

Scope and Motivation:

The mission of the Communication Theory Symposium is to explore the technical fundamentals of communication systems. The symposium features original and innovative research in technical areas focusing on the physical layer and its interactions with higher layers. Sample topics are listed below.

Topics of Interest

The Communication Theory Symposium seeks original contributions in the following topical areas, plus others that are not explicitly listed but are closely related:

- Adaptive Modulation and Coding
- CDMA and Spread Spectrum
- Channel Estimation and Synchronization
- Coding Theory and Practice
- Communication Theory Aspects of Ad Hoc and Sensor Networks
- Compressed Sensing
- Theoretical aspects of Cognitive Radio
- Cooperative Communications
- Theoretical aspects of Cross Layer Design
- Detection and Estimation Theory
- Distributed Coding and Processing
- Diversity and Fading Countermeasures
- Dynamic Spectrum Management
- Feedback in Communication Systems
- Fiber Optical Communications and Free-Space Optical Communications
- Fundamentals of Femtocell and Picocell-Enhanced Cellular Networks
- Information Theory and Channel Capacity
- Interference Management, Cancellation, Alignment, and Avoidance
- Iterative Techniques, Detection and Decoding
- Joint Source/Channel Coding
- Multiple Access Techniques
- Multiple-Input Multiple-Output (MIMO) Systems Design and Analysis
- Multiuser Diversity
- Network Coding
- Network and Multiuser Information Theory
- Orthogonal Frequency Division Multiplexing (OFDM) and Multi-Carrier Systems
- Powerline Communications
- Source Coding and Data Compression
- Space-time Coding and Processing
- Ultra-Wideband, 60GHz, and Sub-Terahertz Communication Theory

Technical Program Committee:

Giuseppe Abreu, Jacobs University Bremen

Sonia Aissa, INRS, University of Quebec

Mohamed-Slim Alouini, King Abdullah University of Science and Technology (KAUST)

Achilleas Anastasopoulos, University of Michigan

Tor Aulin, Chalmers University of Technology
Norman Beaulieu, University of Alberta
Antoine Berthet, Supélec
Deva Borah, New Mexico State University
Marco Chiani, University of Bologna
Jo Woon Chong, Massachusetts Institute of Technology
Bruno Clerckx, Imperial College London
Giulio Colavolpe, University of Parma
Andrea Conti, ENDIF University of Ferrara, WiLAB University of Bologna
Shuguang Cui, Texas A&M University
Tao Cui, California Institute of Technology
Gianluigi Ferrari, University of Parma
Jocelyn Fiorina, SUPELEC
Mark Flanagan, University College Dublin
Long Gao, Hitachi America, Ltd
Costas Georghiadis, Texas A&M University
Wolfgang Gerstaecker, University of Erlangen-Nuernberg
David Gesbert, Eurecom
Dennis Goeckel, University of Massachusetts
Walaa Hamouda, Concordia University
Babak Hassibi, California Institute of Technology
Robert Heath, The University of Texas at Austin
Paul Ho, Simon Fraser University
Rose Qingyang Hu, Utah State University
Brian Hughes, North Carolina State University
Chansoo Hwang, ASSIA Inc.
Syed Jafar, University of California Irvine
Hamid Jafarkhani, University of California, Irvine
Hong Ji, Beijing University of Posts and Telecommunications
Tao Jiang, Huazhong University of Science and Technology
Markku Juntti, University of Oulu
Aravind Kailas, University of North Carolina at Charlotte
Pooi-Yuen Kam, National University of Singapore
George Karagiannidis, Aristotle University of Thessaloniki
Hyuck Kwon, Wichita State University
Lutz Lampe, University of British Columbia
J. Nicholas Laneman, University of Notre Dame
Dongwoo Lee, Massachusetts Institute of Technology
Jemin Lee, Massachusetts Institute of Technology
Cheng Li, Memorial University of Newfoundland
Teng Joon Lim, National University of Singapore
Lingjia Liu, University of Kansas
David Love, Purdue University
Ranjan Mallik, Indian Institute of Technology - Delhi
Shiwen Mao, Auburn University
Philippa Martin, University of Canterbury
Santiago Mazuelas, Massachusetts Institute of Technology

Geoffrey Messier, University of Calgary
Scott Miller, Texas A&M University
Chandra Murthy, Indian Institute of Science
Arumugam Nallanathan, King's College London
Krishna Narayanan, Texas A&M University
Bala Natarajan, Kansas State University
Aria Nosratinia, University of Texas, Dallas
Enrico Paolini, DEIS, WiLAB, University of Bologna
Alberto Perotti, Politecnico di Torino
Erik Perrins, University of Kansas
Tony Q. S. Quek, Institute for Infocomm Research
Alberto Rabbachin, Massachusetts Institute of Technology
Riccardo Raheli, University of Parma
Aditya Ramamoorthy, Iowa State University
Michael Rice, Brigham Young University
Sumit Roy, University of Washington
Maryam Sabbaghian, University of Tehran
Robert Schober, University of British Columbia
Erchin Serpedin, Texas A&M University
Muhammad Shakir, King Abdullah University of Science and Technology
John Shea, University of Florida
Mohammad Shikh-Bahaei, Kings college London
Hyundong Shin, Kyung Hee University
Anthony Soong, Huawei Technologies
Gordon Stuber, Georgia Institute of Technology
Jan Sykora, Czech Technical University in Prague
Leszek Szczecinski, INRS-EMT
Chee Wei Tan, City University of Hong Kong
Alberto Tarable, Politecnico di Torino
Chintha Tellambura, University of Alberta
Andrea Tonello, University of Udine
Daniela Tuninetti, University of Illinois at Chicago
Sennur Ulukus, University of Maryland
Murat Uysal, Ozyegin University
Matthew Valenti, West Virginia University
Sriram Vishwanath, University of Texas at Austin
Giorgio M. Vitetta, University of Modena and Reggio Emilia
Xianbin Wang, The University of Western Ontario
Xinbing Wang, Shanghai Jiaotong University
Ruey-Yi Wei, National Central University
Hsiao-Chun Wu, Louisiana State University
Jingxian Wu, University of Arkansas
Henk Wymeersch, Chalmers University of Technology
Liuqing Yang, Colorado State University
Shahram Yousefi, Queen's University
Shenqiu Zhang, University of Rochester
Weihua Zhuang, University of Waterloo