

# DONG WANG

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Department of Computer Science and Engineering  
Interdisciplinary Center of Network Science and Application (iCeNSA)  
University of Notre Dame  
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## RESEARCH INTERESTS

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- Big Data Analytics, Cyber-Physical-Human Systems
- Social (Human-Centric) Sensing, Smart Cities, Internet of Things (IoT)
- Network Science, Trust and Credibility Analysis in Information and Social Networks

## EDUCATION

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Ph.D in Computer Science July 2007-Dec. 2012  
**University of Illinois at Urbana-Champaign (UIUC)**  
Master of Science in Electrical Engineering Sept. 2004-July 2007  
**Peking University (PKU), Beijing China**  
B.Eng. in Electrical Engineering, Highest honors Sept. 2000-July 2004  
**University of Electronic Science and Technology of China (UESTC)**

## PROFESSIONAL EXPERIENCE

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Assistant Professor Aug. 2014-Now  
**Department of Computer Science and Engineering, University of Notre Dame**  
Postdoc Research Associate Jan. 2013-July 2014  
**Department of Computer Science, University of Illinois at Urbana-Champaign (UIUC)**

## REFERRED PUBLICATIONS:

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Paper Code: [J]: Journal; [C]:Conference; [W]:Workshop;

★ **Book**

- **Dong Wang**, Tarek Abdelzaher, and Lance Kaplan. Social Sensing: Building Reliable Systems on Unreliable Data. 1st Edition. *Elsevier*, 2015.

★ **Book Chapter**

- **Dong Wang**. Data Reliability Challenges of Cyber-Physical Systems. *Elsevier*, 2016.
- **Dong Wang**. Big Data and Information Distillation in Social Sensing. *Taylor & Francis LLC, CRC Press*, 2015.
- Tarek Abdelzaher and **Dong Wang**. Analytic Challenges in Social Sensing. *The Art of Wireless Sensor Networks, Springer*, 2014.

★ Papers (Ph.D. students I advised: \*; Undergraduate students I advised: +; Students I supervised in my course: #.)

1. [C] Jermaine Marshall\*, Arturo Argueta A **Dong Wang**. A Neural Network Approach for Truth Discovery in Social Sensing, *The 14th International Conference on Mobile Ad-hoc and Sensor Systems (MASS 17)*, Orlando, Florida, October, 2017.
2. [J] Chao Huang\*, **Dong Wang**, Jun Tao, Brian Mann+. On Physical-Social-Aware Localness Inference By Exploring Big Data from Location-Based Services, *IEEE Transactions on Big Data (TBD)*, in press, 2017.
3. [J] Chao Huang\*, **Dong Wang**, Shenglong Zhu, Brian Mann+. Toward Local Family Relationship Discovery in Location-based Social Network, *Social Network Analysis and Mining (SNAM)*, Springer, in press, 2017.
4. [C] Xian Wu, Yuxiao Dong, Chao Huang\*, Jian Xu, **Dong Wang**, Nitesh Chawla. UAPD: Predicting Urban Anomalies from Spatial-Temporal Data, *European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (PKDD)*, Skopje, Macedonia, September, 2017. (Acceptance rate: 27%)
5. [C] Chao Huang\*, **Dong Wang**, Shenglong Zhu. Towards Diversified Local Users Identification using Location Based Social Networks, *The 2017 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining ASONAM 2017*, Sydney, August, 2017. (Acceptance rate: 25%)
6. [J] Chao Huang\*, **Dong Wang**. Exploring Scalability and Time Sensitiveness in Reliable Social Sensing with Accuracy Assessment, *IEEE Access*, in press, 2017.
7. [C] Chao Huang\*, **Dong Wang**. Critical Source Selection in Social Sensing Applications, *13th IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS 17)*, Full Paper, Ottawa, Canada, June, 2017.
8. [C] Daniel Zhang\*, Chao Zheng, **Dong Wang**, Doug Thain, Xin Mu, Greg Madey and Chao Huang. Towards Scalable and Dynamic Social Sensing Using A Distributed Computing Framework, *The 37th IEEE International Conference on Distributed Computing (ICDCS 2017)*, Atlanta, GA, June, 2017. (Acceptance rate: 16.9%)
9. [J] Chao Huang\*, **Dong Wang**, Nitesh Chawla. Scalable Uncertainty-Aware Truth Discovery in Big Data Social Sensing Applications for Cyber-Physical Systems, *IEEE Transactions on Big Data (TBD)*, in press, 2017.
10. [J] Chao Huang\*, **Dong Wang**, Brian Mann+. Towards Social-aware Interesting Place Finding in Social Sensing Applications, *Elsevier Knowledge Based Systems (KBS)*, in press, 2017.
11. [C] Chao Huang\*, **Dong Wang**, Shenglong Zhu. Where Are You From: Home Location Profiling of Crowd Sensors from Noisy and Sparse Crowdsourcing Data, *IEEE International Conference on Computer Communications (IEEE INFOCOM 2017)*, Full Paper, Atlanta, GA, May, 2017. (Acceptance rate: 21%)
12. [J] Chao Huang\*, **Dong Wang**, Tao Jun. An Unsupervised Approach to Inferring the Localness of People Using Incomplete Geo-Temporal Online Check-in Data, *ACM Transactions on Intelligent Systems and Technology (TIST)*, in press, 2017.
13. [C] Chao Huang\*, **Dong Wang**. Towards Unsupervised Home Location Inference from Online Social Media, *2016 IEEE International Conference on Big Data (IEEE BigData 2016)*, Full Paper, Washington D.C., December, 2016. (Acceptance rate: 19%)

