Program

S1.T1: Source Coding with Side Information

*Data Processing Lower Bounds for Scalar Lossy Source Codes with Side Information at the Decoder*
Avraham Reani (Technion - Israel Institute of Technology, Israel); Neri Merhav (Technion, Israel)
pp. 1-5

*Graph-based Code Design for Quadratic-Gaussian Wyner-Ziv Problem with Arbitrary Side Information*
Yi-Peng Wei (Graduate Institute of Communication Engineering, National Taiwan University, Taiwan); Shih-Chun Lin (National Taipei University of Technology, Taiwan); Yu-Hsiu Lin (Graduate Institute of Communication Engineering, National Taiwan University, Taiwan); Hsuan-Jung Su (National Taiwan University, Taiwan)
pp. 6-10

*Source Coding With Delayed Side Information*
Osvaldo Simeone (New Jersey Institute of Technology, USA); Haim H Permuter (Ben-Gurion University, Israel)
pp. 11-15

*A Compression Algorithm Using Mis-aligned Side-Information*
Nan Ma (University of California at Berkeley, USA); Kannan Ramchandran (University of California at Berkeley, USA); David Tse (University of California at Berkeley, USA)
pp. 16-20

S1.T2: Multiple Access Codes

*Construction of MIMO MAC Codes Achieving the Pigeon Hole Bound*
Toni Ervvali (University of Turku, Finland); Roope Vehkalahti (University of Turku, Finland)
pp. 21-25

*On The Sum-Capacity of Gaussian MAC With Peak Constraint*
Babak Mamandipoor (University of Waterloo, Canada); Kamyar Moshksar (University of Waterloo, Canada); Amir K. Khandani (University of Waterloo, Canada)
pp. 26-30

*Expurgation for Discrete Multiple-Access Channels via Linear Codes*
Eli Haim (Tel-Aviv University, Israel); Yuval Kochman (The Hebrew University of Jerusalem, Israel); Uri Erez (Tel Aviv University, Israel)
pp. 31-35

*Simpler Achievable Rate Regions for Multiaccess with Finite Blocklength*
Ebrahim MolavianJazi (University of Notre Dame, USA); J. Nicholas Laneman (University of Notre Dame, USA)
pp. 36-40
S1.T3: Two-Unicast Networks

On Two Unicast Wireless Networks with Destination-to-Source Feedback
I-Hsiang Wang (EPFL, Switzerland)
pp. 41-45

On Degrees of Freedom of Layered Two Unicast Networks with Delayed CSIT
I-Hsiang Wang (EPFL, Switzerland); Suhas Diggavi (University of California Los Angeles, USA)
pp. 46-50

Sum Secure Degrees of Freedom of Two-Unicast Layered Wireless Networks
Jianwei Xie (University of Maryland, USA); Sennur Ulukus (University of Maryland, USA)
pp. 51-55

Approximate Ergodic Capacity of a Class of Fading 2-user 2-hop Networks
Sang-Woon Jeon (EPFL, Switzerland); Chien-Yi Wang (EPFL, Switzerland); Michael Gastpar (University of California, Berkeley, USA)
pp. 56-60

S1.T4: Secrecy Models in Wiretap Channels

Broadcast Channels with Confidential Messages by Randomness Constrained Stochastic Encoder
Shun Watanabe (Tokushima University, Japan); Yasutada Oohama (University of Electro-Communications, Japan)
pp. 61-65

Secrecy Is Cheap if the Adversary Must Reconstruct
Curt Schieler (Princeton University, USA); Paul Cuff (Princeton University, USA)
pp. 66-70

Imperfect Secrecy in Wiretap Channel II
Fan Cheng (The Chinese University of Hong Kong, Hong Kong); Raymond W. Yeung (The Chinese University of Hong Kong, Hong Kong); Kenneth W. Shum (Institute of Network Coding, Hong Kong)
pp. 71-75

Strong Secrecy in Compound Broadcast Channels with Confidential Messages
Rafael F. Wyrembelski (Technische Universität München, Germany); Holger Boche (Technical University Munich, Germany)
pp. 76-80

S1.T5: List Decoding and Reed-Solomon Codes

Burst list decoding of interleaved Reed-Solomon codes
Tom Kolan (Technion, Israel); Ron M. Roth (Technion, Israel)
pp. 81-85
List Decoding Algorithms based on Gröbner Bases for General One-Point AG Codes
Olav Geil (Aalborg University, Denmark); Ryutaroh Matsumoto (Tokyo Institute of Technology, Japan); Diego Ruano (Aalborg University, Denmark)
pp. 86-90

An algorithm for list decoding number field codes
Jean-Francois Biasse (University of Calgary, Canada); Guillaume Quintin (Ecole Polytechnique, France)
pp. 91-95

A Lifting Decoding Scheme and its Application to Interleaved Linear Codes
Guillaume Quintin (Ecole Polytechnique, France)
pp. 96-100

