Marital status: Married
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CURRICULUM VITAE JIE LIU

SUMMARY

- Dean, Research Institute for Artificial Intelligence, Harbin Institute of Technology, Shenzhen and Harbin Campuses, China
- Director, National Key Laboratory for Smart Farm Technologies and Systems
- CEO, Harbin Institute of Technology Research Institute for Artificial Intelligence, Inc.
- IEEE Fellow, ACM Distinguished Scientist
- Founding Chair, ACM SIGBED China
- Director, Key Laboratory of Ministry of Industry and Information Technology on Artificial Intelligence for Internet of Things; Director, Key Laboratory of Ministry of Agriculture and Rural Affairs on Northeast Large-scale Smart Agriculture
- PhD from EECS, UC Berkeley (2001), Master's and Bachelor's Degrees from Tsinghua University, Beijing, China (1996 and 1993)
- Research areas: wireless sensing, AI of Things (AIoT) and Cyber-Physical Systems (CPS), with more than 130 publications (H index = 73), 6 Best Paper Awards, 1 Best Demonstration Award, and more than 100 patents.
- 15 years of research experience at Xerox PARC and Microsoft Research, then 4 years on internal product incubation and R&D management. Significant contributions to 1) data center efficiency through sensing, design, and energy optimization, 2) mobile and location sensing, 3) ambient intelligent services and solutions.
- Served as Steering Committee Chair CPS-IoT Week, Steering Committee Chair of IPSN, Steering Committee Chair SenSys; and a General Chair or TPC Chair of many top conferences. Associated Editor for ACM Transaction on Sensor Networks and IEEE Transaction on Mobile Computing.
- Received IEEE TCCPS Distinguished Leadership Award, Microsoft Gold Star Award, Xerox PARC Technical Advance Award, UC Berkeley Leon O. Chua Award, Grand Prize of Outstanding Students at Tsinghua University, among others.

EDUCATION

1996 – 2001, University of California, Berkeley

Ph.D. in Electrical Engineering and Computer Sciences

1993 – 1996, Tsinghua University, Beijing, China

M.S. in Automation

1988 – 1993, Tsinghua University, Beijing, China

B.S. in Automation

DISTINCTIONS AND AWARDS

- IEEE Fellow
- ACM Distinguished Scientist
- H-index = 73
- I10-index = 188
- Over 130 publications, 20K citations, 6 Best Paper Awards, and 1 Best Demonstration Award
- IEEE TCCPS Distinguished Leadership Award, 2021
- Microsoft Gold Star Award, 2008
- Xerox PARC Technology Advance Award, 2003
- Leon O. Chua Award, UC Berkeley, 2001
- Regence Fellowship, UC Berkeley, 1996
- Extraordinary Student (highest student award), Tsinghua University, 1996

EXPERIENCE

Permanent positions:

2019.3 – present

Chair Professor; Dean, Institute for AI Research

Harbin Institute of Technology, Shenzhen, China

2022.12 - present

Director

National Key Laboratory for Smart Farm Technologies and Systems

2020.12 - present

CEO

Harbin Institute of Technology Research Institute for Artificial Intelligence, Inc.

2017.3 – 2019.3

Partner Architect, acting General Manager

Ambient Intelligence Services and Solutions Microsoft Cloud and AI Platforms

2014.10 – 2017.3

Principal Research Manager, Retail Intelligence

Microsoft Research – NexT, Redmond, WA

2004.5 – 2014. 10

Researcher; Senior Researcher; Principal Researcher/Research Manager

Microsoft Research, Redmond, WA

2001.12 – 2004.5

Research Scientist

Palo Alto Research Center, (formerly Xerox PARC）

Visiting positions:

2008 - 2012

Visiting Professor, Doctoral Supervisor

Department of Control Science and Engineering, Harbin Institute of Technology

2008.9 - 2008.12

Visiting Lecturer

University of Washington, Seattle

Senior Technical Consultant

7CorE Inc.