14. [C] Daniel Zhang<sup>\*</sup>, Rungang Han<sup>#</sup>, **Dong Wang**. On Robust Truth Discovery in Sparse Social Media Sensing, *2016 IEEE International Conference on Big Data (IEEE BigData 2016)*, Washington D.C., December, 2016. (Acceptance rate: 19%)
15. [C] Chao Huang<sup>\*</sup>, Xian Wu, **Dong Wang**. Crowdsourcing-based Urban Anomaly Prediction System for Smart Cities, *The 25th ACM International Conference on Information and Knowledge Management (CIKM 2016)*, Indianapolis, IN, October, 2016. (Acceptance rate: 14%)
16. [C] Jermaine Marshall<sup>\*</sup>, **Dong Wang**. Mood-Sensitive Truth Discovery For Reliable Recommendation Systems in Social Sensing, *10th ACM Conference on Recommender Systems (Recsys 2016)*, Full Paper, Boston, MA, USA, September, 2016. (Acceptance rate: 18%)
17. [C] Chao Huang<sup>\*</sup>, **Dong Wang**. Exploiting Spatial-Temporal-Social Constraints for Localness Inference Using Online Social Media, *The 2016 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining ASONAM 2016*, Full Paper, San Francisco, August, 2016. (Acceptance rate: 13%)
18. [C] Jermaine Marshall<sup>\*</sup>, Munira Syed, **Dong Wang**. Hardness-aware Truth Discovery in Social Sensing Applications, *12th IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS 16)*, Full Paper, Washington D.C., May, 2016.
19. [C] Chao Huang<sup>\*</sup>, **Dong Wang**. Unsupervised Interesting Places Discovery in Location-Based Social Sensing, *12th IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS 16)*, Full Paper, Washington D.C., May, 2016.
20. [W] Chao Huang<sup>\*</sup>, Jermaine Marshall<sup>\*</sup>, **Dong Wang**, Mianxiong Dong. Towards Reliable Social Sensing in Cyber-Physical-Social Systems, *The 1st IEEE Workshop on Parallel and Distributed Processing for Computational Social Systems (ParSocial 2016)*, Full Paper, Chicago., May, 2016.
21. [J] Prasanna Giridhar, Md Tanvir Amin, Tarek Abdelzaher, **Dong Wang**, Lance Kaplan, Jemin George, Raghu Ganti, ClariSense+: An Enhanced Traffic Anomaly Explanation Service Using Social Network Feeds, *Pervasive and Mobile Computing*, 2016.
22. [C] **Dong Wang**, Jermaine Marshall<sup>\*</sup>, Chao Huang<sup>\*</sup>. Theme-Relevant Truth Discovery on Twitter: An Estimation Theoretical Approach, *The 10th International AAAI Conference on Web and Social Media (ICWSM 16)*, Full Paper, Cologne, Germany, May, 2016. (Acceptance rate: 17%)
23. [C] Jermaine Marshall<sup>\*</sup>, **Dong Wang**. Towards Emotional-aware Truth Discovery in Social Sensing Applications, *The 2nd IEEE International Conference on Smart Computing (SMARTCOMP 2016)*, Full Paper, St. Louis, Missouri, May, 2016.
24. [C] Chao Huang<sup>\*</sup>, **Dong Wang**. Topic-Aware Social Sensing with Arbitrary Source Dependency Graphs, *The 15th ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN 16)*, Full Paper, Vienna, Austria, April, 2016. (Acceptance rate: 19%)
25. [C] Jize Zhang<sup>#</sup>, **Dong Wang**. Duplicate Report Detection in Urban Crowdsensing Applications for Smart City, *2015 IEEE International Conference on Smart City 2015 (SmartCity 2015)*, Full Paper, Chengdu, China, December, 2015. (Acceptance rate: 18%)
26. [C] Chao Huang<sup>\*</sup>, **Dong Wang**. On Interesting Place Finding in Social Sensing: An Emerging Smart City Application Paradigm, *2015 IEEE International Conference on*

