

# Prasun Sinha

Innovator, Thought Leader, Ex- Full Professor, IEEE Fellow, ACM Distinguished Scientist

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## Highlights

- Architect, software engineer, innovator, team leader and a world renowned researcher.
- Extensive experience and deep practical knowledge in systems, networking, AI and machine learning.
- Unique blend of academic excellence and rapid coding skills
- Curious and sharp scholar with a perfect GPA in MS and PhD.
- High risk-taking attitude: successfully secured highly competitive funds from national agencies over a period of 16 years as a professor and directed multiple ground-breaking projects.
- Prominent international figure in the fields of systems and networking.
- Directed and managed cross-disciplinary and cross-university teams of professors, postdocs and students in several large-scale projects.
- Organized several top systems and networking conferences including IEEE Infocom and ACM MobiCom.
- 4 patents and 100+ publications in top conferences and journals with 10,000+ citations: ([https://scholar.google.com/citations?user=j0X\\_9bQAAAAAJ&hl=en](https://scholar.google.com/citations?user=j0X_9bQAAAAAJ&hl=en)).
- Hired, guided, mentored and supervised theses of 15 PhD and 10 MS students.
- Expert-level proficiency in systems, multi-threading, networks, algorithms and data structures
- Deep understanding of Unix and experience in developing complex distributed systems

**Expertise:** Cloud, Storage, Security, Systems, Networking, Connected Vehicles (V2V, V2I), Autonomous Vehicles, Machine Learning, Pattern Recognition, Computer Vision and Handwriting Recognition, Wireless Technologies, TCP/IP, Multicast/Unicast, Cellular Networks, WiFi, RFIDs, IoTs, 5G, Radio Frequency (RF), Sensors, and Communication, Infrastructure.

**Brief Summary of Research at OSU:** My research was primarily funded through National Science Foundation (NSF), ONR, DARPA, Toyota, and Honda. I have led multiple \$1M+ cross-university, cross-disciplinary projects. I have advised 1 BS, 15 MS, 12 PhD theses and 1 postdoc during my career. I am an IEEE Fellow and an ACM Distinguished Member. I won the prestigious NSF CAREER award in 2006. I have served in the editorial board for 2 top journals. I have chaired/co-chaired six conferences, including MobiCom 2014, which is the topmost conference in wireless networking and mobile computing. I served as a TPC co-chair for IEEE INFOCOM 2018, which is the flagship conference in networking. I have authored 100+ publications and 4 patents. Two of my papers were awarded the Best Paper (BuildSys 2017, MiseNet 2018), one was awarded the Best Student Paper Award (WiOpt 2013) and two were selected as best paper finalists (ACM Mobicom 2014, IEEE SECON 2007). Also our demo in BuildSys 2017 got the best demo award.

## Education

1. **PhD in Computer Science**, University of Illinois, Urbana-Champaign, May 2001 (GPA: 4.0/4.0)
2. **MS in Computer Science and Engg.**, Michigan State University, East Lansing, Aug 1997 (GPA: 4.0/4.0)
3. **B. Tech. in Computer Sc. and Engg.**, IIT, Delhi, India, May 1995

## Professional Experience

1.	Member of Technical Staff	Pure Storage Inc.	Aug 2017 – present
2.	Full Professor (with tenure)	Dept of CSE, Ohio State University	Sep 2015 – Aug 2019
3.	Associate Professor (with tenure)	Dept of CSE, Ohio State University	Oct 2009 – Aug 2015
4.	Visiting Associate Professor	Dept of CS, Stanford University	Oct 2010 – June 2011
5.	Assistant Professor	Dept of CSE, Ohio State University	Oct 2003 – Sep 2009
6.	Visiting Assistant Professor	Dept of CSE, Ohio State University	Sep 2003
7.	Postdoctoral Researcher	Dept of Computer Science, UC Riverside	Feb 2003 – Aug 2003
8.	Member of Technical Staff	Bell Labs, Lucent Technologies, Holmdel, NJ	Mar 2001 – Jan 2003
9.	Research Assistant	Dr. Bharghavan, UIUC	May 1998 – Dec 2000
10.	Summer Intern	HRL Labs, Malibu, CA	May 1999 – Aug 1999
11.	Co-op student (MS thesis)	Almaden Research Center, IBM, San Jose, CA	Jan 1997 – Aug 1997
12.	Co-op student (MS thesis)	Almaden Research Center, IBM, San Jose, CA	May 1996 – Aug 1996

## Teaching Experience

1.	Asst./Assoc./Full Prof.	Ohio State University	Aug 2003 – Aug 2019
2.	Teaching Assistant	University of Illinois, Urbana-Champaign	Jan 1998 – May 1998
3.	Teaching Assistant	Michigan State University, East Lansing	Aug 1995 – Dec 1996

## Industrial Involvement from OSU

1. **Toyota InfoTechnology Center, San Jose (CA), 2013-2016:** I worked on multiple projects related to vehicles. We developed a full-duplex wireless communication system that works robustly in vehicular environments and tested it by sending video in full-duplex mode. We also worked on relative localization of vehicles when the GPS was not very accurate.
2. **Honda R&D Americas, Inc., Marysville (OH) 2014-2015:** The goal was to design software for automatic identification of vehicles in vehicle service bays in manufacturing plants so that the appropriate actions can be taken in the assembly line. Systems solely based on RFID and WiFi can pick up other nearby cars. We developed a solution based on in-vehicle sensors and cameras in the infrastructure to make such techniques significantly more robust.

## Awards and Honors

1. IEEE Fellow, 2017, for contributions to scheduling and resource allocation in wireless networks.
  - The Institute of Electrical and Electronics Engineers (IEEE) Grade of Fellow is conferred by the Board of Directors upon a person with an extraordinary record of accomplishments in any of the IEEE fields of interest to less than 0.1% of the total voting Institute membership per year.
2. Distinguished Scientist, ACM (Association for Computing Machinery), 2016
3. Best Paper in International Venues: IEEE MisNet 2018, ACM BuildSys 2017, WiOpt 2013 (Best Student Paper); Best Demo: ACM BuildSys 2017.
4. Best Paper Finalist in International Venues: ACM MOBICOM 2014 Top 7 papers (Topmost conference in mobile computing and wireless networking), IEEE SECON 2007 (Top 4 papers)
5. Lumley Research Award, College of Engineering, Ohio State University, May 2009
6. NSF CAREER Award, 2006
7. Nominated for ACM PhD Dissertation Award, Department of Computer Science, University of Illinois at Urbana-Champaign, 2002
8. Ray Ozzie Fellowship, Department of Computer Science, University of Illinois at Urbana-Champaign, April 2000 (Established for outstanding graduate students)

9. Mavis Memorial Scholarship, College of Engineering, University of Illinois at Urbana-Champaign, April 1999 (Awarded for excellence in research and teaching)
10. Project CEDAR (PhD Thesis) was selected among the top 4 out of approx. 60 projects nationwide, by DARPA in its Quorum Integration Project, 1999
11. Distinguished Academic Achievement Award, Michigan State University, 1997 (Awarded for excellence in research and teaching)
12. Secured All India Rank of 8th (1st in North India Zone) in GATE (Entrance Examination for Graduate Studies in the field of Computer Science in India), 1995
13. Vivekvir Puraskar (for academic excellence), State of Madhya Pradesh, India, 1992

