



# The College of William & Mary

## **PERSONAL INFORMATION**

Name: Gang Zhou  
Position Title: Associate Professor  
Department: Computer Science  
Office Address: 134 McGlothlin-Street Hall, William & Mary, Williamsburg, VA 23187  
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## **EDUCATION**

2007 Ph.D. in Computer Science, University of Virginia  
--- Thesis Title: Taming the Sensor Networking Challenges  
--- Thesis Adviser: Professor John A. Stankovic

2004 M.CS. in Computer Science, University of Virginia

2002 M.E. in Computer Science, Nanjing University, China

1999 B.S. in Computer Science, Nanjing University, China

## **ACADEMIC POSITIONS**

2015~2017 Graduate Director, Computer Science Department, William & Mary

2013~present Associate Professor, Computer Science Department, William & Mary

2007~2013 Assistant Professor, Computer Science Department, William & Mary

Summer 2006 Research Intern, Health Platform Lab, Intel Corporation, Hillsboro, OR

## **HONORS, PRIZES AND AWARDS**

### **Honors & Awards**

1. Influencer Award of Class 2017 Graduate, William and Mary, 2018
2. Outstanding Service Award for IEEE PerCom, 2017
3. Plumeri Award for Faculty Excellence, William and Mary, 2015
4. Third Best Mobile App in The ACM MobiCom Second Mobile App Competition, 2014
5. ACM Senior Member, 2014
6. IEEE Senior Member, 2013

7. Third Best Mobile App in The ACM MobiCom First Mobile App Competition, 2013
8. NSF CAREER Award, 2013
9. An award for NIH Mobile Health Summer Training Institute, 2012
10. Best paper award for the 18th IEEE International Conference on Network Protocols (IEEE ICNP 2010), selected from 170 submissions, 2010
11. Outstanding Service Award for IEEE Transactions on Instrumentation and Measurement, 2008

### **Journal Editorship**

1. Associate Editor, ACM Transactions on Sensor Networks, 2018 ~ present
2. Associate Editor, IEEE Internet of Things Journal, 2014 ~ present
3. Associate Editor, Elsevier Computer Networks, 2013 ~ present
4. Associate Editor, Elsevier Smart Health, 2016 ~ present
5. Guest Editor, IEEE Access, Special Section on Wearable Healthcare Technologies, 2017
6. Guest Editor, IEEE Internet of Things Journal, Special Issue on Internet of Things for Smart and Connected Health, 2014

### **Chair Positions**

1. Program Chair, IEEE/ACM International Conference on Connected Health: Applications, Systems and Engineering Technologies (IEEE/ACM CHASE), 2018
2. Program Chair, the 14<sup>th</sup> EAI International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services (MobiQuitous), 2017
3. Workshop Chair, chairing workshops of IEEE/ACM International Conference on Connected Health: Applications, Systems and Engineering Technologies (IEEE/ACM CHASE), 2017
4. Work In Progress Chair, chairing the Work In Progress Session, the IEEE International Conference on Pervasive Computing and Communications (IEEE PerCom), 2017
5. Program Vice Chair, chairing the Mobile, Sensor and Ubiquitous Computing track, the 22<sup>nd</sup> IEEE International Conference on Parallel and Distributed Systems (IEEE ICPADS), 2016
6. Workshop Chair, chairing workshops of IEEE International Conference on Connected Health: Applications, Systems and Engineering Technologies (IEEE CHASE), 2016
7. Program Vice Chair, chairing the Embedded Devices and Medical Applications track, the 10<sup>th</sup> International Conference on Body Area Networks (BodyNets), 2015
8. Program Vice Chair, chairing the Applications and Testbed Evaluation track, the 10<sup>th</sup> IEEE International Conference on Mobile Ad hoc and Sensor Systems (IEEE MASS), 2013
9. Program Vice Chair, chairing the Networking track, the 2011 IEEE International Conference on Networking, Architecture, and Storage (IEEE NAS), 2011
10. Web Chair, the 9th ACM/IEEE International Conference on Information Processing in Sensor Networks (ACM/IEEE IPSN), 2010

### **Proposal Review & Panel Services**

1. NSF proposal review panelist, 2008, 2011, 2012, 2015 (twice), 2016, 2017 (3 times), 2018 (twice)
2. NIH proposal review panelist, 2012, 2016
3. GENI proposal review panelist, 2010, 2013
4. CONICYT (Chile) proposal review, 2015
5. ACM SenSys Doctoral Colloquium panelist, 2011
6. IEEE CCW Panelist on Mobile Computing, 2014
7. MIPS (Maryland Industrial Partnerships Program) proposal review, 2015

### **Patents**

1. David Nguyen, Gang Zhou, "I/O Scheduling Method Using Read Prioritization to Reduce Application Delay", this patent was filed on Jan. 6<sup>th</sup> 2016 as US 14/989,321
2. Hongyang Zhao, Gang Zhou, "Gesture-enabled Remote Control Signal Generation," this patent was filed on Sep. 21<sup>st</sup>, 2015 as US 14/860,912
3. Andrew Pyles, Xin Qi, Gang Zhou, "Method for Conserving Power on Battery-powered Communication Devices," this patent was published on March 6<sup>th</sup> 2014 as US 20140064171 A1
4. David Nguyen, Gang Zhou, Xin Qi, "Method of Conserving Power Based on Electronic Device's I/O Pattern," this patent was awarded on May 5<sup>th</sup> 2015 as US 9026819 B2
5. Andrew Pyles, Gang Zhou, Zhen Ren, "Method/system for conserving resources during conversation over wireless network transport media," this patent was awarded on July 16<sup>th</sup> 2013 as US 8488505 B2

### **COURSES TAUGHT**

1. CSCI800 Dissertation, Computer Science, William & Mary, spring 2009~present
2. CSCI790 Readings in Computer Science, Computer Science, William & Mary, spring 2018, fall 2017 (2 sessions), fall 2015 (3 sessions), fall 2012, fall 2011 (2 sessions)
3. CSCI780 Recent Advances in Ubiquitous and Mobile Computing, fall 2018
4. CSCI780 Sensors and Ubiquitous Computing, Computer Science, William & Mary, spring 2015, spring 2014, fall 2012
5. CSCI780 Wireless Sensor Networks, Computer Science, William & May, fall 2010, fall 2009, spring 2008
6. CSCI770 Colloquium, Computer Science, William & Mary, spring 2013, fall 2012
7. CSCI766 Directed Studies, Computer Science, William & Mary, fall 2015
8. CSCI710 Research Project, Computer Science, William & Mary, spring 2018, spring 2017, fall 2016, spring 2016, fall 2015, fall 2014 (2 sessions), fall 2013, spring 2013, fall 2012, fall 2010, spring 2010, fall 2009, spring 2008,
9. Law 705 01 legal research/writing, William & Mary Law School, spring 2016

10. CSCI690 Readings in Computer Science, Computer Science, William & Mary, spring 2017, fall 2015, spring 2013, fall 2012, spring 2010, spring 2008
11. CSCI680 Ubiquitous and Mobile Computing, Computer Science, William & Mary, spring 2016, fall 2017
12. CSCI670 Colloquium, Computer Science, William & Mary, spring 2015, fall 2014, spring 2013, fall 2012
13. CSCI666 Directed Studies, Computer Science, William & Mary, spring 2017, spring 2016
14. CSCI634 Advanced Computer Networking, Computer Science, William & Mary, fall 2016, fall 2015, fall 2014, fall 2011
15. CSCI597 Problems in Computer Science, Computer Science, William & Mary, fall 2017
16. CSCI496 Honors, Computer Science, William & Mary, fall 2017, spring 2011
17. CSCI495 Honors, Computer Science, William & Mary, spring 2017, fall 2010
18. CSCI434/534 Network Systems and Design, Computer Science, William & Mary, spring 2018, spring 2017, spring 2013, spring 2012, spring 2011, spring 2010, spring 2009
19. CSCI321 Database Systems, Computer Science, William & Mary, fall 2008, fall 2007
20. CSCI320 Directed Study, Computer Science, William & Mary, spring 2017

## **FELLOWSHIPS AND GRANTS**

### **Awarded External Grants**

1. In 2016, a grant was **Awarded by National Science Foundation** (NSF-CISE-CNS-TWC).  
 Title: Towards Energy-Efficient Privacy-Preserving Active Authentication of Smartphone Users  
 This is in collaboration with Dr. Kiran Balagani and Paolo Gasti from New York Institute of Technology.  
**I am the Local PI on W&M site. \$204,349 awarded to me.**
2. In 2015, a grant was **Awarded by the Center for Innovative Technology (CIT)**.  
 Title: Reducing Smartphone Application Delay through Read/Write Isolation  
**I am the sole PI. \$99,998**
3. In 2013, a grant was **Awarded by Air Force Research Lab through DARPA**.  
 Title: Investigating Contextual H-MOG (Hand-movement, -orientation, and -grasp) as a New Modality for Continuous Authentication of Smartphone Users  
 This is in collaboration with Dr. Kiran Balagani and Paolo Gasti from New York Institute of Technology.  
**I am the Local PI on W&M site. \$195,214 awarded to me**
4. In 2013, a grant was **Awarded by National Science Foundation** (NSF-CISE-CNS-NeTS).  
 Title: CAREER: Exploiting Sensing Diversity and Conquering Communication Reality to Meet User Requirements in Performance-Critical Wireless Sensor Networks  
**I am the sole PI. \$459,198.**

