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Key Highlights

- IEEE Fellow, 2022
- ACM Fellow, 2020
- Co-PI of one of the $20 million NSF-sponsored AI Institute, 2020
- David J. DeWitt Professorship, UW-Madison, 2020 - onwards
- Sheldon B. Lubar Professorship, UW-Madison, 2018 - 2020
- Chair, Association of Computing Machinery (ACM) SIGMOBILE, 2013-2017
- ACM SIGMOBILE inaugural Rockstar Awardee for early career achievements, 2013
- Authored ∼200 papers (top conferences and journals in the field) and 25+ patents
- Numerous best paper awards (ACM MobiCom, ACM CoNEXT, IEEE Dyspan)

Education

Ph.D., Computer Science (Aug 2003)
University of Maryland, College Park
- A Cooperative Peer-to-peer Framework to Scale Multi-party Applications

M.S., Computer Science (May 1999)
University of Maryland, College Park
- Available Bandwidth Estimation for An End-to-end Network Connection

B.Tech., Computer Science and Engineering (May 1996)
Indian Institute of Technology, Kanpur, India (Director's Gold Medal Winner)

Employment

Professor   Apr 2014 - present
Dept. of Computer Sciences, University of Wisconsin-Madison

CTO and Co-Founder   Aug 2016 - July 2020
StratusWorx, Inc. (acquired by Ericsson)

Associate Professor   Aug 2009 - Apr 2014
Dept. of Computer Sciences, University of Wisconsin-Madison

CEO and Founder   Apr 2009 - Aug 2016
WiRover, Inc.

Assistant Professor   Dec 2003 - Aug 2009
Dept. of Computer Sciences, University of Wisconsin-Madison

Visiting Faculty Researcher   Oct - Dec 2003
Intel Research, Cambridge, UK and Dept. of Computer Science, University of Cambridge, UK

Awards

2022 **IEEE Fellow.**

2020 **ACM Fellow.**

2020-present **David J. DeWitt Professorship, CS UW-Madison** for research excellence.

2018-2020 **Sheldon Lubar Professorship, CS UW-Madison** for research and teaching excellence.

2018-2019 **Universidad Carlos III de Madrid-Santander Chair of Excellence** for promoting excellence in research (during sabbatical 2018-2019).

2015 **Maryland Computer Science Alumni Hall of Fame** for achievements in the field of computer science.

2015-2016 **UW-Madison Vilas Mid-Career Investigator Award.** Awarded to select mid-career faculty members in each year across the entire university for research and teaching excellence.

2013 **ACM SIGMOBILE RockStar award** for early career achievements in mobile and wireless systems. This was the inaugural year for the award.

2013-2015 **UW-Madison Vilas Associates Faculty Award.** Awarded to select faculty members in each year across the entire university for research achievements who are within 20 years of receiving tenure.

2013 **ACM CoNEXT 2013 best paper award finalist** Capturing Mobile Experience in the Wild: A Tale of Two Apps, with co-authors, Ashish Patro, Michael Griepentrog, Shravan Rayanchu, and Yadi Ma.

2012 **Second prize at the Interdigital Innovation Challenge 2012** for Airshark technology at the GigaOM organized Mobilize conference.

2012 **IEEE DySPAN 2012 best paper award**
A Dual Technology Femto Cell Architecture for Robust Communication using Whitespaces, with co-authors Sayandeep Sen, Tan Zhang, Milind Buddhikot, Dragan Samardzija, and Susan Walker.

2012 **ACM MobiGames 2012 best paper award.**
The Anatomy of a Large Mobile Massively Multiplayer Online Game, with co-authors Ashish Patro, Shravan Rayanchu, Michael Griepentrog, and Yadi Ma.

2011 **ACM MobiCom 2011 best paper nominee, one of three papers fast-tracked to Transactions of Mobile Computing.**
FLUID: Improving Throughputs in Entreprise Wireless LANs through Flexible Channelization, with co-authors, Shravan Rayanchu, Vivek Shrivastava, Ranveer Chandra.

2011 **Grand prize winner, Wisconsin Governor's Business Plan Competition** for WiRover technology.

