

# Sanjib Sur

## Contact Details

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## Research Interests

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AI for Healthcare, Mobile and Ubiquitous Sensing, Millimeter-Wave Networks.

## Education

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**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

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**University of South Carolina, SC**

*Associate Professor, Computer Science and Engineering*

Fall 2024 – Present

*Assistant Professor, Computer Science and Engineering*

Fall 2018 – Summer 2024

**University of Wisconsin–Madison, WI**

*Graduate Research Assistant*

Fall 2013 – Summer 2018

**Hewlett Packard Labs, Palo Alto, CA**

*Research Associate in the IoT & Edge Lab*

Summer 2015 – Fall 2017

**Texas Instruments**

*Design Engineer in the Open Multimedia Applications Platform Group*

Summer 2011 – Summer 2013

**Texas Instruments, Bangalore, India**

*Software Engineering Intern in the HD Video Engineering Group*

Summer 2010

## Honors and Awards

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Provost's Research Competition Winner, University of South Carolina 2026

Deans Excellence Award for Research and Scholarship, University of South Carolina 2026, 2025

Best Poster Award Second Place, Discover USC Medical Scholars, University of South Carolina 2025

Best Poster Award Third Place, CSE Research Symposium, University of South Carolina 2024

CEC Young Investigator Award, University of South Carolina 2024

Breakthrough Stars Award, University of South Carolina 2023

Best Poster Award Second Place, CSE Research Symposium, University of South Carolina	2023
Best Poster Award, Engineering and Computing Division at Discover, University of South Carolina	2023
Nominated for the Distinguished Undergraduate Research Mentor Award, University of South Carolina	2023
NSF CAREER Award	2022
Best Poster Runner-up Award, ACM HotMobile	2022
Nominated for the CEC Young Investigator Award, University of South Carolina	2022
Junior Faculty Researcher Award, 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 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

- NSF MRI, Co-PI,** 09/2024 - 09/2027  
 – *Project:* “Equipment: MRI: Track 1 Acquisition of a Mobile Observation System for Neurodevelopment Research”  
 – *PI:* Jessica Bradshaw, University of South Carolina; *Co-PI:* Yan Tong, University of South Carolina; *Co-PI:* Jane E Roberts, University of South Carolina; *Co-PI:* Christian O’Reilly, University of South Carolina;  
 – Award amount: \$1,399,302
- NSF NeTS Core, PI,** 05/2024 - 04/2027  
 – *Project:* “NeTS: Small: NSF-DST: Modernizing Underground Mining Operations with Millimeter-Wave Imaging and Networking”  
 – *Co-PI:* Sandip Chakraborty, Indian Institute of Technology; *Co-PI:* Dheeraj Kumar, Indian School of Mines;  
 – Award amount: \$827,736
- NSF CAREER, PI,** 05/2022 - 04/2027  
 – *Project:* “CAREER: Vision and Learning Augmented D-Band Networking and Imaging”  
 – Award amount: \$596,000
- NSF MRI, Co-PI,** 10/2020 - 09/2025  
 – *Project:* “MRI: Acquisition of Omniperceptive Chamber for Gathering Ground Truth and Enabling Research on Smart and Connected Things”  
 – *PI:* Srihari Nelakuditi, University of South Carolina; *Co-PI:* Stacy Fritz, University of South Carolina; *Co-PI:* Nikolaos Vitzilaios, University of South Carolina; *Co-PI:* Guoan Wang, University of South Carolina;  
 – Award amount: \$766,286

5. **NSF CNS Core, PI,** 10/2019 – 03/2024  
 – *Project*: “CNS Core: Small: Software-Hardware Reconfigurable Systems for Mobile Millimeter-Wave Networks”  
 – *Co-PI*: Srihari Nelakuditi, University of South Carolina; *Co-PI*: Guoan Wang, University of South Carolina  
 – Award amount: \$563,967
6. **US Navy, Office of Naval Research, Co-PI,** 02/2023 - 02/2027  
 – *Project*: “DURIP: ENACT - Enabling Next Adaptive Communication Technologies”  
 – *PI*: Guoan Wang, University of South Carolina; *Co-PI*: Mohammod Ali, University of South Carolina; *Co-PI*: David Matolak, University of South Carolina; *Co-PI*: Alphan Sahin, University of South Carolina;  
 – Award amount: \$795,904
7. **IEEE MTT-S Fellowship, PI,** 01/2022 - 12/2022  
 – *Project*: “Vision-Aided Through-Obstruction Handheld Imaging on 5G Smart Devices”  
 – *Undergraduate student*: Jacqueline Schellberg  
 – Award amount: \$2,500
8. **Vista Medical Equipment Gift, PI** 03/2022  
 – Amount: \$1,540
9. **Texas Instruments Equipment Grant, PI** 08/2018  
 – Amount: \$3,990

