

# Call for papers

## Cognitive Computing and Networking Symposium, ICNC 2014

Honolulu, Hawaii, USA, February 3-6, 2014

<http://www.conf-icnc.org/2014/>

### Symposium Co-chairs

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### Scope

Cognitive computing and networking are two closely related emerging technologies. Cognitive computing concerns with developing computing systems modeled after the human cognitive systems and to teach computers to think and reasoning like a human mind. Cognitive networking refers to developing networks with a cognitive process that can perceive current network conditions, plan, decide, act on those conditions, learn from the consequences of its actions, all while following end-to-end goals. The Cognitive Computing and Networking Symposium will focus on topics related to all aspects of this important problem area. Of special interest are papers reporting on novel and practical solutions to cognitive computing, cognitive algorithms and network design, field tests and measurements, and emerging applications. To ensure complete coverage of the advances in this broad area for current and future systems, the Cognitive Computing and Networking Symposium solicits original contributions in, but not limited to, the following topical areas:

- Adaptive antennas and cognitive RF front-ends
- Analytical models and fundamental limits for cognitive networking
- Applications in public safety, vehicular networks, battlefield networks, and others
- Architectures for cognitive networks
- Artificial intelligence
- Auction, pricing, and other economic aspects and approaches for sharing spectrum
- Cognitive networking testbeds, simulation tools, and infrastructures
- Cognitive radio and software defined radio
- Computer vision
- Cooperative communications and networking in cognitive networks
- Cross-layer design and optimization of cognitive radio networks
- Dynamic spectrum access
- Fuzzy systems and neural networks
- Game theoretic approach to cognitive networking
- Intelligent perception and understanding
- Interference modeling and mitigation
- MAC and networking protocols for cognitive networks
- Machine learning
- Measurements and models for spectrum whitespace
- Multimedia communications over cognitive networks
- Natural computation
- Neuroscience

- Nonlinear system
- Pattern recognition
- Regulatory policy, enforcement, and standardization on sharing spectrum
- Spectrum sensing
- Statistical inference, learning, and cognition
- Secure cognitive networking

## Submission Guidelines

Please follow the author instructions at <http://www.conf-icnc.org/2014/author.htm>

Direct paper submission weblink of this symposium can be found at <http://www.conf-icnc.org/2014/cfp.htm>

## Short biography of co-chairs

### Shilpa Talwar

Shilpa Talwar (shilpa.talwar@intel.com) is a Principal Engineer in the Wireless Communications Laboratory at Intel, where she leads a small research team focused on advanced network topologies for improving the capacity and service quality of cellular networks. Her research interests include heterogeneous networks, multi-radio interworking, device to device communications, and advanced MIMO and interference mitigation techniques. While at Intel, she has contributed to IEEE and 3GPP standard bodies, including an IEEE wide tutorial on Future Wireless Networks with support of many industry partners, which led to formation of multiple study groups in IEEE 802.16, and the 802.16p standard. She is currently coordinating an effort on 5G technologies with several leading universities and industry partners. Prior to Intel, Shilpa held several senior technical positions in wireless industry working on a wide-range of projects, including algorithm design for 3G/4G & WLAN chips, satellite communications, GPS, and others. Shilpa graduated from Stanford University in 1996 with a Ph.D. in Applied mathematics and an M.S. in electrical engineering. She is the author of 60+ technical publications and patents.

### Wei Yu

Dr. Wei Yu is currently an Assistant Professor in the Department of Computer and Information Sciences at Towson University. Before joining Towson University, he worked as a networking software developer for Cisco Systems, Inc. for nine years. His work at Cisco involves developing the world's leading enterprise unified communication system. He received his Ph.D. degree in Computer Engineering from the Department of Computer Science and Engineering at Texas A&M University in May 2008. His research interests are in the areas of cyber space security, networking, and cyber-physical systems. He published over 100 papers, including publications in premier security and system journals such as the IEEE ToN, TC, TPDS, TDSC, TMC, TVT, and conferences such as IEEE S&P, ACM CCS, INFOCOM, and ICDCS. He received the 2012 Excellence in Scholarship Award, Fisher College of Science and Mathematics, Towson University and the Best Paper Award at the 2008 IEEE International Conference on Communication (ICC) and Information and Network Security Symposium.

### Jiazhen Zhou

Dr. Jiazhen Zhou is an Assistant Professor with the Department of Mathematical and Computer Sciences at the University of Wisconsin-Whitewater. He received the B.S. degree in mathematics from Shandong University, China, the M.S. degree in automatic control from Shenyang Institute of Automation, Chinese Academy of Sciences, and the Ph.D. degree in telecommunication networking from the University of Missouri-Kansas City, USA. He has been actively conducting research in smart grid communication networks, cognitive radio networks, vehicular networks, wireless mesh networks, and emergency communication networks. He has been a TPC member for IEEE ICC, IEEE GLOBECOM, and ICNC.