Senior Technical Consultant

Kolmostar

ACADEMIC LEADERSHIP AND SERVICES

- Member of ACM SIGBED Board of Directors, 2021
- Founding Chair of ACM SIGBED China, 2021
- Steering Committee Chair,
  Cyber-Physical System and Internet of Things (CPS-IoT) Week
  2017 – present
- Steering Committee Chair,
  ACM/IEEE Information Processing in Sensor Networks (IPSN)
  2016 – present
- Steering Committee Member
  ACM Networked Embedded Sensing System (SenSys)
  2013 – 2018 (Chair in 2015)
- Steering Committee Co-Chair
  International Workshop on Artificial Intelligence of Things at KDD and AAAI
  2019 – present
- SenSys Test of Time Award Committee Chair
  2015 – 2018
- General Chair, ACM/IEEE Cyber-Physical Systems Week 2015
- General Chair, ACM SenSys 2011
- General Chair, IEEE PerCom 2011
- TPC co-chair, IEEE Intl. Conference on Fog Computing 2019
- TPC co-chair, IEEE Intl. Conference on Autonomous Computing 2016
- TPC co-chair, ACM/IEEE IPSN 2014
- TPC co-chair, IEEE PerCom 2012
- TPC co-chair, IEEE ICDCS 2011 Mobile Computing track
- TPC co-chair, ACM SenSys 2009

- TPC co-chair, ACM/IEEE IPSN/SPOT 2008
- Workshop Chair, WearSys 2015
- Workshop Chair, Feedback Computing 2013
- Workshop Chair, PhoneSense 2010
- Workshop Chair, FeBID 2009
- Workshop Chair, Basenets 2006
- Workshop Chair, ACM Multimedia 2006
- TPC Members: SenSys 2007, 2013, 2015, 2016, 2017, 2019, 2020, 2022; IPSN 2003~2006, 2010, 2011, 2016, 2018, 2020, 2022; HSCC 2013; RTAS 2005; RTSS 2006, 2007, 2011; ICDCS 2007, 2008, 2012; DCOSS 2005; MASS 2006; DATE 2004; SAC 2003; ACM Multimedia 2006

MEDIA COVER

- Mobile ad fraud characterization and detection, MIT Technology Review
- Fuel-cell powered data centers, ComputerWorld | WIRED | SlashDot | Gigaom
- Cloud-offloaded GPS, MIT Technology Review | phys.org | The Verge
- Data furnace, New York Times | TechCrunch| Popular Science | SlashDot | IT News | etc.
- JouleMeter, Green Data Center Blog | Gigaom etc.
- Data Center "Genome", MIT Technology Review | Popular Science | IDG news | Komo4 News | New Scientists

INVITED SPEAKER

- The Opportunities and Challenges of AIoT, Keynote at AAAI Workshop on AIoT, New York, NY, Feb. 2020
- Towards the Artificial Intelligence of Things, Keynote at CCF Chinese Wireless Sensor Network Conference, Chongqing, China, Oct. 2019
- Keynote at Westlake Industrial Science and Engineering (WISE) Forum, Westlake University, Hangzhou, July 2019
- Outside-in Autonomous Systems, Keynote at Embedded Systems Week (ES Week), Turin, Italy, Oct. 2018, Keynote at Embedded Vision Alliance, Santa Clara, CA, Sept. 2018
- Keynote at Tsinghua Automation Forum, Shenzhen, China, Nov. 2017
- Low-Energy and Flexible GPS Sensing Through Cloud Offloading, Departmental Colloquium, University of Maryland, College Park, 2017.3
- Indoor Location Sensing, Where Are We, Departmental Colloquium, ETH Zurich, 2017.4
- Keynote at IEEE MASS, 2015.10
- Departmental Colloquium, Yale University, 2015.4
- Taming The Energy Hog of Cloud Infrastructure, Departmental Colloquium, UC Santa Barbara, 2014.10
- IEEE Real -Time System Symposium (RTSS), 2013.12
- A Fresh Look at Mobile Location Sensing, Departmental Colloquium, Rutgers

University, 2013.4

EDITOR

- Associate Editor, Springer Nature Computer Science, 2019 - present
- Associate Editor, ACM Trans. on Sensor Networks, 2011 - present
- Associate Editor, IEEE Trans. on Mobile Computing, 2008 - 2011
- Associate Editor, SIMULATION: Transactions of The Society for Modeling and Simulation International, 2004 - 2007