5. In 2012, a grant was **Awarded by National Science Foundation** (NSF-CISE-CNS-CSR).  
Title: CSR:EAGER:Network Traffic Aware Smartphone Energy Savings  
**I am the sole PI. \$200, 000.**
6. In 2009, a grant was **Awarded by National Science Foundation** (NSF-CISE-CNS-NeTS).  
Title: Holistic Transparent Performance Assurance within the Crowded Spectrum  
This is in collaboration with Dr. Guoliang Xing from Michigan State University.  
**I am the Leading PI, and W&M is the leading site. \$200,000 awarded to me**
7. In 2009, a grant was **Awarded by National Science Foundation** (NSF-ECCS-IHCS).  
Title: Multi-Scale QoS for Body Sensor Networks  
This is in collaboration with Dr. John Lach and John Stankovic from the University of Virginia.  
**I am the Local PI on W&M site. \$175,000 awarded to me.**

#### **Awarded Internal Grants**

1. 2018, W&M Faculty International Travel Grants Competition Award, \$500.
2. 2016, W&M Faculty International Travel Grants Competition Award, \$400.
3. 2015, Research Support from W&M Technology Transfer Office for Prototyping Wearable Devices, \$12,000.
4. 2014, W&M Faculty International Travel Grants Competition Award, \$400.
5. 2012, W&M Faculty International Travel Grants Competition Award, \$400.
6. 2011, Faculty Interdisciplinary Initiatives Grant funded by the Andrew W. Mellon Foundation for the Humanities, \$5000
7. 2011, W&M Faculty International Travel Grants Competition Award, \$400.
8. 2010, Faculty Interdisciplinary Initiatives Grant funded by the Andrew W. Mellon Foundation for the Humanities, \$5000
9. 2010, W&M Faculty International Travel Grants Competition Award, \$500.
10. 2008, W&M Faculty International Travel Grants Competition Award, \$500

#### **RESERACH**

##### **Refereed Journal Publications**

1. *SignFi: Sign Language Recognition using WiFi*  
Yongsen Ma, **Gang Zhou**, Shuangquan Wang, Hongyang Zhao, Woosub Jung  
**[ACM IMWUT'18]** Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, pages 23:1-23:21, 2018
2. *Ultigesture: A Wristband-based Platform for Continuous Gesture Control in Healthcare*  
Hongyang Zhao, Shuangquan Wang, **Gang Zhou**, Daqing Zhang

**Elsevier Smart Health, 2018**

3. *Pedestrian Walking Safety System based on Smartphone Built-in Sensors*  
Yantao Li, Fengtao Xue, Xinqi Fan, Zehui Qiu, Gang Zhou  
*IET Research Journals*, pages 751-758, 2018
4. *USB Side-channel Attack on Tor*  
Qing Yang, Paolo Gasti, Kiran Balagani, Yantao Li, Gang Zhou  
*Elsevier Computer Networks*, 2018
5. *RoFi: Rotation-aware WiFi Channel Feedback*  
Yongsen Ma, **Gang Zhou**, Shan Lin, Haiming Chen  
**[IEEE IoT'17] IEEE Internet of Things Journal**, pages 1684-1695, 2017
6. *A Light-Weight Opportunistic Forwarding Protocol with Optimized Preamble length for Low-Duty-Cycle Wireless Sensor Networks*  
Haiming Chen, Li Cui, Gang Zhou  
**[Springer JCST] Springer Journal of Computer Science and Technology**, pages 168-180, 2017
7. *On Inferring Browsing Activity on Smartphones via USB Power Analysis Side-channel*  
Qing Yang, Paolo Gasti, Gang Zhou, Aydin Farajidavar, Kiran Balagani  
**[IEEE TIFS'17] IEEE Transactions on Information Forensics and Security**, pages 1056-1066, 2017
8. *Continuous Authentication with Touch Behavioral Biometrics and Voice on Wearable Glasses*  
Ge Peng, Gang Zhou, David Nguyen, Xin Qi, Qing Yang, Shuangquan Wang  
**[IEEE THMS'16] IEEE Transactions on Human-Machine Systems**, pages 404-416, 2016
9. *Arbitrating Traffic Contention for Power Saving with Multiple PSM Clients*  
Dachuan Liu, Haining Wang, Gang Zhou, Weizhen Mao, Boyang Li  
**[IEEE TWC'16] IEEE Transactions on Wireless Communications**, pages 7030-7043, 2016
10. *Secure, Fast, and Energy-Efficient Outsourced Authentication for Smartphones*  
Paolo Gasti, Jaroslav Sedenka, Qing Yang, Gang Zhou, Kiran Balagani  
**[IEEE TIFS'16] IEEE Transactions on Information Forensics and Security**, pages 2256-2571, 2016
11. *Toward Sensor-Based Random Number Generation for Mobile and IoT Devices*  
Kyle Wallace, Kevin Moran, Ed Novak, Gang Zhou, Kun Sun  
**[IEEE IoT'16] IEEE Internet of Things Journal**, pages 1189-1201, 2016
12. *A Context-aware Framework for Reducing Bandwidth Usage of Mobile Video Chats*  
Xin Qi, Qing Yang, David Nguyen, Ge Peng, Gang Zhou, Bo Dai, Daqing Zhang, Yantao Li  
**[IEEE TMM'16] IEEE Transactions on Multimedia**, pages 1640-1649, 2016
13. *Prototyping Wearables: a Code-First Approach to Designing Embedded Systems*  
Daniel Graham, Gang Zhou  
**[IEEE IoT'16] IEEE Internet of Things Journal**, pages 806-815, 2016
14. *A Smartphone Compatible SONAR Ranging Attachment for 2D Mapping*  
Daniel Graham, Gang Zhou, Ed Novak, Jeffrey Buffkin  
**[IEEE IoT'16] IEEE Internet of Things Journal**, pages 779-786, 2016
15. *HMOG: New Behavioral Biometric Features for Continuous Authentication of Smartphone Users*  
Zdenka, Sitova, Jaroslav Sedenka, Qing Yang, Ge Peng, Gang Zhou, Paolo Gasti, Kiran Balagani  
**[IEEE TIFS'16] IEEE Transactions on Information Forensics and Security**, pages 877-892, 2016

16. *Improving Web Performance in Home Broadband Access Networks*  
Yantao Li, **Gang Zhou**, Bin Nie  
**[Springer WPC'16]** Springer Wireless Personal Communications, pages 925-940, 2016
17. *Determining Driver Phone Use Leveraging Smartphone Sensors*  
Yantao Li, **Gang Zhou**, Yue Li, Du Shen  
**[SpringerMTA'16]** Springer Multimedia Tools and Applications, pages 16959-16981, 2016
18. *Energy Modeling and Optimization for BSN and WiFi Networks using Joint Data Rate Adaptation*  
Yantao Li, **Gang Zhou**, Ge Peng  
**[AHSWN'15]** Ad Hoc & Sensor Wireless Networks, pages 149-173, 2016
19. *Mining Personal Frequent Routes via Road Corner Detection*  
 Tianben Wang, Daqing Zhang, Xingshe Zhou, Xin Qi, Hongbo Ni, Haipeng Wang, **Gang Zhou**  
**[ACM SMC'15]** IEEE Transactions on Systems, Man and Cybernetics: Systems, pages 445-458, 2015
20. *ATPC: Adaptive Transmission Power Control for Wireless Sensor Networks*  
 Shan Lin, Fei Miao, Jingbin Zhang, **Gang Zhou**, Gu Lin, Tian He, John A. Stankovic, Sang Son, George Pappas  
**[ACM TOSN'15]** ACM Transactions on Sensor Networks, pages 1-31, 2015
21. *Towards an EEG-based Brain-Computer Interface for Online Robot Control*  
Yantao Li, **Gang Zhou**, Daniel Graham, Andrew Holtzhauer  
**[Springer MTAP'15]** Springer Multimedia Tools and Applications, pages 7999-8017, 2015
22. *Throughput Assurance for Multiple Body Sensor Networks*  
Zhen Ren, Xin Qi, **Gang Zhou**, Haining Wang, David T. Nguyen  
**[IEEE TPDS'15]** IEEE Transactions on Parallel and Distributed Systems, pages 1045-9219, 2015
23. *A Software Based Sonar Ranging Sensor For Smartphones*  
Daniel Graham, George Simmons, David T. Nguyen, **Gang Zhou**  
**[IEEE IoT'15]** IEEE Internet of Things Journal, pages 479-489, 2015
24. *Bluesaver: A Multi PHY Approach to Smartphone Energy Savings*  
Andrew Pyles, David T. Nguyen, Xin Qi, **Gang Zhou**  
**[IEEE TWC'15]** IEEE Transactions on Wireless Communications, pages 3367-3377, 2015
25. *Towards Stable Network Performance in Wireless Sensor Networks: A Multilevel Perspective*  
 Shan Lin, **Gang Zhou**, Motza Al-Hami, Yafeng Wu, Kamin Whitehouse, John Stankovic, Xiaobing Wu, Hengchang Liu  
**[ACM TOSN'15]** ACM Transactions on Sensor Networks, pages 1-26, 2015
26. *A Review on Radio Based Activity Recognition*  
 Shuangquan Wang, **Gang Zhou**  
**[Elsevier DCN'15]** Elsevier Digital Communications and Networks, pages 20-29, 2015 (Invited Paper)
27. *A Learning-based Approach to Confident Event Detection in Heterogeneous Sensor Networks*  
Matthew Keally, **Gang Zhou**, Guoliang Xing, David T. Nguyen, Xin Qi  
**[ACM TOSN'14]** ACM Transactions on Sensor Networks, pages 1-28, 2014
28. *Exploiting the Data Sensitivity of Neurometric Fidelity for Optimizing EEG Sensing*  
Zhen Ren, Xin Qi, **Gang Zhou**, Haining Wang  
**[IEEE IoT'14]** IEEE Internet of Things Journal, pages 243-254, 2014.