## Intramural Grants

1. **USC Provost’s Research Competition Seed Funding, PI,** 05/2026 - 01/2027  
 – *Project*: “A Contactless and AI-Assisted System for Pediatric Body Composition Assessment”  
 – *Co-PI*: Srihari Nelakuditi, University of South Carolina; *Co-PI*: Glenn Weaver, University of South Carolina;  
*Co-PI*: Katie Hirsch, University of South Carolina; *Co-PI*: Michael W. Beets, University of South Carolina;  
 – Award amount: \$20,000
2. **USC ASPIRE II, PI,** 07/2020 – 06/2023  
 – *Project*: “In-Home Mobility Impairment Assessment and Feedback using 5G Wireless Signals and Voice-Assistants”  
 – *Co-PI*: Stacy Fritz, University of South Carolina; *Co-PI*: J Benjamin Jackson, University of South Carolina; *Co-PI*: Souvik Sen, University of South Carolina; *Co-PI*: Srihari Nelakuditi, University of South Carolina;  
 – Award amount: \$99,707
3. **USC SPARC Graduate Research Grant, PI,** 05/2025 - 07/2026  
 – *Project title*: “VolumeSense: A Contactless and Camera-Free Technology for Precise Body Volume Estimation”  
 – *Graduate student*: Reza Tavasoli  
 – Award amount: \$4,866
4. **USC Magellan Research Grant, PI,** 05/2024 - 04/2025  
 – *Project*: “Contactless Estimation of Electrocardiograms using Millimeter-Wave Systems”  
 – *Undergraduate student*: Joseph Telaak  
 – Award amount: \$2,500
5. **USC Magellan Apprentice Award, PI,** 01/2024 - 09/2024  
 – *Project*: “Contactless Estimation of Electrocardiograms using Millimeter-Wave Systems”  
 – *Undergraduate student*: Joseph Telaak  
 – Award amount: \$1,000
6. **USC Magellan Research Grant, PI,** 01/2024 - 12/2024  
 – *Project*: “Understanding Sleep Posture using 5G/Millimeter-Wave Wireless Systems”  
 – *Undergraduate student*: Arshia Eslami  
 – Award amount: \$3,000
7. **USC Magellan Research Grant, PI,** 05/2023 - 05/2024  
 – *Project*: “Pedestrian Detection in Low-Visibility using 5G/Millimeter-Wave Wireless Systems”  
 – *Undergraduate student*: Vansh Nagpal  
 – Award amount: \$3,000

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

## Research Supervision

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### Ph.D. Students

1. Zarin Shejuti, University of South Carolina Spring 2026 – Present
2. Abdulahi Taiwo, University of South Carolina Fall 2025 – Present
3. Emmanuel Addo Addae, University of South Carolina Fall 2025 – Present
4. Aayush Shrestha, University of South Carolina Fall 2025 – Present
5. Zhuangzhuang Gu, University of South Carolina Fall 2022 – Present
  - Travel Grant Award, ACM/IEEE IPSN, 2023
6. Reza Tavasoli, Ph.D. Candidate, University of South Carolina Fall 2021 – Present
  - USC SPARC Research Award, 2025
  - Best Poster Award Third Place, CSE Research Symposium, 2024
  - Best Poster Award Second Place, CSE Research Symposium, 2023
7. Moh Sabbir Saadat, Ph.D. Candidate, University of South Carolina Spring 2019 – Present
  - Travel Grant Award, ACM/IEEE CHASE, 2024
  - ACM HotMobile Best Poster Runner-Up Award, 2021

### Ph.D. Graduates

1. Aakriti Adhikari, Ph.D. Graduate, University of South Carolina Fall 2020 – Summer 2025
  - Nominated for the N<sup>2</sup>Women Rising Stars Award, 2025
  - Nominated for the USC Outstanding Research Award, 2025
  - Nominated for the USC Trustee Fellowship, 2025
  - Travel Grant Award, ACM MobiCom, 2024
  - Winner of the Best Doctoral Consortium Presentation Award at the ACM Richard-Tapia conference, 2024
  - Selected for the Final Round at the 3MT Competition at the University of South Carolina, 2024

- Invited to attend the ACM Richard-Tapia Conference, 2024
  - Nomination for the EECS Rising Star Award, 2023
  - Travel Grant Award, IEEE INFOCOM, 2023
  - Travel Grant Award, ACM HotMobile, 2023
  - Invited to Participate in the CRA-WP Grad Cohort for Women, 2023
  - Travel Grant Award, ACM MobiSys, 2022
  - Nomination for the N<sup>2</sup> Women Young Researcher Fellowship, 2021
  - Invited to Participate in the ACM Grace Hopper Celebration Conference, CSE at USC, 2020 – 2021
2. Hem Regmi, Ph.D. Graduate, University of South Carolina Fall 2020 – Spring 2025
- Travel Grant Award, ACM MobiSys, 2024
  - Winner of the C.C. Royal Trustee Fellowship, 2024
  - Best Poster Award Third Place, CSE Research Symposium, 2024
  - Nominated for the USC Outstanding Research Award, 2023, 2024
  - Nominated for the USC Trustee Fellowship, 2023
  - Travel Grant Award, ACM SIGMETRICS, 2022
  - ACM HotMobile Best Poster Award, 2021
  - ACM HotMobile Best Poster Runner-Up Award, 2021

### M.S. Students

1. Ian McDowell, University of South Carolina Fall 2022 – Spring 2023
2. Heiru Wu, University of South Carolina Fall 2018
3. Long He, University of South Carolina Fall 2018