GRANTS

- Swarm intelligence autonomous operation smart farm, Ministry of Science and Technology, China, Total CNY 150Million
- Intelligent Perception Data Collection Specification for Agricultural Machinery Operations, Ministry of Agriculture and Rural Affairs, China, CNY 50K
- Development and application of Precision agriculture Big data cloud platform, Provincial Ministry of Science and Technology, Heilongjiang Province, China, CNY 5Million
- Natural Language Understanding for Official Documents, CNY 6Million
- Internal projects at Microsoft from 2004-2019, USD 13Million

PUBLICATIONS

Journal, Magazine & Book chapters

1. Z. Ma, H. Zhang and J. Liu, "PrecipLSTM: A Meteorological Spatiotemporal LSTM for Precipitation Nowcasting," in *IEEE Transactions on Geoscience and Remote Sensing,* vol. 60, pp. 1-8, 2022.
2. S. Cheng, J. Huang, Z. Chen, J. Liu and J. Li, "Approximated Assignment Algorithms for Unordered and Ordered Tasks in Data Shared MEC Systems," in *IEEE Transactions on Mobile Computing,* vol. 22, no. 4, pp. 1968-1987, 1 April 2023.
3. D. Stamoulis et al., "Single-Path Mobile AutoML: Efficient ConvNet Design and NAS Hyperparameter Optimization," in *IEEE Journal of Selected Topics in Signal Processing*, vol. 14, no. 4, pp. 609-622, May 2020,
4. Dimitrios Stamoulis, Ruizhou Ding, Di Wang, Dimitrios Lymberopoulos, Nissanka Bodhi Priyantha, Jie Liu, Diana Marculescu, "Single-path mobile automl: Efficient convnet design and NAS hyperparameter optimization," *IEEE Journal of Selected Topics in Signal Processing*, Feb. 2020,
5. Jie Liu, "Autonomous Retailing: A Frontier for Cyber-Physical-Human Systems," *Book Chapter in Principles of Modeling*, Springer 2018, pp. 336-350
6. Abusayeed Saifullah, Sriram Sankar, Jie Liu, Chenyang Lu, Ranveer Chandra, Bodhi Priyantha, "CapNet: Exploiting wireless sensor networks for data center power capping," *ACM Transactions on Sensor Networks* (TOSN), 2018, 15(1), 6
7. Abusayeed Saifullah, Mahbubur Rahman, Dali Ismail, Chenyang Lu, Jie Liu, Ranveer Chandra, "Low-Power Wide-Area Network Over White Spaces," *IEEE/ACM Transactions on Networking*, 2018, 26(4), pp.1893-1906
8. Leonardo B Oliveira, Fernando Magno Quintão Pereira, Rafael Misoczki, Diego F Aranha, Fábio Borges, Michele Nogueira, Michelle Wangham, Min Wu, Jie Liu, "The computer for the 21st century: present security & privacy challenges," *Journal of Internet Services and Applications*, 9(1), 24, Springer London
9. Dimitrios Lymberopoulos and Jie Liu, "The Microsoft Indoor Localization Competition: Experiences and Lessons Learned," *IEEE Signal Processing Magazine,* 34(5), 125-140 , 2017
10. Abhishek Sinha, Pradeepkumar Mani, Jie Liu, Ashley Flavel, David Maltz, "Distributed load management algorithms in anycast-based CDNs," *Computer*