2009 **ACM MobiCom 2009 best paper award.**
Awarded to the best paper titled: CENTAUR: Realizing the full potential of Centralized WLANs using a Hybrid Data Path, with co-authors, Vivek Shrivastava, Nabeel Ahmed, Shravan Rayanchu, Srinivasan Keshav, Dina Papagiannaki, and Arunesh Mishra.

1996 **Director's Gold Medal Class of 1996, IIT Kanpur.**
Awarded for academic excellence and all-round achievement IIT Kanpur, India. India.

Grants

2025-2029 "Towards Unifying the Last-Mile Technologies of Low-Power Wide Area Networks," **co-PI, NSF NeTS Award,** other PI: Bhuvana Krishnaswamy.

2023-2027 "Scalable Metasurface Array for mmWave Communication and Sensing," **co-PI, NSF NeTS Award,** other PI: Xinyu Zhang.

2022-2025 "SpecScape: Enabling a Global Spectrum Observatory through Mobile, Wide-band Spectrum Sensing Kits and a Software Ecosystem," **PI, NSF CCRI Award,** other PIs: Dinesh Bharadia, Bhuvana Krishnaswamy, Younghyun Kim, Aaron Schulman.

2021-2026 "AI Institute for Edge Computing Leveraging Next Generation Networks (Athena)," **co-PI, NSF AI Institutes Award**, other PIs: Yiran Chen, Miroslav Panic, Hai Li, Lin Zhong.

2021-2025 "Characterization, Mitigation, and Management of Active 3D Camera Interference" **PI, NSF Core ProgramsAward**, other PIs: Mohit Gupta, Bhuvana Krishnaswamy.

2020-2023 "Distributed Learning for the Nomadic Edge," **PI, NSF MLWiNS Award,** other PIs: Kassem Fawaz, Mohit Gupta, Kangwook Lee.

2018-2021 "Computation, Communication, and Storage Infrastructure For The Roaming Edge," **co-PI, NSF ECDI Award,** other PIs: Remzi Arpaci-Dusseau, Aditya Akella, Kassem Fawaz, Shivram Venkataramanan.

2017-2020 "Light-Speed Networking (LSN): Refactoring the Wireless Network Stack to Dramatically Reduce Information Response Time," **PI, NSF ICN-WEN Award,** co-PIs: Aditya Akella, Younghyun Kim.

2017-2020 "An Infrastructure to support Edge Computing in the Extreme," **PI, NSF US Ignite Award,** co-PI: Aws Albarghouthi.

2016-2019 "WiNEST: A Prototype for a City-scale "Living Laboratory" for Wide-area Wireless Experimentation," **PI, NSF US Ignite Award,** co-PI: Xinyu Zhang.

2015-2017 "A Feasibility Study for a Wide-Area WiMAX Infrastructure for Wireless Experimentation." **PI, NSF EAGER Award.**

2015-2016 " Microgrid Energy Manager (MEM) using wireless networks and cloud computing." **co-PI, NSF Accelerating Innovation in Research Award,**, other PIs: Giri Venkataramanan, Sarada.

2015-2017 "Population Analytics through a WiFi-based Edge Computing Platform." **PI, NSF EAGER Award.**

2014-2017 "CI-New: Collaborative Research: An Open Observatory for the Internet's Last Mile." **PI, NSF Computing Research Infrastructure Award.**.

2014-2016 "FIA-NP: Collaborative Research: The Next-Phase MobilityFirst Project: From Architecture and Protocol Design to Advanced Services and Trial Deployments." **PI, NSF Future Internet Architecture Phase II Award**.

2014-2017 "EARS: A TV Whitespace Communication System for Connected Vehicles." **PI, NSF Enhanced Access to Radio Spectrum Award**, co-PIs: Xinyu Zhang, Jerry Zhu.

2013-2015 "Enabling an ecological science community on a GENI WiMAX facility." **PI, NSF Award (GENI program as a sub-contract from BBN)**.

2012-2016 "SEP Collaborative: A Unified Framework for Sustainability in Buildings through Human Mediation." **PI, NSF Sustainable Energy Pathways Award**, co-PIs: Carol Menassa, Giri Venkataramanan, Nancy Wong,

2012-2014 US IGNITE: An Application-Aware, Cross-layer Design for Audio-Visual Applications in Medical Ambulances."
PI, NSF US Ignite Program.

