assisted Millimeter-Wave Enterprise Wireless Networks
Sanjib Sur, Ioannis Pefkianakis, Kyu-Han Kim
Hewlett Packard Enterprise Technical Conference, 2017
- CP20. Practical MU-MIMO User Selection on 802.11ac Commodity Networks
Sanjib Sur, Ioannis Pefkianakis, Xinyu Zhang, Kyu-Han Kim
ACM International Conference on Mobile Computing and Networking (MobiCom), 2016
 (31 out of 221 submissions, acceptance ratio: 14%)
- CP21. Scoping Environment for Robust 60 GHz Link Deployment
Sanjib Sur, Xinyu Zhang
Invited paper at Information Theory and Applications (ITA), 2016
- CP22. BeamSpy: Enabling Robust 60 GHz Links Under Blockage
Sanjib Sur, Xinyu Zhang, Parameswaran Ramanathan, Ranveer Chandra
USENIX Symposium on Networked Systems Design and Implementation (NSDI), 2016
 (45 out of 225 submissions, acceptance ratio: 20%)
- CP23. MU-MIMO User Selection and Rate Adaptation for 802.11ac-based Enterprise Wi-Fi Networks
Sanjib Sur, Ioannis Pefkianakis
Hewlett Packard Enterprise Technical Conference, 2016
 (**Honorable Mention**)
- CP24. Scoping Environment to Assist 60 GHz Link Deployment
Sanjib Sur, Xinyu Zhang
ACM International Conference on Mobile Computing and Networking (MobiCom), 2015
- CP25. 60 GHz Indoor Networking through Flexible Beams: A Link-Level Profiling
Sanjib Sur, Vignesh Venkateswaran, Xinyu Zhang, Parameswaran Ramanathan
ACM International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS), 2015
 (32 out of 239 submissions, acceptance ratio: 13.4%)
- CP26. Bringing Multi-Antenna Gain to Energy-Constrained Wireless Devices
Sanjib Sur, Teng Wei, Xinyu Zhang
IEEE/ACM International Conference on Information Processing in Sensor Networks (IPSN), 2015
 (27 out of 111 submissions, acceptance ratio: 24.3%)
- CP27. Bridging Link Power Asymmetry in Mobile Whitespace Networks
Sanjib Sur, Xinyu Zhang
IEEE International Conference on Computer Communications (INFOCOM), 2015
 (316 out of 1640 submissions, acceptance ratio: 19.2%)

- CP28. Autodirective Audio Capturing Through a Synchronized Smartphone Array
Sanjib Sur, Teng Wei, Xinyu Zhang
ACM International Conference on Mobile Systems, Applications, and Services (MobiSys), 2014
 (25 out of 185 submissions, acceptance ratio: 13.5%)
- CP29. μ Sec: A Security Protocol for Unicast Communication in Wireless Sensor Networks
 Amrita Ghosal, **Sanjib Sur**, Sipra Das Bit
International Workshop on Autonomous and Spontaneous Security, 2012
- CP30. Handwritten Bangla Character Recognition in Machine-Printed Forms Using Gradient Information and Haar Wavelet
 Sekhar Mandal, **Sanjib Sur**, Avishek Dan, Partha Bhowmick
IEEE International Conference on Image Information Processing (ICIIP), 2011
 (148 out of 624 submissions, acceptance ratio: 23%)
- CP31. Ensuring Basic Security and Preventing Replay Attack in a Query Processing Application Domain in WSN
 Amrita Ghosal, Subir Halder, **Sanjib Sur**, Avishek Dan, Sipra Das Bit
International Conference on Computational Science and Its Applications, 2010
- CP32. A Lifetime Enhancing Node Deployment Strategy in WSN
 Subir Halder, Amrita Ghosal, **Sanjib Sur**, Avishek Dan, Sipra Das Bit
International Conference on Future Generation Information Technology, 2009