29. *Providing Reliable and Real-time Delivery in the Presence of Body Shadowing in Breadcrumb Systems*  
Hengchang Liu, Pan Hui, Zhiheng Xie, Jingyuan Li, David Siu, **Gang Zhou**, Liusheng Huang, John A. Stankovic  
**[ACM TECS'14] ACM Transactions in Embedded Computing Systems**, pages 1-24, 2014
30. *Typed VoIP Silence Prediction for Smartphone Energy Savings*  
Conner Kasten, **Gang Zhou**  
**[Springer WPC'14] Springer Wireless Personal Communications**, pages 1959-1973, 2014
31. *A Measurement-based Prioritization Scheme for Smartphone Applications*  
Yantao Li, **Gang Zhou**, George Ruddy, Bruce Cutler  
**[Springer WPC'14] Springer Wireless Personal Communications**, pages 333-346, 2014
32. *An Adaptive Backoff Algorithm for Multi-channel CSMA in Wireless Sensor Networks*  
Yantao Li, **Gang Zhou**, Nan Zheng, Liang Hong  
**[Springer NCA'14] Springer Neural Computing and Applications**, pages 1845–1851, 2014
33. *Discrete-time Markov Model for Wireless Link Burstiness Simulations*  
Yantao Li, Daniel Graham, **Gang Zhou**, Xin Qi, Shaojiang Deng, Di Xiao  
**[Springer WPC'13] Springer Wireless Personal Communications**, pages 987–1004, 2013,
34. *Improvement and Performance Analysis of a Novel Hash Function based on Chaotic Neural Network*  
Yantao Li, Di Xiao, Shaojiang Deng, **Gang Zhou**  
**[Springer NCA'13] Springer Neural Computing and Applications**, pages 391-402, 2013
35. *Communication Energy Modeling and Optimization through Joint Packet Size Analysis of BSN and WiFi Networks*  
Yantao Li, Xin Qi, Matthew Keally, Zhen Ren, **Gang Zhou**, Di Xiao, Shaojiang Deng  
**[IEEE TPDS] IEEE Transactions on Parallel and Distributed Systems**, pages 1741 - 1751, 2013
36. *Achieving Real-Time Target Tracking Using Wireless Sensor Networks*  
Tian He, Pascal A. Vicaire, Ting Yan, Liqian Luo, Lin Gu, **Gang Zhou**, Radu Stoleru, Qing Cao, John A. Stankovic, Tarek Abdelzaher  
**[ACM TECS] ACM Transactions in Embedded Computing Systems**, pages 1-37, 2011
37. *Adaptive and Radio-Agnostic QoS for Body Sensor Networks*  
**Gang Zhou**, Qiang Li, Jingyuan Li, Yafeng Wu, Shan Lin, Jian Lu, Chieh-Yih Wan, Mark D. Yarvis, John A. Stankovic  
**[ACM TECS'11] ACM Transactions in Embedded Computing Systems**, pages 1-34, November 2011
38. *A Self-Adaptive Spectrum Management Middleware for Wireless Sensor Networks*  
Robert Thompson, **Gang Zhou**, Lei Lu, Sudha Krishnamurthy, Hover Dong, Xin Qi, Yantao Li, Matthew Keally, Zhen Ren  
**[Springer WPC'11] Springer Wireless Personal Communications**, pages 131-151, November 2011
39. *Continuous Location Dependent Queries in Mobile Wireless Sensor Networks*  
Liang Hong, **Gang Zhou**, Bo Liu, Sang Son  
**[Springer WPC'11] Springer Wireless Personal Communications**, pages 153-173, November 2011
40. *Parallel Hash Function Construction Based on Chaotic Maps with Changeable Parameters*  
Yantao Li, Di Xiao, Shaojiang Deng, Qi Han, **Gang Zhou**  
**[Springer NCA'11] Springer Neural Computing and Applications**, pages 1305-1312, February 2011



41. *AdaSynch: A General Adaptive Clock Synchronization Scheme Based on Kalman Filter for WSNs*  
Qiang Liu, Xue Liu, Jinglun Zhou, **Gang Zhou**, Guang Jin, Quan Sun, Min Xi  
**[Springer WPC'10] Springer Wireless Personal Communications**, pages 217-239, August 2010
42. *A Multifrequency MAC Specially Designed for Wireless Sensor Network Applications*  
**Gang Zhou**, Yafeng Wu, Ting Yan, Tian He, Chengdu Huang, John A. Stankovic, Tarek F. Abdelzaher  
**[ACM TECS'10] ACM Transactions in Embedded Computing Systems**, pages 1-41, March 2010
43. *Achieving Long-Term Surveillance in VigilNet*  
Pascal Vicaire, Tian He, Qing Cao, Ting Yan, **Gang Zhou**, Lin Gu, Liqian Luo, Radu Stoleru, John A. Stankovic, Tarek F. Abdelzaher  
**[ACM TOSN'09] ACM Transactions on Sensor Networks**, pages 1-39, February 2009
44. *Models and Solutions for Radio Irregularity in Wireless Sensor Networks*  
**Gang Zhou**, Tian He, Sudha Krishnamurthy, John A. Stankovic  
**[ACM TOSN'06] ACM Transactions on Sensor Networks**, pages 221-262, May 2006  
**Material for multiple courses, including CSM213B/EEM202B, Summer 2008, University of California, Los Angeles**
45. *VigilNet: An Integrated Sensor Network System for Energy-Efficient Surveillance*  
Tian He, Sudha Krishnamurthy, Liqian Luo, Ting Yan, Radu Stoleru, **Gang Zhou**, Qing Cao, Pascal Vicaire, John A. Stankovic, Tarek F. Abdelzaher, Jonathan Hui, Bruce Krogh  
**[ACM TOSN'06] ACM Transactions on Sensor Networks**, pages 1-38, February 2006  
**Material for multiple courses, including CS294-11/CS298-41, Fall 2005, University of California, Berkeley**

#### **Refereed Conference Publications**

46. *SignFi: Sign Language Recognition using WiFi*  
Yongsen Ma, **Gang Zhou**, Shuangquan Wang, Hongyang Zhao, Woosub Jung  
**[ACM Ubicomp'18] ACM International Joint Conference on Pervasive and Ubiquitous Computing**, Singapore, 2018
47. *CADET: Investigating a Collaborative and Distributed Entropy Transfer Protocol*  
Kyle Wallace, **Gang Zhou**, Kun Sun  
**[IEEE ICDCS'18] The 38<sup>th</sup> IEEE International Conference on Distributed Computing Systems**, Austria, 2018
48. *Eating Detection and Chews Counting through Sensing Mastication Muscle Contraction*  
Shuangquan Wang, **Gang Zhou**, Yongsen Ma, Lisha Hu, Zhenyu Chen, Yiqiang Chen, Hongyang Zhao, Woosub Jung  
**[IEEE/ACM CHASE'18] Proceedings of The 3<sup>rd</sup> IEEE/ACM Conference on Connected Health: Applications, Systems and Engineering Technologies**, Washington, D. C., 2018
49. *MobiGesture: Mobility-Aware Hand Gesture Recognition for Healthcare*  
Hongyang Zhao, Yongsen Ma, Shuangquan Wang, Amanda Watson, **Gang Zhou**  
**[IEEE/ACM CHASE'18] Proceedings of The 3<sup>rd</sup> IEEE/ACM Conference on Connected Health: Applications, Systems and Engineering Technologies**, Washington, D. C., 2018
50. *A Video Optimization Framework for Tracking Teachers in the Classroom*  
Lele Ma, Yantao Li, **Gang Zhou**  
**[ACSIC SOFC] The Second ACSIC Symposium on Frontiers in Computing**, Dallas, 2018
51. *Gesture-enabled Remote Control for Healthcare*  
Hongyang Zhao, Shuangquan Wang, **Gang Zhou**, Daqing Zhang