*Smart City 2015 (SmartCity 2015)*, Full Paper, Chengdu, China, December, 2015. (Acceptance rate: 18%)

27. [J] **Dong Wang**, Tarek Abdelzaher, Lance Kaplan, Raghu Ganti, Shaohan Hu and Hengchang Liu. Reliable Social Sensing with Physical Dependencies: Analytic Bounds and Performance Evaluation. *Journal of Real-Time Systems*, Volume 51, Issue 6, Page 724-762, 2015
28. [C] Chao Huang<sup>\*</sup>, **Dong Wang**, Nitesh Chawla. Towards Time-Sensitive Truth Discovery in Social Sensing Applications. *The 12th IEEE International Conference on Mobile Ad-hoc and Sensor Systems (IEEE MASS 2015)*, Texas, USA, October, 2015. (Acceptance rate: 26%)
29. [C] Chao Huang<sup>\*</sup>, **Dong Wang**. Spatial-Temporal Aware Truth Finding in Big Data Social Sensing Applications. *The 9th IEEE International Conference on Big Data Science and Engineering (BigDataSE 15)*, Helsinki, Finland, August, 2015.
30. [C] **Dong Wang**, Chao Huang<sup>\*</sup>. Confidence-Aware Truth Estimation in Social Sensing Applications. *The 12th Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON'15)*, Seattle, USA, June, 2015. (Acceptance rate: 28%)
31. [W] **Dong Wang**. Data Reliability Challenge of Future Cyber-Physical Systems for Smart Cities. *2015 NSF Early-Career Investigators Workshop on CPS and Smart City (Invited Paper)*, Seattle, WA, April, 2015.
32. [J] **Dong Wang**, Tarek Abdelzaher, and Lance Kaplan. Surrogate Mobile Sensing. *IEEE Communications Magazine*, Volume 52, Issue 8, Page 36-41, 2014
33. [J] **Dong Wang**, Tanvir Amin, Tarek Abdelzaher, Dan Roth, Clare Voss, Lance Kaplan, Stephen Tratzky, Jamal Laoudiy, and Douglas Briesch. Provenance-assisted Classification in Social Networks. *IEEE Journal of Selected Topics in Signal Processing (J-STSP)*, Volume 8, Issue 4, Page 624-637, 2014
34. [C] Shiguang Wang, **Dong Wang**, Lu Su, Lance Kaplan, and Tarek Abdelzaher, Towards Cyber-physical Systems in Social Spaces: The Data Reliability Challenge, *IEEE Real-time Systems Symposium (RTSS)*, Rome, Italy, December 2014.
35. [C] Md Tanvir Amin, Tarek Abdelzaher, **Dong Wang**, Boleslaw Szymanski. "Crowd-sensing with Polarized Sources," *In Proc. 10th IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS)*, Marina Del Rey, CA, May 2014.
36. [C] Siyu Gu, Chenji Pan, Hengchang Liu, Shen Li, Shaohan Hu, Lu Su, Shiguang Wang, **Dong Wang**, Tanvir Amin, Ramesh Govindan, Charu Aggarwal, Raghu Ganti, Mudhakar Srivatsa, Amotz Barnoy, Peter Terlecky, Tarek Abdelzaher "Data Extrapolation in Social Sensing for Disaster Response," *In Proc. 10th IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS)*, Marina Del Rey, CA, May 2014.
37. [C] **Dong Wang**, Tanvir Amin, Tarek Abdelzaher, Lance Kaplan, et al. Using Humans as Sensors: An Estimation-theoretic Perspective. *The 13th ACM/IEEE Conference on Information Processing in Sensor Networks (IPSN'14)*, Berlin, Germany, April 2014. (Acceptance rate: 20%)
38. [J] **Dong Wang**, Lance Kaplan and Tarek Abdelzaher. Maximum Likelihood Analysis of Conflicting Observations in Social Sensing. *ACM Transactions on Sensor Networks (ToSN)*, Vol. 10, No. 2, Article 30, January, 2014.