## Grants and Gifts

1. **PI**, *NeTS: Small: Infrastructure-free Robust Relative Localization of Vehicles on the Road*, **NSF**, Total Funding: \$515,998 (includes \$16K for REU funds), Sinha's share: \$515,998, 08/01/16-07/30/19
2. **PI**, *CNS-1409336, NeTS: Medium: Energy Efficient Operation and Control of Green Base Stations with Renewable Energy: Theory to Practice*, **NSF**, Total Funding: \$1,016,000 (includes \$16,000 for REU funds), Sinha's share: \$517,525, 08/01/14-07/30/18, **PI**: Prasun Sinha, **Co-PI**: Ness B. Shroff
3. **Co-PI**, *Joint Neighbor Identification and Channel Estimation for Enabling Advanced MAC-PHY Techniques in Ad Hoc Networks*, **ONR**, Total Funding: \$0.3m, Sinha's share: \$150,000, 06/01/17-05/31/20, **PI**: K. Srinivasan, **Co-PI**: Prasun Sinha
4. **PI**, *CNS-1161490, NeTS: Medium: Collaborative Research: Enabling Cellular Services over Unplanned Femto-Cell Deployments: From Theory to Implementation*, **NSF**, Total Funding: \$1,200,000, OSU/Sinha's share: \$380,000, 06/01/12-05/31/16, **PI**: Prasun Sinha, **Co-PI**: R. Srikant (UIUC) and Kang G. Shin (UMich)  
(REU Supplement - Sinha's share: \$16,000, 07/01/13-06/30/16)
5. **PI**, *Experiments on Full-Duplex Communication across Vehicles*, **Toyota InfoTechnology Center**, Mountain View, CA \$80,000, 12/01/2014 - 02/28/2016
6. **PI**, *Understanding the Performance of Full-Duplex Links in Mobile Environments: The Analysis*, **Toyota InfoTechnology Center**, Mountain View, CA Gift: \$16,000, 03/01/2014 - 02/28/2015
7. **Co-PI**, *Bluetooth and WiFi Proximity and Positioning Study*, **Honda R&D Americas, Inc.**, Total Funding: \$35,693, Sinha's share: \$17,846, 10/01/2014 - 05/20/2015 **PI**: Rajiv Ramnath
8. **PI**, *Relative Localization of Vehicles on the Road*, **Toyota InfoTechnology Center**, Mountain View, CA Gift: \$10,000, 04/01/2013 - 03/31/2014
9. **PI**, *CNS-1254525, EAGER: WideSpot: Enabling Predictable Wide-Area Coverage over Scattered Hotspots*, **NSF**, Total Funding: \$100,000, 09/15/12-08/14/14,
10. **Co-PI**, *NeTS-NECO: A New Resource Management Paradigm for Sensor Networks with Energy Replenishment*, **NSF**, Total Funding: \$500,000, Sinha's share: \$160,000, 09/01/08-08/31/12, **PI**: Ness Shroff, **Co-PI**: Can Emre Koksal
11. **PI (at OSU)**, *NeTS-NOSS: Collaborative Research: Doing More with Less: Tracking Movements Using a Sparse Sensor Network*, **NSF**, Total Funding: \$500,000, OSU/Sinha's share: \$216,017, 10/01/07-09/30/10, **PI**: Santosh Kumar (UMemhis), **Co-PI**: Bela Bolobas (UMemhis)  
(REU Supplement - Sinha's share: \$12,000, 09/01/07-08/30/08)
12. **Co-PI**, *NeTS-NOSS: Collaborative Research: Energy-Efficient Distributed Sensor Network Control: Theory to Implementation*, **NSF**, Total Funding: \$650,000, Sinha's share: \$230,542, 10/01/07-09/30/10, **PI**: Ness Shroff, **Co-PI**: Xiaojun Lin (Purdue)  
(REU Supplement - Sinha's share: \$12,000, 09/01/07 - 08/30/08)

13. **PI**, *CAREER: On-the-fly Protocols for Data Dissemination in Wireless Mesh Networks*, **NSF**, Total Funding: \$400,000, 01/01/06 - 12/31/10  
(REU Supplement: \$12,000, 05/25/06 - 05/24/08)
14. **PI**, *Katrina SGER: Mapping the Coverage Islands of Wireless Base-stations*, **NSF**, Total Funding: \$31,274, Sinha's share: \$22,000, 10/01/05 - 09/30/06
15. **Senior Personnel**, PI: Dhabaleswar K. Panda, Co-PIs: Joel Saltz, Han-Wei Shen, Stu Zweben, *High-End Computing and Networking Research Testbed for Next Generation Data Driven, Interactive Applications*, **NSF**, Total funding: \$3,014,063, Sinha's share: \$50,000, 07/01/04 - 06/30/09
16. **Senior Personnel**, *Project Echelon: A 10 Kilometer, 10,000 Node Sensor Network Experiment*, **DARPA-IXO**, Total funding: \$899,000, Sinha's share: \$32,000, 11/01/03 - 10/01/05

(Note: \* indicates my student)

## Journals

1. AutoCalib: Automatic traffic Camera Calibration at Scale Gopi Krishna Tummala\* (co-primary), Romil Bhardwaj (co-primary), Ganesan Ramalingam, Ramachandran Ramjee and Prasun Sinha **ACM Transactions on Sensor Networks (TOSN)**, 14 (3-4), 2019
2. Zizhan Zheng\*, Zhixue Lu\*, Prasun Sinha, and Santosh Kumar, "Ensuring Predictable Contact Opportunity for Scalable Vehicular Internet Access On the Go". **IEEE/ACM Transactions on Networking (TON)**, 23 (3), pp 768-781, June 2015
3. Shengbo Chen\*, Prasun Sinha, Ness Shroff and Changhee Joo "A Simple Asymptotically Optimal Joint Energy Allocation and Routing Scheme in Rechargeable Sensor Networks", **IEEE/ACM Transactions on Networking (TON)**, 22 (4), pp 1325-1336, Feb. 2014
4. Tarun Bansal\*, Dong Li\*, and Prasun Sinha "Opportunistic Channel Sharing for Improved Throughput in Cognitive Radio Networks", **IEEE Transactions on Mobile Computing (TMC)**, 13 (4), pp. 852-865, 2014
5. Shengbo Chen\*, Prasun Sinha, and Ness Shroff, "Heterogeneous Delay Tolerant Task Scheduling and Energy Management in the Smart Grid with Renewable Energy", **IEEE JSAC Smart Grid Communications**, 31 (7), pp 1258-1267, 2013
6. Dong Li\* and Prasun Sinha. "RBTP: Low Power Mobile Discovery Protocol through Recursive Binary Time Partitioning", **IEEE Transactions on Mobile Computing (TMC)**, 13 (2), Feb. 2014
7. Zhixue Lu\*, Tarun Bansal\*, and Prasun Sinha. "Achieving User-Level Fairness in Open-Access Femtocell based Architecture", **IEEE Transactions on Mobile Computing (TMC)**, 12 (10) pp. 1943-1954, 2013
8. Zizhan Zheng\*, Prasun Sinha, and Santosh Kumar, "Sparse WiFi Deployment for Vehicular Internet Access With Bounded Interconnection Gap", **IEEE/ACM Transactions on Networking (TON)**, 20 (3), pp 956-969, Jun 2012
9. Ren-Shiou Liu\*, Kai-Wei Fan\*, Zizhan Zheng\* and Prasun Sinha, "Perpetual and Fair Data Collection for Environmental Energy Harvesting Sensor Networks", **IEEE/ACM Transactions on Networking (TON)**, 19 (4), pp 947-960, August 2011
10. Santosh Kumar, Ten H. Lai, Marc E. Posner, and Prasun Sinha, "Maximizing the Lifetime of a Barrier of Wireless Sensors", **IEEE Transactions on Mobile Computing (TMC)**, 9 (8), pp 1161 - 1172, August 2010
11. JooHwan Kim, Xiaojun Lin, Ness Shroff, and Prasun Sinha "Minimizing Delay and Maximizing Lifetime for Wireless Sensor Networks with Anycast", **IEEE/ACM Transactions on Networking (TON)**, 18 (2), pp 515-528, April 2010

