Stanford



Andrea Goldsmith

Stephen Harris Professor in the School of Engineering, Emerita

Electrical Engineering

Curriculum Vitae available Online

Bio

BIO

Andrea Goldsmith is the Dean of Engineering and Applied Science and the Arthur LeGrand Doty Professor of Electrical and Computer Engineering at Princeton University. She was previously the Stephen Harris Professor of Engineering and Professor of Electrical Engineering at Stanford University, where she is now Harris Professor Emerita. Her research interests are in information theory, communication theory, and signal processing, and their application to wireless communications, interconnected systems, and biomedical devices. She founded and served as Chief Technical Officer of Plume WiFi (formerly Accelera, Inc.) and of Quantenna (QTNA), Inc, and she serves on the Board of Directors for Intel (INTC), Medtronic (MDT), Crown Castle Inc (CCI), and the Marconi Society. She also serves on the Presidential Council of Advisors on Science and Technology (PCAST). Dr. Goldsmith is a member of the National Academy of Engineering, the Royal Academy of Engineering, and the American Academy of Arts and Sciences. She is a Fellow of the IEEE and has received several awards for her work, including the Marconi Prize, the ACM Sigmobile Outstanding Contribution Award, the IEEE Sumner Technical Field Award, the ACM Athena Lecturer Award, the ComSoc Armstrong Technical Achievement Award, the Kirchmayer Graduate Teaching Award, the WICE Mentoring Award, and the Silicon Valley/San Jose Business Journal's Women of Influence Award. She is author of the book ``Wireless Communications" and co-author of the books ``MIMO Wireless Communications," "Principles of Cognitive Radio," and "Machine Learning and Wireless Communications," all published by Cambridge University Press, as well as an inventor on 29 patents. She received the B.S., M.S. and Ph.D. degrees in Electrical Engineering from U.C. Berkeley.

Dr. Goldsmith is the founding Chair of the IEEE Board of Directors Committee on Diversity and Inclusion. She served as President of the IEEE Information Theory Society in 2009, as founding Chair of its Student Committee, and as founding Editor-in-Chief of the IEEE Journal on Selected Areas in Information Theory. She has also served on the Board of Governors for both the IEEE Information Theory and Communications Societies. At Stanford she served as Chair of Stanford's Faculty Senate and for multiple terms as a Senator, and on its Academic Council Advisory Board, Budget Group, Committee on Research, Planning and Policy Board, Commissions on Graduate and on Undergraduate Education, Faculty Women's Forum Steering Committee, and Task Force on Women and Leadership.

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Electrical Engineering
- Affiliate, Stanford Woods Institute for the Environment
- Member, Wu Tsai Neurosciences Institute

HONORS AND AWARDS

- Eric E. Sumner Technical Field Award in Communications Technology, IEEE Communications Society (2018)

- Member, American Academy of Arts and Sciences (2017)
- Member, National Academy of Engineering (2017)
- Highly Cited Researcher, Thomson-Reuters (2014,2015,2016, 2017)
- Edwin H. Armstrong Achievement Award, IEEE Communications Society (2014)
- Best Tutorial Paper Award, IEEE Communications Society (2013)
- Silicon Valley Women of Influence Award, Silicon Valley Business Journal (2013)
- Technical Achievement Award in Communication Theory, IEEE Communications Society (2013)
- Tsinghua Distinguished Chair Professorship, Tsinghua University (2013)
- Innovation Award, Interdigital (2012)
- Technical Achievement Award in Wireless Communications, IEEE Communications Society (2009)
- Fellow, IEEE (2005)
- IEEE Information Theory Society and Communication Society Joint Paper Award, IEEE (2004)
- Gilbreth Lectureship, National Academy of Engineering (2002)
- Alfred P. Sloan Fellowship, Alfred P. Sloan Foundation (2001)
- Young Investigator Award, The Office of Naval Research (1999)
- CAREER Development Award, National Science Foundation (1995)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- President, IEEE Information Theory Society (2009 - 2009)
- Distinguished Lecturer, IEEE Information Theory Society and Comsoc (2007 - 2009)

PROFESSIONAL EDUCATION

- PhD, University of California, Berkeley , Electrical Engineering and Computer Science (1994)

LINKS

- http://ee.stanford.edu/~andrea: http://ee.stanford.edu/~andrea

Publications

PUBLICATIONS

- **Parallelism Versus Latency in Simplified Successive-Cancellation Decoding of Polar Codes** *IEEE Transactions on Wireless Communications*
  Hashemi, A. S.
  2022; 21 (6): 3909-3920
- **Estimating the Memory Order of Electrocorticography Recordings** *IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING*
  Murin, Y., Goldsmith, A., Aazhang, B.
  2019; 66 (10): 2809–22
- **The Compress-and-Estimate Coding Scheme for Gaussian Sources** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Rini, S., Kipnis, A., Song, R., Goldsmith, A. J.
  2019; 18 (9): 4344–56
- **Fast Blind MIMO Decoding Through Vertex Hopping** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Dean, T. R., Perlstein, J. R., Wootters, M., Goldsmith, A. J.
  2019; 18 (7): 3669–82
- **Blind Joint MIMO Channel Estimation and Decoding** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Dean, T. R., Wootters, M., Goldsmith, A. J.