39. [C] **Dong Wang**, Tarek Abdelzaher, Lance Kaplan, Raghu Ganti, Shaohan Hu, and Hengchang Liu. Exploitation of Physical Constraints for Reliable Social Sensing. *IEEE 34th Real-Time Systems Symposium (RTSS'13)*, Vancouver, Canada, December, 2013 (Acceptance rate: 22%)
40. [J] **Dong Wang**, Lance Kaplan, Tarek Abdelzaher and Charu C. Aggarwal. On Credibility Tradeoffs in Assured Social Sensing. *IEEE Journal On Selected Areas in Communication (JSAC)*, Volume 31, Issue 6, 2013.
41. [C] **Dong Wang**, Tarek Abdelzaher, Lance Kaplan and Charu C. Aggarwal. Recursive Fact-finding: A Streaming Approach to Truth Estimation in Crowdsourcing Applications. *The 33rd International Conference on Distributed Computing Systems (ICDCS'13)* Philadelphia, PA, July 2013. (Acceptance rate: 13%)
42. [C] Hongzhao Huang, Arkaitz Zubiaga, Heng Ji, Hongbo Deng, **Dong Wang**, Hieu Khac Le, Tarek Abdelzaher, Jiawei Han, Alice Leung, John Hancock and Clare Voss, "Tweet Ranking based on Heterogeneous Networks," *In Proc. 24th International Conference on Computational Linguistics*, Mumbai, India, December 2012.
43. [C] **Dong Wang**, Lance Kaplan, Tarek Abdelzaher and Charu C. Aggarwal. On Scalability and Robustness Limitations of Real and Asymptotic Confidence Bounds in Social Sensing. *The 9th Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON'12)*, Seoul, Korea, from June, 2012. (Acceptance rate: 19%)
44. [C] **Dong Wang**, Lance Kaplan, Hieu Le and Tarek Abdelzaher. On Truth Discovery in Social Sensing: A Maximum Likelihood Estimation Approach. *The 11th ACM/IEEE Conference on Information Processing in Sensor Networks (IPSN'12)*, Beijing, China April 2012. (Acceptance rate: 15%)
45. [J] **Dong Wang**, Tarek Abdelzaher, Bodhi Priyantha, Jie Liu, Feng Zhao. Energy-optimal Batching Periods for Asynchronous Multistage Data Processing on Sensor Nodes: Foundations and an mPlatform Case Study. *Journal of Real-Time Systems*, Volume 48, Issue 2 (2012), Page 135-165.
46. [C] **Dong Wang**, Tarek Abdelzaher, Hossein Ahmadi, Jeff Pasternack, Dan Roth, Manish Gupta, Jiawei Han, Omid Fatemeh, and Hieu Le, Charu Aggarwal. On Bayesian Interpretation of Fact-finding in Information Networks. *14th International Conference on Information Fusion (Fusion'11)*, Chicago, IL, July, 2011.
47. [C] **Dong Wang**, Hossein Ahmadi, Harsha Chenji, Tarek Abdelzaher, Radu Stoleru, Charu Aggarwal. Optimizing Quality-of-Information in Cost-sensitive Sensor Data Fusion. *7th IEEE International Conference on Distributed Computing in Sensor Systems (DCoSS'11)*, Barcelona, Spain, June 2011. (Acceptance rate: 28%)
48. [W] **Dong Wang**, Tarek Abdelzaher, Lance Kaplan, and Charu C. Aggarwal. On Quantifying the Accuracy of Maximum Likelihood Estimation of Participant Reliability in Social Sensing. *8th International Workshop on Data Management for Sensor Networks (DMSN'11)*, Seattle, WA, August 2011.
49. [J] Jin Heo, Praveen Jayachandran, Insik Shiny, **Dong Wang**, Tarek Abdelzaher, Xue Liu. OptiTuner: On Performance Composition and Server Farm Energy Minimization Application. *IEEE Transactions on Parallel and Distributed Systems*, Vol. 22, No. 11, November 2011.
50. [C] Qing Cao, **Dong Wang**, Tarek Abdelzaher, Bodhi Priyantha, Jie Liu, Feng Zhao. Energy-optimal Batching Periods for Asynchronous Multistage Data Processing on Sen-