### Undergraduate Students

1. Hammam Salman, University of South Carolina Spring 2025 – Present
2. Tsbih Salman, University of South Carolina Spring 2025 – Present
3. EmmaLee Peyton, University of South Carolina Spring 2025
4. Genar Villalva, University of South Carolina Spring 2025
5. Maximus Fernandez, University of South Carolina Spring 2024
6. Siri Avula, University of South Carolina Spring 2022 – Fall 2023
- Travel Grant Award, ACM HotMobile, 2023
  - Magellan Scholar Award, VPR Office at USC, 2023
  - Invited to Participate in the ACM Grace Hopper Celebration Conference, CSE at USC, 2022
7. Vansh Nagpal, University of South Carolina Fall 2022 – Spring 2024
- Nominated for the Outstanding Senior Award, CSE, 2025
  - Magellan Scholar Award, VPR Office at USC, 2023
8. Arshia Eslami, University of South Carolina Fall 2022 – Spring 2024
- Nominated for the Outstanding Senior Award, CSE, 2025
  - Magellan Scholar Award, VPR Office at USC, 2024
  - Travel Grant Award, ACM HotMobile, 2024
9. Joseph Telaak, University of South Carolina Spring 2023 – Spring 2024
- Magellan Scholar Award, VPR Office at USC, 2024
  - Magellan Apprentice Award, VPR Office at USC, 2023
10. Joshua DuPuis, University of South Carolina Summer 2023 – Fall 2023
11. Jacqueline Schellberg, University of South Carolina Spring 2021 – Spring 2023
- Travel Grant Award, ACM HotMobile, 2023
  - Nominated for the Outstanding Senior Award, CSE, 2023
  - Nominated for the CRA Outstanding Undergraduate Researcher Award, 2023
  - 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
  - Currently ECE Ph.D. Student at the University of Wisconsin-Madison
12. Rahul Bulusu, University of South Carolina Fall 2021 – Spring 2023
    - USC Outstanding Senior Award, 2023
    - Best Poster Presentation, Undergraduate Engineering and Computing Division at USC Discover, 2023
    - NSF Graduate Research Fellowships Program (GRFP) Award, 2023
    - ACM HotMobile Best Poster Runner-up Award, 2022
    - Magellan Scholar Award, VPR Office at USC, 2022
    - Currently ECE Ph.D. Student at the University of Texas at Austin
  13. Dylan Johnson, University of South Carolina Fall 2023
  14. Jackson Ginn, University of South Carolina Spring 2023
  15. Edward Sitar, University of South Carolina Spring 2021 – Fall 2022
    - Nominated for the Outstanding Senior Award, CSE, 2023
    - Finalist for the CRA Outstanding Undergraduate Researcher Award, 2023
    - Travel Grant Award, ACM SenSys, 2022
    - Travel Grant Award, ACM MobiSys, 2022
    - Magellan Scholar Award, VPR Office at USC, 2022
  16. Nicholas Junker, University of South Carolina Spring 2022 – Fall 2022
    - Travel Grant Award, ACM SenSys, 2022
  17. Abdullah Alawfi, University of South Carolina Summer 2022 – Fall 2022
  18. Ian McDowell, University of South Carolina Spring 2021 – Summer 2022
    - ACM HotMobile Best Poster Runner-Up Award, 2022
    - Magellan Scholar Award, VPR Office at USC, 2022
  19. Joshua Fugate, University of South Carolina Summer 2022
  20. Zachary Young, University of South Carolina Fall 2021 – Spring 2022
    - Magellan Scholar Award, VPR Office at USC, 2022
  21. Timothy Dayne Hooks, University of South Carolina Fall 2020 – Summer 2021
    - ACM HotMobile Best Poster Award, 2021
    - Magellan Scholar Award, VPR Office at USC, 2021
  22. Lance Kevin, University of South Carolina Fall 2020 – Summer 2021
  23. Stephen Baione, University of South Carolina Spring 2021 – Summer 2021
  24. Ian Urton, University of South Carolina Fall 2020
  25. Austin Hetherington, University of South Carolina Summer 2020
  26. Austin Staton, University of South Carolina Fall 2018
  27. Chuanyi Zhang, University of Wisconsin–Madison Summer 2016
  28. Ran Xu, University of Wisconsin–Madison Summer 2015

### Visiting Scholars and Students

1. Sankalp Jajee, M.S. Student, University of South Carolina Summer 2024
2. Pingping Cai, Ph.D. Student, University of South Carolina Spring 2021 – Spring 2022
3. Austin Hetherington, Ph.D. Student, University of South Carolina Fall 2020 – Spring 2021
  - Bridge to Doctorate Fellowship
4. Sparsho De, Undergraduate Student, University of Chicago Summer 2022

## High School Students

1. William Wang, Dutch Fork High School

Fall 2025

## Teaching Experience

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### 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.  
Spring 2026, Fall 2025, Spring 2025, Fall 2024, Fall 2023, 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 2024, Spring 2023, 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 2023, Fall 2020

### Guest Lecturer

1. CSCE 791: Seminar in Advances in Computing, University of South Carolina
  - Millimeter-Wave Wireless Sensing for Contactless Monitoring of Stroke Patients Spring 2025
  - 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