Networks 115, 1-15, 2017

11. Li Zhao, Jacob Brouwer, Sean James, Eric Peterson, Di Wang, and Jie Liu, "Fuel cell powered data centers: In-rack dc generation," *Electrochemical Society Transactions* 71 (1), 131-139
12. Li Zhao, Jacob Brouwer, Sean James, John Siegler, Eric Peterson, Aman Kansal, Jie Liu, "Dynamic performance of an in-rack proton exchange membrane fuel cell battery system to power servers," *International Journal of Hydrogen Energy*, vol. 42, No. 15, pp.10158-10174, April 2017.
13. Abhishek Sinha, Pradeepkumar Mani, Jie Liu, Ashley Flavel, Dave Maltz, "Distributed load management algorithms in anycast-based CDNs," *Computer Networks*, Vol 115, pp. 1-15, March 2017.
14. Nam Tuan Nguyen, Rong Zheng, Jie Liu and Zhu Han, "GreenLocs: An Energy Efficient Indoor Place Identification Framework," *ACM Trans on Sensor Networks*, Volume 11 Issue 3, March 2015.
15. Nan Zhu, Xue Liu, Jie Liu, Yu Hua, "Towards A Cost-Efficient MapReduce: Mitigating Power Peaks for Hadoop Clusters," *Tsinghua Science and Technology*, Volume 19, Issue 1, Feb. 2014, pp: 24-32 (**Best Paper of the Year**)
16. Yin Chen, Dimitrios Lymberopoulos, Jie Liu, and Bodhi Priyantha, "Indoor Localization Using FM Signals," *IEEE Transactions on Mobile Computing* (TMC), Volume 12, Issue 8, Aug. 2013.
17. Lei Rao, Xue Liu, Marija D. Ilic, and Jie Liu, "Distributed Coordination of Internet Data Centers Under Multiregional Electricity Markets," *Proceedings of the IEEE*, 2012, pp.269-282.
18. Jie Liu and Andreas Terzis, "Sensing Data Centres for Energy Efficiency," *Philosophical Transactions of Royal Society A. January 13, 2012 370 1958 136-157*, 13 January 2012.
19. Bodhi Priyantha, Dimitrios Lymberopoulos, and Jie Liu, "LittleRock: Enabling Energy Efficient Continuous Sensing on Mobile Phones," *Pervasive Computing Magazine*, IEEE Computer Society, April ~ June, 2011, pp. 2~5.
20. Jie Liu, Feng Zhao, Jeff O'Reilly, Amaya Souarez, Michael Manos, Chieh-Jan Mike Liang, and Andreas Terzis, "Project Genome: Wireless Sensor Network for Data Center Cooling," in *The Architecture Journal*, Microsoft, December 2008
21. Jie Liu and Feng Zhao, "Composing Semantic Services in Open Sensor-Rich Environments," *IEEE Network*, vol. 22, No. 4, July/August 2008, pp. 44~49.
22. Aman Kansal, Suman Nath, Jie Liu, and Feng Zhao, "SenseWeb: An Infrastructure for Shared Sensing," *IEEE Multimedia*. Vol. 14, No. 4, pp. 8-13, October-December 2007.
23. Suman Nath, Jie Liu, and Feng Zhao, "SensorMap for Wide-Area Sensor Webs," *IEEE Computer Magazine*, 40(7), pp. 90-93, July, 2007.
24. Jie Liu, Patrick Cheung, Leonidas Guibas, and Feng Zhao, "Apply Geometric Duality to Energy Efficient Non-Local Phenomenon Awareness Using Sensor Networks," in *IEEE Wireless Communication Magazine*, special issue on Wireless Sensor Networks: Theory and Systems, Vol. 11, No. 6, December, 2004, pp. 62—69.
25. Jie Liu, Maurice Chu, Juan Liu, James Reich, and Feng Zhao, "State-Centric Programming for Sensor-Actuator Network Systems." *IEEE Pervasive Computing*, October, 2003, pp.50-62.
26. Juan Liu, Jie Liu, James Reich, Patrick Cheung, and Feng Zhao, "Distributed Group Management for Track Initiation and Maintenance in Target Localization Applications," in *Telecommunication Systems*, Kluwer Academic Publishers, 2004.
27. Jie Liu, Johan Eker, Jorn W. Janneck, Xiaojun Liu, and Edward A. Lee, "Actor-Oriented Control System Design: A Responsible Framework Perspective," in *IEEE Trans. on Control System Technology*, vol. 12, No. 2, March 2004, pp. 250-262.
28. Feng Zhao, Jie Liu, Juan Liu, Leonidas Guibas, and James Reich, "Collaborative Signal and Information Processing: An Information Directed Approach," in *Proceedings of the IEEE*, vol. 91. No. 8, August, 2003, pp. 1199-1209.
29. Xiaojun Liu, Jie Liu, Edward A. Lee, and Johan Eker, "Heterogeneous Modeling and Design of Control Systems," in Tariq Samad and Gary Balas (eds.), *Software Enabled*