- [IEEE/ACM CHASE'17]** Proceedings of The 2<sup>nd</sup> IEEE/ACM Conference on Connected Health: Applications, Systems and Engineering Technologies, pages 392-401, Philadelphia, 2017
52. *EliMO: Eliminating Channel Feedback from MIMO*  
Yongsen Ma, **Gang Zhou**, Shan Lin  
**[IEEE SMARTCOMP'17] (Invited Paper)** The 3<sup>rd</sup> IEEE International Conference on Smart Computing, Hong Kong, 2017
53. *iRAM: Sensing Memory Needs of My Smartphone*  
David Nguyen, Hongyang Zhao, **Gang Zhou**, Ge Peng, Guoliang Xing, Xin Qi  
**[IEEE WiMob'16]** The 12<sup>th</sup> IEEE International Conference on Wireless and Mobile Computing, Networking and Communications, New York, 2016
54. *HIDE: AP-assisted Broadcast Traffic Management to Save Smartphone Energy*  
Ge Peng, **Gang Zhou**, David Nguyen, Xin Qi, Shan Lin  
**[IEEE ICDCS'16]** The 36<sup>th</sup> IEEE International Conference on Distributed Computing Systems, Nara, Japan, 2016
55. *RunBuddy: A Smartphone System for Running Rhythm Monitoring*  
Tian Hao, Guoliang Xing, **Gang Zhou**  
**[ACM Ubicomp'15]** The 17<sup>th</sup> ACM International Conference on Ubiquitous Computing, pages 133-144, Osaka, Japan, 2015  
**(Third Best Mobile App in The ACM MobiCom Second Mobile App Competition)**
56. *Reducing Smartphone Application Delay through Read/Write Isolation*  
David T. Nguyen, **Gang Zhou**, Guoliang Xing, Xin Qi, Zijiang Hao, Ge Peng, Qing Yang  
**[ACM MobiSys'15]** The Thirteen International Conference on Mobile Systems, Applications and Services, Florence, Italy, 2015
57. *LBVC: Towards Low-bandwidth Video Chat on Smartphones*  
Xin Qi, Qing Yang, David Nguyen, **Gang Zhou**, Ge Peng  
**[ACM MMSys'15]** The ACM Multimedia Systems Conference, Portland, Oregon, 2015
58. *All or None? The Dilemma of Handling WiFi Broadcast Traffic in Smartphone Suspend Mode*  
Ge Peng, **Gang Zhou**, David Nguyen, Xin Qi  
**[IEEE INFOCOM'15]** The 34<sup>th</sup> Annual IEEE International Conference on Computer Communications, Hong Kong, 2015
59. *A Theoretical Analysis of Path Loss Based Activity Recognition*  
Iberedem Ekure, Shuangquan Wang, **Gang Zhou**  
**[IEEE MASS'14]** The 11<sup>th</sup> IEEE International Conference on Mobile Ad hoc and Sensor Systems, Philadelphia, Pennsylvania, 2014
60. *TRACK: Unleash Exposed Terminals in Enterprise WLANs*  
Jun Huang, Guoliang Xing, **Gang Zhou**  
**[IEEE INFOCOM'14]** The 33<sup>rd</sup> Annual IEEE International Conference on Computer Communications, Toronto, ON, Canada, 2014
61. *iSleep: Unobtrusive Sleep Quality Monitoring using Smartphones*  
Tian Hao, Guoliang Xing, **Gang Zhou**  
**[ACM Sensys'13]** Proceedings of the 11th ACM Conference on Embedded Networked Sensor Systems, pages 1-14, Rome, Italy, 2013 (17% Acceptance Rate)  
**(Third Best Mobile App in The ACM MobiCom First Mobile App Competition)**
62. *Storage-aware Smartphone Energy Savings*  
David T. Nguyen, Gang Zhou, Xin Qi, Ge Peng, Jianing Zhao, Tommy Nguyen, Duy Le

- [ACM Ubicomp'13]** The 2013 ACM International Joint Conference on Pervasive and Ubiquitous Computing, Zurich, Switzerland, 2013  
**(United States Patent # US 9026819B2: Method of Conserving Power Based on Electronic Device's I/O Pattern)**
63. *Remora: Sensing Resource Sharing Among Smartphone-based Body Sensor Networks*  
Matthew Keally, Gang Zhou, Guoliang Xing, Jianxin Wu  
**[ACM/IEEE IWQoS'13]** ACM/IEEE International Symposium on Quality of Service, pages 1-10, 2013
64. *AdaSense: Adapting Sampling Rates for Activity Recognition in Body Sensor Networks*  
Xin Qi, Matthew Keally, **Gang Zhou**, Yantao Li, Zhen Ren  
**[IEEE RTAS'13]** Proceedings of the 19<sup>th</sup> IEEE Real-Time and Embedded Technology and Applications Symposium, Philadelphia, PA, 2013
65. *RadioSense: Exploiting Wireless Communication Patterns for Body Sensor Network Activity Recognition*  
Xin Qi, **Gang Zhou**, Yantao Li, Ge Peng  
**[IEEE RTSS'12]** Proceedings of the 33<sup>rd</sup> IEEE Real-Time Systems Symposium, accepted, San Juan, Puerto Rico, December 2012
66. *SAPSM: Smart Adaptive 802.11 PSM for Smartphones*  
Andrew Pyles, Xin Qi, **Gang Zhou**, Matthew Keally, Xue Liu  
**[ACM Ubicomp'12]** Proceedings of the 14<sup>th</sup> ACM International Conference on Ubiquitous Computing, accepted, Pittsburg, PA, September 2012 (19.3% Acceptance Rate)  
**(United State Patent US 20140064171 A1: Method for Conserving Power on Battery-powered Communication Devices)**
67. *Towards Energy Optimization Using Joint Data Rate Adaptation for BSN and WiFi Networks*  
Yantao Li, Ge Peng, Xin Qi, **Gang Zhou**, Di Xiao, Shaojiang Deng, Hongyu Huang  
**[IEEE NAS'12]** Proceedings of the 7<sup>th</sup> IEEE International Conference on Networking, Architecture, and Storage, pages 1-8, Xiamen, China, June 2012
68. *PBN: Towards Practical Activity Recognition Using Smartphone-Based Body Sensor Networks*  
Matthew Keally, **Gang Zhou**, Guoliang Xing, Jianxin Wu, Andrew Pyles  
**[ACM SenSys'11]** Proceedings of the 9<sup>th</sup> ACM Conference on Embedded Networked Sensor Systems, pages 246-259, Seattle, WA, November 2011 (19.5% Acceptance Rate)  
**Material for multiple courses, including CSCI 815, Fall 2011, University of South Carolina**
69. *SiFi: Exploiting VOIP Silence for WiFi Energy Savings in Smart Phones*  
Andrew Pyles, Zhen Ren, **Gang Zhou**, Xue Liu  
**[ACM Ubicomp'11]** Proceedings of the 13<sup>th</sup> ACM International Conference on Ubiquitous Computing, pages 325-334, Beijing, China, September 2011  
**Material for multiple courses, including CIS 4350, Fall 2011, Temple University**  
**(United States Patents #US 8488505 B2: Method/system for conserving resources during conversation over wireless network transport media)**
70. *Exploiting Sensing Diversity for Confident Sensing in Wireless Sensor Networks*  
Matthew Keally, **Gang Zhou**, Guoliang Xing, Jianxin Wu  
**[IEEE INFOCOM'11]** Proceedings of the 30<sup>th</sup> IEEE International Conference on Computer Communications, pages 1719-1727, Shanghai, China, March 2011 (15.9% Acceptance Rate)  
**Material for Ad Hoc Networks, Fall 2011, Shanghai Jiao Tong University, China**
71. *BodyT2: Throughput and Time Delay Performance Assurance for Heterogeneous BSNs*  
Zhen Ren, **Gang Zhou**, Andrew Pyles, Matthew Keally, Weizhen Mao, Haining Wang  
**[IEEE INFOCOM'11]** Proceedings of the 30<sup>th</sup> IEEE International Conference on Computer Communications, pages 2750-2758, Shanghai, China, March 2011 (15.9% Acceptance Rate)