2019; 65 (4): 2507–24

- **Retail and Wholesale Electricity Pricing Considering Electric Vehicle Mobility** *IEEE TRANSACTIONS ON CONTROL OF NETWORK SYSTEMS*
  Alizadeh, M., Wai, H., Goldsmith, A., Scaglione, A.
  2019; 6 (1): 249–60
- **The Distortion-Rate Function of Sampled Wiener Processes** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Kipnis, A., Goldsmith, A. J., Eldar, Y. C.
  2019; 65 (1): 482–99
- **DISTRIBUTED CONVEX OPTIMIZATION WITH LIMITED COMMUNICATIONS**
  Rao, M., Rini, S., Goldsmith, A., IEEE
  IEEE.2019: 4604–8
- **Neural Network Detection of Data Sequences in Communication Systems** *IEEE TRANSACTIONS ON SIGNAL PROCESSING*
  Farsad, N., Goldsmith, A.
  2018; 66 (21): 5663–78
- **Non-Coherent Detection for Diffusive Molecular Communication Systems**
  Jamali, V., Farsad, N., Schober, R., Goldsmith, A.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2018: 2515–31
- **Analog-to-Digital Compression A new paradigm for converting signals to bits** *IEEE SIGNAL PROCESSING MAGAZINE*
  Kipnis, A., Eldar, Y. C., Goldsmith, A. J.
  2018; 35 (3): 16–39
- **The Distortion Rate Function of Cyclostationary Gaussian Processes**
  Kipnis, A., Goldsmith, A. J., Eldar, Y. C.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2018: 3810–24
- **Outage Detection Using Load and Line Flow Measurements in Power Distribution Systems** *IEEE TRANSACTIONS ON POWER SYSTEMS*
  Sevlian, R., Zhao, Y., Rajagopal, R., Goldsmith, A., Poor, H.
  2018; 33 (2): 2053–69
- **A CCA-Secure Cryptosystem Using Massive MIMO Channels**
  Dean, T., Goldsmith, A.
  edited by Baldi, M., Quaglia, E. A., Tomasin, S.
  SPRINGER.2018: 65–77
- **The Future of Wireless and What it will Enable**
  Goldsmith, A., ACM
  ASSOC COMPUTING MACHINERY.2018: 223
- **MobiCom'18 Panel Discussion: Hammer & Nail vis-a-vis AI / ML Applications to Networked Systems**
  Bhagwat, P., Goldsmith, A., Gupta, M., Rastogi, R., Shroff, G., ACM
  ASSOC COMPUTING MACHINERY.2018: 653–54
- **Two Way Molecular Communications**
  Kwack, J., Yilmaz, H., Farsad, N., Chae, C., Goldsmith, A., ACM
  ASSOC COMPUTING MACHINERY.2018
- **SLIDING BIDIRECTIONAL RECURRENT NEURAL NETWORKS FOR SEQUENCE DETECTION IN COMMUNICATION SYSTEMS**
  Farsad, N., Goldsmith, A., IEEE
  IEEE.2018: 2331–35
- **DEEP LEARNING FOR JOINT SOURCE-CHANNEL CODING OF TEXT**
  Farsad, N., Rao, M., Goldsmith, A., IEEE
  IEEE.2018: 2326–30

- **Detection Over Rapidly Changing Communication Channels Using Deep Learning**
  Farsad, N., Goldsmith, A.
  edited by Matthews, M. B.
  IEEE.2018: 604–8
- **Using Markov Properties of ECoG Signals to Infer Neuron Connectivity**
  Murin, Y., Goldsmith, A.
  edited by Matthews, M. B.
  IEEE.2018: 671–75
- **Fast Blind MIMO Decoding through Vertex Hopping**
  Perlstein, J., Dean, T., Wootters, M., Goldsmith, A.
  edited by Matthews, M. B.
  IEEE.2018: 148–49
- **Robustness of FDM-FDCP Modulation to Phase Noise in Millimeter Wave Systems**
  Grimwood, N., Dean, T., Goldsmith, A.
  edited by Matthews, M. B.
  IEEE.2018: 264–68
- **Neural Network Detectors for Molecular Communication Systems**
  Farsad, N., Goldsmith, A., IEEE
  IEEE.2018: 506–10
- **Zero-Padded FDM-FDCP: Real-Time Signal Processing for Underwater Channels**
  Dean, T., Chowdhury, M., Goldsmith, A., IEEE
  IEEE.2018: 186–90
- **Variable Length Joint Source-Channel Coding of Text Using Deep Neural Networks**
  Rao, M., Farsad, N., Goldsmith, A., IEEE
  IEEE.2018: 81–85
- **SozRank: A new approach for localizing the epileptic seizure onset zone** *PLOS COMPUTATIONAL BIOLOGY*
  Murin, Y., Kim, J., Parvizi, J., Goldsmith, A.
  2018; 14 (1): e1005953
- **Ranking Causal Influence of Financial Markets via Directed Information Graphs**
  Diamandis, T., Murin, Y., Goldsmith, A., IEEE
  IEEE.2018
- **Lossy Compression of Decimated Gaussian Random Walks**
  Murray, G., Kipnis, A., Goldsmith, A. J., IEEE
  IEEE.2018
- **Optimal Pricing to Manage Electric Vehicles in Coupled Power and Transportation Networks** *IEEE TRANSACTIONS ON CONTROL OF NETWORK SYSTEMS*
  Alizadeh, M., Wai, H., Chowdhury, M., Goldsmith, A., Scaglione, A., Javidi, T.
  2017; 4 (4): 863–75
- **Directed Information Between Connected Leaky Integrate-and-Fire Neurons**
  Soltani, N., Goldsmith, A. J.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2017: 5954–67
- **Physical-Layer Cryptography Through Massive MIMO** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Dean, T. R., Goldsmith, A. J.
  2017; 63 (8): 5419–36
- **The Fluctuating Two-Ray Fading Model: Statistical Characterization and Performance Analysis** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Romero-Jerez, J. M., Javier Lopez-Martinez, F., Paris, J. F., Goldsmith, A. J.