Control :Information Technology for Dynamical Systems, Wiley-IEEE Press, April 2003

30. Jie Liu and Edward A. Lee, "Timed Multitasking for Real-Time Embedded Software," *IEEE Control Systems,* special issue on Software-Enabled Control, vol. 23, no. 1, January, 2003, pp 65-75.
31. Johan Eker, Jorn W. Janneck, Edward A. Lee, Jie Liu, Xiaojun Liu, Jozsef Ludvig, Stephen Neuendorffer, Sonia Sachs, and Yuhong Xiong, "Taming Heterogeneity—the Ptolemy Approach," in *Proceedings of the IEEE*, vol. 91, no. 1, January, 2003, pp. 127-144.
32. Jie Liu and Edward A. Lee, "A Component-Based Approach to Modeling and Simulating Mixed-Signal and Hybrid Systems," in *ACM Trans. on Modeling and Computer Simulation,* Vol. 12, No. 4, October, 2002, pp. 343-368.
33. Jie Liu, Bicheng Wu, Xiaojun Liu, and Edward A. Lee, "Interoperation of Heterogeneous CAD Tools in Ptolemy II," in *Journal of Modeling and Simulation of Microsystems*, Vol. 2, No. 1, Pages 1-10, 200

Conferences and Workshops:

34. Dongbo Li, Tong Yu, Yu Yang, Yuze Zhao, Zihan Chen, and Jie Liu. Intelligent heating monitoring method based on infrared image segmentation and target detection: poster abstract. *Proceedings of the 9th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation New York*, NY, USA, 301–302, 2022.
35. J. Yan, S. Cheng, Z. Li and J. Liu, "PCTC: Parallel Cross Technology Communication in Heterogeneous wireless systems," *2022 21st ACM/IEEE International Conference on Information Processing in Sensor Networks* (IPSN), Milano, Italy, 2022, pp. 67-78.
36. Li, Y., Cheng, S., Li, F., Liu, J., Wu, H. (2022). Optimizing the Age of Sensed Information in Cyber-Physical Systems. Database Systems for Advanced Applications. *DASFAA 2022 International Workshops*. DASFAA 2022.
37. Zhang, Y.; Liu, J. Prediction of Overall Energy Consumption of Data Centers in Different Locations. *Sensors 2022*, 22, 3704.
38. Z. Zhang, F. Li, C. Lin, S. Wen, X. Liu and J. Liu, "Choosing Appropriate AI-enabled Edge Devices, Not the Costly Ones," *2021 IEEE 27th International Conference on Parallel and Distributed Systems* (ICPADS), Beijing, China, 2021, pp. 201-208.
39. Changyao Lin, Ziyang Zhang, Huan Li, and Jie Liu. 2021. ECSRL: A Learning-Based Scheduling Framework for AI Workloads in Heterogeneous Edge-Cloud Systems. *Proceedings of the 19th ACM Conference on Embedded Networked Sensor Systems* (SenSys '21). Association for Computing Machinery, New York, NY, USA, 386–387.
40. X. Chen, S. Cheng, F. Li and J. Liu, "Transmit or Wait? Efficient Scheduling Algorithms for minimizing latency in Power-Adjustable Wireless Sensor Network," *2021 7th International Conference on Big Data Computing and Communications* (BigCom), Deqing, China, 2021, pp. 255-262.
41. S. Cheng, J. Yan, J. Li and J. Liu, "Typingwristband: A Human Slight Motion Sensing System Based on Vibration Detection," *ICASSP 2021 - 2021 IEEE International Conference on Acoustics, Speech and Signal Processing* (ICASSP), Toronto, ON, Canada, 2021, pp. 8313-8317.
42. Dimitrios Stamoulis, Ruizhou Ding, Di Wang, Dimitrios Lymberopoulos, Bodhi Priyantha, Jie Liu, Diana Marculescu, "Single-Path NAS: Designing Hardware-Efficient ConvNets in less than 4 Hours," *European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases*, 2019, (**Best Paper Award**)
43. Mengting Wan, Di Wang, Jie Liu, Paul Bennett, Julian McAuley, "Representing and Recommending Shopping Baskets with Complementarity, Compatibility and Loyalty," *Proceedings of the 27th ACM International Conference on Information and*

*Knowledge Managemen*t (CIKM 2018), October , 2018.