2011-2014 "A Federated WiMAX Facility for Vehicular Applications and Metro-Scale Experimentation."
PI, NSF Award (GENI program as a sub-contract from BBN).

2011-2014 "Building Trustworthy Applications for Mobile Devices."
co-PI, NSF Award (TC program), PI: Somesh Jha, co-PI: Mike Swift.

2011-2014 A Multi-Party Distributed Wall through Dispersed Sensing and Computation.
PI, NSF Award (GENI concept award).

2011-2015 "Enhancing a Metro-Scale Vehicular Testbed for Flexible White Space Networking."
PI, NSF Award (CRI program).

2010-2013 "FIA: Collaborative Research: MobilityFirst: A Robust and Trustworthy Mobility-Centric Architecture for the Future Internet."
PI, NSF Award (Future Internet Architecture program).

2010-2011 "Logical Localization for Mobile Devices through Ambience Sensing."
PI, NSF Award (NeTS program).

2009-2011 "A Programmable Facility for Experimentation with Wireless Heterogeneity and Wide-area Mobility."
PI, NSF Award (GENI program as a sub-contract from BBN).

2009-2011 "A Metro-Scale Vehicular Wireless Testbed with Spectrum Awareness and Spectrum Agility."
PI, NSF Award (CRI program), Co-PI: Parmesh Ramanathan.

2008-2013 "Towards Client-assisted Management in Wireless Networks."
PI, NSF Award (CAREER program).

2008-2009 "A Virtualized Vehilcular Wireless Testbed with Spectrum Agility."
PI, NSF Award (CRI program), Co-PI: Parmesh Ramanathan.

2006-2009 "An Integrated PHY-MAC Approach to Secure Open Access Wireless Networks. "
PI, NSF Award (CyberTrust program), Co-PI: Akbar Sayeed.

2006-2007 "Virtualization Techniques to Multiplex Experiments on a 802.11 Wireless Facility."
PI, NSF Award (GENI Concept Development program).

2005-2008 "An Open Market Architecture for Wide-area Wireless Services."
PI, NSF Award (NeTS program).

2006-2008 "Design for Manageability in the Next Generation Internet."
co-PI, NSF Award (NeTS program), PI: Paul Barford, co-PI: Cristian Estan.

2006 "Wireless Grids: A Technology for Rural Networking."
PI, Microsoft Digital Inclusion Award .

2005-2008 Resilience Oriented Multicast for Real-time Multimedia.
co-PI (PI- Sanjay Jha, Univeristy of New South Wales, Australia), Australian Research Council.

2002 "Location-Aware Computing." Student Technical Leader, Advanced E-team grant from National Collegiate Inventors and Innovations Alliance in collaboration with Dingman Center for Enterpreneurship.

Research in Popular News

- UW and City of Madison selected for ultra high-bandwidth applications (reporting on Paradrop technology that was part of a significant NSF grant that was announced by the White House.)
  UW News - http://news.wisc.edu/24011, September 2015.

- Airshark project: Detecting non-WiFi interferers (Microwave, Bluetooth, XBox/PS2 controllers, etc.) using WiFi-only hardware
  In Slashdot, Network World, CRA Highlight of the week, PC Magazine, The Register UK, BoingBoing, and multiple other online publications. September-October 2011.

- WiRover project: Providing high-bandwidth Internet connectivity to moving vehicles.
  In Wisconsin State Journal, Milwaukee Journal Sentinel, WTN News, and other publications. October 2010 and June 2011.

Professional Activities

- **Chair, ACM SIGMOBILE:** July 2013 - June 2017.

- **Chair,** NSF Workshop on Future Wireless Cities, February 2016.

- **Chair,** NSF workshop on Research Infrastructure Needs for the Wireless Edge, November 2014.

- **Chair,** NSF workshop on Future Directions in Wireless Networking, November 2013.

- **General Chair:** COMSNETS, 2025.

- **General Chair:** ACM MobiSys, 2021.

- **Program Chair (conferences):**
  - ACM/IEEE Symposium on Edge Computing, 2023.
  - International Conference on Distributed Computing and Networking, 2021.
  - ACM eEnergy, 2019.
  - COMSNETS Conference, 2019.
  - IEEE Vehicular Networking Conference, 2014.
  - IEEE SECON, 2012.
  - ACM MobiCom, 2010.