**Material for multiple courses, including DM805, Spring 2011, University of Southern Denmark, Denmark**

72. *Energy Modeling and Optimization through Joint Packet Size Analysis of BSN and WiFi Networks*  
Yantao Li, Xin Qi, Zhen Ren, **Gang Zhou**, Di Xiao, Shaojiang Deng  
**[IEEE IPCCC'11]** Proceedings of the 30<sup>th</sup> IEEE International Performance Computing and Communications Conference, pages 1-8, Orlando, FL, November 2011
73. *Beyond Co-existence: Exploring WiFi White Space for ZigBee Performance Assurance*  
Jun Huang, Guoliang Xing, **Gang Zhou**  
**[IEEE ICNP'10]** Proceedings of the 18<sup>th</sup> IEEE International Conference on Network Protocols, pages 305-314, Kyoto, Japan, October 2010 (18% Acceptance Rate)  
**(Best Paper Award, selected from 170 submissions)**
74. *Watchdog: Confident Event Detection in Heterogeneous Sensor Networks*  
Matt Keally, **Gang Zhou**, Guoliang Xing  
**[IEEE RTAS'10]** Proceedings of the 16th IEEE Real-Time and Embedded Technology and Applications Symposium, pages 279-288, Stockholm, Sweden, April 2010
75. *ACR: Active Collision Recovery in Dense Wireless Sensor Networks*  
Yafeng Wu, **Gang Zhou**, John A. Stankovic  
**[IEEE INFOCOM'10]** Proceedings of the 29<sup>th</sup> IEEE International Conference on Computer Communications, pages 911-919, San Diego, CA, March 2010 (17.5% Acceptance Rate)  
**Material for EKE544, 2011, Korean University**
76. *Multi-channel Interference Measurement and Modeling in Low-Power Wireless Networks*  
Guoliang Xing, Mo Sha, Jun Huang, **Gang Zhou**, Xiaorui Wang, Shucheng Liu  
**[IEEE RTSS'09]** Proceedings of the 30<sup>th</sup> IEEE Real-Time Systems Symposium, pages 248-257, Washington, D.C., December 2009 (12% Acceptance Rate for the Wireless Sensor Networks track)
77. *Towards Stable Network Performance in Wireless Sensor Networks*  
Shan Lin, **Gang Zhou**, Kamin Whitehouse, Yafeng Wu, John A. Stankovic, Tian He  
**[IEEE RTSS'09]** Proceedings of the 30<sup>th</sup> IEEE Real-Time Systems Symposium, pages 227-237, Washington, D.C., December 2009 (12% Acceptance Rate for the Wireless Sensor Networks track)
78. *PLL Based Time Synchronization in Wireless Sensor Networks*  
**Gang Zhou**, Sachin Shetty, George Simmons, Min Song  
**[IEEE RTCSA'09]** Proceedings of the 15<sup>th</sup> IEEE International Conference on Embedded and Real-Time Computing Systems and Applications, pages 51-56, Beijing, China, August 2009
79. *Sidewinder: A Predictive Data Forwarding Protocol for Mobile Wireless Sensor Networks*  
Matthew Keally, **Gang Zhou**, Guoliang Xing  
**[IEEE SECON'09]** Proceedings of the 5<sup>th</sup> Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks, pages 538-546, Rome, Italy, June 2009 (18.8% Acceptance Rate)
80. *SAS: Self-Adaptive Spectrum Management for Wireless Sensor Networks*  
**Gang Zhou**, Lei Lu, Sudha Krishnamurthy, Matthew Keally, Zhen Ren  
**[IEEE ICCCN'09]** Proceedings of the 18<sup>th</sup> International Conference on Computer Communications and Networks, pages 1-6, San Francisco, CA, August 2009
81. *Traffic-Aware Channel Assignment in Wireless Sensor Networks*  
Yafeng Wu, Matthew Keally, **Gang Zhou**, Weizhen Mao  
**[WASA'09]** Proceedings of the 4<sup>th</sup> International Conference on Wireless Algorithms, Systems, and Applications, pages 479-488, Boston, MA, August 2009

82. *C-MAC: Model-driven Concurrent Medium Access Control for Wireless Sensor Network*  
 Mo Sha, Guoliang Xing, **Gang Zhou**, Shucheng Liu, Xiaorui Wang  
**[IEEE INFOCOM'09]** Proceedings of the 28<sup>th</sup> IEEE International Conference on Computer Communications, pages 1845-1853, Rio de Janeiro, Brazil, March 2009 (19.6% Acceptance Rate)
83. *Accurate, Fast Fall Detection Using Gyroscopes and Accelerometer-Derived Posture Information*  
 Qiang Li, John A. Stankovic, Mark Hanson, Adam Barth, John Lach, **Gang Zhou**  
**[BSN'09]** Proceedings of the 6<sup>th</sup> International Workshop on Wearable and Implantable Body Sensor Networks, pages 138-143, Berkeley, CA, June 2009
84. *Performance Analysis of Group Based Detection for Sparse Sensor Networks*  
 Jingbin Zhang, **Gang Zhou**, Sang H. Son, John A. Stankovic, Kamin Whitehouse  
**[IEEE ICDCS'08]** Proceedings of the 28<sup>th</sup> IEEE International Conference on Distributed Computing Systems, pages 111-122, Beijing, China, June 2008 (16% Acceptance Rate)
85. *BodyQoS: Adaptive and Radio-Agnostic QoS for Body Sensor Networks*  
**Gang Zhou**, Jian Lu, Chieh-Yih Wan, Mark D. Yarvis, John A. Stankovic  
**[IEEE INFOCOM'08]** Proceedings of the 27<sup>th</sup> IEEE International Conference on Computer Communications, pages 565-573, Phoenix, AZ, April 2008 (21% Acceptance Rate)
86. *DEEJAM: Defeating Energy-Efficient Jamming in IEEE 802.15.4-based Wireless Networks*  
 Anthony D. Wood, John A. Stankovic, **Gang Zhou**  
**[IEEE SECON'07]** Proceedings of the 3<sup>rd</sup> Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks, pages 60-69, San Diego, California, June 2007  
**Material for multiple courses, including ITIS 6010/8010, Fall 2011, University of North Carolina at Charlotte**
87. *TMMAC: An Energy Efficient Multi-Channel MAC Protocol for Ad Hoc Networks*  
 Jingbin Zhang, **Gang Zhou**, Chengdu Huang, Ting Yan, Sang H. Son, John A. Stankovic  
**[IEEE ICC'07]** Proceedings of the 2007 IEEE International Conference on Communications, pages 3554-3561, Glasgow, Scotland, June 2007
88. *MMSN: Multi-Frequency Media Access Control for Wireless Sensor Networks*  
**Gang Zhou**, Chengdu Huang, Ting Yan, Tian He, John A. Stankovic, Tarek F. Abdelzaher  
**[IEEE INFOCOM'06]** Proceedings of the 25<sup>th</sup> IEEE International Conference on Computer Communications, pages 1-12, Barcelona, Spain, April 2006 (18% Acceptance Rate)  
**Material for multiple courses, including EECS290Q, Spring 2007, University of California, Berkeley**
89. *Achieving Real-Time Target Tracking Using Wireless Sensor Networks*  
 Tian He, Pascal A. Vicaire, Ting Yan, Liqian Luo, Lin Gu, **Gang Zhou**, Radu Stoleru, Qing Cao, John A. Stankovic, Tarek F. Abdelzaher  
**[IEEE RTAS'06]** Proceedings of the 12<sup>th</sup> IEEE Real-Time and Embedded Technology and Applications Symposium, pages 37-48, San Jose, California, April 2006  
**(Best Paper Finalist of RTAS'06)**
90. *Achieving Long-Term Surveillance in VigilNet*  
 Tian He, Pascal Vicaire, Ting Yan, Qing Cao, **Gang Zhou**, Lin Gu, Liqian Luo, Radu Stoleru, John A. Stankovic, Tarek F. Abdelzaher  
**[IEEE INFOCOM'06]** Proceedings of the 25<sup>th</sup> IEEE International Conference on Computer Communications, pages 1-12, Barcelona, Spain, April 2006 (18% Acceptance Rate)
91. *ATPC: Adaptive Transmission Power Control for Wireless Sensor Networks*  
 Shan Lin, Jingbin Zhang, **Gang Zhou**, Lin Gu, Tian He, John A. Stankovic  
**[ACM SenSys'06]** Proceedings of the 4<sup>th</sup> ACM Conference on Embedded Networked Sensor Systems, pages 223-236, Boulder, Colorado, November 2006

**Material for multiple courses, including CSC8223, Fall 2008, Georgia State University**

92. *Achieving Repeatability of Asynchronous Events in Wireless Sensor Networks with EnviroLog*  
Liqian Luo, Tian He, **Gang Zhou**, Lin Gu, Tarek A. Abdelzaher, John A. Stankovic  
**[IEEE INFOCOM'06]** Proceedings of the 25<sup>th</sup> IEEE International Conference on Computer Communications, pages 1-14, Barcelona, Spain, April 2006 (18% Acceptance Rate)  
**Material for multiple courses, including CS862, Fall 2006, University of Virginia**
93. *SeeMote: In-Site Visualization and Logging Device for Wireless Sensor Networks*  
Leo Selavo, **Gang Zhou**, John A. Stankovic  
**[IEEE BASENETS'06] (Invited Paper)** Proceedings of the 3<sup>rd</sup> IEEE/CreateNet International Workshop on Broadband Advanced Sensor Networks, pages 1-9, San Jose, CA, October 2006
94. *RESTORE: A Real-time Event Correlation and Storage Service for Sensor Networks*  
Sudha Krishnamurthy, Tian He, **Gang Zhou**, John A. Stankovic, Sang H. Son  
**[INSS'06]** Proceedings of 3<sup>rd</sup> International Workshop on Networked Sensing Systems, pages 1-9, Chicago, Illinois, May 2006
95. *RID: Radio Interference Detection in Wireless Sensor Networks*  
**Gang Zhou**, Tian He, John A. Stankovic, Tarek F. Abdelzaher  
**[IEEE INFOCOM'05]** Proceedings of the 24<sup>th</sup> IEEE International Conference on Computer Communications, pages 891-901, Miami, Florida, March 2005 (17% Acceptance Rate)  
**Material for multiple courses, including CS598 HL, Fall 2005, University of Illinois at Urbana-Champaign**
96. *An Overview of the VigilNet Architecture*  
Tian He, Liqian Luo, Ting Yan, Lin Gu, Qing Cao, **Gang Zhou**, Radu Stoleru, Pascal Vicaire, Qiuhua Cao, John A. Stankovic, Sang H. Son, Tarek F. Abdelzaher  
**[IEEE RTCSA'05]** Proceedings of the 11<sup>th</sup> IEEE International Conference on Embedded and Real-Time Computing Systems and Applications, pages 109-114, Hong Kong, August 2005  
( **Invited Paper**)
97. *Load Balancing in Bounded-Latency Content Distribution*  
Chengdu Huang, **Gang Zhou**, Tarek F. Abdelzaher, Sang H. Son, John A. Stankovic  
**[IEEE RTSS'05]** Proceedings of the 25<sup>th</sup> IEEE Real-Time Systems Symposium, pages 50-61, Miami, Florida, December 2005
98. *Impact of Radio Irregularity on Wireless Sensor Networks*  
**Gang Zhou**, Tian He, Sudha Krishnamurthy, John A. Stankovic  
**[ACM MobiSys'04]** Proceedings of the 2<sup>nd</sup> ACM International Conference on Mobile Systems, Applications, and Services, pages 125-138, Boston, Massachusetts, June 2004 (13% Acceptance Rate)  
**Material for multiple courses, including MAS961, Fall 2005, Massachusetts Institute of Technology**