44. Leonardo B Oliveira, Fernando Magno Quintao Pereira, Rafael Misoczki, Diego F Aranha, Fábio Borges, Jie Liu, "The computer for the 21st century: Security & privacy challenges after 25 years," *26th International Conference on Computer Communication and Networks* (ICCCN), Toronto, Canada, October 10-13, 2017.
45. M Wu, FMQ Pereira, J Liu, HS Ramos, MS Alvim, LB Oliveira, "New Directions: Proof-Carrying Sensing–Towards Real-World Authentication in Cyber-Physical Systems," *2017 International Conference on Embedded Networked Sensor Systems* (ACM SenSys), Delft, Netherland, Nov. 2017
46. Abu Saifullah, M. Rahman, D. Ismail, Chenyang Lu, Jie Liu, Ranveer Chandra, "Enabling Reliable, Asynchronous, and Bidirectional Communication in Sensor Networks over White Spaces," *2017 International Conference on Embedded Networked Sensor Systems* (ACM SenSys), Delft, Netherland, Nov. 2017
47. Saman Naderiparizi, Pengyu Zhang, Matthai Philipose, Bodhi Priyantha, Jie Liu, Deepak Ganesan, "Glimpse: A programmable early-discard camera architecture for continuous mobile vision," *15th International Conference on Mobile Systems, Applications, and Services* (MobiSys'17), Buffalo, NY, June 2017
48. Mengting Wan, Di Wang, Matt Goldman, Matt Taddy, Justin Rao, Jie Liu, Dimitrios Lymberopoulos, Julian McAuley, "Modeling Consumer Preferences and Price Sensitivities from Large-Scale Grocery Shopping Transaction Logs," *The 26th International Conference on World Wide Web* (WWW'17), Perth, Australia, April 2017
49. Iyswarya Narayanan, Bikash Sharma, Di Wang, Sriram Govindan, Laura Caulfield, Anand Sivasubramaniam, Aman Kansal, Jie Liu, Badriddine Khessib, Kushagra Vaid, "Rain or Shine?-Making Sense of Cloudy Reliability Data," *The 37th IEEE International Conference on Distributed Computing Systems* (ICDCS'17), Atlanta, GA, June 2017
50. Abusayeed Saifullah, Mahbubur Rahman, Dali Ismail, Chenyang Lu, Ranveer Chandra, Jie Liu, "SNOW: Sensor network over white spaces," *2016 International Conference on Embedded Networked Sensor Systems* (ACM SenSys), Stanford, CA, Nov. 2016
51. Yan Michalevsky, Suman Nath, Jie Liu, "MASHaBLE: Mobile Applications of Secret Handshakes over Bluetooth LE," *The 22nd International Conference on Mobile Computing and Networking* (MobiCom), New York, June, 2016
52. Yang Li, Di Wang, Saugata Ghose, Jie Liu, Sriram Govindan, Sean James, Eric Peterson, John Siegler, Rachata Ausavarungnirun, Onur Mutlu, "SizeCap: Coordinating Energy Storage Sizing and Power Capping for Fuel Cell Powered Data Centers", *22nd Intl. Symp. on High Performance Computer Architecture* (HPCA), 2016
53. Iyswarya Narayanan, Di Wang, Myeongjae Jeon, Bikash Sharma, Laura Caulfield, Anand Sivasubramaniam, Ben Cutler, Jie Liu, Badriddine Khessib, and Kushagra Vaid. "SSD Failures in Datacenters: What? When? and Why?" In Proceedings of *the 9th ACM International on Systems and Storage Conference* (SYSTOR '16), New York, NY, 2016 (**Best Student Paper Award**)
54. Abhishek Sinha, Pradeepkumar Mani, Jie Liu, Ashley Flavel, David Maltz, "Distributed Load Management in Anycast-Based CDNs," in *53rd Annual Allerton Conference on Communication, Control, and Computing*, 2015
55. Swagath Venkataramani, Jie Liu, Anand Raghunathan, and Mohammed Shoaib, "Scalable-effort classifiers for energy-efficient machine learning," in *IEEE Design Automation Conference* (DAC), San Francisco, CA, June 2015
56. Dimitrios Lymberopoulos, Jie Liu, Xue Yang, Romit Roy Choudhury, Souvik Sen, Vlado Handziski, et. al., "A Realistic Evaluation and Comparison of Indoor Location Technologies: Experiences and Lessons Learned," *14th ACM/IEEE Conference on Information Processing in Sensor Networks* (IPSN), Seattle, WA, May, 2015.
57. Ashley Flavel, Pradeepkumar Mani, David Maltz, Jie Liu, Nick Holt, Oleg Surmachev, Yingying Chen, "FastRoute: A Scalable Load-Aware Anycast Routing Architecture for