- **Program Chair (workshops):**
  - Networked AI Systems (NetAISys), 2025.
  - Dagstuhl Workshop on Inter-Vehicular Communication for Cooperative Driving, 2018.
  - CellNet Workshop, co-located with ACM MobiSys, 2013.
  - Workshop on Networking, Systems, and Applications for Mobile Handhelds (MobiHeld), co-located with ACM Sigcomm, 2009.
  - Workshop on Wireless Mesh Networks (WiMesh), 2008.
  - CoNEXT student workshop, 2007.
  - International Workshop on Foundations of Mobile Computing, co-located with ACM MobiCom, 2005.

- **Steering Committee member:**
  - ACM/IEEE Transactions on Networking, 2014 - onwards. (chair, starting Jan 2018)
  - ACM MobiCom, 2013 - onwards.
  - CellNet workshop, 2013 - onwards.
  - Mobile Cloud Computing and Services Workshop, 2013 - onwards.

- Workshop on Networking, Systems, and Applications for Mobile Handhelds (MobiHeld), 2009-2012.
- COMSNETS Association (India), 2017 - onwards.
- Asia Pacific Networking (APNet) conference, 2017 - onwards.

- **Chair** ACM SIGCOMM Doctoral Dissertation Award Selection Committee, 2012.

- **Tutorials Chair:**
  - ACM Sigcomm, 2008.
  - ACM Sigmetrics, 2007.

- **Workshops Chair**
  - ACM Sigcomm, 2008.
  - ACM MobiQuitous, 2007.
  - Wireless Internet Conference (WICON), 2006.
  - ACM MobiCom, 2005.

- **Research Demo Chair:** ACM MobiCom and ACM MobiHoc 2007, IEEE SECON 2009.

- **Research Poster Chair:** ACM MobiCom 2009, IEEE SECON 2009.

- **Editor-in-Chief:** Mobile Computing and Communications Review (MC2R) 2008 - 2014,

- **Area/Associate Editor:** Transactions on Mobile Computing 2009 - 2012, Computer and Communications Review (CCR) 2008 - 2010, Mobile Computing and Communications Review (MC2R) 2008 - 2010, International Journal on Vehicular Technology (IJVT) 2006 - 2008.

- **Panel organizer:** WICON 2008, and NSF/DOE Research Challenges Workshop, 2008.

- **Area TPC Chair:** IEEE Infocom 2011- 2014, 2017, 2018, 2021-2025.

- **Program committee member:**
  - ACM Sigcomm 2009, 2016, 2017, 2023.
  - ACM MobiCom, 2005-2010, 2012, 2015, 2018-2020, 2021-2026.
  - ACM Sigmetrics, 2007, 2008, 2009.
  - ACM MobiSys, 2009, 2011, 2013, 2014, 2025.
  - Networking Systems, Design and Implementation (NSDI) 2013, 2015. 2021.
  - IEEE Infocom 2005, 2007, 2008, 2009.
  - Network and Distributed Systems Security (NDSS), 2011.
  - ACM eEnergy Conference, 2013, 2014, 2018.
  - IEEE COMSWARE 2007, 2008, 2009 (name changed to Comsnets).
  - ACM eEnergy, 2013, 2014, 2018, 2019.
  - ACM BuildSys, 2016, 2017, 2018.
  - IEEE SECON 2004, 2005, 2006.
  - ACM Conference on Wireless Network Security (WiSec), 2008, 2009, 2010.
  - ACM MobiHoc, 2006.
  - ACM/IEEE Symposium on Edge Computing, 2016-2018, 2021, 2022.
  - Conference on Future Networking Technologies (CoNEXT), 2006, 2013, 2015, 2017.
  - ACM Workshop of Software Radio Implementation Forum (SRIF), 2013.
  - ACM Workshop on Cellular Networking (CellNet), 2012, 2014.
  - ACM Workshop on Mobile Games (MobiGames), 2012.
  ACM Workshop on Measurements Up The Stack (WMUST), 2012.
  - ACM Workshop on Networking, Systems, and Applications for Mobile Handhelds (MobiHeld), 2009-2011.
  - ACM Workshop on Home Networks (HomeNets), 2010.
  - ACM Workshop on Virtualization in Mobile Computing (MobiVirt), 2008.
  - Wireless Internet Conference (WICON), 2006.
  - ICDCS: International Conference on Distributed Computing Systems, 2006, 2007.