S1.T6: Combinatorial Problems in Coding

Translation association schemes, poset metrics, and the shape enumerator of codes
Alexander Barg (University of Maryland, USA); Marcelo Firer (State University of Campinas - UNICAMP, Brazil)
pp. 101-105

On the Uncertainty of Information Retrieval in Associative Memories
Eitan Yaakobi (Caltech, USA); Jehoshua Bruck (California Institute of Technology, USA)
pp. 106-110

On q-ary antipodal matchings and applications
Erik Ordentlich (Hewlett-Packard Laboratories, USA); Ron M. Roth (Technion, Israel); Gadiel Seroussi (Hewlett-Packard Laboratories, USA)
pp. 111-115

Optimal Family of q-ary Codes Obtained From a Substructure of Generalised Hadamard Matrices
Carl Bracken (Nanyang Technological University & CCRG, Singapore); Yeow Meng Chee (Nanyang Technological University, Singapore); Punarbasu Purkayastha (Nanyang Technological University, Singapore)
pp. 116-119

S1.T7: Gaussian Channels

High-Rate Sparse Superposition Codes with Iteratively Optimal Estimates
Andrew R Barron (Yale University, USA); Sanghee Cho (Yale University, USA)
pp. 120-124

The Capacity of the Multi-MMSE Constrained Gaussian Channel
Ronit Bustin (Technion - Israel Institute of Technology, Israel); Shlomo (Shitz) Shamai (The Technion, Israel)
pp. 125-129
Expurgated Infinite Constellations at Finite Dimensions
Amir Ingber (Stanford University, USA); Ram Zamir (Tel Aviv University, Israel)
pp. 130-134

The Capacity Loss of Dense Constellations
Tobias Koch (Universidad Carlos III de Madrid, Spain); Alfonso Martinez (Universitat Pompeu Fabra, Spain); Albert Guillen i Fabregas (ICREA and Universitat Pompeu Fabra & University of Cambridge, Spain)
pp. 135-139

S1.T8: Information Theoretic Tools and Properties

On Optimum Strategies for Minimizing the Exponential Moments of a Loss Function
Neri Merhav (Technion, Israel)
pp. 140-144

On the equivalence between Stein identity and de Bruijn identity
Sangwoo Park (Texas A&M University, USA); Erchin Serpedin (Texas A&M University, USA); Khalid A. Qaraqe (Texas A&M University at Qatar, USA)
pp. 145-149

Minimization of Entropy Functionals Revisited
Imre Csiszár (Renyi Institute, Hungarian Academy of Science, Hungary); Frantisek Matuš (Academy of Sciences of the Czech Republic & Institute of Information Theory and Automation, Czech Republic)
pp. 150-154

Shannon Entropy Convergence Results in the Countable Infinite Case
Jorge Silva (University of Chile, Chile); Patricio Parada (Universidad de Chile, Chile)
pp. 155-159

S1.T9: Theory of Quantum Error Correction

Sphere Packing Bound for Quantum Channels
Marco Dalai (University of Brescia, Italy)
pp. 160-164

Stabilizer Codes over Frobenius Rings
Sushma Nadella (Texas A&M University, USA); Andreas Klappenecker (Texas A&M University, USA)
pp. 165-169

Nice Nearrings
Andreas Klappenecker (Texas A&M University, USA)
p. 170-173
S2.T1: Network Source Coding with Side Information

A General Formula of Rate-Distortion Functions for Source Coding with Side Information at Many Decoders
Tetsunao Matsuta (Tokyo Institute of Technology, Japan); Tomohiko Uyematsu (Tokyo Institute of Technology, Japan)
pp. 174-178

On the Heegard-Berger Problem with Common Reconstruction Constraints
Behzad Ahmadi (New Jersey Institute of Technology, USA); Ravi Tandon (Virginia Tech, USA); Osvaldo Simeone (New Jersey Institute of Technology, USA); H. Vincent Poor (Princeton University, USA)
pp. 179-183

Distributed and Cascade Lossy Source Coding with a Side Information "Vending Machine"
Behzad Ahmadi (New Jersey Institute of Technology, USA); Osvaldo Simeone (New Jersey Institute of Technology, USA)
pp. 184-188

Information Masking and Amplification: The Source Coding Setting
Thomas Courtade (UCLA, USA)
pp. 189-193

S2.T2: Variations on Broadcast Channels

Multiple Description Coding Based Compress-and-Forward for the Broadcast Relay Channel
Seckin Anil Yildirim (Hacettepe University, Turkey); Melda Yuksel (TOBB University of Economics and Technology, Turkey)
pp. 194-198

Broadcast Correlated Gaussians: the Vector-Scalar Case
Lin Song (McMaster University, Canada); Jun Chen (McMaster University, Canada); Chao Tian (AT&T Labs - Research, USA)
pp. 199-203

Quadratic Gaussian Source Broadcast with Individual Bandwidth Mismatches
Louis Tan (University of Toronto, Canada); Ashish Khisti (University of Toronto, Canada); Emina Soljanin (Bell Labs, Alcatel - Lucent, USA)
pp. 204-208