Modern CDNs," 12th *USENIX Symposium on Networked Systems Design and Implementation* (NSDI '15), Oakland, CA, May 2015

58. Swagath Venkataramani, Victor Bahl, Xian-Sheng Hua, Jie Liu, Jin Li, Matthai Phillipose, Bodhi Priyantha, and Mohammed Shoaib, "SAPPHIRE: An Always-on Context-aware Computer Vision System for Portable Devices," in *IEEE Conf. Design Automation and Test in Europe* (DATE) March 2015
59. He Wang, Dimitrios Lymberopoulos, and Jie Liu, "Sensor-based User Authentication," in *12th European Conference on Wireless Sensor Networks* (EWSN 2015), Porto, Portugal, Feb. 2015
60. Abusayeed Saifullah, Sriram Sankar, Jie Liu, Chenyang Lu, Ranveer Chandra and Bodhi Priyantha, "CapNet: A Real-Time Wireless Management Network for Data Center Power Capping," in *IEEE Real-Time Systems Symposium* (RTSS 2014), Rome, Italy, Dec. 2014 (**Best Paper Award**)
61. Chieh-Jan Mike Liang, Kaifei Chen, Nissanka Bodhi Priyantha, Jie Liu, Feng Zhao, "RushNet: Practical Traffic Prioritization for Saturated Wireless Sensor Networks," in *12th ACM Conference on Networked Embedded Sensing Systems* (SenSys 2014), Memphis, TN, Nov. 2014
62. Cheng Bo, Guobin Shen, Jie Liu, Xiang-Yang Li, Yongguang Zhang, Feng Zhao, "Privacy.Tag: Privacy Concern Expressed and Respected," in *12th ACM Conference on Networked Embedded Sensing Systems* (SenSys 2014), Memphis, TN, Nov. 2014
63. Mohammed Shoaib, Jie Liu, and Matthai Phillipose, "Energy Scaling in Multi-tiered Sensing Systems Through Compressive Sensing," in *IEEE Custom Integrated Circuits Conference* (CICC 2014), San Jose, CA, Sep. 2014 (**Best Paper Award Nomination**).
64. Shahriar Nirjon, Jie Liu, Gerald DeJean, Bodhi Priyantha, Yuzhe Jin, and Ted Hart, "COIN-GPS: Indoor Localization from Direct GPS Receiving," in *12th International Conference on Mobile Systems, Applications, and Services* (MobiSys 2014), Bretton Woods, NH, June 2014 (**Best Paper Award**)
65. Jeremy Gummeson (and Bodhi Priyantha and Jie Liu, "An Energy Harvesting Wearable Ring Platform for Gesture Input on Surfaces," in *12th International Conference on Mobile Systems, Applications, and Services* (MobiSys 2014), Bretton Woods, NH, June 2014
66. Li Zhao, Jacob Brouwer, Sean James, Eric Peterson, John Siegler, Aman Kansal, and Jie Liu, "Servers Powered By a 10kW In-rack Proton Exchange Membrane Fuel Cell System," in *Proceedings of the ASME 2014 8th International Conference on Energy Sustainability & 12th Fuel Cell Science, Engineering and Technology Conference*, ASME, 29 June 2014
67. Yixin Luo, Sriram Govindan, Bikash Sharma, Mark Santaniello, Justin Meza, Aman Kansal, Jie Liu, Badriddine Khessib, Kushagra Vaid, and Onur Mutlu, "Characterizing Application Memory Error Vulnerability to Optimize Datacenter Cost via Heterogeneous-Reliability Memory," in *The 44th Annual IEEE/IFIP International Conference on Dependable Systems and Networks* (DSN 2014), June 2014
68. Bin Liu, Suman Nath, Ramesh Govindan, and Jie Liu, "DECAF: DEtecting and Characterizing Ad Fraud in Mobile Apps," in *12th USENIX Symposium on Networked Systems Design and Implementation* (NSDI 2014), Seattle, WA, April 2014.
69. Prasant Misra, Wen Hu, Yuzhe Jin; Jie Liu; Amanda de Paula, Niklas Wirström, and Thiemo Voigt, "Energy Efficient GPS Acquisition with Sparse-GPS," in *IEEE/ACM IPSN 2014*, Berlin, Germany, April 2014
70. He Wang, Dimitrios Lymberopoulos, and Jie Liu, "Local Business Ambience Characterization through Mobile Audio Sensing," in *WWW 2014*, Seoul, Korea, April 2014.
71. Di Wang, Sriram Govindan, Anand Sivasubramaniam, Aman Kansal, Jie Liu, and Badriddine Khessib, "Underprovisioning Backup Power Infrastructure for Datacenters," in *19th International Conference on Architectural Support for Programming Languages and Operating Systems* (ASPLOS 2014), Salt Lake City, UT, March, 2014.
72. Mastooreh Salajegheh, Jie Liu, and Bodhi Priyantha, "Unleashing The Wild Card for