- ACM Workshop on Wireless Network Testbeds, Experimental evaluation and CHaracterization (WinTECH), 2007, 2008, 2009.
- International Workshop on Wireless Traffic Measurements and Modeling, 2005.
- PAM: Workshop on Passive and Active Measurements, 2005, 2007.
- International Conference on High Performance Computing (HiPC) 2004
- International Conference on Parallel Processing (ICPP) 2004

- **NIH Panel Reviewer:** MHealth Technologies - 2015, 2017.

- **NIST Panel Reviewer:** Public Safety Innovator Accelerator Program - 2017;

- **NSF Panel Reviewer:** CIRC program - 2025; OAC Core program - 2025; Mid-scale Research Infrastructure - 2023; CPS program - 2018, 2020; CIViC program - 2020; SBIR Phase I program - 2017; CRI program - 2013; NeTS program - 2006 - 2008, 2011, 2013, 2017, 2020, 2025; CPS program - 2010; NetSE program - 2009; CAREER program - 2006, 2020; and CyberTrust program - 2005, 2008.

- **Evaluation committee member:**
  - Chair, ACM Sigcomm Lifetime Achievement Award committee, 2025.
  - ACM India Dissertation Award committee, 2020.
  - Chair, ACM Sigcomm Dissertation Award Committee, 2012-2013.
  - Student poster committee, ACM Sigcomm 2006, 2008.
  - Best paper award committee, ACM MobiCom 2006, 2007, 2010, 2012, 2014, 2017, 2019.
  - Best paper award committee, NSDI, 2013.
  - Student Research Competition evaluation committee, ACM MobiCom, 2005.

Tutorials

- ParaDrop: Edge Computing in the Extreme.
  US Ignite, Santa Clara, June 2014, *ACM MobiCom,* Salt Lake City, October 2017 and New Delhi, India, October 2018.

- Performance of Peer-to-Peer Systems.
  ACM Sigmetrics, New York, June 2004.

- Mutli-hop Wireless Networks: State-of-the-Art, Research Directions and Future Challenges.
  IEEE International Conference on Networks, Sydney, September 28, 2003.

Teaching Experience

- Course Instructor, Department of Computer Sciences, University of Wisconsin, Madison
- CS 407 - Fundamentals of Mobile Systems and Applications (undergraduate): Fall 2025, Fall 2024, Fall 2023, Fall 2021, Spring 2020, Spring 2017, Spring 2016, Fall 2015, Spring 2015, Spring 2014, Spring 2013, Spring 2012, Spring 2010.
- CS 640 - Introduction to Computer Networks (undergraduate): Spring 2025, Spring 2024, Spring 2022, Spring 2021, Spring 2018, Spring 2009, Spring 2008, Spring 2004.
- CS/ECE 707 - Mobile and Wireless Networking (graduate): Fall 2022, Fall 2020, Fall 2019, Fall 2017, Fall 2016, Fall 2013, Fall 2012, Fall 2011, Fall 2009, Fall 2008, Fall 2007, Fall 2006, Spring 2006, Spring 2005.
- CS 740 - Advanced Computer Networks (graduate): Fall 2004, Fall 2005.

- Course Instructor, Department of Telematics, Universidad Carlos III Madrid
- Special course on Foundations of Wireless Networking Protocols, Spring 2019.

- CS 407 (undergraduate) and CS/ECE 707 (graduate) were new courses that I had introduced to the academic curriculum at UW-Madison.