The Broadcast Approach Under Mixed Delay Constraints
Kfir M. Cohen (Technion, Israel); Avi Steiner (Technion, Israel); Shlomo (Shitz) Shamai (The Technion, Israel)
pp. 209-213
S2.T3: Multi-Hop Multi-Flow Wireless Networks

Is Gaussian Noise the Worst-Case Additive Noise in Wireless Networks?  
Ilan Shomorony (Cornell University, USA); Salman Avestimehr (Cornell University, USA)  
pp. 214-218

Optimized Flow Allocation for Anonymous Communication in Multipath Wireless Networks  
Chouchang Yang (University of Washington, USA); Basel Alomair (King Abdulaziz City for Science and Technology, Saudi Arabia); Radha Poovendran (University of Washington, USA)  
pp. 219-223

Can geographic routing scale when nodes are mobile?  
Dinesh Ramasamy (University of California, Santa Barbara, USA); Upamanyu Madhow (University of California, Santa Barbara, USA)  
pp. 224-228

An Asymptotically Optimal Push-Pull Method for Multicasting over a Random Network  
Vasuki Swamy (IIT Madras, India); Rajesh Sundaresan (Indian Institute of Science, India); Pramod Viswanath (University of Illinois, Urbana-Champaign, USA)  
pp. 229-233

S2.T4: Wiretap Channels with Feedback, Side Information, and Common Messages

Broadcasting over Fading Wiretap Channels  
Yingbin Liang (Syracuse University, USA); Lifeng Lai (Worcester Polytechnic Institute, USA); H. Vincent Poor (Princeton University, USA); Shlomo (Shitz) Shamai (The Technion, Israel)  
pp. 234-238

On the Ergodic Secret Message Capacity of the Wiretap Channel with Finite-Rate Feedback  
Zouheir Rezki (King Abdullah University of Science and Technology (KAUST), Saudi Arabia); Ashish Khisti (University of Toronto, Canada); Mohamed-Slim Alouini (King Abdullah University of Science and Technology (KAUST), Saudi Arabia)  
pp. 239-243

Capacity Region of Non-degraded Wiretap Channel with Noiseless Feedback  
Bin Dai (Shanghai Jiaotong University, P.R. China); Han Vinck (University of Duisburg-Essen, Germany); Yuan Luo (Shanghai Jiao Tong University & Waterloo University, P.R. China); Zhuojun Zhuang (Shanghai Jiao Tong University, P.R. China)  
pp. 244-248

An Achievable Region for the Wiretap Multiple-Access Channel with Common Message  
Moritz Wiese (Technische Universität München, Germany); Holger Boche (Technical University Munich, Germany)  
pp. 249-253
S2.T5: Reed-Muller Codes

*Projected Subcodes of the second order binary Reed-Muller Code*
Matthieu Legeay (University of Rennes 1 & IRMAR, France); Pierre Loidreau (Université de Rennes 1 & CELAr, France)
pp. 254-258

*Spherically punctured biorthogonal codes*
Ilya Dumer (University of California at Riverside, USA); Olga Kapralova (University of California, Riverside, USA)
pp. 259-263

*Multiplicative secret sharing schemes from Reed-Muller type codes*
Iwan Duursma (UIUC, USA); Jiashun Shen (University of Illinois, USA)
pp. 264-266

*Partial Permutation Decoding for Abelian Codes*
José Bernal-Buitrago (University of Murcia, Spain); Juan Simón (Universidad de Murcia, Spain)
pp. 269-273

S2.T6: Constrained Coding

*On embedding conditions of shifts of finite type into the Fibonacci-Dyck shift*
Hiroshi Fujisaki (Kanazawa University, Japan)
pp. 274-278

*Approximately Counting the Number of Constrained Arrays via the Sum-Product Algorithm*
Farzad Parvaresh (Hewlett-Packard, USA); Pascal Vontobel (HP Labs, USA)
pp. 279-283

*On Codes for Structured Bursts*
Luis A Lastras-Montano (IBM TJ Watson Research Center & IBM Corporation, USA); Mario Blaum (IBM Almaden Research Center, USA)
pp. 284-288

*Erasure Coding for Real-Time Streaming*
Derek Leong (California Institute of Technology, USA); Tracey Ho (California Institute of Technology, USA)
pp. 289-293

S2.T7: Capacity of Gaussian Channels

*On the Capacity of Additive White Alpha-Stable Noise Channels*
Jihad Fahs (American University of Beirut, Lebanon); Ibrahim Abou-Faycal (American University of Beirut, Lebanon)
pp. 294-298
Bounds on the Capacity of the Additive Inverse Gaussian Noise Channel
Hui-Ting Chang (National Chiao Tung University (NCTU), Taiwan); Stefan M. Moser (National Chiao Tung University NCTU, Taiwan)
pp. 299-303

Achievable Rates of Gaussian Channels with Realistic Duty Cycle and Power Constraints
Hui Li (University of Science and Technology of China, P.R. China); Dongning Guo (Northwestern University, USA)
pp. 304-308