2017; 16 (7): 4420–32

- **Minimum Sparsity of Unobservable Power Network Attacks** *IEEE TRANSACTIONS ON AUTOMATIC CONTROL*
  Zhao, Y., Goldsmith, A., Poor, H.
  2017; 62 (7): 3354–68
- **Time-slotted transmission over molecular timing channels** *NANO COMMUNICATION NETWORKS*
  Murin, Y., Farsad, N., Chowdhury, M., Goldsmith, A.
  2017; 12: 12–24
- **On the Minimax Capacity Loss Under Sub-Nyquist Universal Sampling** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Chen, Y., Goldsmith, A. J., Eldar, Y. C.
  2017; 63 (6): 3348–67
- **A Critical Survey of Deconvolution Methods for Separating Cell Types in Complex Tissues** *PROCEEDINGS OF THE IEEE*
  Mohammadi, S., Zuckerman, N., Goldsmith, A., Grama, A.
  2017; 105 (2): 340-366
- **Joint Optimization of Power and Data Transfer in Multiuser MIMO Systems** *IEEE TRANSACTIONS ON SIGNAL PROCESSING*
  Rubio, J., Pascual-Iserte, A., Palomar, D. P., Goldsmith, A.
  2017; 65 (1): 212-227
- **Compressed Sensing under Optimal Quantization**
  Kipnis, A., Reeves, G., Eldar, Y. C., Goldsmith, A. J., IEEE
  IEEE.2017: 2148–52
- **Compress-and-Estimate Source Coding for a Vector Gaussian Source**
  Song, R., Rini, S., Kipnis, A., Goldsmith, A. J., IEEE
  IEEE.2017: 539–43
- **Marginal Charging Station Pricing in an Intelligent Electric Transportation System**
  Alizadeh, M., Wai, H., Goldsmith, A., Scaglione, A., IEEE
  IEEE.2017: 3438–44
- **Capacity of Molecular Channels with Imperfect Particle-Intensity Modulation and Detection**
  Farsad, N., Rose, C., Medard, M., Goldsmith, A., IEEE
  IEEE.2017: 2468–72
- **ESTIMATION IN AUTOREGRESSIVE PROCESSES WITH PARTIAL OBSERVATIONS**
  Rao, M., Javidi, T., Eldar, Y. C., Goldsmith, A., IEEE
  IEEE.2017: 4212–16
- **Blind Joint MIMO Channel Estimation and Decoding**
  Dean, T., Wootters, M., Goldsmith, A., IEEE
  IEEE.2017
- **A Novel Experimental Platform for In-Vessel Multi-Chemical Molecular Communications**
  Farsad, N., Pan, D., Goldsmith, A., IEEE
  IEEE.2017
- **Coding Theorems for the Compress and Estimate Source Coding Problem**
  Kipnis, A., Rini, S., Goldsmith, A. J., IEEE
  IEEE.2017: 2568–72
- **Fundamental Estimation Limits in Autoregressive Processes with Compressive Measurements**
  Rao, M., Javidi, T., Eldar, Y. C., Goldsmith, A., IEEE
  IEEE.2017: 2895–99
- **Machine Learning based Channel Modeling for Molecular MIMO Communications**
  Lee, C., Yilmaz, H., Chae, C., Farsad, N., Goldsmith, A., IEEE

IEEE.2017

- **A New Modulation Technique for Doppler Compensation in Frequency-Dispersive Channels**
  Dean, T., Chowdhury, M., Goldsmith, A., IEEE
  IEEE.2017
- **Diversity Gain of One-shot Communication over Molecular Timing Channels**
  Murin, Y., Chowdhury, M., Farsad, N., Goldsmith, A., IEEE
  IEEE.2017
- **A Novel Experimental Platform for In-Vessel Multi-Chemical Molecular Communications**
  Farsad, N., Pan, D., Goldsmith, A., IEEE
  IEEE.2017
- **Coding Theorems for the Compress and Estimate Source Coding Problem**
  Kipnis, A., Rini, S., Goldsmith, A. J., IEEE
  IEEE.2017: 2568–72
- **Fundamental Estimation Limits in Autoregressive Processes with Compressive Measurements**
  Rao, M., Javidi, T., Eldar, Y. C., Goldsmith, A., IEEE
  IEEE.2017: 2895–99
- **Machine Learning based Channel Modeling for Molecular MIMO Communications**
  Lee, C., Yilmaz, H., Chae, C., Farsad, N., Goldsmith, A., IEEE
  IEEE.2017
- **A New Modulation Technique for Doppler Compensation in Frequency-Dispersive Channels**
  Dean, T., Chowdhury, M., Goldsmith, A., IEEE
  IEEE.2017
- **Diversity Gain of One-shot Communication over Molecular Timing Channels**
  Murin, Y., Chowdhury, M., Farsad, N., Goldsmith, A., IEEE
  IEEE.2017
- **Energy-Based Modulation for Noncoherent Massive SIMO Systems** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Manolakos, A., Chowdhury, M., Goldsmith, A.
  2016; 15 (11): 7831-7846
- **Information Recovery From Pairwise Measurements** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Chen, Y., Suh, C., Goldsmith, A. J.
  2016; 62 (10): 5881-5905
- **Benefits of Storage Control for Wind Power Producers in Power Markets** *IEEE TRANSACTIONS ON SUSTAINABLE ENERGY*
  Chowdhury, M., Rao, M., Zhao, Y., Javidi, T., Goldsmith, A.
  2016; 7 (4): 1492-1505
- **Achieving Full DoF in Heterogeneous Parallel Broadcast Channels With Outdated CSIT** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Chen, J., Yang, S., Ozgur, A., Goldsmith, A.
  2016; 62 (7): 4154-4171
- **Scaling Laws for Noncoherent Energy-Based Communications in the SIMO MAC** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Chowdhury, M., Manolakos, A., Goldsmith, A.
  2016; 62 (4): 1980-1992
- **On the Total Power Capacity of Regular-LDPC Codes With Iterative Message-Passing Decoders** *IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS*
  Ganesan, K., Grover, P., Rabaey, J., Goldsmith, A.
  2016; 34 (2): 375-396
- **A Unified Graphical Approach to Random Coding for Single-Hop Networks** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Rini, S., Goldsmith, A.