sor Nodes: Foundations and an mPlatform Case Study. *16th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS'10)*, Stockholm, Sweden, April, 2010 (**Best Paper Award**). (Acceptance rate: 22%)

51. [C] Qing Cao, **Dong Wang**, Tarek Abdelzaher, End-User Diagnosis of Communication Paths in Sensor Network Systems. *The 38th International Conference on Parallel Processing (ICPP 09)*, Vienna, Austria, 2009. (Acceptance rate: 32%)
52. [W] Jin Heo, Praveen Jayachandran, Insik Shiny, **Dong Wang**, and Tarek Abdelzaher. OptiTuner: An Automatic Distributed Performance Optimization Service and a Server Farm Application. *FeBID: Fourth International Workshop on Feedback Control Implementation and Design in Computing Systems and Networks*, San Francisco, California, April, 2009
53. [J] Jianwei Wang, **Dong Wang**, TIMO Korhonen, Yuping Zhao. A Novel Anti-Collision Protocol in Multiple Readers RFID Sensor Networks. *Chinese Journal of Sensors and Actuators*, Vol.21 No.8, 2008.
54. [C] **Dong Wang**, Zimin Liu, Yuping Zhao, Yan Luo. A Novel Unicast Multiplexing Scheme to Guarantee the QoS of VoWLAN. *49th Annual IEEE GLOBECOM Conference*, San Francisco, USA, Nov.27-Dec.1, 2006.
55. [C] **Dong Wang**, Jianwei Wang, Yuping Zhao. A Novel Solution to the Reader Collision Problem in RFID System. *IEEE 2nd International Conference on Wireless Communications, Networking and Mobile Computing*, WuHan China, Sept., 2006.
56. [J] **Dong Wang**, Zimin Liu, Yuping Zhao, Yan Luo. A Novel Unicast Based Multiplexing Scheme to Improve the Capacity of VoWLAN. *Journal of Peking University*, Vol. 1 No. 3, Sept. 30, 2006.
57. [C] Jianwei Wang, **Dong Wang**, Yuping Zhao. A Novel Anti-Collision Algorithm with Dynamic Tag Number Estimation. *IEEE International Conference on Communication Technology*, Gulin, China, Nov. 27-30, 2006
58. [C] Jianwei Wang, **Dong Wang**, Yuping Zhao. Multi-path Combining Scheme for ISI Suppression in DS UWB System. *IEEE 2nd International Conference on Wireless Communications, Networking and Mobile Computing*, WuHan China, Sept., 2006.
59. [W] **Dong Wang**, Yuping Zhao. Analysis and Design of UWB MAC Based on Ad Hoc Networks. *Proceedings of 10th Annual Joint Workshop on Modern Electronic Technology and Applications*, Beijing, China, Nov., 2005.
60. [J] **Dong Wang**, Kun Qiu, Licun Wang. A New DBA Algorithm in EPON Upstream Channel in Support of SLA. *Journal on Communications of China*, Vol. 26 No. 6, June, 2005.
61. [J] **Dong Wang**, Kun Qiu, Licun Wang. Design of of DBA algorithm in EPON Upstream Channel in Support of QoS. *Journal of UESTC*, Vol.33 No.6, Dec, 2004.
62. [J] Licun Wang, Kun Qiu, **Dong Wang**. Design of MAC of Fixed Frame Size of EPON. *Journal of UESTC*, Vol.33 No.6, Dec, 2004.