**Refereed Workshop/Demo/Poster/White papers**

1. *CrowdWatch: Pedestrian Safety Assistance with Mobile Crowd Sensing*  
Qianru Wang, Bin Guo, Ge Peng, **Gang Zhou**, Zhiwen Yu  
**[ACM Ubicomp'16]** The 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing, (Poster), Heidelberg, Germany
2. *Microsleep Prediction Using an EKG Capable Heart Rate Monitor*  
Amanda Watson, **Gang Zhou**  
**[IEEE CHASE'16]** The First IEEE Conference on Connected Health: Applications, Systems and Engineering Technologies, (Poster), Washington DC, USA
3. *CARE: Chewing Activity Recognition Using Noninvasive Single Axis Accelerometer*

- Shuangquan Wang, **Gang Zhou**, Lisa Hu, Zhenyu Chen, Yiqiang Chen  
**[ACM Ubicomp'15]** The 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing, Osaka, Japan, 2015
4. *Poster: A Continuous and Noninvasive user Authentication System for Google Glass*  
Ge Peng, David T. Nguyen, **Gang Zhou**, Shuangquan Wang  
**[ACM MobiSys'15]** The 13rd International Conference on Mobile Systems, Applications, and Services, Florence, Italy, 2015
  5. *Poster Abstract: A Multimodal Data Set for Evaluating Continuous Authentication Performance in Smartphones*  
Qing Yang, Ge Peng, Xin Qi, David T. Nguyen, **Gang Zhou**, Zdenka Sitova, Paolo Gasti, Kiran S. Balagani  
**[ACM SenSys'14]** The 12th ACM Conference on Embedded Networked Sensor Systems, Memphis, TN, 2014
  6. *Smartphone Application Launch with Smarter Scheduling*  
David T. Nguyen, Ge Peng, Daniel Graham, **Gang Zhou**, Guoliang Xing  
**[ACM Ubicomp'14]** The 2014 ACM International Joint Conference on Pervasive and Ubiquitous Computing, Seattle, 2014
  7. *Study of Storage Impact on Smartphone Application Delay*  
David T. Nguyen, Gang Zhou, Guoliang Xing  
**[ACM MobiSys'14]** The 12th International Conference on Mobile Systems, Applications, and Services (Video), Bretton Woods, NH, 2014
  8. *Poster: Towards Reducing Smartphone Application Delay through Read/Write Isolation*  
David T. Nguyen, **Gang Zhou**, Guoliang Xing  
**[ACM MobiSys'14]** The 12th International Conference on Mobile Systems, Applications, and Services (Poster), Bretton Woods, NH, 2014
  9. *Context-aware Frame Rate Adaption for Video Chats on Smartphones*  
Xin Qi, Qing Yang, David T. Nguyen, **Gang Zhou**  
**[ACM Ubicomp'13]** The 2013 ACM International Joint Conference on Pervasive and Ubiquitous Computing, Zurich, Switzerland, 2013
  10. *Confident Sensor Collaboration with Machine Learning*  
**Gang Zhou**  
**[NSF PeCS'11]** NSF Workshop on Pervasive Computing at Scale (White Paper), pages 1-2, January 2011
  11. *Accurate, Fast Fall Detection Method Using Posture and Context Information*  
Qiang Li, **Gang Zhou**, John A. Stankovic  
**[ACM SenSys'08]** Proceedings of the 6<sup>th</sup> ACM Conference on Embedded Networked Sensor Systems (Poster Abstract), pages 443-444, Raleigh, NC, November 2008
  12. *Achieving Stable Network Performance for Wireless Sensor Networks*  
Shan Lin, **Gang Zhou**, Yafeng Wu, Kamin Whitehouse, John A. Stankovic, Tian He  
**[ACM SenSys'08]** Proceedings of the 6<sup>th</sup> ACM Conference on Embedded Networked Sensor Systems, (Poster Abstract), pages 453-454, Raleigh, NC, November 2008
  13. *Aggregator-Centric QoS for Body Sensor Networks*  
**Gang Zhou**, Chieh-Yih Wan, Mark D. Yarvis, John A. Stankovic  
**[ACM/IEEE IPSN'07]** Proceedings of the 2007 ACM/IEEE International Conference on Information Processing in Sensor Networks (Demo Abstract), pages 539-540, Cambridge, MA, April 2007
  14. *Crowded Spectrum in Wireless Sensor Networks*  
**Gang Zhou**, John A. Stankovic, Sang F. Son

**[IEEE EmNets'06]** Proceedings of the 3<sup>rd</sup> Workshop on Embedded Networked Sensors, pages 1-5, Cambridge, MA, May 2006

15. *Ears on the Ground: Acoustic Streaming Service in Wireless Sensor Networks*

Jingbin Zhang, **Gang Zhou**, Sang H. Son, John A. Stankovic

**[ACM/IEEE IPSN'06]** Proceedings of the 2006 ACM/IEEE International Conference on Information Processing in Sensor Networks, pages 1-2, Nashville, Tennessee, April 2006

**Invited Talks**

1. "Pushing Down User Information to Enhance Smart Device System Design," Computer Science Department, City University of Honk Kong, 2017 (**Invited Colloquium Speaker**)
2. "Pushing Down User Information to Enhance Smart Device System Design," Department of Computing, Honk Kong Polytechnic University, 2017 (**Invited Colloquium Speaker**)
3. "Pushing Down User Information to Enhance Smart Device System Design," The First International Workshop on Mobile and Pervasive Internet of Things (PerIoT'17), Hawaii, 2017 (**Invited Keynote Speaker**)
4. "Pushing Down User Information to Enhance Smart Device System Design," Center for Cybersecurity Education and Research, Old Dominion University, 2017 (**Invited Colloquium Speaker**)
5. "Pushing Down User Information to Enhance Smart Device System Design," **Invited IEEE IES/CIS Chapter Seminar Speaker** in Raleigh, North Carolina State University, 2017
6. "Reducing Smartphone Application Delay & Energy Consumption through Storage I/O Optimization," Institute of Software, Beijing University, 2016 (**Invited Colloquium Speaker**)
7. "Reducing Smartphone Application Delay through Read/Write Isolation," Institute of Computing Technology, Chinese Academy of Science, 2015 (**Invited Colloquium Speaker**)
8. "Reducing Smartphone Application Delay & Energy Consumption through Storage I/O Optimization," School of Computer Science and Technology, Shandong University, 2015 (**Invited Colloquium Speaker**)
9. "Reducing Smartphone Application Delay through Read/Write Isolation," College of Computer and Information Science, Southwest University, 2015 (**Invited Colloquium Speaker**)
10. "Pushing Down Human Information to Enhance Smartphone MAC Design," The 28<sup>th</sup> IEEE Annual Computer Communications Workshop, 2014 (**Invited Panel Speaker**)
11. "Smartphone-centered Body Networks," College of Computer and Information Science, Southwest University, 2014 (**Invited Colloquium Speaker**)
12. "Smartphone Energy Savings through Learning and Traffic Analysis," Department of Computer Science and Engineering, University of Arkansas, 2014 (**Invited Colloquium Speaker**)
13. "Smartphone Energy Savings through Learning and Traffic Analysis," School of Computer Science and Technology, University of Science and Technology of China, 2013 (**Invited Colloquium Speaker**)
14. "Smartphone Energy Savings through Learning and Traffic Analysis," Computer Science Department, Wuhan University, 2013 (**Invited Colloquium Speaker**)
15. "Smartphone Energy Savings through Learning and Traffic Analysis," Computer Science Department, Wuhan University of Technology, 2013 (**Invited Colloquium Speaker**)