12. Thang Le, Prasun Sinha, and Dong Xuan “Turning Heterogeneity into an Advantage in Wireless Ad-hoc Network Routing”, **Elsevier Ad Hoc Networks (ADHOC)**, Volume 8, Number 1, pp 108-118, January 2010
13. Sha Liu\*, Kai-Wei Fan\* and Prasun Sinha, “CMAC: Energy Efficient MAC Layer Design for Sensor Networks with Anycasting,” **ACM Transactions on Sensor Networks (TOSN)**, Volume 5, Number 4, November 2009
14. Ren-Shiou Liu\*, Kai-Wei Fan\*, and Prasun Sinha, “Locally Scheduled Packet Bursting for Data Collection in Wireless Sensor Networks”, **Elsevier Ad Hoc Networks (ADHOC)**, Volume 7, Number 5, pp 904-917, July 2009
15. Hongwei Zhang, Anish Arora, and Prasun Sinha, “Link Estimation and Routing in Sensor Network Backbones: Beacon-based or Data-driven?”, **IEEE Transactions on Mobile Computing (TMC)**, Volume 8, Number 5, pp 653-667, May 2009
16. Ai Chen\*, Dongwook Lee and Prasun Sinha, “Efficient Multicasting over Large-Scale WLANs through Controlled Association,” **Elsevier Computer Networks (COMNET)**, Volume 53, Number 1, pp 45-59, January 2009
17. Kai-Wei Fan\*, Sha Liu\*, and Prasun Sinha, “Dynamic Forwarding over Tree-on-DAG for Scalable Data Aggregation in Sensor Networks”, **IEEE Transactions on Mobile Computing (TMC)**, Volume 7, Number 10, pp 1271-1284, October 2008
18. Ai Chen\*, Gayathri Chandrasekaran\*, Dongwook Lee, and Prasun Sinha, “High Throughput MAC Layer Multicasting over Time-Varying Channels”, **Elsevier Computer Communications (COMCOM)**, Volume 32, Number 1, pp 94-104, January 2009
19. Zizhan Zheng\*, and Prasun Sinha, “Buffer Coding for Reliable Transmissions over Wireless Networks”, **Elsevier Computer Communications (COMCOM)**, Volume 32, Number 1, pp 111-123, January 2009
20. Sha Liu\*, Rahul Srivastava, Can Emre Koksall, and Prasun Sinha, “Pushback: A Hidden Markov Model Based Scheme for Energy Efficient Data Transmission in Sensor Networks”, **Elsevier Ad Hoc Networks (ADHOC)**, Volume 7, Number 5, pp 973-986, July 2009
21. Dongwook Lee, Gayathri Chandrasekaran\*, Mukundan Sridharan and Prasun Sinha “Association Management for Data Dissemination over Wireless Mesh Networks”, **Elsevier Computer Networks (COMNET)**, Volume 51, Number 15, pp 4338-4355, October 2007
22. Haiyun Luo, Xiaqiao Meng, Ram Ramjee, Prasun Sinha, and Li (Erran) Li, “The Design and Evaluation of Unified Cellular and Ad-Hoc Networks”, **IEEE Transactions on Mobile Computing (TMC)**, Volume 6, Number 9, pp 1060-1074, September 2007
23. Kai-Wei Fan\*, Sha Liu\*, and Prasun Sinha, “Structure-free Data Aggregation in Sensor Networks”, **IEEE Transactions on Mobile Computing (TMC)**, Volume 6, Number 8, pp 929-942, August 2007
24. Vinayak Naik, Anish Arora, Prasun Sinha and Hongwei Zhang, “Sprinkler: A Reliable and Energy Efficient Data Dissemination Service for Extreme Scale Wireless Networks of Embedded Devices” **IEEE Transactions on Mobile Computing (TMC)**, Volume 6, Number 7, pp 777-789, July 2007
25. Prasun Sinha, Danny Raz and Nidhan Choudhuri, “Estimation of Network Distances using Off-line Measurements”, **Elsevier Computer Communications (COMCOM)**, Volume 29, Number 16, pp 3295-3305, 2006
26. Raghupathy Sivakumar, Prasun Sinha and Vaduvur Bharghavan, “Braving the Broadcast Storm: Infrastructural Support for Ad-hoc Routing”, **Computer Networks (COMNET)**, 41(6), pp 687-706, 2003.
27. Prasun Sinha, Narayanan Venkitaraman, Raghupathy Sivakumar and Vaduvur Bharghavan, “WTCP: A Reliable Transport Protocol for Wireless Wide-Area Networks”, **Wireless Networks (WINET)** 8(2-3): pp 301-316, 2002.

28. Raghupathy Sivakumar, Prasun Sinha and Vaduvur Bharghavan, “CEDAR: a Core-Extraction Distributed Ad-hoc Routing algorithm”, **Journal on Selected Areas in Communications (JSAC), Special Issue on Wireless Ad-Hoc Networks** 17(8), pp 1454-65, 1999.

## Conference Publications

29. Ananya Mahanti, Weihan Chen, Prasun Sinha, and Kannan Srinivasan “DuoRelay: Parallel Interference Nulling using Full-duplex Relaying,” in **Proc. of IEEE SECON**, Jun 2019 (Acceptance rate: 28.6% = 54/189)
30. Gopi Krishna Tummala\*, Tanmoy Das\*, Prasun Sinha, and Rajiv Ramnath, “SmartDashCam: Automatic Live Calibration for DashCams”, **ACM/IEEE IPSN**, Apr 2019
31. Tanmoy Das\*, Lu Chen, Rupam Kundu\*, Arjun Bakshi, Prasun Sinha, Kannan Srinivasan, Gaurav Bansal and Takayuki Shimizu “CoReCast: Collision Resilient Broadcasting in Vehicular Networks,” in **Proc. of Mobisys**, Munich, Germany, Jun 2018 (Acceptance rate: 26.8% = 37/138)
32. Romil Bhardwaj, Gopi Krishna Tummala\*, Ganesan Ramalingam, Ramachandran Ramjee and Prasun Sinha, “AutoCalib: Automatic traffic Camera Calibration at Scale,” in **Proc. of Buildsys**, Delft, Netherlands, Nov 2017, **Best Paper Award** (Acceptance rate: 31.3% = 30/96)
33. Gopi Krishna Tummala\*, Dong Li\* and Prasun Sinha “Live View of On-Road Vehicular Information,” in **Proc. of SECON**, San Diego, Jun 2017 (Acceptance rate: 26.5% = 45/170)
34. Rupam Kundu\*, Gopi Krishna Tummala\* and Prasun Sinha “Navigation assistance for Individuals with Visual Impairments in Indoor Environment (Invited Paper)”, in **Proc. of COMSNETS**, Bangalore, India, Jan 2017
35. Jiashang Liu\*, Yang Yang, Prasun Sinha and Ness Shroff “Load-Adaptive Base-Station Management for Energy Reduction including Operation-Cost and Turn-on-Cost”, in **Proc. of IEEE WCNC**, San Francisco, CA, Mar 2017
36. Wenjie Zhou\*, Tanmoy Das\*, Lu Chen, Kannan Srinivasan and Prasun Sinha, “BASIC: Backbone-Assisted Successive Interference Cancellation”, in **Proc. of ACM MOBICOM**, New York, Oct 2016 (Acceptance rate: 14.2% = 32/226)
37. Yang Yang, Jiashang Liu\*, Prasun Sinha and Ness B. Shroff, “Dynamic User Association and Energy Control in Cellular Networks with Renewable Resources”, in **Proc. of IEEE CDC**, Osaka, Japan, Dec 2015
38. Yousi Zheng\*, Bo Ji, Ness B. Shroff and Prasun Sinha, “Forget the Deadline: Scheduling Interactive Applications in Data Centers”, in **Proc. of IEEE Cloud**, New York, Jun 2015 (Acceptance rate: 17%)
39. Yousi Zheng\*, Ness B. Shroff, R. Srikant and Prasun Sinha, “Exploiting Large System Dynamics for Designing Simple Data Center Schedulers”, in **Proc. of IEEE INFOCOM**, Hong Kong, Apr 2015 (Acceptance rate: 19.3% = 316/1640)
40. Wenjie Zhou\* (co-primary), Tarun Bansal\* (co-primary), Prasun Sinha and Kannan Srinivasan, “BBN: Throughput Scaling in Dense Enterprise WLANs with Blind Beamforming and Nulling”, in **Proc. of ACM MOBICOM**, Maui, Hawaii, Sep 2014 (Acceptance rate: 16.4% = 36/220)
41. Shengbo Chen\*, Ulas Can Kozat, Longbo Huang, Prasun Sinha, Guanfeng Liang, Xin Liu, Yin Sun and Ness B. Shroff. “When Queueing Meets Coding: Optimal-Latency Data Retrieving Scheme in Storage Clouds”, in **Proc. of IEEE INFOCOM**, Toronto, Canada, Apr 2014 (Acceptance rate: 19.4% = 320/1645)
42. Tarun Bansal\*, Karthikeyan Sundaresan, Sampath Rangarajan and Prasun Sinha. “R2D2: Embracing Device-to-Device Communication in Next Generation Cellular Networks”, in **Proc. of IEEE INFOCOM**, Toronto, Canada, Apr 2014 (Acceptance rate: 19.4% = 320/1645)