2016; 62 (1): 56-88

- **A Polynomial-Time Method to Find the Sparsest Unobservable Attacks in Power Networks**
  Zhao, Y., Goldsmith, A., Poor, H., IEEE
  IEEE.2016: 276–82
- **Capacity of Block Rayleigh Fading Channels Without CSI**
  Chowdhury, M., Goldsmith, A., IEEE
  IEEE.2016: 1884–88
- **On the Capacity of Diffusion-Based Molecular Timing Channels**
  Farsad, N., Murin, Y., Eckfordt, A., Goldsmith, A., IEEE
  IEEE.2016: 1023–27
- **Multiterminal Compress-and-Estimate Source Coding**
  Kipnis, A., Rini, S., Goldsmith, A. J., IEEE
  IEEE.2016: 540–44
- **A Molecular Communication System Using Acids, Bases and Hydrogen Ions**
  Farsad, N., Goldsmith, A., IEEE
  IEEE.2016
- **Optimal Rate Allocation in Multiterminal Compress-and-Estimate Source Coding**
  Song, R., Rini, S., Kipnis, A., Goldsmith, A. J., IEEE
  IEEE.2016
- **Energy Model for Vesicle-Based Active Transport Molecular Communication**
  Farsad, N., Yilmaz, H., Chae, C., Goldsmith, A., IEEE
  IEEE.2016
- **System Identification from Partial Samples: Non-Asymptotic Analysis**
  Rao, M., Kipnis, A., Javidi, T., Eldar, Y. C., Goldsmith, A., IEEE
  IEEE.2016: 2938–44
- **SWIPT Techniques for Multiuser MIMO Broadcast Systems**
  Rubio, J., Pascual-Iserte, A., Palomar, D. P., Goldsmith, A., IEEE
  IEEE.2016: 499–504
- **On the Capacity of Diffusion-Based Molecular Timing Channels With Diversity**
  Farsad, N., Murin, Y., Rao, M., Goldsmith, A.
  edited by Matthews, M. B.
  IEEE COMPUTER SOC.2016: 1117–21
- **Tracking Epileptic Seizure Activity via Information Theoretic Graphs**
  Murin, Y., Kim, J., Goldsmith, A.
  edited by Matthews, M. B.
  IEEE COMPUTER SOC.2016: 583–87
- **The Fluctuating Two-Ray Fading Model for mmWave Communications**
  Romero-Jerez, J. M., Javier Lopez-Martinez, F., Paris, J. F., Goldsmith, A., IEEE
  IEEE.2016
- **Communication over Diffusion-Based Molecular Timing Channels**
  Murin, Y., Farsad, N., Chowdhury, M., Goldsmith, A., IEEE
  IEEE.2016
- **Distortion Rate Function of Sub-Nyquist Sampled Gaussian Sources** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Kipnis, A., Goldsmith, A. J., Eldar, Y. C., Weissman, T.
  2016; 62 (1): 401-429

- **Average Fade Duration for Amplify-and-Forward Relay Networks in Fading Channels** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Javier Lopez-Martinez, F., Kurniawan, E., Islam, R., Goldsmith, A.
  2015; 14 (10): 5454-5467
- **Rainfall Effect on the Performance of Millimeter-Wave MIMO Systems** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Zhang, Y., Wang, P., Goldsmith, A.
  2015; 14 (9): 4857-4866
- **Exact and Stable Covariance Estimation From Quadratic Sampling via Convex Programming** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Chen, Y., Chi, Y., Goldsmith, A. J.
  2015; 61 (7): 4034-4059
- **Null Space Learning in Cooperative MIMO Cellular Networks Using Interference Feedback** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Manolakos, A., Noam, Y., Goldsmith, A. J.
  2015; 14 (7): 3961-3977
- **Eigenvalue Dynamics of a Central Wishart Matrix With Application to MIMO Systems** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Javier Lopez-Martinez, F., Martos-Naya, E., Paris, J. F., Goldsmith, A.
  2015; 61 (5): 2693-2707
- **MGF Approach to the Analysis of Generalized Two-Ray Fading Models** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Rao, M., Javier Lopez-Martinez, F., Alouini, M., Goldsmith, A.
  2015; 14 (5): 2548-2561
- **Wind Aggregation Via Risky Power Markets** *IEEE TRANSACTIONS ON POWER SYSTEMS*
  Zhao, Y., Qin, J., Rajagopal, R., Goldsmith, A., Poor, H. V.
  2015; 30 (3): 1571-1581
- **Diversity-Multiplexing Tradeoff for the Interference Channel With a Relay** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Zahavi, D., Zhang, L., Maric, I., Dabora, R., Goldsmith, A. J., Cui, S.
  2015; 61 (2): 963-982
- **Reliable Uncoded Communication in the SIMO MAC** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Chowdhury, M., Goldsmith, A.
  2015; 61 (1): 388-403
- **Value of Storage for Wind Power Producers in Forward Power Markets**
  Rao, M., Chowdhury, M., Zhao, Y., Javidi, T., Goldsmith, A., IEEE
  IEEE.2015: 5686–91
- **Coherent Versus Noncoherent Massive SIMO Systems: Which Has Better Performance?**
  Chowdhury, M., Manolakos, A., Goldsmith, A. J., IEEE
  IEEE.2015: 1691–96
- **Benefits of Coding in a Noncoherent Massive SIMO System**
  Knott, B., Chowdhury, M., Manolakos, A., Goldsmith, A. J., IEEE
  IEEE.2015: 2350–55
- **MGF Approach to the Capacity Analysis of Generalized Two-Ray Fading Models**
  Rao, M., Javier Lopez-Martinez, F., Alouini, M., Goldsmith, A., IEEE
  IEEE.2015: 4278–84
- **Information Recovery from Pairwise Measurements: A Shannon-Theoretic Approach**
  Chen, Y., Suh, C., Goldsmith, A. J., IEEE
  IEEE.2015: 2336–40
- **Degrees of Freedom of the MIMO Interference Channel with Parallel Multicasting**