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### Ph.D. Dissertation

1. Patrick Murphy, University of South Carolina 2024 – Present  
Advisor: Prof. David Matolak
2. Jian Liu, University of South Carolina 2024 – 2026  
Graduated; Advisor: Prof. Chin-Tser Huang
3. Yingcong Zhang, University of South Carolina 2025 – 2026  
Advisors: Prof. Guoan Wang and Prof. Xiaofeng Wang
4. Ivan Panchenko, University of South Carolina 2021 – Present  
Advisor: Prof. Jason Bakos
5. Safi Shams Muhtasimul Hoque, University of South Carolina 2022 – 2023  
Graduated; Advisor: Prof. Alphan Sahin

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| 6. Zeenat Afroze, University of South Carolina<br>Graduated; Advisor: Prof. David Matolak                 | 2022 – 2023 |
| 7. Phani Krishna Penumarthy, University of South Carolina<br>Graduated; Advisor: Prof. Srihari Nelakuditi | 2019 – 2020 |
| 8. Nozhan Hosseini, University of South Carolina<br>Graduated; Advisor: Prof. David Matolak               | 2019 – 2020 |
| 9. Jinwen Liu, University of South Carolina<br>Graduated; Advisor: Prof. David Matolak                    | 2019 – 2020 |

### Ph.D. Qualifying Exam

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| 1. Suyash Vardhan Singh, University of South Carolina<br>Advisor: Prof. Jason Bakos | Fall 2025 |
| 2. Yong Yang, University of South Carolina<br>Advisor: Prof. Srihari Nelakuditi     | Fall 2025 |

### Journal Publications

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

- JP1. MiHazeFree3D: Accurate 3D Bounding Box Prediction for Vehicles and Pedestrians in All Weather Conditions  
Hem Regmi, Reza Tavasoli, **Sanjib Sur**, Srihari Nelakuditi  
*ACM Transactions on Internet of Things (TIOT)*, 2025  
(CORE Ranking: A\*)
- JP2. mmBox: Harnessing Millimeter-Wave Signals for Reliable Vehicle and Pedestrians Detection  
Zhuangzhuang Gu, Hem Regmi, **Sanjib Sur**  
*ACM Transactions on Internet of Things (TIOT)*, 2024  
(CORE Ranking: A\*)
- JP3. CoSense: Deep Learning Augmented Sensing for Coexistence with Networking in Millimeter-Wave Picocells  
Hem Regmi, **Sanjib Sur**  
*ACM Transactions on Internet of Things (TIOT)*, 2024  
(CORE Ranking: A\*)
- JP4. MiSleep: Human Sleep Posture Identification from Deep Learning Augmented Millimeter-Wave Wireless Systems  
Aakriti Adhikari, **Sanjib Sur**  
*ACM Transactions on Internet of Things (TIOT)*, 2024  
(CORE Ranking: A\*)
- JP5. Aquilo: Temperature-Aware Scheduler for Millimeter-Wave Devices and Networks  
Moh Sabbir Saadat, **Sanjib Sur**, Srihari Nelakuditi  
*Elsevier High-Confidence Computing (HCC)*, 2024
- JP6. MilliPCD: Beyond Traditional Vision Indoor Point Cloud Generation via Handheld Millimeter-Wave Devices  
Pingping Cai, **Sanjib Sur**  
*ACM Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)*, 2023  
(CORE Ranking: A\*)
- JP7. MiShape: Accurate Human Silhouettes and Body Joints from Commodity Millimeter-Wave Devices  
Aakriti Adhikari, Hem Regmi, **Sanjib Sur**, Srihari Nelakuditi  
*ACM Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)*, 2022  
(CORE Ranking: A\*)
- JP8. DeepPCD: Enabling AutoCompletion of Indoor Point Clouds with Deep Learning  
Pingping Cai, **Sanjib Sur**  
*ACM Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)*, 2022  
(CORE Ranking: A\*)

- JP9. Argus: Predictable Millimeter-Wave Picocells with Vision and Learning Augmentation  
Hem Regmi, **Sanjib Sur**  
*ACM Measurement and Analysis of Computing Systems (POMACS/SIGMETRICS)*, 2022  
(CORE Ranking: A\*)
- JP10. Order of FIB Updates Seldom Matters: Fast Reroute and Fast Convergence with Interface-Specific Forwarding  
Phani Krishna Penumarthi, Aaron Pecora, **Sanjib Sur**, Jason M O’Kane, Srihari Nelakuditi  
*Elsevier High-Confidence Computing (HCC)*, 2022
- JP11. SquiggleMilli: Approximating SAR Imaging on Mobile Millimeter-Wave Devices  
Hem Regmi, Moh Sabbir Saadat, **Sanjib Sur**, Srihari Nelakuditi  
*ACM Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)*, 2021  
(CORE Ranking: A\*)