43. Dong Li\*, Zhixue Lu\*, Tarun Bansal\*, Erik Schilling\* and Prasun Sinha. “ForeSight: Mapping Vehicles in Visual Domain and Electronic Domain”, in **Proc. of IEEE INFOCOM**, Toronto, Canada, Apr 2014 (Acceptance rate: 19.4% = 320/1645)
44. Zhixue Lu\*, Prasun Sinha and R. Srikant. “EasyBid: Enabling Cellular Offloading via Small Players”, in **Proc. of IEEE INFOCOM**, Toronto, Canada, Apr 2014 (Acceptance rate: 19.4% = 320/1645)
45. Tarun Bansal\*, Bo Chen\* and Prasun Sinha. “FastProbe: Malicious User Detection in Cognitive Radio Networks Through Active Transmissions”, in **Proc. of IEEE INFOCOM**, Toronto, Canada, Apr 2014 (Acceptance rate: 19.4% = 320/1645)
46. Wenjie Zhou\*, Dong Li, Kannan Srinivasan, and Prasun Sinha. “DOMINO: Relative Scheduling in Enterprise Wireless LANs”, in **Proc. of ACM CoNEXT**, Santa Barbara, Dec 2013 (Acceptance rate: 20.3% = 29/143)
47. Wenjie Zhou\*, Kannan Srinivasan, and Prasun Sinha. “RCTC: Rapid Concurrent Transmission Coordination in Full Duplex Wireless Networks”, in **Proc. of IEEE ICNP**, Germany, Oct 2013 (Acceptance rate: 18.3% = 46/251)
48. Tarun Bansal\*, Bo Chen, Prasun Sinha and Kannan Srinivasan. “Symphony: Cooperative Packet Recovery over the Wired Backbone in Enterprise WLANs”, **Proc. of ACM MOBICOM**, Miami, Florida, Sep 2013 (Acceptance rate: 13.5% = 28/208)
49. Shengbo Chen\*, Prasun Sinha and Ness B. Shroff, “Energy Trading in the Smart Grid: From End-user’s Perspective”, **Proc. of Asilomar Conference on Signals, Systems and Computers**, Nov. 2013. (Invited paper)
50. Yousi Zheng\*, Prasun Sinha, and Ness B. Shroff, “A New Analytical Technique for Designing Provably Efficient MapReduce Schedulers”, in **Proc. of IEEE INFOCOM**, Turin, Italy, Apr 2013 (Acceptance rate: 17.4% = 280/1613)
51. Tarun Bansal\*, Bo Chen and Prasun Sinha, “DISCERN: Cooperative Whitespace Scanning in Practical Environments”, in **Proc. of IEEE INFOCOM**, Turin, Italy, Apr 2013 (Acceptance rate: 17.4% = 280/1613)
52. Yousi Zheng\*, Prasun Sinha, and Ness B. Shroff, “Performance Analysis of Work-Conserving Schedulers in Minimizing the Total Flow Time with Phase Precedence”, Invited Paper, In **Proc. of Allerton Conference**, Allerton, Illinois, Oct. 2012
53. Shengbo Chen\*, Prasun Sinha, and Ness Shroff, “Scheduling Heterogeneous Delay Tolerant Tasks in Smart Grid with Renewable Energy”, in **Proc. of IEEE CDC (Conference on Decision and Control)**, Maui, Hawaii, Dec 2012 (Acceptance rate (approx): 50%, papers submitted = 2363)
54. Dong Li\* (co-primary), Tarun Bansal\* (co-primary), Zhixue Lu\* (co-primary), and Prasun Sinha, “MARVEL: Multiple Antenna based Relative Vehicle Localizer”, in **Proc. of ACM MOBICOM**, Istanbul, Turkey, Aug 2012 (Acceptance rate: 15.1% = 32/212)
55. Shengbo Chen\*, Prasun Sinha, Ness Shroff, and Changhee Joo “A Simple Asymptotically Optimal Energy Allocation and Routing Scheme in Rechargeable Sensor Networks”, in **Proc. of IEEE INFOCOM**, Orlando, Mar 2012 (Acceptance rate: 18% = 278/1547)
56. Mayank Jain, Jung II Choi, Tae Min Kim, Dinesh Bharadia, Kannan Srinivasan, Philip Levis, Sachin Katti, Prasun Sinha and Siddharth Seth “Practical, Real-time Full Duplex Wireless”, in **Proc. of ACM MOBICOM**, Las Vegas, Sep 2011 (Acceptance rate: 13.6% = 29/214)
57. Shengbo Chen\*, Prasun Sinha, Ness Shroff, and Changhee Joo “Finite-Horizon Energy Allocation and Routing Scheme in Rechargeable Sensor Networks”, **Proc. of IEEE INFOCOM**, Shanghai, Apr. 2011 (Acceptance rate: 17.6% = 276/1575)

58. Zizhan Zheng\*, Zhixue Lu\*, Prasun Sinha, and Santosh Kumar, "Maximizing the Contact Opportunity for Vehicular Internet Access", **Proc. of IEEE INFOCOM**, San Diego, Mar. 2010 (Acceptance rate: 17.6% = 276/1575)
59. Ren-Shiou Liu\*, Prasun Sinha, and Emre (Can) Koksall, "Joint Energy Management and Resource Allocation in Rechargeable Sensor Networks", **Proc. of IEEE INFOCOM**, San Diego, Mar. 2010 (Acceptance rate: 17.6% = 276/1575)
60. Paul Balister, Zizhan Zheng\*, Santosh Kumar, and Prasun Sinha, "Trap Coverage: Allowing Coverage Holes of Bounded Diameter in Wireless Sensor Networks", **Proc. of IEEE INFOCOM**, Rio de Janeiro, Brazil, Apr. 2009 (Acceptance rate: 19.6% = 282/1453)
61. Kai-Wei Fan\*, Zizhan Zheng\* and Prasun Sinha, "Steady and Fair Rate Allocation for Rechargeable Sensors in Perpetual Sensor Networks," in **Proc. of ACM SENSYS**, Raleigh, NC, 14 pages, Nov. 2008 (Acceptance rate: 16.4% = 25/153)
62. Kai-Wei Fan\* and Prasun Sinha, "Distributed Online Data Aggregation for Large Scale Sensor Networks," in **Proc. of IEEE MASS**, Atlanta, Georgia, 10 pages, Sep. 2008 (Acceptance rate: 10.4% = 26/250)
63. Zizhan Zheng\*, Kai-Wei Fan\*, Prasun Sinha and Yusu Wang, "Distributed Roadmap Aided Routing in Sensor Networks," **Proc. of IEEE MASS**, Atlanta, Georgia, 6 pages, Short Paper, Sep. 2008 (Acceptance rate: 24% = 60/250)
64. Joochwan Kim, Xiaojun Lin, Ness Shroff, and Prasun Sinha, "On Maximizing the Lifetime of Delay-Sensitive Wireless Sensor Networks with Anycast", in **Proc. of IEEE INFOCOM**, Phoenix, Arizona, pp 807-815, Apr. 2008 (Acceptance rate: 20.5% = 236/1152)
65. Ren-Shiou Liu\*, Kai-Wei Fan\*, and Prasun Sinha, "ClearBurst: Clearing Congestion in Sensor Networks with Packet Bursts", **IEEE Wireless Communications and Networking Conference (WCNC)**, Las Vegas, pp 1899-1904, Apr. 2008 (Acceptance rate: 46.8% = 585/1250)
66. Tan Apaydin, Serdar Vural and Prasun Sinha, "On Improving Data Accessibility in Storage Based Sensor Networks", **Proc. of IEEE MASS**, Pisa, Italy, pp 1-9, Oct 2007 (Acceptance rate: 25.3% = 67/265)
67. Santosh Kumar, Ten H. Lai, Marc E. Posner and Prasun Sinha, "Optimal Sleep-Wakeup Algorithms for Barriers of Wireless Sensors", in **Proc. of IEEE BROADNETS**, Raleigh, North Carolina, 10 pages, Sep 2007 (Acceptance rate: 35%)
68. Zizhan Zheng\* and Prasun Sinha, "XBC: XOR-based Buffer Coding for Reliable Transmissions over Wireless Networks", in **Proc. of IEEE BROADNETS**, Raleigh, North Carolina, 10 pages, Sep 2007 (Acceptance rate: 35%)
69. Sha Liu\*, Kai-Wei Fan\* and Prasun Sinha, "CMAC: An Energy Efficient MAC Layer Protocol Using Convergent Packet Forwarding for Wireless Sensor Networks", in **Proc. of IEEE SECON**, San Diego, CA, pp 11-20, Jun 2007, **Best Paper Finalist (Top 4)**, (Acceptance rate: 20% = 60/300)
70. Kai-Wei Fan\*, Sha Liu\* and Prasun Sinha, "Scalable Data Aggregation for Dynamic Events in Sensor Networks", in **Proc. of ACM SENSYS**, Boulder, Colorado, pp 181-194, Nov 2006 (Acceptance rate: 19.4% = 24/124)
71. Ai Chen\*, Gayathri Chandrasekaran\*, Dongwook Lee, and Prasun Sinha, "HIMAC: High Throughput MAC Layer Multicasting in Wireless Networks", in **Proc. of IEEE MASS**, Vancouver, Canada, pp 41-50, Oct 2006 (Acceptance rate: 24.8% = 49/197)
72. Hongwei Zhang\*, Anish Arora, and Prasun Sinha, "Learn on the Fly: Beacon-free Link Estimation and Routing in Sensor Network Backbones", in **Proc. of IEEE INFOCOM**, pp 1607-1618, Apr. 2006 (Acceptance rate: 18% = 252/1400)
73. Kai-Wei Fan\*, Sha Liu\*, and Prasun Sinha, "On the Potential of Structure-free Data Aggregation in Sensor Networks", in **Proc. of IEEE INFOCOM**, pp 1263-1274, Apr. 2006 (Acceptance rate: 18% = 252/1400)