Workshop Publications

Underlined are my direct advisees. Updated information available at <https://syrex.cse.sc.edu/publications/>

- WP1. MilliDrone: A Drone Platform to Facilitate Scalable Survey of Outdoor Millimeter-Wave Signal Propagation
Ian C. McDowell, Rahul Bulusu, **Sanjib Sur**
ACM International Workshop on Mobile Computing Systems and Applications (HotMobile), 2022
 (**Best Poster Runner-up Award**)
- WP2. MilliCloud: Beyond Vision PCD Generation using Millimeter-Wave
Pingping Cai, **Sanjib Sur**
ACM International Workshop on Mobile Computing Systems and Applications (HotMobile), 2022
- WP3. VisualMM: Visual Data & Learning Aided 5G Picocell Placement
 Timothy Dayne Hooks, Hem Regmi, **Sanjib Sur**
ACM International Workshop on Mobile Computing Systems and Applications (HotMobile), 2021
 (**Best Poster Award**)
- WP4. ZigZagCam: Pushing the Limits of Hand-held Millimeter-Wave Imaging
 Hem Regmi, Moh Sabbir Saadat, **Sanjib Sur**, Srihari Nelakuditi
ACM International Workshop on Mobile Computing Systems and Applications (HotMobile), 2021
 (**Best Poster Runner-up Award**)
- WP5. SpiroMilli: Bringing Ad-hoc Spirometry to 5G Devices
Aakriti Adhikari, Austin Hetherington, **Sanjib Sur**
ACM International Workshop on Mobile Computing Systems and Applications (HotMobile), 2021

Patents

Granted

- PG1. US Patent 11,394,125, Reconfigurable Antenna Design For Centimeter-Wave and Millimeter-Wave, Sanjib Sur, Guoan Wang, Srihari Nelakuditi, Granted on Jul. 2022
- PG2. US Patent 10,972,155, Access Point Selection, Sanjib Sur, Ioannis Pefkianakis, Yunze Zeng, Granted on Apr. 2021
- PG3. US Patent 10,820,242, Reroute Network Traffic From Millimeter-Wave Link to WLAN Transmission, Sanjib Sur, Ioannis Pefkianakis, Granted on Oct. 2020

- PG4. US Patent 10,587,353, MU-MIMO Group Assignment, Sanjib Sur, Ioannis Pefkianakis, Souvik Sen, Granted on Mar. 2020
- PG5. US Patent 10,548,147, Access Point Beam Strength Rankings, Sanjib Sur, Ioannis Pefkianakis, Granted on Jan. 2020
- PG6. US Patent 10,505,619, Selecting Beams Based on Channel Measurements, Sanjib Sur, Ioannis Pefkianakis, Granted on Dec. 2019
- PG7. US Patent 10,171,140, MU-MIMO Group Selection, Sanjib Sur, Ioannis Pefkianakis, Granted on Jan. 2019
- PG8. US Patent 10,051,685, Adapting Radios of Millimeter-Wave Devices, Sanjib Sur, Ioannis Pefkianakis, Granted on Aug. 2018
- PG9. US Patent 9,577,731, Radio Frequency Communication with Antenna Index Coding, Xinyu Zhang, Sanjib Sur, Teng Wei, Granted on Feb. 2017

Pending

1. US Patent Application 63/192,345, Human-Perceptible and Machine-Readable Shape Generation and Classification of Hidden Objects, Sanjib Sur, Hem Regmi, Filed on May 2021
2. US Utility Patent Application 17/327,881, Heat Dissipation for Millimeter-Wave Devices with Antenna Switching, Sanjib Sur, Moh Sabbir Saadat, Srihari Nelakuditi, Filed on May 2021
3. US Patent Application 63/182,257, Transforming Cheap Spirometers to Estimate Flow-Volume Graph by Deep Learning, Sanjib Sur, Aakriti Adhikari, Filed on April 2021
4. US Patent Application 63/176,514, Facilitating At-Home Spirometry with Millimeter-Wave Devices, Sanjib Sur, Aakriti Adhikari, Filed on April 2021
5. US Patent Application 63/055,386, Heat Dissipation for Millimeter-Wave Devices with Antenna Switching, Sanjib Sur, Moh Sabbir Saadat, Srihari Nelakuditi, Filed on July 2020
6. US Patent Application 63/025,333, Methods and Integrated Structures of Heat Dissipation for Microwave Antennas, Guoan Wang, Jinqun Ge, Sanjib Sur, Srihari Nelakuditi, Filed on May 2020
7. US Patent Application 62/753,293, In-field Gait Parameters Estimation, Sanjib Sur, Filed on Oct. 2018