Mobile Payment," in *IEEE PerCom 2014*, Budapest, Hungary, March 2014.

73. Andrew Frye, Michel Goraczko, Jie Liu, Anindya Prodhan, and Kamin Whitehouse, "Circulo: Saving Energy with Just-In-Time Hot Water Recirculation," in *The 5th ACM Workshop On Embedded Systems For Energy-Efficient Building* (BuildSys'13), Rome, Italy, November, 2013.
74. Ana Carolina Riekstin, Sean James, Aman Kansal, Jie Liu, and Eric Peterson, "No More Electrical Infrastructure: Towards Fuel Cell Powered Data Centers," in 2013 *ACM Workshop on Power-Aware Computing and Systems* (HotPower 2013) Farmington, PA, November 2013
75. Alan Roytman, Aman Kansal, Sriram Govindan, Jie Liu, and Suman Nath, "PACMan: Performance Aware Virtual Machine Consolidation," in *10th International Conference on Autonomic Computing* (ICAC), USENIX, 26 June 2013
76. Jie Liu, Bodhi Priyantha, Ted Hart, Heitor Ramos, Antonio A.F. Loureiro, and Qiang Wang, "Energy Efficient GPS Sensing with Cloud Offloading," in *10th ACM Conference on Embedded Networked Sensor Systems* (SenSys 2012), ACM, November 2012 (**Best Paper Award**)
77. Moo-Ryong Ra, Bodhi Priyantha, Aman Kansal, and Jie Liu, "Improving Energy Efficiency of Personal Sensing Applications with Heterogeneous Multi-Processors," in *The 14th International Conference on Ubiquitous Computing* (Ubicomp 2012), ACM, 5 September 2012
78. Tingxin Yan, David Chu, Deepak Ganesan, Aman Kansal, and Jie Liu, "Fast App Launching for Mobile Devices Using Predictive User Context," in *ACM International Conference in Mobile Systems, Applications, and Services* (MobiSys 2012), Lake District, UK, June 2012
79. Yin Chen, Dimitrios Lymberopoulos, Jie Liu, and Bodhi Priyantha, "FM-based Indoor Localization," in *ACM International Conference in Mobile Systems, Applications, and Services* (MobiSys), Lake District, UK, June 2012
80. Zhenghua Wu, Qiang Wang, Yi Shen, Jie Liu, "Zig-Zag And Replacement Product Expander Graphs For Compressive Sensing," *2012 IEEE International Instrumentation and Measurement Technology Conference*, Graz, Austria, May 13-16, 2012.
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