16. "Smartphone Energy Savings through Learning and Traffic Analysis," College of Computer and Information Science, Southwest University, 2013 **(Invited Colloquium Speaker)**
17. "Smartphone Energy Savings through Learning and Traffic Analysis," Computer Science Department, Nanjing University, 2013 **(Invited Colloquium Speaker)**
18. "Smartphone Energy Savings through Learning and Traffic Analysis," College of Computer Science, Zhejiang University, 2013 **(Invited Colloquium Speaker)**
19. "Smartphone Energy Savings through Learning and Traffic Analysis," Institute of Computing Technology, Chinese Academy of Science, 2013 **(Invited Colloquium Speaker)**
20. "Network Traffic Aware Smartphone Energy Savings," Department of Electrical and Computer Engineering, Old Dominion University, 2013 **(Invited Speaker for Graduate Seminar Series)**
21. "Achieving Confident and Practical Body Sensor Networks," Information System Department, University of Maryland Baltimore County, 2012 **(Invited Colloquium Speaker)**
22. "Towards Achieving Confident Wireless Sensor Networks," Department of Computer and Information Science, Temple University, 2011 **(Invited Colloquium Speaker)**
23. "Towards Creating Confident Wireless Sensor Networks," Department of Computer and Information Sciences, University of Delaware, 2011 **(Invited CIS SIGNET Speaker)**
24. "Towards Creating Confident Wireless Sensor Networks," Institute of Computing Technology, Chinese Academy of Science, 2011 **(Invited Colloquium Speaker)**
25. "Providing Sensing and Communication Confidence for Performance-critical Wireless Sensor Networks," Computer Science Department, Virginia Commonwealth University, 2010 **(Invited Speaker for Fall 2010 Seminar Series)**
26. "Quality of Service for Body Sensor Networks," Nanjing University, 2009 **(Invited Colloquium Speaker)**
27. "Quality of Service for Body Sensor Networks," Sichuan University, 2009 **(Invited Colloquium Speaker)**
28. "Achieving Reliable Data Collection During Emergency Response," Hampton Roads Technology Council Sensors World, Williamsburg, VA, 2007 **(Invited talk)**

#### **Conference Technical Program Committee Members**

1. TPC Member, [IEEE INFOCOM] IEEE International Conference on Computer Communications, 2009-2019
2. TPC Member, [IEEE ICDCS] IEEE International Conference on Distributed Computing Systems, 2010, 2015
3. TPC Member, [IEEE RTSS] IEEE Real-Time Systems Symposium 2010-2012
4. TPC Member, [IEEE RTAS] IEEE Real-Time and Embedded Technology and Applications Symposium, 2010
5. TPC Member, [IEEE PerCom] IEEE International Conference on Pervasive Computing and Communications, 2016
6. TPC Member, [IEEE/ACM CHASE] IEEE/ACM Conference on Connected Health: Applications, Systems and Engineering Technologies, 2016-2017
7. TPC Member, [IEEE IPDPS] IEEE International Parallel and Distributed Processing Symposium, 2008
8. TPC Member, [IEEE MASS] IEEE International Conference on Mobile Ad hoc and Sensor Systems 2013-2014
9. TPC Member, [IEEE/ACM IWQoS] IEEE/ACM International Symposium on Quality of Service 2013

10. TPC Member, [IEEE ICCCN] IEEE International Conference on Computer Communications and Networks, 2007-2017
11. TPC Member, [ICPP] International Conference on Parallel Processing, 2013-2015
12. TPC Member, [IEEE IPCCC] IEEE International Performance Computing and Communications Conference, 2010-2017
13. TPC Member, [IEEE ICPADS] IEEE International Conference on Parallel and Distributed Systems, 2015-2016
14. TPC Member, [BSN] International Conference on Body Sensor Networks, 2011, 2018
15. TPC Member, [BodyNets] International Conference on Body Area Networks, 2011, 2013
16. TPC Member, [IEEE EMC] IEEE International Conference on Embedded and Multimedia Computing, 2010
17. TPC Member, [IEEE NAS] IEEE International Conference on Networking, Architecture, and Storage, 2012-2015
18. TPC Member, [IEEE BigDataService] IEEE International Conference on Big Data Computing Service and Applications, 2015, 2017
19. TPC Member, [IEEE SUTC] IEEE International Conference on Sensor Networks, Ubiquitous, and Trustworthy Computing, 2010
20. TPC Member, [IEEE/IFIP EUC] IEEE/IFIP International Conference on Embedded and Ubiquitous Computing 2012-2013
21. TPC Member, [IEEE INSS] IEEE International Conference on Networked Sensing Systems 2009-2012
22. TPC Member, [IEEE CCECE] IEEE IEEE Canadian Conference on Electrical and Computer Engineering, 2009, 2014
23. TPC Member, [IEEE CollaborateCom] IEEE International Conference on Collaborative Computing: Networking, Applications and Worksharing, 2010
24. TPC Member, [IEEE CSCloud] IEEE International Conference on Cyber Security and Cloud Computing, 2015
25. TPC Member, [ACM MiseNet] ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems, 2015
26. TPC Member, [IEEE HealthCom] IEEE International Conference on E-health Networking, Applications & Services, 2015, 2017
27. TPC Member, [IEEE ICNC] IEEE International Conference on Computing, Networking and Communications, 2017-2018
28. TPC Member, [IEEE GI] IEEE Global Internet Symposium, 2015-2016
29. TPC Member, [IRADSN] International Symposium on Innovations and Real-time Applications of Distributed Sensor Networks, 2009
30. TPC Member, [S-Cube] International Conference on Sensor Systems and Software, 2014
31. TPC Member, [ICOT] International Conference on Orange Technologies, 2015
32. TPC Member, [Ubi-Health Tech] International Symposium on Future Information and Communication Technologies for Ubiquitous HealthCare, 2015
33. TPC Member, [WWASN] Workshop on Wireless Ad hoc and Sensor Networks, 2008-2011
34. TPC Member, The First International Workshop on Wireless Sensing Systems for Extreme Conditions, 2017

#### **Workshop Technical Program Committee Member**

1. TPC Member, [IEEE PerIoT] IEEE The Second International Workshop on Mobile and Pervasive Internet of Things, 2018
2. TPC Member, [IEEE CPNS] International workshop on cyber-Physical networking systems, 2011
3. TPC Member, [ACM MobileHealth] ACM International Workshop on Pervasive Wireless Healthcare, 2015
4. TPC Member, [IEEE PhoneCom] IEEE International Workshop on Sensing, Networking, and Computing with Smartphones, 2012
5. TPC Member, [ACM HeterSenet] ACM SIGMOBILE International Workshop on Integrated Heterogeneous Sensor Networks, 2008
6. TPC Member, [IEEE EmNets] IEEE Workshop on Embedded Networked Sensors, 2008

#### **Invited Reviewer for the Following Journals**

1. ACM Transactions on Sensor Networks, 2005-2016
2. IEEE Journal of Biomedical and Health Informatics, 2017
3. ACM IMWUT, 2017
4. ACM Transactions on Cyber-Physical Systems, 2017
5. ACM Transactions in Embedded Computing Systems, 2010
6. ACM Transactions on Computing Education, 2009
7. ACM Transactions on Multimedia, 2016
8. ACM SIGMETRICS Performance Evaluation Review, 2008-2009
9. IEEE/ACM Transactions on Networking, 2007, 2011-2013
10. IEEE Access, 2017
11. IEEE Transactions on Mobile Computing, 2006-2016
12. IEEE Transactions on Emerging Topics in Computing, 2013
13. IEEE Transactions on Cybernetics, 2014
14. IEEE Transactions on Wireless Communications, 2008-2009, 2011-2014
15. IEEE Transactions on Parallel and Distributed Systems, 2008-2010, 2013-2014
16. IEEE Transactions on Communications, 2012
17. IEEE Transactions on Vehicular Technology, 2006
18. IEEE Transactions on Instrumentation & Measurement, 2007-2008
19. IEEE Transactions on Industrial Informatics, 2009, 2011, 2015
20. IEEE Transactions on Computers 2007, 2011
21. IEEE Journal on Selected Areas in Communications, 2008
22. IEEE Embedded Systems Letters, 2006, 2010
23. IEEE Communications Letters, 2010
24. IEEE Communications Magazine, 2014
25. IEEE Journal of Communications and Networks, 2007
26. ACM/Springer Personal and Ubiquitous Computing Journal, 2011
27. Springer Wireless Personal Communications, 2009
28. Springer Real-time Systems, 2009
29. Springer Personal and Ubiquitous Computing, 2014
30. Elsevier Computer Communications 2007, 2011-2013
31. Elsevier Journal of Parallel and Distributed Computing, 2013
32. Elsevier Ad Hoc Networks, 2007-2009
33. Elsevier Pervasive and Mobile Computing, 2011-2013, 2017
34. Elsevier Computer Networks, 2012-2013
35. Elsevier System Architecture 2012-2013
36. Elsevier Sustainable Computing, Informatics and Systems, 2012
37. IBM Journal of Research and Development, 2010
38. BCS (The British Computer Society) The Computer Journal, 2006
39. WILEY Wireless Communications and Mobile Computing, 2007, 2010-2011
40. EURASIP Journal on Embedded Systems, 2010
41. KSII Transactions on Internet and Information Systems, 2013
42. ETRI Journal, 2008
43. KICS Journal of Communications and Networks, 2007
44. International Journal of Distributed Sensor Networks, 2008
45. International Journal of Sensor Networks, 2007

**Invited Reviewer for the Following Conferences & Workshops**

1. ACM SenSys, 2007
2. ACM MobiSys 2013
3. ACM UbiComp, 2012, 2015
4. ACM/IEEE IPSN, 2005
5. IEEE/ACM CHASE, 2016
6. IEEE INFOCOM, 2009-2019
7. IEEE ICDCS, 2006, 2010, 2015
8. IEEE SECON, 2004
9. IEEE IWQoS, 2013
10. IEEE PerCom, 2017