An Efficient Algorithm to Calculate BICM Capacity
Georg Böcherer (Technische Universität München, Germany); Fabian Altenbach (RWTH Aachen University, Germany); Alex Alvarado (University of Cambridge, United Kingdom); Steven Corroy (RWTH Aachen University, Germany); Rudolf Mathar (RWTH Aachen University, Germany)
pp. 309-313

S2.T8: Distributed Detection and Estimation

Quantization Effect On Second Moment of Log-Likelihood Ratio and Its Application to Decentralized Sequential Detection
Yan Wang (Georgia Institute of Technology, USA); Yajun Mei (Georgia Institute of Technology, USA)
pp. 314-318

The sufficiency principle for decentralized data reduction
Ge Xu (Syracuse University, USA); Biao Chen (Syracuse University, USA)
pp. 319-323

Nonparametric Decentralized Detection Based on Weighted Count Kernel
Jiayao Hu (Syracuse University, USA); Yingbin Liang (Syracuse University, USA); Eric P Xing (Carnegie Mellon University, USA)
pp. 324-328

Distributed Estimation in Multi-Agent Networks
Lalitha Sankar (Princeton University, USA); H. Vincent Poor (Princeton University, USA)
pp. 329-333

S2.T9: Quantum Codes from Classical Codes

Quantum polar codes for arbitrary channels
Mark M Wilde (McGill University, Canada); Joseph M Renes (ETH Zurich, Switzerland)
pp. 334-338

A Construction of Quantum Codes via A Class of Classical Polynomial Codes
Lingfei Jin (Nanyang Technological University, Singapore); Chaoping Xing (Nanyang Technological University, Singapore)
Quantum LDPC codes obtained by non-binary constructions
Iryna Andriyanoa (ENSEA/UCP/CNRS, France); Denise Maurice (INRIA, France); Jean-Pierre Tillich (INRIA Rocquencourt, France)
pp. 343-347

Improved quantum hypergraph-product LDPC codes
Alexey Kovalev (University California, Riverside, USA); Leonid Pryadko (University California, Riverside, USA)
pp. 348-352

S3.T1: Lossy Source Coding

On Real-Time and Causal Secure Source Coding
Yonatan Kaspi (Technion, Israel Institute of Technology, Israel); Nerl Merhav (Technion, Israel)
pp. 353-357

Rate-Distortion Behavior at Low Distortion for Densely Sampled Gaussian Data
David L. Neuhoff (University of Michigan, USA); Sandeep Pradhan (University Michigan, USA)
pp. 358-362

Pointwise lossy source coding theorem for sources with memory
Barlas Oguz (University of California, Berkeley, USA); Venkat Anantharam (University of California at Berkeley, USA)
pp. 363-367

Gaussian Rate-Distortion via Sparse Linear Regression over Compact Dictionaries
Ramji Venkataramanan (Yale University, USA); Antony Joseph (Yale University, USA); Sekhar Tatikonda (Yale University, USA)
pp. 368-372

Lossy Source Coding via Spatially Coupled LDGM Ensembles
Vahid Aref (Ecole Polytechnique Federale de Lausanne, Switzerland); Nicolas Macris (EPFL, Switzerland); Ruediger L Urbanke (EPFL, Switzerland); Marc Vuffray (EPFL, Switzerland)
pp. 373-377

S3.T2: Three-Receiver Broadcast Channels

On Three-Receiver More Capable Channels
Chandra Nair (Chinese University of Hong Kong, Hong Kong); Lingxiao Xia (Chinese University of Hong Kong, Hong Kong)
pp. 378-382

The Capacity Region of Some Classes of Parallel Degraded Broadcast Channels with Three Receivers and Three-Degraded Message Sets
Hon Fah Chong (Institute for Infocomm Research, Singapore); Ying-Chang Liang (Institute for Infocomm Research, Singapore)
Broadcast Capacity Regions with Three Receivers and Message Cognition
Tobias J. Oechtering (KTH Royal Institute of Technology & School of Electrical Engineering, EE, Sweden); Michele A Wigger (Telecom ParisTech, France); Roy Timo (University of South Australia, Australia)
pp. 388-392

Three-Receiver Broadcast Channels with Side Information
Saeed Hajizadeh (Ferdowsi University of Mashhad, Iran); Ghosheh Abed Hodtani (Ferdowsi University of Mashhad, Mashhad, Iran)
pp. 393-397

Is Non-Unique Decoding Necessary?
Shirin Saeedi Bidokhti (EPFL, Switzerland); Vinod M Prabhakaran (Tata Institute of Fundamental Research, India); Suhas Diggavi (University of California Los Angeles, USA)
pp. 398-402

S3.T3: *-and-Forward Relaying

Blind Compute-and-Forward
Chen Feng (University of Toronto, Canada); Danilo Silva (Federal University of Santa Catarina, Brazil); Frank R. Kschischang (University of Toronto, Canada)
pp. 403-407