## TEACHING AND MENTORING EXPERIENCES

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- **Instructor**

Department of Computer Science and Engineering, University of Notre Dame  
Course: Social Sensing and Cyber-Physical Systems (CIF: 4.7/5)

Spring 2017

- Refined lectures on Social Sensing and Cyber-Physical Systems
- Instructed students on course projects around the key issues in Social Sensing and CPS and submitted a couple of papers from the top course projects.
- **Instructor** Fall 2016  
 Department of Computer Science and Engineering, University of Notre Dame  
 Course: Computer Networks (CIF: 4.4/5)
  - Refined lectures on Computer Networks.
  - Increased the challenging level of the programming assignments.
- **Instructor** Spring 2016  
 Department of Computer Science and Engineering, University of Notre Dame  
 Course: Social Sensing and Cyber-Physical Systems (CIF: 4.8/5)
  - Refined lectures on Social Sensing and Cyber-Physical Systems
  - Instructed students on course projects around the key issues in Social Sensing and CPS and submitted a couple of papers from the top course projects.
- **Instructor** Fall 2015  
 Department of Computer Science and Engineering, University of Notre Dame  
 Course: Computer Networks (CIF: 4.6/5)
  - Designed the class of Computer Networks from scratch and taught it for the first time.
  - Instructed students on fundamental topics of principles, design, implementation, and performance of computer networks.
- **Instructor** Spring 2015  
 Department of Computer Science and Engineering, University of Notre Dame  
 Course: Social Sensing and Cyber-Physical Systems (CIF: 4.5/5)
  - Developed and gave lectures on Social Sensing and Cyber-Physical Systems
  - Instructed students on course projects around the key issues in Social Sensing and CPS (e.g., big data, trust and credibility, privacy).
- **Instructor** Fall 2014  
 Department of Computer Science and Engineering, University of Notre Dame  
 Course: Cloud Computing (CIF: 3.7/5)
  - Developed and gave lectures on Hadoop/MapReduce and other cloud computing and distributed system topics
  - Instructed students on experiments in various cloud computing environments (e.g., Con-dor, Hadoop, Amazon EC2, Google App Engine)

## PRESENTATIONS

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1. Topic-Aware Social Sensing with Arbitrary Source Dependency Graphs, *The 15th ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN 16)*, Viena, Austria, April, 2016.
2. Duplicate Report Detection in Urban Crowdsensing Applications for Smart City, 2015 IEEE International Conference on Smart City 2015 (SmartCity 2015), Chengdu, China, December, 2015.