11. IEEE RTSS, 2005, 2009-2012
12. IEEE RTAS, 2010
13. IEEE RTCSA, 2005-2006
14. IEEE IPDPS, 2008
15. IEEE IPCCC, 2010-2017
16. IEEE ICPADS, 2015-2016
17. IEEE HealthCom, 2015
18. ICPP 2013, 2014
19. BSN, 2011, 2018
20. BodyNets, 2011, 2013
21. IEEE NAS, 2011-2015
22. IEEE ICCCN, 2006-2017
23. IEEE GI, 2015, 2016
24. IEEE ICNC, 2017-2018
25. IEEE CPNS, 2011
26. IEEE BigDataService, 2015, 2017
27. IEEE ICC, 2007
28. IEEE Healthcom, 2015, 2017
29. IEEE WWASN, 2008-2010
30. IEEE CollaborateCom, 2010
31. IEEE INSS, 2009-2012
32. IEEE EmNets, 2008
33. IEEE/ACM CCGrid, 2014
34. IEEE EMC, 2010
35. IEEE SUTC, 2010
36. IEEE VTC, 2009
37. IEEE CCECE, 2009, 2014
38. IEEE ISCIT, 2007
39. IEEE/IFIP EUC 2012-2013
40. IEEE MASCOTS 2012
41. IEEE CScloud, 2015
42. ACM HeterSenet, 2008
43. ACM MobileHealth 2015
44. ACM MiseNet, 2015
45. IFIP NPC, 2010
46. Ubi-Health Tech, 2015
47. WTS, 2008
48. ICOT, 2015
49. IRADSN, 2009
50. EXPONWIRELESS, 2006

## **PROFESSIONAL SERVICE**

### **Service at William & Mary**

1. 2017~present, member of the International Studies Advisory Committee, William & Mary
2. 2017~present, member of the Parking Advisory Committee, William & Mary
3. 2016~present, member of the Admission Policy Advisory Committee, William & Mary
4. 2016, judge panelist, The 1<sup>st</sup> Annual Business Model Competition, Mason School of Business
5. 2016, judge panelist, William and Mary 3 Day Startup, Mason School of Business
6. 2017~present, member of the Plumeri Award Review Advisory Committee, Arts & Sciences
7. 2010~present, freshman/sophomore adviser for undergraduate students, Arts & Sciences

8. 2015~2017, member of the Committee on Graduate Studies, Arts & Sciences
9. 2011~2013, member of the A&S Graduate Awards Committee, Arts & Sciences
10. 2010, 2011, 2018, Session Chair for W&M Annual Graduate Research Symposium, Arts & Sciences

**Service in the Computer Science Department, William & Mary**

1. 2017~present, Chair of the Awards and Prizes Committee
2. 2015~2017, Graduate Program Director
3. 2015~2017, Chair of the Graduate Admissions Committee
4. 2012, 2014~2015, Chair of the Colloquium Committee
5. 2014~2017, member of the Faculty Recruiting Committee
6. 2013~present member of the Personnel Committee
7. 2011, member of the Colloquium Committee
8. 2010~present, member of the Graduate Curriculum Committee
9. 2009~2015, member of the Graduate Admissions Committee
10. 2007~2011, member of the Web Presence Committee
11. 2007~2009, member of the System Committee
12. 2007~present, Chair of PhD Degree Dissertation Committee for 14 students: Woosub Jung, Shuangquan Wang, Amanda Watson, Hongyang Zhao, Yongsen Ma, Qing Yang, Daniel Graham, David Nguyen, Ge Peng, Matthew Keally, Zhen Ren, Andrew Pyles, George Simmons, and Xin Qi
13. 2007~present, Chair of Master Degree Comprehensive Exam Committee for 9 students: Xiaoran Peng, Leigh Garbs, Conner Kasten, Bruce Cutler, Matthew Keally, George Simmons, Robert Thompson, Andrew Pyles, and Daniel Leong
14. 2007~present, member of PhD Degree Dissertation Committee for 25 students: Kevin Moran, Qiong Wu, Sunil Manandhar, Yutao Tang, Jianhua Sun, Yue Li, Xing Gao, Ji Xue, Shuai Hao, Du Shen, Yue Li, Jidong Xiao, Seyed Iranmanesh, Jianing Zhao, Zijiang Hao, Dachuan Liu, Hao Han, Wei Wei, Duy Le, Nan Zheng, Zi Chu, Xin Ruan, Kathleen Moore, Aaron Koehl, and Nicolas Van Balen.
15. 2007~present, member of Master Degree Comprehensive Exam Committee for 14 students: Stephen Feldman, Eunyoung Cho, Lihua Ren, Bennett Summers, Fan Luo, Nicholas Powers, Shengye Wan, William Hollingsworth, John Savino, Kari Heffner, Yue Wang, Kathleen Moore, Jean McIntyre, and Nicolas Van Balen
16. 2018, Chair of Undergraduate Honored Thesis Exam Committee for Ben Powell
17. 2013, member of Undergraduate Honored Thesis Exam Committee for Brett Cooley

**Graduated Ph.D.s**

1. Qing Yang, January 2018, Thesis Title: Exploiting Power for Smartphone Security and Privacy

2. Ge Peng, May 2017, Thesis Title: Enhancing Energy Efficiency and Privacy Protection of Smart Devices, initial placement at Google, WA, as Software Engineer.
3. David Nguyen, May 2016, Thesis Title: Enhancing Mobile Device System Using Information from Users and Upper Layers, initial placement at Facebook, CA, as Research Scientist.
4. Daniel Graham (Minority), May 2016, Thesis Title: Enhancing the Sensing Capabilities of Mobile and Embedded Systems, initial placement at Microsoft, Seattle, as Program Manager.
5. Xin Qi, PhD, May 2015, Thesis Title: Improving Context Recognition and Leveraging Context Awareness in Mobile Systems, initial placement at VMware, CA, as Member of Technical Staff.
6. Andrew Pyles, PhD, May 2013, Thesis Title: Network Traffic Aware Smartphone Energy Savings, initial placement at MITRE, VA, as Senior Cyber Security Engineer.
7. Zhen Ren (female), PhD, co-advised with Prof. Haining Wang, August 2012, Thesis Title: Towards Confident Body Sensor Networking, initial placement at Synopsys, NC, as Research and Development Engineer.
8. Matthew Keally, PhD, May 2012, Thesis Title: A Learning-based Approach to Exploiting Sensing Diversity in Performance Critical Sensor Networks, initial placement at MITRE, VA, as Senior Cyber Security Engineer.

#### **Current Ph.D. Students**

1. Kyle Wallace, co-advised with Prof. Kun Sun, the next step is thesis pre-defense
2. Yongsen Ma, the next step is thesis proposal
3. Hongyang Zhao, the next step is thesis proposal
4. Amanda Watson, the next step is thesis proposal
5. George Simmons, the next step is thesis proposal
6. Shuangquan Wang, the next step is thesis proposal
7. Woosub Jung, the next step is thesis proposal

#### **Former Visiting Scholars**

1. Fang Wang, visiting scholar from Chinese Academy of Science, China, 2017
2. Mingyan Xu, visiting scholar from National Digital Switching System Engineering and Technological R&D Center, China, 2017
3. Haimin Chen, visiting scholar from Chinese Academy of Science, 2016
4. Yongfen Wang, visiting scholar from Harbin Engineering University, China, 2016
5. Kun Liu, visiting scholar from Anhui Normal University, China, 2014
6. Shuangquan Wang, visiting scholar from Chinese Academy of Science, 2014
7. Yantao Li, visiting PhD from Chongqing University, China, 2012

#### **Current Visiting Scholars**

1. Yantao Li, visiting scholar from Southwest University, China

### **Graduated Masters**

1. Xiaoran Peng, Master Degree obtained in May 2018
2. Aaron Wells, Master Degree obtained in May 2017
3. Leigh Garbs, Master Degree obtained in December 2016
4. Amanda Watson, Master Degree obtained in May 2016
5. Steven Walker, Master Degree obtained in May 2016
6. Kyle Wallace, Master Degree obtained in December 2014
7. Conner Kasten, Master Degree obtained in December 2013
8. Bruce Cutler, Master Degree obtained in May 2013
9. Daniel Leong, Master Degree obtained in December 2012
10. Andrew Pyles, Master Degree obtained in December 2010
11. George Simmons, Master Degree obtained in December 2010
12. Robert Thompson, Master Degree obtained in May 2010
13. Matthew Keally, Master Degree obtained in May 2008

### **Advising Undergraduate Students**

1. 2017~present, Wentao Xu, academic study towards computer science major.
2. 2018 Benjamin Powell, Honors Thesis: Turning Detection in Sandbar Sharks through Accelerometer Data
3. 2016~2017, Kelvin Abrokwa-Johnson (Minority), (1) undergraduate research (CSCI320) on smart devices for vehicles, and (2) academic study towards computer science major
4. 2016~presnt, Benjamin Powell, Honored Thesis on energy efficient smart tag for shark
5. 2016, Matthew Cohen, undergraduate research on smart devices for K-12 education
6. 2015, Fei He (Female), (1) undergraduate research in mobile computing, and (2) academic study towards computer science major
  - a. Received 2015 Charles Center Summer Research Scholarship
7. 2015, Jeffrey Buffkin, work with my PhD student Daniel Graham on embedded and wearable devices
8. 2013, Kevin Ji, undergraduate research on sensor networks

### **Advising K-12 Student**

1. George Stathopoulos, 2015~2016, research & development on wearable computing