Chen, J., Goldsmith, A., Ozgur, A., Yang, S., IEEE
IEEE.2015: 1069–73

- **Reliable Uncoded Communication in the Quantized SIMO MAC**
  Chowdhury, M., Kipnis, A., Goldsmith, A., IEEE
  IEEE.2015: 2141–45
- **The Indirect Rate-Distortion Function of a Binary i.i.d Source**
  Kipnis, A., Rini, S., Goldsmith, A. J., IEEE
  IEEE.2015: 352–56
- **The Perils of Dynamic Electricity Pricing Tariffs in the Presence of Retail Market Imperfections**
  Alizadeh, M., Goldsmith, A., Scaglione, A.
  edited by Matthews, M. B.
  IEEE.2015: 683–88
- **Multiplexing-diversity tradeoffs in noncoherent massive MIMO systems**
  Chowdhury, M., Manolakos, A., Goldsmith, A. J.
  edited by Matthews, M. B.
  IEEE.2015: 312–16
- **Optimal Trade-off Between Sampling Rate and Quantization Precision in A/D conversion**
  Kipnis, A., Eldar, Y. C., Goldsmith, A. J., IEEE
  IEEE.2015: 1083–90
- **Sub-Nyquist Sampling Achieves Optimal Rate-Distortion**
  Kipnis, A., Goldsmith, A. J., Eldar, Y. C., IEEE
  IEEE.2015
- **Capacity Scaling in Noncoherent Wideband Massive SIMO Systems**
  Chowdhury, M., Manolakos, A., Gomez-Cuba, F., Erkip, E., Goldsmith, A. J., IEEE
  IEEE.2015
- **Backing Off From Infinity: Performance Bounds via Concentration of Spectral Measure for Random MIMO Channels** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Chen, Y., Goldsmith, A. J., Eldar, Y. C.
  2015; 61 (1): 366-387
- **Backing Off From Infinity: Performance Bounds via Concentration of Spectral Measure for Random MIMO Channels** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Chen, Y., Goldsmith, A. J., Eldar, Y. C.
  2015; 61 (1): 366-387
- **CaMoDi: a new method for cancer module discovery** *BMC GENOMICS*
  Manolakos, A., Ochoa, I., Venkat, K., Goldsmith, A. J., Gevaert, O.
  2014; 15
- **Identification of Outages in Power Systems With Uncertain States and Optimal Sensor Locations** *IEEE JOURNAL OF SELECTED TOPICS IN SIGNAL PROCESSING*
  Zhao, Y., Chen, J., Goldsmith, A., Poor, H. V.
  2014; 8 (6): 1140-1153
- **Energy Efficient Cooperative Strategies for Relay-Assisted Downlink Cellular Systems** *IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS*
  Rini, S., Kurniawan, E., Ghaghanidze, L., Goldsmith, A.
  2014; 32 (11): 2075-2089
- **On the Capacity of the Multiantenna Gaussian Cognitive Interference Channel** *IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS*
  Rini, S., Goldsmith, A.

2014; 32 (11): 2252-2267

- **Null Space Learning With Interference Feedback for Spatial Division Multiple Access** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Noam, Y., Manolakos, A., Goldsmith, A. J.
  2014; 13 (10): 5699-5715
- **Channel Capacity Under Sub-Nyquist Nonuniform Sampling** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Chen, Y., Goldsmith, A. J., Eldar, Y. C.
  2014; 60 (8): 4739-4756
- **On the Capacity of the Interference Channel With a Cognitive Relay** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Rini, S., Tuninetti, D., Devroye, N., Goldsmith, A. J.
  2014; 60 (4): 2148-2179
- **COURSE OUTLINE ELEC 456–Mobile Communications Spring 2014** *Instructor*
  Goldsmith, A.
  2014
- **Distortion Rate Function of Cyclo-Stationary Gaussian Processes** *IEEE International Symposium on Information Theory (ISIT)*
  Kipnis, A., Goldsmith, A. J.
  IEEE.2014: 2834–2838
- **Interference due to Null Space Mismatch in Cooperative Multipoint MIMO Cellular Networks**
  Manolakos, A., Noam, Y., Goldsmith, A. J.
  edited by Jamalipour, A., Deng, D. J.
  IEEE.2014: 5148–53
- **AN ALGORITHM FOR EXACT SUPER-RESOLUTION AND PHASE RETRIEVAL** *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*
  Chen, Y., Eldar, Y. C., Goldsmith, A. J.
  IEEE.2014
- **ESTIMATION OF SIMULTANEOUSLY STRUCTURED COVARIANCE MATRICES FROM QUADRATIC MEASUREMENTS** *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*
  Chen, Y., Chi, Y., Goldsmith, A. J.
  IEEE.2014
- **Optimized Path Planning for Electric Vehicle Routing and Charging**
  Alizadeh, M., Wai, H., Scaglione, A., Goldsmith, A., Fan, Y., Javidi, T., IEEE
  IEEE.2014: 25–32
- **Gaussian Distortion-Rate Function under Sub-Nyquist Nonuniform Sampling**
  Kipnis, A., Goldsmith, A. J., Eldar, Y. C., IEEE
  IEEE.2014: 874–80
- **Optimal Strategies for Dynamic Joint Source-Channel Coding with Feedback**
  Park, S., Javidi, T., Goldsmith, A., IEEE
  IEEE.2014: 1524–28
- **Power-Controlled Multiple Access with a Queue-Dependent Backoff Threshold**
  Mounzer, J., Schubert, K., Bambos, N., Goldsmith, A., IEEE
  IEEE.2014: 4738–44
- **Constellation Design in Noncoherent Massive SIMO Systems**
  Manolakos, A., Chowdhury, M., Goldsmith, A. J., IEEE
  IEEE.2014: 3690–95
- **Capturing Aggregate Flexibility in Demand Response**
  Alizadeh, M., Scaglione, A., Goldsmith, A., Kesidis, G., IEEE
  IEEE.2014: 6439–45