74. Dongwook Lee, JongWon Kim and Prasun Sinha, "Handoff-aware Adaptive Media Streaming in Mobile IP", **ICOIN (The International Conference on Information Networking)**, Sendai (Japan), 10 pages, Jan. 2006 (Sponsored by Information Processing Society of Japan, Korea Information Science Society and Springer) (Acceptance rate: 30.1% = 141 among 468)
75. Anish Arora, Rajiv Ramnath, Emre Ertin, Prasun Sinha et. al. "ExScal: Elements of an Extreme Scale Wireless Sensor Network," Invited Paper, In **Proc. of RTCSA (11th IEEE International Conference on Embedded and Real-Time Computing Systems and Applications)**, Hong Kong, pp 102-108, Aug. 2005
76. Prasun Sinha, Yuval Shavitt, Ramachandran Ramjee, Danny Raz and Sneha Kasera, "FairMAC: Fair Sharing of Multi-Access Channels in WLAN Hotspots", In **Proc of IEEE ICCCN (Fourteenth International Conference on computer Communications and Networks)**, pp 113-118, San Diego, Oct. 2005. (Acceptance rate: 33.46% = 87/260)
77. Dan Berger, Zhenqiang. Ye, Prasun Sinha, Srikanth Krishnamurthy, Michalis Faloutsos and Satish K. Tripathi, "TCP Friendly Medium Access Control for Ad-Hoc Wireless Networks: Alleviating Self Contention", in **Proc. of IEEE MASS**, Ft. Lauderdale, FL, pp 214-223, Oct. 2004. (Acceptance rate: 25%)
78. Haiyun Luo, Ramachandran Ramjee, Prasun Sinha, Li Li and Songwu Lu, "UCAN: A Unified Cellular and Ad-hoc Network Architecture", in **Proc. of ACM MOBICOM**, San Diego, CA, pp 353-367, Sep. 2003. (Acceptance rate: 27/281 = 9.6%)
79. Saar Pilosof, Ramachandran Ramjee, Danny Raz, Yuval Shavitt and Prasun Sinha, "Understanding TCP fairness over Wireless LAN", in **Proc. of IEEE INFOCOM**, San Francisco, CA, pp 863-872, Mar. 2003. (Acceptance rate: 224/1078 = 20.8%)
80. Prasun Sinha, Raghupathy Sivakumar and Vaduvur Bharghavan, "Enhancing Ad-hoc Routing with Dynamic Virtual Infrastructures", in **Proc. of IEEE INFOCOM**, pp 1763-1772, Anchorage, Alaska, pp 1763-1772, Apr. 2001. (Acceptance rate: 192/830 = 23.1%)
81. Prasun Sinha and Srikanth Krishnamurthy, "Scalable Unidirectional Routing with Zone Routing Protocol (ZRP) Extensions for Mobile Ad-hoc Networks", in **Proc. of IEEE WCNC**, Chicago, pp 1329-1339, Sep. 2000.
82. Prasun Sinha, Narayanan Venkitaraman, Raghupathy Sivakumar and Vaduvur Bharghavan, "A Wireless Transmission Control Protocol for CDPD", **Proc. of IEEE WCNC**, New Orleans, pp 953-957, Sep. 1999.
83. Prasun Sinha, Raghupathy Sivakumar and Vaduvur Bharghavan, "MCEDAR: Multicast extensions to Core-Extraction Distributed Ad-hoc Routing algorithm", in **Proc. of IEEE WCNC**, New Orleans, pp 1313-1317, Sep. 1999.
84. Prasun Sinha, Narayanan Venkitaraman, Raghupathy Sivakumar and Vaduvur Bharghavan, "WTCP: A Reliable Transport Protocol for Wireless Wide-Area Networks", in **Proc. of ACM MOBICOM**, pp 231-241, Seattle, Aug. 1999. (Acceptance rate: 23/170 = 13.5%)
85. Prasun Sinha, Raghupathy Sivakumar and Vaduvur Bharghavan, "CEDAR: a Core-Extraction Distributed Ad-hoc Routing algorithm", in **Proc. of IEEE INFOCOM**, New York, NY, pp 202-209, Apr. 1999. (Acceptance rate: 184/600 = 30.7%)
86. Prasun Sinha and Jianchang Mao, "Combining Multiple OCRs for Optimizing Word Recognition", **International Conference on Pattern Recognition (ICPR)** Brisbane, Australia, pp 436-438, Aug. 1998
87. Jianchang Mao, Prasun Sinha and Mohiuddin Moidin, "A System for Cursive Handwritten Address Recognition", **International Conference on Pattern Recognition (ICPR)**, Brisbane, Australia, pp 1285-1287, Aug. 1998.

#### Mini-Conference Publications

88. Zizhan Zheng\*, Prasun Sinha, and Santosh Kumar, “Alpha Coverage: Bounding the Interconnection Gap for Vehicular Internet Access”, **Proc. of IEEE INFOCOM Mini-Conference**, Rio de Janeiro, Brazil, Apr. 2009 (Acceptance rate: 26.7% = 383/1453)
89. Yigal Bejerano, Dongwook Lee, Prasun Sinha, and Lisa Zhang, “Approximation Algorithms for Scheduling Real-Time Multicast Flows in Wireless LANs”, **Proc. of IEEE INFOCOM Mini-Conference**, Phoenix, Arizona, pp 151-155, Apr. 2008 (Acceptance rate: 27.9% = 321/1152)

### Symposium Publications

90. Shengbo Chen\*, Tarun Bansal\*, Yin Sun, Prasun Sinha and Ness Shroff, “Life-Add: Lifetime Adjustable Design for WiFi Networks with Heterogeneous Energy Supplies”, In **Proc. of the 11th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt)**, Tsukuba Science City, Japan, 8 pages, 2013, **Best Student Paper Award**, (Acceptance rate: 44.3% = 58/131)
91. Vinayak Naik, Anish Arora, Prasun Sinha and Hongwei Zhang, “Sprinkler: A Reliable and Scalable Data Dissemination Service for Wireless Embedded Devices”, In **Proc. of the 26th IEEE Real-Time Systems Symposium (RTSS)**, Miami, Florida, 10 pages, 2005 (Acceptance rate: 21% = 37/176)
92. Kiran Kumar, Prasun Sinha and P. C. P. Bhatt, “Distributed and Object Oriented Geographical Information System (DO.GIS)”, **7th International Symposium on Spatial Data Handling (SDH)**, Netherlands, pp 263-275, Aug 1996.