Graduate students

Graduated students:
- Varun Chandrasekaran, Ph.D. (CS) completed in July 2022, first job at UIUC, USA.
- Yijing Zeng, Ph.D. (CS) completed in July 2022, first job at Facebook (Meta),USA.
- Bozhao Qi, Ph.D. (ECE) completed in July 2020, first job at OnTracMD, USA.
- Neil Klingensmith, Ph.D. (ECE) completed July 2019, first job at Loyola University, USA.
- Peng Liu, Ph.D. (CS) completed June 2019, first job at Apple, USA.
- Lei Kang, Ph.D. (CS) completed June 2018, first job at Cruise Automation, USA.
- Tan Zhang, Ph.D. (CS) completed Dec 2016, first job at Google, USA.
- Joshua Hare, Ph.D. (CS) completed Dec 2015, first job at Apple, USA.
- Ashish Patro, Ph.D. (CS) completed July 2015, first job at Apple, USA.
- Jongwon Yoon, Ph.D. (CS) completed Dec 2014, first job as Assistant Professor, Hanyang University, Korea.
- Yadi Ma, Ph.D. (CS) completed December 2013, first job at HP Laboratories, Palo Alto, USA
- Sayandeep Sen, Ph.D. (CS) completed October 2012, first job at Alcatel-Lucent Bell Labs, Bangalore, India
- Shravan Rayanchu, Ph.D. (CS) completed June 2012, first job at Google, Mountain View, CA, USA
- Vivek Shrivastava, Ph.D. (CS) completed August 2010, first job at Nokia Research Center, Palo Alto, USA
- Qunfeng Dong, Ph.D. (CS) completed May 2007, first job as Assistant Professor, Suzhou Institute of Advanced Study, University of Science and Technology, China

- Chuhan Gao, M.S. (CS), completed May 2020, first job at Microsoft.
- Parikshit Sharma, M.S. (CS), completed May 2018, first job at Facebook.
- Sejal Chauhan, M.S. (CS), completed May 2017, first job at Intel.
- Kaichen Zhao, M.S. (CS), completed May 2015, first job at Oracle.
- Lance Hurtung, M.S. (CS) completed May 2015, first job at Centaur Systems.
- Arkodeb Dasgupta, M.S. (ECE) completed May 2015, first job at Cisco Systems.
- R. Sivasubramanian, M.S. (CS) completed May 2014, first job at Amazon.
- Prakhar Panwaria, M.S. (CS) completed May 2014, first job at Walmart Labs.
- Srinivas Govindan, M.S. (CS) completed May 2013, first job at Facebook.
- Michael Griepentrog, M.S. (CS) completed May 2013, first job at Meraki Networks (acquired by Cisco).
- Vishnu Katreddy, M.S. (ECE) completed December 2010, first job at Harvest Power Technologies.
- Vikrant Soman, M.S. (ECE) completed December 2009, first job at SeaMicro.
- Sreejith Rajkumar, M.S. (ECE) completed December 2009, first job at Intuit.
- Neel Kamal Madabhushi, M.S. (ECE) completed December 2009, first job at Nvidia.
- Vladimir Brik, M.S. (CS) completed August 2009, first job at US Geological Survey.
- Dheeraj Agrawal, M.S. (CS) completed December 2007, first job at Cisco Systems.
- Ashutosh Shukla, M.S. (CS) completed May 2007, first job at Google.
- Kevin Springborn, M.S. (CS) completed May 2007, first job at Nemean Networks.

Other student mentoring

- Lei Kang was awarded a **Google Fellowship** (2017)
- Lei Kang secured the *second place* in the Mobile App contest at IEEE Vehicular Networking Conference, 2016.

- Tan Zhang was awarded a **Google PhD Fellowship** (2015)
- Tan Zhang secured the **first place** in ACM SIGMOBILE Student Research Competition 2013 (held at ACM Mobicom 2013)
- Ashish Patro was awarded a **Microsoft PhD Fellowship** (2012)
- Sayandeep Sen was awarded a **Google PhD Fellowship** (2011)
- Ashish Patro secured the **first place** in ACM SIGMOBILE Student Research Competition 2011 (held at ACM MobiCom 2011)
- Shravan Rayanchu was awarded a **Microsoft PhD Fellowship** (2009)
- Vivek Shrivastava was awarded an **IBM PhD Fellowship** (2009)
Fellowship (2006-2009)
- Vladimir Brik was awarded a **DHS Graduate Student Fellowship** (2006-2009)
- Shravan Rayanchu secured the **first place** in ACM SIGMOBILE Student Research Competition 2007 (held at ACM MobiCom 2007)
- Vivek Shrivastava secured the **first place** in ACM SIGMOBILE Student Research Competition 2006 (held at ACM MobiCom 2006)

Publications — Book Chapters and Journals

J-1. EasyVizAR: Supporting First Responders Through the Use of Collaborative Augmented Reality Tools.
Kevin Ponto, Lance Hartung, Yuhang Zhao, Bryce Sprecher, Ross Tredinnick, Suman Banerjee.
Journal of Applied Science, Volume 15, Number 21, 2025.