- **Increasing Capacity in Massive MIMO Cellular Networks via Small Cells**
  Kazerouni, A., Lopez-Martinez, F., Goldsmith, A., IEEE
  IEEE.2014: 358–63
- **Design and Performance of Noncoherent Massive SIMO Systems**
  Chowdhury, M., Manolakos, A., Goldsmith, A. J., IEEE
  IEEE.2014
- **Statistics and System Performance Metrics for the Two Wave With Diffuse Power Fading Model**
  Rao, M., Lopez-Martinez, F., Goldsmith, A., IEEE
  IEEE.2014
- **Line Outage Detection in Power Transmission Networks via Message Passing Algorithms**
  Chen, J., Zhao, Y., Goldsmith, A., Poor, H.
  edited by Matthews, M. B.
  IEEE COMPUTER SOC.2014: 350–54
- **Dynamic Joint Outage Identification and State Estimation in Power Systems**
  Zhao, Y., Chen, J., Goldsmith, A., Poor, H.
  edited by Matthews, M. B.
  IEEE COMPUTER SOC.2014: 1138–42
- **Information Recovery from Pairwise Measurements** *IEEE International Symposium on Information Theory (ISIT)*
  Chen, Y., Goldsmith, A. J.
  IEEE.2014: 2012–2016
- **Robust and Universal Covariance Estimation from Quadratic Measurements via Convex Programming** *IEEE International Symposium on Information Theory (ISIT)*
  Chen, Y., Chi, Y., Goldsmith, A. J.
  IEEE.2014: 2017–2021
- **CSI IS not needed for Optimal Scaling In Multiuser Massive SIMO Systems** *IEEE International Symposium on Information Theory (ISIT)*
  Manolakos, A., Chowdhury, M., Goldsmith, A. J.
  IEEE.2014: 3117–3121
- **Directed Information Between Connected Leaky Integrate-and-Fire Neurons** *IEEE International Symposium on Information Theory (ISIT)*
  Soltani, N., Goldsmith, A.
  IEEE.2014: 1291–1295
- **Outdated CSIT can Achieve Full DoF in Heterogeneous Parallel Channels** *IEEE International Symposium on Information Theory (ISIT)*
  Chen, J., Yang, S., Ozgur, A., Goldsmith, A.
  IEEE.2014: 2564–2568
- **The One-Bit Null Space Learning Algorithm and Its Convergence** *IEEE TRANSACTIONS ON SIGNAL PROCESSING*
  Noam, Y., Goldsmith, A. J.
  2013; 61 (24): 6135-6149
- **Achievable Error Exponents in the Gaussian Channel With Rate-Limited Feedback** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Mirghaderi, R., Goldsmith, A., Weissman, T.
  2013; 59 (12): 8144-8156
- **Isoosmolar Enemas Demonstrate Preferential Gastrointestinal Distribution, Safety, and Acceptability Compared with Hyperosmolar and Hypoosmolar Enemas as a Potential Delivery Vehicle for Rectal Microbicides** *AIDS RESEARCH AND HUMAN RETROVIRUSES*
  Leyva, F. J., Bakshi, R. P., Fuchs, E. J., Li, L., Caffo, B. S., Goldsmith, A. J., Ventuneac, A., Carballo-Dieguez, A., Du, Y., Leal, J. P., Lee, L. A., Torbenson, M. S., Hendrix, et al
  2013; 29 (11): 1487-1495
- **Shannon Meets Nyquist: Capacity of Sampled Gaussian Channels** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Chen, Y., Eldar, Y. C., Goldsmith, A. J.
  2013; 59 (8): 4889-4914

- **A Self-Directed Method for Cell-Type Identification and Separation of Gene Expression Microarrays** *PLOS COMPUTATIONAL BIOLOGY*
  Zuckerman, N. S., Noam, Y., Goldsmith, A. J., Lee, P. P.
  2013; 9 (8)
- **Reduced-Complexity Robust MIMO Decoders** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Thian, B. S., Goldsmith, A.
  2013; 12 (8): 3783-3795
- **Energy-Efficient Communication via Feedback** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Mirghaderi, R., Goldsmith, A.
  2013; 12 (7): 3338-3349
- **Reduced-Dimension Multiuser Detection** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Xie, Y., Eldar, Y. C., Goldsmith, A.
  2013; 59 (6): 3858-3874
- **Reliable Joint Source-Channel Cooperative Transmission Over Relay Networks** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Guenduez, D., Erkip, E., Goldsmith, A., Poor, H. V.
  2013; 59 (4): 2442-2458
- **Blind Null-Space Learning for MIMO Underlay Cognitive Radio with Primary User Interference Adaptation** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Noam, Y., Goldsmith, A. J.
  2013; 12 (4): 1722-1734
- **Capacity Bounds and Exact Results for the Cognitive Z-Interference Channel** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Liu, N., Maric, I., Goldsmith, A. J., Shamai (Shitz), S.
  2013; 59 (2): 886-893
- **A General Approach to Random Coding for Multi-Terminal Networks** *Information Theory and Applications Workshop*
  Rini, S., Goldsmith, A.
  IEEE.2013
- **Dynamic joint source-channel coding with feedback**
  Javidi, T., Goldsmith, A.
  2013
- **Energy Efficient Cooperative Strategies for Relay-Assisted Downlink Cellular Systems Part II: Practical Design** *arXiv preprint arXiv*
  Riniy, S., Kurniawan, E., Ghaghanidze, L., Goldsmith, A.
  2013: 1303.7034
- **One-Bit Null Space Learning for MIMO Underlay Cognitive Radio**
  Noam, Y., Goldsmith, A. J.
  2013
- **Interference management and network performance optimization in dense wifi networks**
  Goldsmith, A., Chandrasekhar, V., Madan, R. K., Krishna, S.
  2013
- **A self-directed method for cell-type identification and separation of gene expression microarrays.** *PLoS computational biology*
  Zuckerman, N. S., Noam, Y., Goldsmith, A. J., Lee, P. P.
  2013; 9 (8)
- **Convex Optimization for Precoder Design in MIMO Interference Networks** *50th Annual Allerton Conference on Communication, Control, and Computing (Allerton)*
  Zhao, Y., Diggavi, S. N., Goldsmith, A., Poor, H. V.
  IEEE.2013: 1213–1219
- **On the Capacity of Indecomposable Finite-State Channels With Feedback** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Dabora, R., Goldsmith, A. J.