### Workshop Publications

93. Jiashang Liu\*, Joohyun Lee, Ness Shroff, Prasun Sinha, “A Near-Optimal Control Policy in Cloud Systems with Renewable Sources and Time-dependent Energy Price”, **Cloud Management and Operations Workshop** (held along with IEEE Cloud), San Francisco, July 2018
94. Rupam Kundu\*, Gopi Krishna Tummala\* and Prasun Sinha “CaneScanner: Obstacle Detection for People with Visual Disabilities,” in **Proc. of IEEE MiSeNet**, Honolulu, HI, USA, April 2018
95. Tanmoy Das\*, Gopi Krishna Tummala\* and Prasun Sinha “TagTone: Scalable RFID Communication through Multi-Frequency Analysis,” in **Proc. of IEEE MiSeNet**, Honolulu, HI, USA, April 2018
96. Gopi Krishna Tummala\*, Dong Li\*, and Prasun Sinha “RoadMap: Mapping Vehicles to IP Addresses using Motion Signatures,” in **Proc. of ACM CarSys (MobiCom Workshop)**, New York, Oct 2016 (Acceptance Rate 40% = 8/20)
97. Gopi Krishna Tummala\*, Rupam Kundu\*, Prasun Sinha, and Rajiv Ramnath, “Vision-Track: Vision based indoor tracking in anchor-free regions,” in **Proc. of ACM HotWireless (MobiCom Workshop)**, New York, Oct 2016 (Acceptance Rate 75% = 9/12)
98. Tarun Bansal\*, Wenjie Zhou\*, Kannan Srinivasan, and Prasun Sinha, “RobinHood: Sharing the Happiness in a Wireless Jungle,” in **Proc. of HotMobile**, Jekyll Island, Feb. 2014 (Acceptance rate: 30.6% = 22/72)
99. Sha Liu\*, Rahul Srivastava, Can Emre Koksal, and Prasun Sinha, “Achieving Energy Efficiency with Transmission Pushbacks in Sensor Networks,” in **Proc. of IEEE IWQoS**, The Netherlands, Jun. 2008 (Acceptance rate: 35.6% = 26/73)
100. Dongwook Lee, Gayathri Chandrasekaran\*, and Prasun Sinha, “Optimizing Broadcast Load in Mesh Networks using Dual Association”, Invited Paper, In **Proc. of WiMESH (First IEEE Workshop on Wireless Mesh Networks)**, Santa Clara, 10 pages, Sep. 2005
101. Sha Liu\*, Kai-Wei Fan\*, Prasun Sinha, “Dynamic Sleep Scheduling using Online Experimentation for Wireless Sensor Networks” Invited Paper, In Proc. of **SenMetrics**, (Third Intl. Workshop on Measurement, Modeling and Performance Analysis of Wireless Sensor Networks), 9 pages, Jul. 2005

102. Li Li and Prasun Sinha, "Throughput and Energy Efficiency in Topology-Controlled Multi-hop Wireless Sensor Networks", In Proc. of **Second ACM International Workshop on Wireless Sensor Networks and Applications (WSNA)**, (Held in conjunction with ACM MOBICOM), pp 132-140, Sep. 2003.
103. Danny Raz and Prasun Sinha, "On the Power of Offline Data in Approximating Internet Distances", **DI-MACS Workshop on Internet and WWW Measurement, Mapping and Modeling**, Rutgers University, Feb. 2002.
104. Jeff Monks, Prasun Sinha and Vaduvur Bharghavan, "Limitations of TCP-ELFN for Ad-hoc Networks", **IEEE MOMUC (Mobile Multimedia Communications)**, Tokyo, 6 pages, Oct. 2000.
105. Thyagarajan Nandagopal, Tan-Eun Kim, Prasun Sinha and Vaduvur Bharghavan, "Service Differentiation Through End-to-end Rate Control in Low Bandwidth Wireless Packet Networks", **IEEE MOMUC (Mobile Multimedia Communications)**, San Diego, pp 211-220, Nov. 1999.

### Demonstrations with Abstract

106. Romil Bhardwaj, Gopi Krishna Tummala\*, Ganesan Ramalingam, Ramachandran Ramjee and Prasun Sinha, "Demo: AutoCalib: Automatic traffic Camera Calibration at Scale," in **Proc. of Buildsys**, Delft, Netherlands, Nov 2017, **Best Demo Award**
107. Dong Li\* (co-primary), Tarun Bansal\* (co-primary), Zhixue Lu\* (co-primary), and Prasun Sinha, "Demo Abstract: MARVEL: Multiple Antenna based Relative Vehicle Localizer", **Proc. of ACM MOBICOM**, 3 pp, Istanbul, Turkey, Aug 2012,
108. Somnath Mitra, Zizhan Zheng, Santanu Guha, Animikh Ghosh, Prabal Dutta, Bhagavathy Krishna, Kurt Plarre, Santosh Kumar, and Prasun Sinha, "Demo Abstract: An Affordable, Long-Lasting, and Autonomous Theft Detection and Tracking System", in **Proc. of ACM SENSYS**, 2 pp, Nov. 2009

### Poster Publications

109. Rupam Kundu , Gopi Krishna Tummala and Prasun Sinha "Poster: VisualLoc: Vision Based Localization using a single Smart-Bulb," in **Proc. of ACM BuildSys**, Delft, Netherlands, Nov 2017
110. Soft-Swipe: Enabling High-Accuracy Pairing of Vehicles to Lanes using COTS Technology Gopi Krishna Tummala\*, Derrick Cobb, Prasun Sinha and Rajiv Ramnath in **Proc. of ACM CarSys (MobiCom Workshop) Poster**, New York, Oct 2016 (Acceptance Rate 58.3% = 7/12)
111. Anish Arora, Rajiv Ramnath, Prasun Sinha, et. al. "Project Exscal" **DCOSS (International Conference on Distributed Computing in Sensor Systems)**, Invited Poster, 2005.
112. Anish Arora, Prasun Sinha, Emre Ertin, Vinayak Naik, Hongwei Zhang, Mukundan Sridharan and Sandip Bapat, "ExScal Backbone Network Architecture", **MOBISYS (The Third International Conference on Mobile Systems Applications and Services) Poster**, Seattle, June 2005.
113. Zhenqiang Ye, Dan Berger, Prasun Sinha, Srikanth Krishnamurthy, Michalis Faloutsos and Satish K. Tripathi, "Alleviating MAC Layer Self-contention in Ad-hoc Networks", **ACM MOBICOM Poster**, San Diego, 2003.

### Internet Draft

114. Raghupathy Sivakumar, Prasun Sinha and Vaduvur Bharghavan, "CEDAR: a Core-Extraction Distributed Ad-hoc Routing algorithm", **IETF MANET working group**, draft-ietf-manet-cedar-spec-00.txt, October 1998.