Rateless Coded Hybrid Amplify/Decode-Forward Cooperation for Wireless Multicast
Talha Ahmed Khan (LUMS School of Science & Engineering, Pakistan); Momin Uppal (Lahore University of Management Sciences, Pakistan); Anders Høst-Madsen (University of Hawaii, USA); Zixiang Xiong (Texas A&M University, USA)
pp. 408-412

Dynamic QMF for Half-Duplex Relay Networks
Ayfer Özgür (Stanford University, Switzerland); Suhas Diggavi (University of California Los Angeles, USA)
pp. 413-417

Joint Optimization of The Transmit Covariance and The Relay Precoder in General Gaussian Amplify-and-Forward Relay Channels
Ramy Gohary (Carleton University, Canada); Halim Yanikomeroglu (Carleton University, Canada)
pp. 418-422

Layered Quantize-Forward For The Two-Way Relay Channel
Hieu T. Do (Royal Institute of Technology (KTH), Sweden); Tobias J. Oechtering (KTH Royal Institute of Technology & School of Electrical Engineering, EE, Sweden); Mikael Skoglund (KTH Royal Institute of Technology, Sweden)
pp. 423-427
S3.T4: Secure Communications

Broadcasting Private Messages Securely
László Czap (Ecole Polytechnique Fédérale de Lausanne, EPFL, Switzerland); Vinod M Prabhakaran (Tata Institute of Fundamental Research, India); Suhas Diggavi (University of California Los Angeles, USA); Christina Fragouli (EPFL, Switzerland)
pp. 428-432

On Private Broadcasting over Independent Parallel Channels
Ashish Khisti (University of Toronto, Canada); Tie Liu (Texas A&M University, USA)
pp. 433-437

Degraded Broadcast Channel with Noncausal Side Information, Confidential Messages and Noiseless Feedback
Bin Dai (Shanghai Jiaotong University, P.R. China); Han Vinck (University of Duisburg-Essen, Germany); Yuan Luo (Shanghai Jiao Tong University & Waterloo University, P.R. China); Zhuojun Zhuang (Shanghai Jiao Tong University, P.R. China)
pp. 438-442

On Optimal Signaling over Secure MIMO Channels
Sergey Loyka (University of Ottawa, Canada); Charalambos D Charalambous (University of Cyprus, Cyprus)
pp. 443-447

Square Root Law for Communication with Low Probability of Detection on AWGN Channels
Boulat Bash (University of Massachusetts, USA); Dennis Goeckel (University of Massachusetts, USA); Don Towsley (University of Massachusetts at Amherst, USA)
pp. 448-452

S3.T5: Spatially-Coupled Coding

Spatially Coupled Ensembles Universally Achieve Capacity under Belief Propagation
Shrinivas Kudekar (Los Alamos National Laboratory, USA); Thomas Richardson (Qualcomm Flarion Inc., USA); Ruediger L Urbanke (EPFL, Switzerland)
pp. 453-457

How to Prove the Maxwell Conjecture Via Spatial Coupling - A Proof of Concept
Andrei Giurgiu (EPFL, Switzerland); Nicolas Macris (EPFL, Switzerland); Ruediger L Urbanke (EPFL, Switzerland)
pp. 458-462

Spatially-Coupled Binary MacKay-Neal Codes for Channels with Non-Binary Inputs and Affine Subspace Outputs
Kenta Kasai (Tokyo Institute of Technology, Japan); Takayuki Nozaki (Tokyo Institute of Technology, Japan); Kohichi Sakaniwa (Tokyo Institute of Technology, Japan)
pp. 463-467

Improving Spatially Coupled LDPC Codes by Connecting Chains
Dmitri Truhachev (University of Alberta, Canada); David G. M. Mitchell (University of Notre Dame, USA); Michael Lentmaier (Dresden University of Technology, Germany); Daniel J. Costello, Jr. (University of Notre Dame, USA)
Distance Spectrum Estimation of LDPC Convolutional Codes
Hua Zhou (Vienna University of Technology, Austria); David G. M. Mitchell (University of Notre Dame, USA); Norbert Goertz (Vienna University of Technology, Austria); Daniel J. Costello, Jr. (University of Notre Dame, USA)
pp. 473-477

S3.T6: Codes and Their Applications

Spatially-Coupled Random Access on Graphs
Gianluigi Liva (DLR - German Aerospace Center, Germany); Enrico Paolini (DEI, University of Bologna, Italy); Michael Lentmaier (Dresden University of Technology, Germany); Marco Chiani (University of Bologna, Italy)
pp. 478-482

Biff (Bloom Filter) Codes: Fast Error Correction for Large Data Sets
Michael Mitzenmacher (Harvard University, USA); George Varghese (University of California at San Diego, USA)
pp. 483-487

Distributed Rateless Coding with Cooperative Sources
Mahyar Shirvanimoghaddam (University of Sydney, Australia); Yonghui Li (University of Sydney, Australia); Branka Vucetic (The University of Sydney, Australia)
pp. 488-492