J-2. Athena - The NSF AI Institute for Edge Computing.
Yiran Chen, Suman Banerjee, Shaundra Daily, Jeffery Krolik, Hai Li, Daniel Limbrick, Miroslav Pajic, Rajashi Runton, Lin Zhong.
AI Magazine, Volume 4, Issue 1, 2024.

J-3. When Two Cameras Are a Crowd.
Jongho Lee, Mohit Gupta, Bhuvana Krishnaswamy, Suman Banerjee.
Communications of the ACM, Volume 66, Number 12, 2023.

J-4. Adaptive uplink data compression in spectrum crowdsensing systems.
Yijing Zeng, Roberto Calvo-Palomino, Domenico Giustiniano, Gerome Bovet, Suman Banerjee.
IEEE Transactions on Networking, Jan 2023.

J-5. The Roaming Edge and its Applications Suman Banerjee, Remzi Arpaci-Dusseau, Shenghong Dai, Kassem Fawaz, Mohit Gupta, Kangwook Lee, Shivaram Venkataraman.
ACM GetMobile, Volume 25, Issue 4, March 2022.

J-6. AEROKEY: Using ambient electromagnetic radiation for secure and usable wireless device authentication.
Kyuin Lee, Yucheng Yang, Omkar Prabhune, Aishwarya Lekshmi Chithra, Jack West, Kassem Fawaz, Neil Klingensmith, Suman Banerjee, Younghyun Kim.
Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), Volume 6, Issue 1, March 2022.

J-7. Revisiting WiFi offloading in the wild for V2I applications.
Furong Yang, Andrea Ferlini, Davide Aguiari, Davide Pesavento, Rita Tse, Suman Banerjee, Gaogang Xie, Giovanni Pau.
Computer Networks, Volume 202, Jan 2022.

J-8. A Method for Energy-Efficient Sampling of Analog to Digital Converters.
Neil Klingensmith, Suman Banerjee:
IEEE Transactions on Sustainable Computing, Volume 5, Number 1, 2020.

J-9. Hardware-assisted, Low-cost Video Transcoding Solution in Wireless Networks.
Jongwon Yoon, Suman Banerjee.
IEEE Transactions on Mobile Computing, February 2019.

J-10. A Method for Energy-Efficient Sampling of Analog to Digital Converters.
Neil Klingensmith, Suman Banerjee.
ACM Transactions on Sustainable Computing,, 2019.

J-11. VideoCoreCluster: Energy-Efficient, Low-Cost, and Hardware-Assisted Video Transcoding System.
Peng Liu, Jongwon Yoon, Ha Ryung Kim, Suman Banerjee.
Journal on Wireless Communications and Mobile Computing, 2018.

J-12. Characterization of Interference in OFDMA-based Small-cell Networks.
Mustafa Arslan, Jongwon Yoon, Karthik Sundaresan, Srikanth Krishnamuthy, Suman Banerjee.
Accepted for publication in *IEEE Transactions on Vehicular Technology,* 2018.

J-13. WiScape: A Framework for Measuring the Performance of Wide-Area Wireless Networks.
Jongwon Yoon, Sayandeep Sen, Joshua Hare, Suman Banerjee.
ACM/IEEE Transactions on Mobile Computing, Volume 14, Issue 8, 2014.
(Extended version of IMC 2011 paper.)

J-14. Self-Organizing Resource Management Framework in OFDMA Femtocells.
Jongwon Yoon, Mustafa Arslan, Karthik Sundaresan, Srikanth Krishnamuthy, Suman Banerjee.
ACM/IEEE Transactions on Mobile Computing, Volume 14, Issue 4, 2014.
(Extended version of MobiHoc 2012 paper.)

J-15. Video Multicast with Joint Resource Allocation and Adaptive Modulation and Coding in 4G Networks.
Jongwon Yoon, Honghai Zhang, Suman Banerjee, Sampath Ragarangan.
To appear in **IEEE/ACM Transactions on Networking,** Volume 22, Number 5, 2014.
(Extended version of MobiCom 2012 paper.)

