

Title: Communication Theory Symposium

Co-Chairs: Michael Rice, Brigham Young University, [mdr@byu.edu](mailto:mdr@byu.edu)  
Vahid Tarokh, Harvard University, [vahid@seas.harvard.edu](mailto:vahid@seas.harvard.edu)  
Shuguang (Robert) Cui, Texas A&M University, [cui@tamu.edu](mailto:cui@tamu.edu)

Sponsoring Technical Committee: Communication Theory Technical Committee

Introduction:

The Communication Theory Symposium welcomes papers dealing with fundamental problems associated with the transmission of information. Of special interest are papers describing the novel use of communication theory and/or information theory to solve these problems at both the physical layer and higher layers.

Topics of Interest:

- Capacity/scaling laws of ad hoc networks
- Adaptive modulation & coding
- CDMA & spread spectrum
- Channel estimation
- Coding theory & practice
- Fundamental limits in cognitive radio systems
- Performance limits of PHY/MAC cooperate communications
- Theoretical analysis of cross-layer systems
- Detection & estimation
- Distributed coding & processing
- Diversity transmission/reception
- Dynamic spectrum management
- Equalization
- Feedback schemes in communications
- Fiber optic communications
- Free-space optical communications
- Interference management, cancellation, avoidance
- Iterative techniques, detection, coding
- Joint source/channel coding
- Multi-carrier systems
- Multiple-access techniques
- MIMO systems design & analysis
- Multiuser detection
- Multiuser diversity
- Network coding
- PHY/MAC OFDM techniques
- Physical layer security
- Radio resource management
- Source coding and data compression
- Space-time coding & processing
- Synchronization
- Turbo and LDPC codes
- Ultra-wideband communications

## TPC Members

Giuseppe Abreu (USC)  
Fumiyuki Adachi (Tohoku University)  
Rajiv Agarwal (Stanford University)  
Jeffrey Andrews (University Texas, Austin)  
Norman Beaulieu (University Alberta)  
Vijay Bhargava (University British Columbia)  
Dan Bliss (MIT Lincoln Labs)  
Angela Sara Cacciapuoti (University Naples Federeico II)  
Wei Chen (Tsinghua University)  
Biao Chen (Syracuse University)  
Shuguang Cui (Texas A&M University)  
Zoran Cvetkovic (King's College London)  
Javier Del Ser (TECNALIA-Telecom)  
Natasha Devroye (University Illinois, Chicago)  
Pingzhi Fan (Southwest Jiaotong Univeristy)  
Pingyi Fan (Tsinghua University)  
Xiqi Gao (Southwest University)  
Saeed Ghassemzadeh (AT&T Labs-Research)  
Ali Ghrayeb (Concordia University)  
Deniz Gunduz (Princeton University)  
Kiran Gunnam (LSI Corp.)  
Yang Han (LSI Corp.)  
Babak Hassibi (Caltech)  
Robert Heath (University Texas, Austin)  
Chansoo Hwang (Samsung Electronics)  
Syed Jafar (University California, Irvine)  
Hamid Jafarkhani (University California, Irvine)  
Hong Ji (Beijing University Posts & Telecommunications)  
Jinhua Jiang (Stanford University)  
Tao Jiang (Huazhong University Science & Technology)  
Nihar Jindal (University Minnesota)  
Joonhyuk Kang (KAIST)  
Amir K. Khandani (University Waterloo)  
Toshiaki Koike-Akino (Harvard University)  
Lifeng Lai (University Arkansas, Little Rock)  
J. Nicholas Laneman (University Notre Dame)  
Kwang Bok Lee (Seoul National University)  
Nan Liu (Southeast University)  
Ernest Lo (Standord University)  
Muriel Medard (MIT)  
Hugues Mercier (Harvard University)  
Patrick Mitran (University Waterloo)  
Hideki Ochiai (Yokohama National University)  
Ozgur Oyman (Intel Corporation)  
Adam Panagos (Dynerics, Inc.)  
Peter Parker (MIT-Lincoln Laboratory)  
Erik Perrins (University Kansas)  
Zhi Quan (Qualcomm Inc.)  
Aditya Ramamoorthy (Iowa State University)  
Michael Rice (Brigham Young University)  
Maryam Sabbaghian (Harvard University)  
Robert Schober (University British Columbia)  
John Shea (University Florida)  
Mohammad Shikh-Bahaei (Kings College London)  
Besma Smida (Purdue University, Calumet)  
Meixia Tao (Shanghai Jiao Tong University)  
Vahid Tarokh (Harvard University)  
Nghien Tran (McGill University)  
Sriram Vishwanath (University Texas, Austin)  
Mai Vu (McGill Univeristy)  
Haohong Wang (Marvell Semiconductors)  
Li-Chun Wang (National Chiao Tung University)  
Qixing Wang (China Mobile Research Institute)  
Xinbing Wang (Shanghai Jiaotong University)  
Hsiao-Chun Wu (Louisiana State University)  
Raymond Yim (Mitsubishi Electric Research Labs)  
Changchuan Yin (Beijing University Posts & Telecommunications)  
Simon Yiu (Harvard University)  
Heather Yu (Huawei Technologies USA)  
Wei Yu (University Toronto)  
Qian Zhang (HKUST)  
Rui Zhang (Institute Infocomm Research)  
Wei Zhang (University New South Wales)  
Ying Jun Zhang (Chinese University Hong Kong)

## Short Biography of Co-chairs

Michael Rice received his PhD in Electrical Engineering from Georgia Tech in 1991 and is currently the Jim Abrams Professor in the Department of Electrical Engineering at Brigham Young University.

Vahid Tarokh received the PhD in electrical engineering from the University of Waterloo, Ontario, Canada. He is currently a Hammond Vinton Hayes Senior Fellow of Electrical Engineering and a Perkins professor at Harvard University,

Shuguang (Robert) Cui received Ph.D in Electrical Engineering from Stanford University in 2005. He is now working as an assistant professor in Electrical and Computer Engineering at the Texas A&M University, College Station, TX. His current research interests include cross-layer optimization for resource-constrained networks and network information theory. He has been serving as the associate editor for the IEEE Communication Letters and IEEE Transactions on Vehicular Technology, and the TPC chair for CTW'07 and ICC'08 Communication Theory Symposium.