On Matching Short LDPC Codes with Spectrally-Efficient Modulation
Stefan Nowak (TU Dortmund University, Germany); Ruediger Kays (Dortmund University of Technology, Germany)
pp. 493-497

On the Power Transfer of Error-Control Codes for RFID Communications
Guang Yang (University of Bergen, Norway); Eirik Rosnes (University of Bergen, Norway); Angela Isabel Barbero (University of Valladolid, Spain); Øyvind Ytrehus (University of Bergen, Norway)
pp. 498-502

S3.T7: Deletion Channels

A characterization of the number of subsequences obtained via the deletion channel
Yuvalal Liron (The Open University of Israel, Israel); Michael Langberg (Open University of Israel, Israel)
pp. 503-507

Adaptive Synchronization Marker for Insertion/Deletion/Substitution Error Correction
Masato Inoue (Tokyo Institute of Technology, Japan); Haruhiko Kaneko (Tokyo Institute of Technology, Japan)
pp. 508-512
A Coloring Approach to Constructing Deletion Correcting Codes from Constant Weight Subgraphs
Daniel F Cullina (University of Illinois at Urbana-Champaign, USA); Ankur Kulkarni (University of Illinois at Urbana-Champaign, USA); Negar Kiyavash (University of Illinois at Urbana-Champaign, USA)
pp. 513-517

Mutual Information for a Deletion Channel
Michael Drmota (Insitute for Discrete Mathematics and Geometry, Austria); Wojciech Szpankowski (Purdue University, USA); Krishnamurthy Viswanathan (Hewlett Packard, USA)
pp. 2561-2565

S3.T8: Directed Information, Common Information, and Divergence

Directed Information on Abstract Spaces: Properties and Extremum Problems
Charalambos D Charalambous (University of Cyprus, Cyprus); Photios A. Stavrou (University of Cyprus, Cyprus)
pp. 518-522

Universal Estimation of Directed Information via Sequential Probability Assignments
Jiantao Jiao (Tsinghua University, P.R. China); Haim H Permuter (Ben-Gurion University, Israel); Lei Zhao (Stanford University, USA); Young-Han Kim (UCSD, USA); Tsachy Weissman (Stanford University, USA)
pp. 523-527

Lossy Common Information of Two Dependent Random Variables
Kumar Viswanatha (UCSB, USA); Emrah Akyol (UCSB, USA); Kenneth Rose (University of California, Santa Barbara, USA)
pp. 528-532

Information Divergence is more chi square distributed than the chi squared statistics
Peter Harremoës (Niels Brock, Copenhagen Business College, Denmark); Gábor Tusnády (Rényi Institute of Mathematics, Hungary)
pp. 533-537

Application of Information-Type Divergences to Constructing Multiple-priors and Variational Preferences
Amir Ahmadi-Javid (Amirkabir University of Technology, Iran)
pp. 538-540

S3.T9: Communication Problems in Quantum Optics

The Ultimate Limits of Optical Communication Efficiency with Photon-Counting Receivers
Sam Dolinar (Jet Propulsion Laboratory, USA); Baris I Erkmen (Jet Propulsion Laboratory, USA); Bruce Moision (Jet Propulsion Laboratory, USA); Kevin Birnbaum (Jet propulsion Laboratory (JPL), USA); Dariush Divsalar (Jet Propulsion Laboratory, USA)
pp. 541-545
Polar coding to achieve the Holevo capacity of a pure-loss optical channel
Saikat Guha (Raytheon BBN Technologies, USA); Mark M Wilde (McGill University, Canada)
pp. 546-550

Explicit capacity-achieving receivers for optical communication and quantum reading
Mark M Wilde (McGill University, Canada); Saikat Guha (Raytheon BBN Technologies, USA); Si-Hui Tan (Data Storage Institute, Singapore); Seth Lloyd (MIT, USA)
pp. 551-555

Quantum M-ary Phase Shift Keying
Ranjith Nair (National University of Singapore, Singapore); Brent J Yen (National University of Singapore, Singapore); Saikat Guha (Raytheon BBN Technologies, USA); Jeffrey H. Shapiro (Massachusetts Institute of Technology, USA); Stefano Pirandola (University of York, United Kingdom)
pp. 556-560

S4.T1: The Slepian-Wolf and CEO Problems

On Lossless Universal Compression of Distributed Identical Sources
Ahmad Beirami (Georgia Institute of Technology, USA); Faramarz Fekri (Georgia Institute of Technology, USA)
pp. 561-565

Polar Coding for the Slepian-Wolf Problem Based on Monotone Chain Rules
Erdal Arikan (Bilkent University, Turkey)
pp. 566-570

On the Vector Gaussian L-Terminal CEO Problem
Jia Wang (Shanghai Jiao Tong University, P.R. China); Jun Chen (McMaster University, Canada)
pp. 571-575

An Outer Bound for the Vector Gaussian CEO Problem
Ersen Ekrem (University of Maryland, USA); Sennur Ulukus (University of Maryland, USA)
pp. 576-580