J-16. A Resource Management System for Interference Mitigation in Enterprise OFDMA Femtocells.
Mustafa Arslan, Jongwon Yoon, Karthik Sundaresan, Srikanth Krishnamuthy, Suman Banerjee.
IEEE/ACM Transactions on Networking, Volume 21, Number 5, 2013.
(Extended version of MobiHoc 2012 paper.)

J-17. Design and Implementation of an "Approximate" Communication System for Wireless Media Applications.
Sayandeep Sen, Tan Zhang, Syed Gilani, Shreesha Srinath, Suman Banerjee, Sateesh Addepalli.
Accepted for publication to **ACM/IEEE Transactions of Mobile Computing.**
(Extended version of Sigcomm 2010 paper.)

J-18. FLUID: Improving Throughputs in Enterprise Wireless LANs through Flexible Channelization.
Shravan Rayanchu, Vivek Shrivastava, Suman Banerjee, Ranveer Chandra.
IEEE Transactions on Mobile Computing, Volume 11 Issue 9, September 2012.
(Extended version of MobiCom 2011 paper.)

J-19. Network Coding-Aware Routing in Wireless Networks.
Sudipta Sengupta, Shravan Rayanchu, Suman Banerjee.
ACM/IEEE Transactions on Networking, Volume 18, Issue 4, August 2010.
(Extended version of Infocom 2007 paper.)

J-20. SWARM: The Power of Structure in Community Wireless Mesh Networks.
Saumitra Das, Konstantina Papagiannaki, Suman Banerjee, Y.C. Tay.
ACM/IEEE Transactions on Networking, Preprint made available on November 2010.
(Extended version of CoNEXT 2009 paper.)

J-21. Low-coordination wake-up algorithms for multiple connected-covered topologies in sensornets.
Rajagopal Iyengar, Koushik Kar, Suman Banerjee.
International Journal on Sensor Networks, Volume 5, Number 1, 2009.
(Extended version of MobiHoc 2005 paper.)

J-22. Load Balancing in Large-Scale RFID Systems.
Qunfeng Dong, Vivek Shrivastava, Dheeraj Agrawal, Ashutosh Shukla, Suman Banerjee, Koushik Kar.
Computer Networks, Volume 52, Number 9, March 2008.
(Extended version of Infocom 2007 paper.)

J-23. Routing Algorithms for Energy Efficient Reliable Packet Delivery in Multi-hop Wireless Networks.
Suman Banerjee, Archan Misra.
Chapter in book titled **Mobile, Wireless and Sensor Networks: Technology, Applications and Future Directions,** by John Wiley and Sons. 2005.
(Extended version of Mobihoc 2002 and MWCN 2004 papers.)

J-24. A Mobile Bazaar for Wide-Area Wireless Services.
Rajiv Chakravorty, Sulabh Agarwal, Suman Banerjee, Ian Pratt.
WINET Special Issue, Volume 13, Number 6, December 2007.
(Extended version of Mobicom 2005 paper.)

J-25. Resilient Overlays using Multicast.
Suman Banerjee, Seungjoon Lee, Bobby Bhattacharjee, Aravind Srinivasan.
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Sayandeep Sen, Neel Kamal Madabhushi, Suman Banerjee.
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Saumitra Das, Dina Papagiannaki, Suman Banerjee, Y.C. Tay.
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C-72. CENTAUR: Realizing the Full Potential of Centralized WLANs using a Hybrid Data Path, **(Best paper award winner.)**
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C-76. 802.11n Under the Microscope.
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C-82. Packet Classification without TCAMs: A few Registers (and a bit of logic) is enough.
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C-83. An Analysis of Wireless Network Coding for Unicast Sessions: The Case for Coding-Aware Routing.
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C-84. VoIP on Wireless Meshes: Models, Algorithms and Evaluation.
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C-86. Towards Secure Localization Using Wireless Congruity.
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C-87. Achieving Good End-to-End Service Using Bill-Pay.
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C-102. Fast Replication in Content Distribution Overlays.
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Julian Chesterfield, Rajiv Chakravorty, Ian Pratt, Suman Banerjee, Pablo Rodriguez.
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