3. On Interesting Place Finding in Social Sensing: An Emerging Smart City Application Paradigm, *2015 IEEE International Conference on Smart City 2015 (SmartCity 2015)*, Chengdu, China, December, 2015.
4. Towards Time-Sensitive Truth Discovery in Social Sensing Applications. *The 12th IEEE International Conference on Mobile Ad-hoc and Sensor Systems (IEEE MASS 2015)*, Texas, USA, October, 2015.
5. Spatial-Temporal Aware Truth Finding in Big Data Social Sensing Applications. *The 9th IEEE International Conference on Big Data Science and Engineering (BigDataSE 15)*, Helsinki, Finland, August, 2015.
6. Confidence-Aware Truth Estimation in Social Sensing Applications. *The 12th Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON'15)*, Seattle, USA, June, 2015.
7. Exploitation of Physical Constraints for Reliable Social Sensing. *IEEE 34th Real-Time Systems Symposium (RTSS'13)*, Vancouver, Canada, December, 2013
8. Recursive Fact-finding: A Streaming Approach to Truth Estimation in Crowdsourcing Applications. *The 33rd International Conference on Distributed Computing Systems (ICDCS'13)* Philadelphia, PA, July 2013.
9. On Scalability and Robustness Limitations of Real and Asymptotic Confidence Bounds in Social Sensing. *The 9th Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON'12)*, Seoul, Korea, from June, 2012.
10. On Truth Discovery in Social Sensing: A Maximum Likelihood Estimation Approach. *The 11th ACM/IEEE Conference on Information Processing in Sensor Networks (IPSN'12)*, Beijing, China April 2012.
11. On Quantifying the Accuracy of Maximum Likelihood Estimation of Participant Reliability in Social Sensing. *8th International Workshop on Data Management for Sensor Networks (DMSN'11)*, Seattle, WA, August 2011.
12. Optimizing Quality-of-Information in Cost-sensitive Sensor Data Fusion. *7th IEEE International Conference on Distributed Computing in Sensor Systems (DCoSS'11)*, Barcelona, Spain, June 2011.
13. Energy-optimal Batching Periods for Asynchronous Multistage Data Processing on Sensor Nodes: Foundations and an mPlatform Case Study. *16th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS'10)*, Stockholm, Sweden, April, 2010 (**Best Paper Award**).
14. A Novel Unicast Multiplexing Scheme to Guarantee the QoS of VoWLAN. *49th Annual IEEE GLOBECOM Conference*, November, 2006, San Francisco, USA
15. A Novel Solution to the Reader Collision Problem in RFID System. *IEEE 2nd International Conference on Wireless Communications, Networking and Mobile Computing*, WuHan, China, Sept., 2006,
16. A Novel UWB MAC Designed for Ad Hoc Networks. *10th Annual Joint Workshop on Modern Electronic Technology and Applications*, Beijing, China, November, 2005.