Trademarks

Pending

1. US Trademark Application Serial Number 90085316, AQUILO: Heat Dissipation Systems for Antennae, Sanjib Sur, Filed on Jul. 2020

Services

Professional Community

- *Organizing Committee Member*
 - Steering Committee Member: IEEE/ACM STEERS Workshop 2021–2022
 - Poster and Demo Co-Chair: ACM HotMobile 2023
 - Demo Co-Chair: ACM MobiSys 2022
 - Publicity Co-Chair: ACM SenSys 2022
 - Program Committee Co-Chair: IEEE/ACM STEERS Workshop 2021–2022; ACM mmNets Workshop 2020
 - Session Chair: IEEE MASS 2021; IEEE WoWMoM 2021; IEEE IFIP Networking 2021
- *Technical Program Committee Member*
 - ACM MobiCom 2023; IEEE MSN 2021–2022; IEEE ICPADS 2022; IEEE ICC - MWN Symposium 2023;
 - IEEE MASS 2021–2022; IEEE ICDCS 2021; EAI MobiQuitous 2022; IEEE WoWMoM 2021–2022;
 - IEEE IFIP Networking 2021; IEEE WSCE 2019; ACM mmNets 2019–2022; ACM WiNTECH 2019–2022;
 - ACM S3 Workshop 2017

- *Panel Member*
 - NSF panelist for GRFP 2021; ACM MobiCom S3 Workshop 2018
- *Reviewer*
 - IEEE Transactions on Mobile Computing 2015–2022; IEEE/ACM Transactions on Networking 2016–2022;
 - IEEE Transactions on Communications 2016–2020; IEEE Pervasive Computing 2022; UbiComp Poster 2022;
 - IEEE Transactions on Wireless Communications 2020; IEEE Transactions on Vehicular Technology 2017;
 - IEEE Transactions on Network and Service Management 2018, 2021; IEEE Systems 2018–2022;
 - IEEE Transactions on Dependable and Secure Computing 2018; IEEE Access 2019 – 2021;
 - IEEE Wireless Communications Letters 2018; IEEE Transactions on Network Science and Engineering 2018;
 - Wiley Transactions on Emerging Telecommunications Technologies 2020; PLOS One 2021;
 - ACM Transactions on Sensor Networks 2018–2021; Elsevier Computer Communications 2021;
 - Elsevier Pervasive and Mobile Computing 2018–2022; Book proposal at Springer Nature 2018;
 - EURASIP Journal on Wireless Communications and Networking 2018; IEEE Journal on Selected Areas in Communications 2019; MDPI Energies, Applied Sciences, Information 2019–2021;

University

- Serving on the CSE Graduate Admissions and Fellowships Committee 2018–Present
 - Director of the CSE Graduate Admissions Sub-committee 2019–Present
- Served as the judge for the Math/CS Senior Division projects at the USC Science and Engineering Fair: Head Judge 2020, 2022; Judge 2021
- Proposal Reviewer for ASPIRE II, USC 2021
- Reviewer and Judge for USC Discover 2021–2022
- Faculty Mentors for first-year scholars at USC for National Fellowships and Scholar Programs 2021
- Serving as an Advising Fellow for the CSE department 2021
- Served on the USC CSE Faculty Search Committee 2019