## Conference Publications

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- CP1. Towards Contactless Pediatric Anthropometry using Millimeter-Wave Wireless Radar  
Reza Tavasoli, **Sanjib Sur**, Srihari Nelakuditi  
*IEEE International Conference on Pervasive Computing and Communications (PerCom)*, 2026
- CP2. A Novel Approach of Monitoring Stroke Recovery: Contactless Sensor for Gait Speed and Fugl-Meyer Action Duration Estimation  
Zhuangzhuang Gu, Ryan Titus, Hem Regmi, Reza Tavasoli, **Sanjib Sur**, Souvik Sen  
*American Heart Association International Stroke Conference (ISC)*, 2025
- CP3. Contactless and Cameraless Monitoring of Bed Transition Times in Stroke Survivors: A Novel Sensor-Based Approach  
Aakriti Adhikari, **Sanjib Sur**, Souvik Sen  
*American Heart Association International Stroke Conference (ISC)*, 2025
- CP4. A Contactless and Automated Approach to the Acute Stroke Assessment  
Moh Sabbir Saadat, Ryan Titus, Haley VerKuilen, Phil Fleming, **Sanjib Sur**, Souvik Sen  
*American Heart Association International Stroke Conference (ISC)*, 2025
- CP5. Towards Accurate Sleep Monitoring: Detecting Bed Events Using Millimeter-Wave Technology  
Aakriti Adhikari, **Sanjib Sur**  
*ACM International Conference on Mobile Computing and Networking (MobiCom) Poster Session*, 2024
- CP6. Gait Speed Estimation from Millimeter-Wave Wireless Sensing  
Zhuangzhuang Gu, Hem Regmi, **Sanjib Sur**  
*ACM International Conference on Mobile Computing and Networking (MobiCom) Poster Session*, 2024
- CP7. AutoSense: Reliable 3D Bounding Box Prediction for Vehicles  
Hem Regmi, Reza Tavasoli, Joseph Telaak, **Sanjib Sur**, Srihari Nelakuditi  
*ACM International Conference on Mobile Systems, Applications, and Services (MobiSys)*, 2024
- CP8. Enabling Coexistence of Indoor Millimeter-Wave Networking and Human Activity Sensing  
Moh Sabbir Saadat, **Sanjib Sur**  
*IEEE/ACM international conference on Connected Health: Applications, Systems and Engineering Technologies (CHASE)*, 2024
- CP9. Human Activity Sensing from Low-rate Samples under Integrated Networking  
Moh Sabbir Saadat, **Sanjib Sur**  
*IEEE/ACM international conference on Connected Health: Applications, Systems and Engineering Technologies (CHASE) Poster Session*, 2024
- CP10. mmBox: mmWave Bounding Box for Vehicle and Pedestrian Detection under Outdoor Environment  
Zhuangzhuang Gu, Hem Regmi, **Sanjib Sur**  
*IEEE International Conference on Network Protocols (ICNP) Poster Session*, 2023

- CP11. D3PicoNet: Deep Learning Networks for Robust Deployment of D-Band Millimeter-Wave Picocells  
Hem Regmi, **Sanjib Sur**  
*IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM)*, 2023
- CP12. mmSight: Towards Robust Millimeter-Wave Imaging on Handheld Devices  
Jacqueline M Schellberg, Hem Regmi, **Sanjib Sur**  
*IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM)*, 2023
- CP13. Argosleep: Monitoring Sleep Posture from Commodity Millimeter-Wave Devices  
Aakriti Adhikari, **Sanjib Sur**  
*IEEE International Conference on Computer Communications (INFOCOM)*, 2023  
(252 out of 1312 submissions, acceptance ratio: 19.2%)
- CP14. SugarWave: A Non-destructive Estimation of Fruit Sugar Content Using Millimeter-Wave Sensing  
Reza Tavasoli, **Sanjib Sur**, Srihari Nelakuditi  
*IEEE International Conference on Mobile Ad Hoc and Smart Systems (MASS)*, 2023
- CP15. Outdoor Millimeter-Wave Picocell Placement using Drone-based Surveying and Machine Learning  
Ian C McDowell, Rahul Bulusu, Hem Regmi, **Sanjib Sur**  
*IEEE International Conference on Computer Communications and Networks (ICCCN)*, 2023
- CP16. Enhancing Blockage Detection and Handover on 60 GHz Networks With P4 Programmable Data Planes  
Ali Mazloum, Elie Kfoury, **Sanjib Sur**, Jorge Crichigno, Nasir Ghani  
*IEEE International Black Sea Conference on Communications and Networking (BlackSeaCom)*, 2023
- CP17. Exploring the Potential of Residual Networks for Efficient Sub-Nyquist Spectrum Sensing  
Hem Regmi, **Sanjib Sur**  
*IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2023
- CP18. mmWaveNet: Indoor Point Cloud Generation from Millimeter-Wave Devices  
Zhuangzhuang Gu, **Sanjib Sur**  
*ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN) Poster Session*, 2023
- CP19. MatGAN: Sleep Posture Imaging using Millimeter-Wave Devices  
Aakriti Adhikari, Siri Avula, **Sanjib Sur**  
*IEEE International Conference on Computer Communications (INFOCOM) Poster Session*, 2023
- CP20. Towards Robust Pedestrian Detection with Roadside Millimeter-Wave Infrastructure  
Hem Regmi, Vansh Nagpal, **Sanjib Sur**  
*IEEE International Conference on Computer Communications (INFOCOM) Poster Session*, 2023
- CP21. FlexVAA: A Flexible, Passive Van Atta Retroreflector for Roadside Infrastructure Tagging and Identification  
Nicholas Junker, Jinqun Ge, Guoan Wang, **Sanjib Sur**  
*ACM Conference on Embedded Networked Sensor Systems (SenSys) Poster Session*, 2022
- CP22. A Millimeter-Wave Wireless Sensing Approach for Sleep Posture Classification  
Edward Sitar, **Sanjib Sur**  
*ACM Conference on Embedded Networked Sensor Systems (SenSys) Poster Session*, 2022
- CP23. MilliFit: A Millimeter-Wave Wireless Sensing Based At-Home Exercise Classification  
Edward M Sitar, **Sanjib Sur**  
*IEEE International Conference on Mobility, Sensing and Networking (MSN)*, 2022
- CP24. 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
- CP25. 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) Poster Session*, 2022