2013; 59 (1): 193-203

- **The Multiway Relay Channel** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Guenduez, D., Yener, A., Goldsmith, A., Poor, H. V.
  2013; 59 (1): 51-63
- **Uncoded transmission in MAC channels achieves arbitrarily small error probability** *50th Annual Allerton Conference on Communication, Control, and Computing (Allerton)*
  Chowdhury, M., Goldsmith, A., Weissman, T.
  IEEE.2013: 1983–1990
- **On the Interference Channel with Common Messages and the role of Rate-Sharing** *IEEE Information Theory Workshop (ITW)*
  Rini, S., Goldsmith, A.
  IEEE.2013
- **A General Framework for Statistically Characterizing the Dynamics of MIMO Channels** *IEEE Information Theory Workshop (ITW)*
  Lopez-Martinez, F. J., Martos-Naya, E., Paris, J. F., Goldsmith, A.
  IEEE.2013
- **Rate Optimization for Relay-Assisted Downlink Cellular Systems Using Superposition Coding** *IEEE International Conference on Communications (ICC)*
  Rini, S., Ghaghanidze, L., Kurniawan, E., Goldsmith, A.
  IEEE.2013: 5371–5375
- **Reliable Uncoded Communication in the Underdetermined SIMO MAC with Low-Complexity Decoding** *51st Annual Allerton Conference on Communication, Control, and Computing*
  Chowdhury, M., Goldsmith, A., Weissman, T.
  IEEE.2013: 1075–1081
- **Dynamic Joint Source-Channel Coding with Feedback** *IEEE International Symposium on Information Theory Proceedings (ISIT)*
  Javidi, T., Goldsmith, A.
  IEEE.2013: 16–20
- **On The Capacity of the MIMO Cognitive Interference Channel** *IEEE International Symposium on Information Theory Proceedings (ISIT)*
  Rini, S., Goldsmith, A.
  IEEE.2013: 2691–2695
- **Physical-Layer Cryptography Through Massive MIMO** *IEEE Information Theory Workshop (ITW)*
  Dean, T., Goldsmith, A.
  IEEE.2013
- **Inferring Neural Connectivity via Measured Delay in Directed Information Estimates** *IEEE International Symposium on Information Theory Proceedings (ISIT)*
  Soltani, N., Goldsmith, A.
  IEEE.2013: 2503–2507
- **Minimax Universal Sampling for Compound Multiband Channels** *IEEE International Symposium on Information Theory Proceedings (ISIT)*
  Chen, Y., Goldsmith, A. J., Eldar, Y. C.
  IEEE.2013: 1032–1036
- **How far are LDPC codes from fundamental limits on total power consumption?** *50th Annual Allerton Conference on Communication, Control, and Computing (Allerton)*
  Ganesan, K., Grover, P., Goldsmith, A.
  IEEE.2013: 671–678
- **Reliable Uncoded Communication in the SIMO MAC via Low-Complexity Decoding** *IEEE International Symposium on Information Theory Proceedings (ISIT)*
  Chowdhury, M., Goldsmith, A., Weissman, T.
  IEEE.2013: 1645–1649
- **On the interference channel with common messages and the role of rate-sharing**

Rini, S., Goldsmith, A.
2013

- **The one-bit null space learning algorithm and its convergence** *arXiv preprint arXiv*
Noam, Y., Goldsmith, A. J.
2013: 1301.203

- **Backing off from Infinity: Tight Performance Bounds for Large Random Vector Channels** *arXiv preprint arXiv*
Chen, Y., Goldsmith, A. J., Eldar, Y. C.
2013: 1312.2574

- **Non-Asymptotic Analysis of Random Vector Channels**
Chen, Y., Goldsmith, A. J., Eldar, Y. C.
2013

- **Minimax Capacity Loss under Sub-Nyquist Universal Sampling** *arXiv preprint arXiv*
Chen, Y., Eldar, Y. C., Goldsmith, A.
2013: 1304.7751

- **On the capacity of the MIMO cognitive interference channel**
Rini, S., Goldsmith, A.
2013

- **Inferring neural connectivity via measured delay in directed information estimates**
Soltani, N., Goldsmith, A.
2013

- **Estimation of simultaneously structured covariance matrices from quadratic measurements**
Chen, Y., Chi, Y., Goldsmith, A. J.
2013

- **Outage Detection in Power Distribution Networks with Optimally-Deployed Power Flow Sensors**
Zhao, Y., Sevlian, R., Rajagopal, R., Goldsmith, A., Poor, H. V.
2013

- **Analog network coding in the high-SNR regime** *Institute of Electrical and Electronics Engineers (IEEE)*
Medard, M., Maric, I., Goldsmith, A.
2013

- **A general framework for statistically characterizing the dynamics of MIMO channels** *Information Theory Workshop (ITW), IEEE*
Lopez-Martinez, F. J., Martos-Naya, E., Paris, J. F., Goldsmith, A.
2013: 1-5

- **Physical-layer cryptography through massive MIMO** *Information Theory Workshop (ITW), IEEE*
Dean, T., Goldsmith, A.
2013: 1-5

- **Interference management and network performance optimization in small cells**
Chandrasekhar, V., Goldsmith, A., Krishna, S., Madan, R. K.
2013

- **Exact and stable covariance estimation from quadratic sampling via convex programming** *arXiv preprint arXiv*
Chen, Y., Chi, Y., Goldsmith, A.
2013: 1310.0807

- **An Algorithm for Exact Super-resolution and Phase Retrieval** *arXiv preprint arXiv*
Chen, Y., Eldar, Y. C., Goldsmith, A. J.
2013: 1310.7552

- **Dynamic joint source-channel coding with feedback**
Javidi, T., Goldsmith, A.