## Bookchapters

115. Hongwei Zhang, Anish Arora, Prasun Sinha and Loren J. Rittle, “Messaging in Sensor Networks: Bridging Wireless Communications and Applications”, *Chapter in Handbook of Real-Time and Embedded Systems*, Edited by Insup Lee, Joe Leung, and Sang Son, ISBN: 1-58488-678-1, Chapman and Hall/CRC, Jul. 2007
116. Sha Liu, Kai-Wei Fan, and Prasun Sinha, “Protocols for Data Aggregation in Sensor Networks”, **Chapter** in book titled **Wireless Sensor Networks and Applications**, Edited by Yingshu Li, My Thai, and Weili Wu, Springer Verlag’s book series *Network Theory and Applications*, ISBN: 0-387-49591-6 and 978-0-387-49591-0, Mar. 2007
117. Ren-Shiou Liu, Lifeng Sang, and Prasun Sinha, “Boundary Detection for Sensor Networks”, *Chapter* in book titled **Wireless Sensor Networks and Applications**, Edited by Yingshu Li, My Thai, and Weili Wu, Springer Verlag’s book series *Network Theory and Applications*, ISBN: 0-387-49591-6 and 978-0-387-49591-0, Mar. 2007
118. Kai-Wei Fan, Sha Liu and Prasun Sinha, “Ad-hoc Routing Protocols”, *Chapter* in book titled **Algorithms and Protocols for Wireless and Mobile Networks**, Edited by A. Boukerche, CRC/Hall Publisher, pp 183-215, ISBN: 1-58488-465-7, 2005
119. Prasun Sinha, “QoS Issues in Ad-hoc Networks”, *Chapter* in book titled **Ad-hoc Networks: Technologies and Protocols**, Edited by P. Mohapatra and S. Krishnamurthy, ISBN: 0-387-22689-3, Springer, 2004
120. Satish K. Tripathi and Prasun Sinha, “Challenges in the Evolution from Single-hop to Multi-hop Wireless Networks”, *Chapter* in book titled **Performance Evaluation - Stories and Perspectives Symposium**, Editor – G. Kotsis, Austrian Computer Society, Volume 175, pp 333-352, Series OCG Schriftenreihe, ISBN 3-85403-175-0, Vienna, Austria, December 5-6, 2003.

## Patents

1. DashCalib: Live Dashboard Camera Calibration Gopi Krishna Tummala\*, and Prasun Sinha, Filed: 11/27/2017, OSU #T2018-176
2. TagTone: Scalable RFID Communication through Multi-Frequency Analysis” Tanmoy Das\*, Prasun Sinha, Gopi Krishna Tummala\*, Filed: 6/30/2017, OSU #T2017-459
3. Gopi Krishna Tummala\*, Derrick Ian Cobb, Prasun Sinha, and Rajiv Ramnath. Methods and apparatus for enabling mobile communication device based secure interaction from vehicles through motion signatures, Filed: March 3 2016. US Patent App. 15/060,494.
4. Shengbo Chen\*, Tarun Bansal\*, Yin Sun, Prasun Sinha and Ness Shroff, “Energy Efficient Control for Wireless Devices”, Filed: May 2013
5. Santosh Kumar, Prasun Sinha, Kurt Plarre, Somnath Mitra, Zizhan Zheng, Santanu Guha, Animikh Ghosh, Prabal Dutta and Bhagavathy Krishna, “Theft Detection Systems and Methods”, Filed: Sep 2010, Application No.: 2013-289 (OSU-022280 US PRO)
6. Srikanth Krishnamurthy and Prasun Sinha, “Scalable Unidirectional Routing for Mobile Ad-hoc Networks”, European Patent 01904908.9-2413-US0101624 (Sep 2002), US6990075 (Jan 24, 2006)
7. Prasun Sinha, Yuval Shavitt, Ramachandran Ramjee, Danny Raz and Sneha Kasera, “Fair Sharing of Multi-Access Channels”, Bell Labs, Lucent Technologies, Holmdel, NJ, US7317686 (Jan 8, 2008)

## Invited Talks

1. “Exploiting Wired Backbones for Faster Wireless Networks,” CEWIT 2014 (at Stony Brook), New York, Oct 2014

2. "Exploiting Wired Backbones for Faster Wireless Networks," TAMU, College Station, Texas, Oct 2014
3. "Exploiting Wired Backbones for Faster Wireless Networks," UT Dallas, Dallas, Texas, Oct. 2014
4. "Navigating the Taxi Driver to Find the Passenger", UKC (US Korea Collaboration) organized by KSEA (Korean-American Scientists and Engineers Association), East Rutherford, New Jersey, Aug 2013
5. "MARVEL: Multiple Antenna based Relative Vehicle Localizer", MIT, Boston, Massachusetts, Oct 2013
6. "MARVEL: Multiple Antenna based Relative Vehicle Localizer", GE Research, San Ramon, CA, July 2013
7. "Symphony: Cooperative Packet Recovery over the Wired Backbone in Enterprise WLANs", Stanford University, June 2013
8. "Targeted V2V Communication", Toyota InfoTechnology Center, Mountain View, CA, Feb. 2013
9. "Relative Localization of Vehicles", Toyota InfoTechnology Center, Mountain View, CA, Dec. 2012
10. "Performance Analysis of Work-Conserving Schedulers in Minimizing the Total Flow Time with Phase Precedence", Allerton Conference, Urbana-Champaign, Oct. 2012
11. "Relative Localization of Vehicles", GM Reseach, Warren, MI, Oct. 2012
12. "Enabling Fair Sharing of Resources in Femtocell based Architectures", DoCoMo Research Labs, Mountain View, CA, Mar. 2011
13. "Fast Smartphone Discovery in your Neighborhood", Deutsche Telekom, Mountain View, Mar. 2011
14. "Enabling Fair Sharing of Resources in Femtocell based Architectures", Stanford University, Feb. 2011
15. "Fast Smartphone Discovery in your Neighborhood", Nokia Research labs, Palo Alto, Jan. 2011
16. "Enabling Fair Sharing of Resources in Femtocell based Architectures", Huawei Technologies, Santa Clara, Jan. 2011
17. "Enabling Fair Sharing of Resources in Femtocell based Architectures", Sprint Labs, Burlingame, CA, Nov. 2010
18. "Perpetual Sensor Networks", Robert Bosch Labs, Palo Alto, CA, Nov. 2010
19. "Perpetual Operation in Renewable Energy based Sensor Networks", University of Illinois, Urbana-Champaign, Spring 2010
20. "Rethinking Network Protocol Design for Large Scale Sensor Networks", Cornell, Spring 2008
21. "Rethinking Network Protocol Design for Large Scale Sensor Networks", UIUC, Spring 2008
22. "Rethinking Network Protocol Design for Large Scale Sensor Networks", UCLA, Spring 2008
23. "Rethinking Network Protocol Design for Large Scale Sensor Networks", USC, Spring 2008
24. "Rethinking Network Protocol Design for Large Scale Sensor Networks", University of Michigan, Spring 2008
25. "Data Aggregation in Sensor Networks", BBN Technologies, Summer 2007
26. "Energy-Efficient Protocol Design for Sensor Networks", Bosch Research, Summer 2007
27. Tutorial on Wireless Networking, The Advanced Science and Technology Adjudication Resource (ASTAR) Program, Supreme Court of Ohio, Columbus, May 2006
28. Research Presentation and Demonstration on "Wireless Sensor Networks" to High School Students, Summer Institute (SI) Program, Ohio Supercomputer Center, Summer 2004