- CP26. 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)* Poster Session, 2022
- CP27. 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)* Poster Session, 2022
- CP28. 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)* Poster Session, 2022
- CP29. 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)* Performance Evaluation Review and Poster Session, 2022
- CP30. 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)* Extended Abstract, 2022  
 (23 out of 106 submissions, acceptance ratio: 21.7%)
- CP31. 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%)
- CP32. MilliPose: Facilitating Full Body Silhouette Imaging from Millimeter-Wave Device  
Aakriti Adhikari, **Sanjib Sur**  
*ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp)* Poster Session, 2021
- CP33. 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)* Poster Session, 2021  
 (**Best Poster Honorable Mention**)
- CP34. AutoPCD: Learning-Augmented Indoor Point Cloud Completion  
Pingping Cai, Edward Sitar, **Sanjib Sur**  
*ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp)* Poster Session, 2021
- CP35. Bringing Temperature-Awareness to Millimeter-Wave Networks  
Moh Sabbir Saadat, **Sanjib Sur**, Srihari Nelakuditi  
*ACM International Conference on Mobile Computing and Networking (MobiCom)* Poster Session, 2020
- CP36. 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
- CP37. 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%)
- CP38. 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%)
- CP39. 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%)

- CP40. 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%)
- CP41. 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) Demo Session*, 2017
- CP42. Towards WiFi-Assisted Millimeter-Wave Enterprise Wireless Networks  
**Sanjib Sur**, Ioannis Pefkianakis, Kyu-Han Kim  
*Hewlett Packard Enterprise Technical Conference*, 2017
- CP43. 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%)
- CP44. Scoping Environment for Robust 60 GHz Link Deployment  
**Sanjib Sur**, Xinyu Zhang  
*Invited paper at Information Theory and Applications (ITA)*, 2016
- CP45. 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%)
- CP46. 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**)
- CP47. Scoping Environment to Assist 60 GHz Link Deployment  
**Sanjib Sur**, Xinyu Zhang  
*ACM International Conference on Mobile Computing and Networking (MobiCom) Poster Session*, 2015
- CP48. 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%)
- CP49. 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%)
- CP50. 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%)
- CP51. 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%)
- CP52.  $\mu$ 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
- CP53. 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%)

- CP54. 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
- CP55. 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

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- WP1. PressureSilhouette: A Model to Predict Sleep Silhouette from Pressure Mattress Images  
Arshia Eslami, **Sanjib Sur**  
*ACM International Workshop on Mobile Computing Systems and Applications (HotMobile)*, 2024
- WP2. Enhancing Blockage Detection and Handover on 60 GHz Networks with P4 Programmable Data Planes  
Ali Mazloum, Elie Kfoury, **Sanjib Sur**, Jorge Crichigno, Jose Gomez  
*Open Networking Foundation P4 Workshop*, 2023
- WP3. 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)**
- WP4. MilliCloud: Beyond Vision PCD Generation using Millimeter-Wave  
Pingping Cai, **Sanjib Sur**  
*ACM International Workshop on Mobile Computing Systems and Applications (HotMobile)*, 2022
- WP5. 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)**
- WP6. 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)**
- WP7. 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

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### Granted

- PG1. US Patent 12,465,241, Facilitating At-Home Spirometry With Millimeter-Wave Devices, Sanjib Sur, Aakriti Adhikari, Jul. 2025
- PG2. US Patent 12,244,373, Heat Dissipation For Millimeter-Wave Devices with Antenna Switching, Sanjib Sur, Moh Sabbir Saadat, Srihari Nelakuditi, Mar. 2025
- PG3. US Patent 11,626,654, Heat Dissipating Antenna Structures, Guoan Wang, Jinqun Ge, Sanjib Sur, Srihari Nelakuditi, Apr. 2023
- PG4. US Patent 11,394,125, Reconfigurable Antenna Design For Centimeter-Wave and Millimeter-Wave, Sanjib Sur, Guoan Wang, Srihari Nelakuditi, Jul. 2022
- PG5. US Patent 10,972,155, Access Point Selection, Sanjib Sur, Ioannis Pefkianakis, Yunze Zeng, Apr. 2021
- PG6. US Patent 10,820,242, Reroute Network Traffic From Millimeter-Wave Link to WLAN Transmission, Sanjib Sur, Ioannis Pefkianakis, Oct. 2020