S4.T2: Capacity of Broadcast Channels

On Marton’s inner bound for broadcast channels
Amin Aminzadeh Gohari (Sharif University of Technology, Iran); Chandra Nair (Chinese University of Hong Kong, Hong Kong); Venkat Anantharam (University of California at Berkeley, USA)
pp. 581-585
The capacity region of the two-receiver vector Gaussian broadcast channel with private and common messages
Yanlin Geng (Chinese University of Hong Kong, Hong Kong); Chandra Nair (Chinese University of Hong Kong, Hong Kong)
pp. 586-590

The State-Dependent Semideterministic Broadcast Channel
Amos Lapidoth (ETHZ, Switzerland); Ligong Wang (Massachusetts Institute of Technology, USA)
pp. 591-595

The Degraded Broadcast Channel with Action-Dependent States
Yossef Steinberg (Technion, Israel); Tsachy Weissman (Stanford University, USA)
pp. 596-600

S4.T3: Connectivity and Interference

Percolation in Directed Random Geometric Graphs
Olivier Dousse (Nokia Research Center, Switzerland)
pp. 601-605

Power Optimization on a Network: The effects of randomness
Aris Moustakas (University of Athens, Greece); Nicholas Bambos (Stanford University, USA)
pp. 606-610

Cooperation versus Interference in Large Wireless Relay Networks
Andrés Altieri (University of Buenos Aires, Argentina); Leonardo Rey Vega (University of Buenos Aires, Facultad de Ingeniería, Argentina); Cecilia G. Galarza (University of Buenos Aires, Argentina); Pablo Piantanida (SUPELEC, France)
pp. 611-615

Interference and Throughput in Aloha-based Ad Hoc Networks with Isotropic Node Distribution
Ralph Tanbourgi (Karlsruhe Institute of Technology (KIT), Germany); Holger Jäkel (Karlsruhe Institute of Technology (KIT), Germany); Leonid Chaichenets (Karlsruhe Institute of Technology, Germany); Friedrich K. Jondral (Karlsruhe Institute of Technology, Germany)
pp. 616-620

S4.T4: Structured Codes

Capacity Achieving Linear Codes with Random Binary Sparse Generating Matrices over the Binary Symmetric Channel
Abbasali Makhdoumi Kakhaki (MIT & RLE, USA); Hossein Karkeh Abadi (Stanford University, USA); Pedram Pad (Sharif University of Technology, Iran); Hamid Saedee (Tarbiat Modares University, Iran); Farokh Marvasti (Sharif university of Technology, Iran); Kasra Alishahi (Sharif University, Iran)
pp. 621-625
Nested Lattice Codes for Arbitrary Continuous Sources and Channels
Aria Ghasemian Sahebi (University of Michigan, USA); Sandeep Pradhan (University Michigan, USA)
pp. 626-630

Codes Over Non-Abelian Groups: Point-to-Point Communications and Computation
Over MAC
Aria Ghasemian Sahebi (University of Michigan, USA); Sandeep Pradhan (University Michigan, USA)
pp. 631-635

Efficient Decoding of Permutation Codes Obtained from Distance Preserving Maps
Yeow Meng Chee (Nanyang Technological University, Singapore); Punarbasu Purkayastha (Nanyang Technological University, Singapore)
pp. 636-640

S4.T5: Codes on Graphs

Observability, Controllability and Local Reducibility of Linear Codes on Graphs
David Forney (MIT, USA); Heide Gluesing-Luerssen (University of Kentucky, USA)
pp. 641-645

Reducing complexity of tail-biting trellises
Heide Gluesing-Luerssen (University of Kentucky, USA); David Forney (MIT, USA)
pp. 646-650

A Graphical Revisit of the Krawtchouk Transform
Yongyi Mao (University of Ottawa, Canada); Terence H. Chan (University of South Australia, Australia)
pp. 651-655

A Factor-Graph Representation of Probabilities in Quantum Mechanics
Hans-Andrea Loeliger (ETH Zurich, Switzerland); Pascal Vontobel (HP Labs, USA)
pp. 656-660

S4.T6: Identifying Codes and Power Line Communications

Importance of Symbol Equity in Coded Modulation for Power Line Communications
Yeow Meng Chee (Nanyang Technological University, Singapore); Han Mao Kiah (Nanyang Technological University, Singapore); Punarbasu Purkayastha (Nanyang Technological University, Singapore); Chengmin Wang (Nanyang Technological University, Singapore)
pp. 661-665

Optimal Equitable Symbol Weight Codes for Power Line Communications
Yeow Meng Chee (Nanyang Technological University, Singapore); Han Mao Kiah (Nanyang Technological University, Singapore); Alan Ling (University of Vermont, USA); Chengmin Wang (Nanyang Technological University, Singapore)
pp. 666-670
Codes for Locating Objects in Sensor Networks
Ville Junnila (University of Turku, Finland); Tero K Laihonen (University of Turku, Finland); Aline Parreau (University of Joseph Fourier, France)
pp. 671-675