## External Professional Activities

1. Technical Program Committee (TPC) Co-Chair: IEEE INFOCOM 2018, IEEE SECON 2016, ACM MOBICOM 2014, IEEE ICDCN 2013, IEEE IWQoS 2011, ICST QShine 2009
2. Technical Program Committee (TPC) Chair: ICST BROADNETS 2010
3. Invited Panelist, Future Directions in Smart Networking and Communication, Atlanta, May 2017
4. Guest Co-Editor, Special Section on ICDCN, Elsevier Pervasive and Mobile Computing (PMC), 2013
5. Guest Co-Editor, Special Section on IWQoS, IEEE Transactions on Network and Service Management (TNSM), 2012
6. Steering Committee Member: IEEE IWQoS, April 2011 – present
7. Area Chair, IEEE INFOCOM 2017
8. Invited Session Organizer: WICON 2008
9. Student Poster Judge: ACM MobiCom 2016
10. Session Chair: IEEE INFOCOM 2017, ACM MobiCom 2016, IEEE INFOCOM 2008, IEEE ICCCN 2005, ACM MobiDE 2003
11. Publicity Chair: Mobiquitous 2006
12. Registration Chair: MobiHoc 2005
13. Publicity Co-Chair: ICDCS 2005
14. Panels Chair: QShine 2004
15. Co-Organizer: Special Session on Actor based Sensor Networks, SANPA 2004
16. Submissions Chair: ACM SenSys 2004
17. TPC member: ACM MOBICOM 2004-2005,2008,2010,2016; IEEE ICNP 2010; ACM MOBIHOC 2006-2009; IEEE INFOCOM 2004-2016; ACM Carsys 2016, WICON 2008, IEEE ICPP 2008, Createnet, IEEE PERCOM 2005; ACM MobiDE 2003; ACM WMASH 2003; IEEE ICC 2003; IEEE PERCOM 2007; ICPADS 2007;
18. NSF Panelist, 2005, 2006, 2009, 2010, 2012, 2013
19. Proposal reviewer for Louisiana Board of Regents, 2006
20. Proposal reviewer for SBIR (Argonne National Labs), 2006
21. Proposal reviewer for Indiana 21st Century Research and Technology Fund (2006)
22. Proposal reviewer for Kentucky Commercialization Fund (2008,2014,2015,2016)

## Editorship

1. Editorial Board, IEEE Transactions on Mobile Computing (TMC), July 2008 - June 2013
2. Editorial Board, IEEE Transactions on Wireless Communications (TWC), Feb 2010 - Feb 2011

## Internal Professional Services

1. Tutorial on Wireless Networking, ASTAR (The Advanced Science and Technology Adjudication Resource) Program for the Supreme Court of Ohio, On request from Dean Washington, May 19th, 2006
2. Offered a collaborative course on *Advanced Mobile Computing* with University of Cincinnati, Autumn 2007.
3. Final Exam (Dissertation Chair): Wenjie Zhou (2015), Yousi Zheng (2015), Dong Li (2014), Tarun Bansal (2014), Zhixue Lu (2014), Shengbo Chen (2013, co-advised with Ness Shroff), Ren-Shiou Liu (2010), Zizhan Zheng (2010), Sha Liu (2008), Kai-Wei Fan (2008)
4. Final Exam (Dissertation Committee Member): Shansi Ren (2009), Vinod Kulathumani (2008), Hui Cao (2008), Vinayak Naik (2006), Hongwei Zhang (2006)
5. Graduate Faculty Representative, Thesis Committee: Yi Guo (Interdisciplinary Program on Nutrition, 2014), Yan Chen (Mechanical and Aerospace Engineering, 2013), E. Paska (Geodetic Sc, 2009), Mehmet Emre Yavuz (ECE, 2007)
6. MS Thesis Committee Member: Juan Santa Cruz (2014)
7. BS Honors Thesis Committee Member: Chad Sowald (2009)
8. Candidacy Exam, Committee Member: Nusrat Islam (2016), Bo Chen (2014), Yating Hsu (2010), Fang Yu (2010), Feng Chen (2009), Na Li (2008), Shansi Ren (2008), Mukundan Sridharan (2008) Gopalakrishnan Santhanaraman (2008), Vinod Kulathumani (2007), Tan Apaydin (2007), Hui Cao (2007), Lei Guo (2007), Wenjun Gu (2007), Sha Liu (2007), Kai-Wei Fan (2007), Thang Nam Le (2006), Vinayak Naik (2005), Hongwei Zhang (2005)
9. Candidacy Exam, Department Representative: Feng Chen (2009), Weikuan Yu (2005), Jiasheng Wu (2004)
10. Member, Graduate Admissions Committee, CSE, Ohio State University, 2012, 2011, 2009, 2007, 2003-2006 item Member, Faculty Search Committee, CSE, Ohio State University, 2014, 2013, 2008
11. Member, Computer Committee, CSE, Ohio State University, 2004-2007
12. Member, Department Co-secretary, CSE, Ohio State University, 2003-2004

## Supervision

- Alumni (Postdoc)
  1. Dongwook Lee, Postdoc: Sep '04 - Jan '07, Senior Engineer, Samsung, Suwon, Korea  
Research Topic: "Network Support for Multimedia Streaming over Wireless Access Networks"
- Alumni (PhD)
  1. Tanmoy Das, Graduated: Su '19, Amazon, CA  
Thesis Title: "Exploiting Hidden Resources to Design Collision-Embracing Protocols for Emerging Wireless Networks"
  2. Gopi Krishna Tummala, Graduated: Au '18, Qualcomm Research Labs, San Diego, CA  
Thesis Title: "Automatic Camera Calibration Techniques for Collaborative Vehicular Applications"
  3. Wenjie Zhou (co-advised with Kannan Srinivasan), Graduated: Au '15, Google, Mountain View, CA  
Thesis Title: "Cross MAC-PHY layer Channel Access Mechanism for Enterprise Wireless LANs"
  4. Yousi Zheng (co-advised with Ness B. Shroff), Graduated: Sp '15, Oracle, Redwood City, CA  
Thesis Title: "Scheduling and Design in Cloud Computing Systems"
  5. Tarun Bansal, Graduated: Sp '14, Google, Seattle  
Thesis Title: "Network-Centric Mechanisms for Better Network-Experience on Mobile Devices"
  6. Dong Li, Graduated: Sp '14, Waymo, CA  
Thesis Title: "Enabling Smart Driving through Sensing and Communication in Vehicular Networks"

7. Zhixue Lu, Graduated: Sp '14, Google, China  
Thesis Title: "Deployment, Management, and Access Acquisition of Smallcell based Networks"
  8. Shengbo Chen (co-advised with Ness B. Shroff), Graduated: Su '13, Qualcomm Research, San Diego  
Thesis Title: "Resource Allocation and Control in Communication and Cyberphysical Networks with Renewable Energy"
  9. Zizhan Zheng, Graduated: Sp '10, Asst. Prof., Tulane University  
Thesis Title: "Deployment of Large-Scale Wireless Networks for Mobile Targets"
  10. Ren-Shiou Liu, Graduated: Sp '10, Currently: Assistant Professor, Dept. of Industrial and Information Management, National Cheng Kung University  
Thesis Title: "Towards Perpetual Operation in Renewable Energy based Sensor Networks"
  11. Kai-Wei Fan, Graduated: Sp '08, VMWare, CA  
Thesis Title: "On Structure-Less and Everlasting Data Collection in Wireless Sensor Networks"
  12. Sha Liu, Graduated: Sp '08, Walmart Labs, Sunnyvale  
Thesis Title: "Energy Efficient MAC Layer Design for Wireless Sensor Networks"
- Alumni (MS)
    1. Jiashang Liu, MS, Sp '19 (Automatic MS after PhD candidacy exam)
    2. Tanmoy Das, MS, Sp '19 (Automatic MS after PhD candidacy exam)
    3. Rupam Kundu, MS, Sp '19
    4. Gopi Krishna Tummala, MS, Sp '18 (Automatic MS after PhD candidacy exam)
    5. Wenjie Zhou, MS, Sp '14 (Automatic MS after PhD candidacy exam)
    6. Yousi Zheng, MS, Sp '13 (Automatic MS after PhD candidacy exam)
    7. Tarun Bansal, MS, Sp '13 (Automatic MS after PhD candidacy exam)
    8. Dong Li, MS, Sp '13 (Automatic MS after PhD candidacy exam)
    9. Zhixue Lu, MS, Sp '13, (Automatic MS after PhD candidacy exam)
    10. Shengbo Chen, MS, Sp '12 (Automatic MS after PhD candidacy exam)
    11. Daeyoung Choi, Sp '10
    12. Zizhan Zheng, MS, Sp '09 (Automatic MS after PhD candidacy exam)
    13. Ren-Shiou Liu, MS, Sp '09 (Automatic MS after PhD candidacy exam)
    14. Sha Liu, MS, Sp '08 (Automatic MS after PhD candidacy exam)
    15. Kai-Wei Fan, MS, Au '07 (Automatic MS after PhD candidacy exam)