- PG7. US Patent 10,587,353, MU-MIMO Group Assignment, Sanjib Sur, Ioannis Pefkianakis, Souvik Sen, Mar. 2020
- PG8. US Patent 10,548,147, Access Point Beam Strength Rankings, Sanjib Sur, Ioannis Pefkianakis, Jan. 2020
- PG9. US Patent 10,505,619, Selecting Beams Based on Channel Measurements, Sanjib Sur, Ioannis Pefkianakis, Dec. 2019
- PG10. US Patent 10,171,140, MU-MIMO Group Selection, Sanjib Sur, Ioannis Pefkianakis, Jan. 2019
- PG11. US Patent 10,051,685, Adapting Radios of Millimeter-Wave Devices, Sanjib Sur, Ioannis Pefkianakis, Aug. 2018
- PG12. US Patent 9,577,731, Radio Frequency Communication with Antenna Index Coding, Xinyu Zhang, Sanjib Sur, Teng Wei, Feb. 2017

### **Pending**

- PP1. US Patent Application, Contactless Detection of Cardiac Biomarkers in Stroke Survivors, Aakriti Adhikari, Sanjib Sur, Disclosed to TCO on July 2025
- PP2. US Patent Application, Vehicles and Pedestrians Detection from Moving Vehicle in Adverse Conditions, Sanjib Sur, Hem Regmi, Reza Tavasoli, Srihari Nelakuditi, Disclosed to TCO on July 2025
- PP3. US Patent Application 63/784,349, A Contactless and Camera-Free Technology for Gait Assessment, Sanjib Sur, Zhuangzhuang Gu, Filed on April 2025
- PP4. US Patent Application 63/512,712, All Weather Traffic Monitoring with Roadside Infrastructure, Sanjib Sur, Hem Regmi, Filed on July 2023 (Notice of Allowance: December 2025)
- PP5. US Patent Application 63/497,218, Human Sleep Posture Extraction from Millimeter-Wave Wireless Systems, Sanjib Sur, Aakriti Adhikari, Filed on April 2023 (Notice of Allowance: February 2026)
- PP6. US Patent Application 63/493,864, Sleep Disruptions Identification from Millimeter-Wave Wireless Systems, Sanjib Sur, Filed on March 2023
- PP7. US Patent Application 17/726,279, Human-Perceptible and Machine-Readable Shape Generation and Classification of Hidden Objects, Sanjib Sur, Hem Regmi, Filed on April 2022
- PP8. US Patent Application 17/715,561, Transforming Cheap Spirometers to Estimate Flow-Volume Graph by Deep Learning, Sanjib Sur, Aakriti Adhikari, Filed on April 2022
- PP9. US Patent Application 62/753,293, In-field Gait Parameters Estimation, Sanjib Sur, Filed on Oct. 2018

### **Trademarks**

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#### **Granted**

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

### **Talks**

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#### **Invited**

- Millimeter-Wave Wireless Sensing for Contactless Monitoring of Stroke Patients  
*Grand Rounds at Neurology Department of Prisma Health Hospital, August 2024*
- Expert Feedback on Installation for Small Wireless Facility (SWF) of 5G Cell Tower  
*Town of Irmo's Council, September 2023*
- Millimeter-Wave Wireless Sensing for Human Well-being: Challenges, Design, and Prototyping  
*Samsung Research, 5G/6G Mobility Innovation Lab, March 2023*
- Bringing Scalable Millimeter-Wave Networks and Applications to the Masses  
*Department of Electrical, Computer, and Systems Engineering, Rensselaer Polytechnic Institute, December 2022*
- A Case for Line-Of-Sight Blockage Detection as a Primitive in Millimeter-Wave Networks  
*IEEE International Conference on Mobile Ad-Hoc and Smart Systems, Denver, Colorado, USA, Oct 2022*

- Bringing Scalable Millimeter-Wave Networks and Applications to the Masses  
*Centre for Networked Intelligence, Indian Institute of Science Bangalore, June 2022*
- Bringing Scalable Millimeter-Wave Networks and Applications to the Masses  
*5G Wireless EE Camp, University of South Carolina, June 2022*
- Bringing Scalable Millimeter-Wave Networks and Applications to the Masses  
*Department of Computer Science and Engineering, Indian Institute of Technology Kharagpur, June 2022*
- Bringing Scalable Millimeter-Wave Networks and Applications to the Masses  
*Department of Computer Science, Indian Institute of Engineering, Science, and Technology, June 2022*
- Bringing Scalable Millimeter-Wave Networks and Applications to the Masses  
*IEEE Columbia Section, March 2022*
- Towards Ubiquitous Millimeter-Wave Networks and Applications  
*PVP SIT affiliated with Jawaharlal Nehru Technological University, August 2020*
- Bringing Millimeter-Wave Wireless to the Masses  
*HPE Research Lab, April 2018*
- Bringing Millimeter-Wave Wireless to the Masses  
*Department of Computer Science and Engineering, University of South Carolina, March 2018*
- Bringing Millimeter-Wave Wireless to the Masses  
*Samsung Research, 5G Mobility Innovation Lab, March 2018*