New lower bounds for identifying codes in infinite grids
Ville Junnila (University of Turku, Finland); Tero K Laihonen (University of Turku, Finland)
pp. 676-680

S4.T7: Capacity of Finite-Alphabet Channels

Improved Upper Bounds on the Capacity of Binary Channels with Causal Adversaries
Bikash K Dey (Indian Institute of Technology Bombay, India); Sidharth Jaggi (Chinese University of Hong Kong, Hong Kong); Michael Langberg (Open University of Israel, Israel); Anand D. Sarwate (Toyota Technological Institute at Chicago, USA)
pp. 681-685

Finding the Capacity of a Quantized Binary-Input DMC
Brian Michael Kurkoski (Japan Advanced Institute of Science and Technology (JAIST), Japan); Hideki Yagi (University of Electro-Communications, Japan)
pp. 686-690

On the Capacity of Binary Input Symmetric q-ary Output Channels with Synchronization Errors
Mojtaba Rahmati (Arizona State University, USA); Tolga M. Duman (Arizona State University, USA)
pp. 691-695

Mutual Information and Relative Entropy over the Binomial and Negative Binomial Channels
Camilo G. Taborda (Universidad Carlos III de Madrid, Spain); Fernando Pérez-Cruz (Universidad Carlos III de Madrid, Spain)
pp. 696-700

S4.T8: Information and Estimation

Pointwise Relations between Information and Estimation in Gaussian Noise
Kartik Venkat (Stanford University, USA); Tsachy Weissman (Stanford University, USA)
pp. 701-705

Estimation with a helper who knows the interference
Yeow-Khiang Chia (Stanford University, USA); Rajiv Soundararajan (University of Texas, Austin, USA); Tsachy Weissman (Stanford University, USA)
pp. 706-710

Rate Distortion Codes for the Collective Estimation from Independent Noisy Observations
Tatsuto Murayama (NTT, Japan); Peter Davis (Telecognix Corporation, Japan)
Mismatched MMSE Estimation of Multivariate Gaussian Sources
Inaki Esnaola (Princeton University, USA); Antonia Tulino (Bell Labs, USA); H. Vincent Poor (Princeton University, USA)
pp. 716-720

S4.T9: Quantum Channels in Network Information Theory

Classical codes for quantum broadcast channels
Ivan Savov (McGill University, Canada); Mark M Wilde (McGill University, Canada)
pp. 721-725

Capacities of classical compound quantum wiretap and classical quantum compound wiretap channels
Minglai Cai (University Bielefeld, Germany); Ning Cai (Xidian University, P.R. China); Christian Deppe (University of Bielefeld, Germany)
pp. 726-730

Partial decode-forward for quantum relay channels
Ivan Savov (McGill University, Canada); Mark M Wilde (McGill University, Canada); Mai Vu (McGill University, Canada)
pp. 731-735

Achieving the Han-Kobayashi inner bound for the quantum interference channel
Pranab Sen (Tata Institute of Fundamental Research, India)
pp. 736-740

S5.T5: Coding for L1 Distance and Asymmetric Errors

On Symmetric L1 distance error control codes and elementary symmetric functions
Luca G. Tallini (Università di Teramo, Italy); Bella Bose (Oregon State University, USA)
pp. 741-745

On symmetric/asymmetric Lee distance error control codes and elementary symmetric functions
Luca G. Tallini (Università di Teramo, Italy); Bella Bose (Oregon State University, USA)
pp. 746-750

New Constructions of Codes for Asymmetric Channels via Concatenation
Markus Grassl (Centre for Quantum Technologies (CQT) & National University of Singapore, Singapore); Peter Shor (MIT, USA); Graeme Smith (IBM T. J. Watson Research Centre, USA); John Smolin (IBM T. J. Watson Research Center, USA); Bei Zeng (University of Guelph, Canada)
pp. 751-755
S5.T1: Multiterminal Source Coding

The Effect of Zero-rate Encoders in the Multi-terminal Source Coding Problem
Badri N Vellambi (University of South Australia, Australia)
pp. 756-760

Multiterminal Source Coding under Logarithmic Loss
Thomas Courtade (UCLA, USA); Tsachy Weissman (Stanford University, USA)
pp. 761-765

On Cooperation in Multi-Terminal Computation and Rate Distortion
Milad Sefidgaran (Telecom ParisTech, France); Asian Tchamkerten (Telecom ParisTech, France)
pp. 766-770

Polynomials and Computing Functions of Correlated Sources
Sheng Huang (KTH Royal Institute of Technology, Sweden); Mikael Skoglund (KTH Royal Institute of Technology, Sweden)
pp. 771-775

S5.T2: Relay Channels

An upper bound on relaying over capacity
Feng Xue (Intel Corporation, USA)
pp. 776-780

Buffer-Aided Relaying in a Three Node Network
Nikola Zlatanov (University of British Columbia, Canada); Robert Schober (University of British Columbia, Canada); Lutz Lampe (University of British Columbia, Canada)
pp. 781-785