## INVITED TALKS

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1. Dong Wang, Building Reliable Cyber-Physical Systems with Human-in-the-loop, *Department of Computer Science, Chongqing University*, Chongqing, China, Dec, 2015
2. Dong Wang, Reliable Knowledge Discovery in Social Sensing, *Department of Computer Science, Tsinghua University*, Beijing, China, May, 2015
3. Dong Wang, Information Extraction in Social Sensing Applications, *EECS, Peking University*, Beijing, China, May, 2015
4. Dong Wang, Big Data in Cyber-Physical Systems, *Department of Electrical and Computer Engineering, University of Pittsburgh*, Pittsburgh, PA, April, 2015
5. Dong Wang, Data Reliability Challenge of Future Cyber-Physical Systems for Smart Cities, *NSF Early Career Investigators Workshop on CPS and Smart City*, Seattle, WA, April, 2015
6. Dong Wang, Assured Information Distillation in Social Sensing, *Department of Computer Science and Engineering, University of Notre Dame*, Notre Dame, IN, February, 2014
7. Dong Wang and Lance Kaplan, Assured Fact-Finding, *U.S Army Research Lab, Review Management Board (RMB) Meeting for Five Years*, Adelphi, MD, November, 2013
8. Dong Wang, Social Sensing: A Reliability Perspective, *Department of Computer Science, University of California at Santa Barbra (UCSB)*, Santa Barbara, CA, November, 2013
9. Dong Wang, Reliable Crwodsensing and Its Future Applications in Health, *Department of Health Information Management, University of Pittsburgh*, Pittsburgh, Pennsylvania, November, 2013
10. Dong Wang, Social Sensing in an Information-rich World, *Department of Social and Decision Sciences, Carnegie Mellon University*, Pittsburgh, Pennsylvania, November, 2013
11. Dong Wang, Social Sensing: Building Reliable Systems on Unreliable Data, *Department of Computer Science and Engineering, University of California at Davis (UC Davis)*, Davis, CA, October, 2013
12. Dong Wang, Reliable Social Sensing, *Department of Computer Science and Engineering, Pennsylvania State University*, University Park, Pennsylvania, October, 2013
13. Dong Wang, Assured Information Distillation Systems in Social Sensing, *Department of Computer Science, Rensselaer Polytechnic Institute (RPI)*, Troy, New York, September, 2013
14. Dong Wang, Applications of Assured Knowledge Discovery, *Network Science Collaborative Technology Alliance review held by Army Research Lab*, Delaware, April, 2013
15. Dong Wang, On Truth Discovery in Reliable Social Sensing, *Department of Computer Science, UIUC*, December, 2011

## AWARDS AND HONORS

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- Wing Kai Cheng Fellowship, University of Illinois at Urbana Champaign August 2012
- Best Paper Award, IEEE 16th RTAS 2010, Stockholm, Sweden April 2010
- Outstanding EECS Graduate Research Award, Peking University July 2007
- Distinguished Graduate Research Award, Peking University April 2007
- Graduate Innovative Research Award, Peking University October 2006
- Outstanding Student Award, Peking University 2005-2006
- Peking University May Fourth Scholarship, Peking University 2004-2005

## PROFESSIONAL SERVICE

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- Steering Committee Member of Second International Workshop on Social Sensing (SocialSens 2017)
- TPC Chair of First International Workshop on Social Sensing (SocialSens 2015)
- Web Chair of First and Second IEEE International Conference on Internet-of-Things Design and Implementation (IoTDI 2016, 2017)
- Guest Editor of Special Issue of “Big Data: Deal with Information Fusion” International Journal on Multi-Sensor, Multi-Source Information Fusion (2015)
- TPC member of ACM KDD 2015, 2016, 2017, ACM/IEEE IPSN 2017, 2018, IEEE IOTDI 2017, 2018, IEEE DCOSS 2016, IEEE ICDM 2015, CIKM 2015
- TPC member of IEEE International Conference on Big Data Science and Engineering (BDSE 2013, 2015)
- TPC member of IEEE CloudCom 2013
- TPC member of International Conference on Computing, Networking and Communications (ICNC 2014, 2015)
- Reviewer of IEEE Communications Magazine
- Reviewer of ACM Transactions on Sensor Networks (ToSN)
- Reviewer of ACM Transactions on Internet of Things (IOIT)
- Reviewer of IEEE Transactions of Wireless Communications
- Reviewer of Transactions on Autonomous and Adaptive Systems (TAAS)
- Reviewer of Pervasive and Mobile Computing (PMC)
- Reviewer of Elsevier Computer Communications
- Reviewer of KSII Transactions on Internet and Information Systems
- Reviewer of Security and Communication Networks
- Reviewer of INFOCOM 2014