#### **Contributed**

- Bringing Scalable Millimeter-Wave Networks and Applications to the Masses  
*Research Symposium, Department of Computer Science and Engineering, Columbia, SC, USA, March 2023*
- DeepPCD: Enabling AutoCompletion of Indoor Point Clouds with Deep Learning  
*ACM International Joint Conference on Pervasive and Ubiquitous Computing, Atlanta, Georgia, USA, Sep 2022*
- MilliCam: Hand-held Millimeter-Wave Imaging  
*IEEE International Conference on Computer Communications and Networks, Honolulu, Hawaii, USA, August 2020*
- UbiG: Towards Scalable and Ubiquitous Millimeter-Wave Wireless Networks  
*ACM International Conference on Mobile Computing and Networking, New Delhi, India, Oct 2018*
- MUST: WiFi-Assisted 60 GHz Wireless Networks  
*ACM International Conference on Mobile Computing and Networking, Snowbird, Utah, Oct 2017*
- MUSE: Practical MU-MIMO User Selection on 802.11ac Commodity Networks  
*ACM International Conference on Mobile Computing and Networking, New York, Oct 2016*
- BeamSpy: Enabling Robust 60 GHz Links Under Blockage  
*USENIX Symposium on Networked Systems Design and Implementation, Santa Clara, CA, March 2016*
- Ubiquitous mmWave Imaging  
*WARF Discovery Challenge, Madison, WI, April 2016*
- Bridging Link Power Asymmetry in Mobile Whitespace Networks  
*IEEE International Conference on Computer Communications, Hong Kong, April 2015*
- Dia: Autodirective Audio Capturing Through a Synchronized Smartphone Array  
*ACM International Conference on Mobile Systems, Applications, and Services, Bretton Woods, NH, June 2014*
- Autodirective Audio Capturing Through a Synchronized Smartphone Array  
*Qualcomm Wireless Innovation Competition, Madison, WI, April 2014*

## Services

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### Professional Community

- *Organizing Committee Member*
  - Steering Committee Member: IEEE/ACM STEERS Workshop, 2021–2023
  - Program Committee Co-Chair: IEEE/ACM STEERS Workshop 2021–2023; ACM mmNets Workshop 2020
  - Poster and Demo Co-Chair: ACM HotMobile 2023
  - Demo Co-Chair: ACM MobiSys 2022
  - Travel Grants Co-Chair: IEEE COMSNETS 2024
  - Publicity Co-Chair: IEEE COMSNETS 2023; ACM SenSys 2022
  - Session Chair: IEEE INFOCOM 2023; IEEE MASS 2021–2022; IEEE WoWMoM 2021; IFIP Networking 2021
- *Technical Program Committee Member*
  - IEEE PerRad 2026; ACM MobiCom 2023–2025; ACM/IEEE IoTDI 2023;
  - ACM TheWebConference 2023; IEEE MSN 2021–2022; IEEE ICPADS 2022–2023; IEEE ICC-MWN 2023;
  - IEEE MASS 2021–2022; IEEE ICDCS 2021; EAI MobiQuitous 2022; IEEE WoWMoM 2021–2023;
  - IEEE IFIP Networking 2021; ACM mmNets 2019–2023; ACM WiNTECH 2019–2024; ACM mmWaveSys 2023;
  - ACM S3 Workshop 2017 IEEE WSCE 2019;
- *Panel Member*
  - NIH/NINDS panelist for SBIR/STTR 2025;
  - NSF panelist for CISE/IIS and TIP/ITE 2025, ECCS/CCSS 2025, CNS-Core Medium 2025, VINES Track 1 2025; panelist for American Heart Association 2025;
  - NSF panelist for SWIFT NewSpectrum 2024, CNS-Core Small 2024, CNS-Core Medium 2024, SCH 2024;
  - NSF panelist for Midscale Research Infrastructure-1 2023, NeTS CAREER 2022, GRFP 2021;
  - Panelist for ACM MobiCom S3 Workshop 2018
- *Reviewer*
  - IEEE Internet of Things Journal 2023–2024;
  - IEEE Transactions on Mobile Computing 2015–2024; IEEE/ACM Transactions on Networking 2016–2023;
  - ACM Interactive, Mobile, Wearable and Ubiquitous Technologies 2023–2024; UbiComp Poster 2022–2023;
  - IEEE Transactions on Machine Learning in Communications and Networking 2023;
  - IEEE Transactions on Communications 2016–2020; IEEE Pervasive Computing 2022–2023;
  - 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, 2023, 2025; Elsevier Computer Communications 2021;
  - Elsevier Journal of the International Measurement Confederation 2023; Springer Applied Intelligence 2023;
  - 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 MCEC Strategic Working Group on Elevating Student Excellence, 2025–Present
- Serving on the USC Graduate Council, 2024–Present
- 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, 2023, 2025; Judge 2021, 2024
- Proposal Reviewer for ASPIRE II, USC 2021
- Reviewer and Judge for USC Discover, 2021–2023

- Faculty Mentors for first-year scholars at USC for National Fellowships and Scholar Programs, 2021–Present
- Serving as an Advising Fellow for the CSE department, 2021–Present
- Served on the USC CSE Faculty Search Committee, 2019