2013

- **Energy Efficient Cooperative Strategies for Relay-Assisted Downlink Cellular Systems Part II: Practical Design** *arXiv preprint arXiv*
  Riniy, S., Kurniawan, E., Ghaghanidze, L., Goldsmith, A.
  2013: 1303.7034
- **One-Bit Null Space Learning for MIMO Underlay Cognitive Radio**
  Noam, Y., Goldsmith, A. J.
  2013
- **Interference management and network performance optimization in dense wifi networks**
  Goldsmith, A., Chandrasekhar, V., Madan, R. K., Krishna, S.
  2013
- **A self-directed method for cell-type identification and separation of gene expression microarrays.** *PLoS computational biology*
  Zuckerman, N. S., Noam, Y., Goldsmith, A. J., Lee, P. P.
  2013; 9 (8)
- **Convex Optimization for Precoder Design in MIMO Interference Networks** *50th Annual Allerton Conference on Communication, Control, and Computing (Allerton)*
  Zhao, Y., Diggavi, S. N., Goldsmith, A., Poor, H. V.
  IEEE.2013: 1213–1219
- **On the Capacity of Indecomposable Finite-State Channels With Feedback** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Dabora, R., Goldsmith, A. J.
  2013; 59 (1): 193-203
- **The Multiway Relay Channel** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Guenduez, D., Yener, A., Goldsmith, A., Poor, H. V.
  2013; 59 (1): 51-63
- **Uncoded transmission in MAC channels achieves arbitrarily small error probability** *50th Annual Allerton Conference on Communication, Control, and Computing (Allerton)*
  Chowdhury, M., Goldsmith, A., Weissman, T.
  IEEE.2013: 1983–1990
- **A Learning Framework for Cognitive Interference Networks with Partial and Noisy Observations** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Levorato, M., Firouzabadi, S., Goldsmith, A.
  2012; 11 (9): 3101-3111
- **Minimum Expected Distortion in Gaussian Source Coding With Fading Side Information** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Ng, C. T., Tian, C., Goldsmith, A. J., Shamai (Shitz), S.
  2012; 58 (9): 5725-5739
- **Relaying in the Presence of Interference: Achievable Rates, Interference Forwarding, and Outer Bounds** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Maric, I., Dabora, R., Goldsmith, A. J.
  2012; 58 (7): 4342-4354
- **Networked Markov Decision Processes With Delays** *IEEE TRANSACTIONS ON AUTOMATIC CONTROL*
  Adlakha, S., Lall, S., Goldsmith, A.
  2012; 57 (4): 1013-1018
- **Multihop Analog Network Coding via Amplify-and-Forward: The High SNR Regime** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Maric, I., Goldsmith, A., Medard, M.
  2012; 58 (2): 793-803
- **LQG Control for MIMO Systems Over Multiple Erasure Channels With Perfect Acknowledgment** *IEEE TRANSACTIONS ON AUTOMATIC CONTROL*
  Garone, E., Sinopoli, B., Goldsmith, A., Casavola, A.

2012; 57 (2): 450-456

- **Exploiting Spatial Degrees of Freedom in MIMO Cognitive Radio Systems** *IEEE International Conference on Communications (ICC)*
  Noam, Y., Goldsmith, A. J.
  IEEE.2012
- **Blind Null-space Tracking for MIMO Underlay Cognitive Radio Networks** *IEEE Global Communications Conference (GLOBECOM)*
  Manolakos, A., Noam, Y., Dimou, K., Goldsmith, A. J.
  IEEE.2012: 1223–1229
- **Energy Efficient Cooperation for Two-Hop Relay Networks** *Annual Summit and Conference of the Asia-Pacific-Signal-and-Information-Processing-Association (APSIPA)*
  Kurniawan, E., Rini, S., Goldsmith, A.
  IEEE.2012
- **Structure-based learning in wireless networks via sparse approximation** *EURASIP JOURNAL ON WIRELESS COMMUNICATIONS AND NETWORKING*
  Levorato, M., Mitra, U., Goldsmith, A.
  2012
- **Reduced-Dimension Multiuser Detection** *IEEE International Conference on Communications (ICC)*
  Xie, Y., Eldar, Y. C., Goldsmith, A. J.
  IEEE.2012: 2265–2269
- **Blind Null-Space Learning for Spatial Coexistence in MIMO Cognitive Radios** *IEEE International Conference on Communications (ICC)*
  Noam, Y., Goldsmith, A. J.
  IEEE.2012: 1726–1731
- **Optimizing Cellular Network Architectures to Minimize Energy Consumption** *IEEE International Conference on Communications (ICC)*
  Kurniawan, E., Goldsmith, A.
  IEEE.2012
- **Channel Capacity under General Nonuniform Sampling** *IEEE International Symposium on Information Theory*
  Chen, Y., Eldar, Y. C., Goldsmith, A. J.
  IEEE.2012: 855–859
- **Fundamental limits on the power consumption of encoding and decoding** *IEEE International Symposium on Information Theory*
  Grover, P., Goldsmith, A., Sahai, A.
  IEEE.2012
- **On PMU location selection for line outage detection in wide-area transmission networks** *Power and Energy Society General Meeting, IEEE*
  Zhao, Y., Goldsmith, A., Poor, H. V.
  2012: 1-8
- **Joint Source-Channel Cooperative Transmission over Relay-Broadcast Networks** *arXiv preprint arXiv*
  Gunduz, D., Erkip, E., Goldsmith, A., Poor, H. V.
  2012: 1202.5967
- **COURSE OUTLINE ELEC 456–Mobile Communications Summer**
  Goldsmith, A.
  2012
- **Complex Network Information Exchange in Random Wireless Environments** *STANFORD UNIV CA*
  Boyd, S., Eldar, Y., Goldsmith, A. J., Poor, H. V.
  2012
- **Combining Superposition Coding and Binning Achieves Capacity for the Gaussian Cognitive Interference Channel** *IEEE Information Theory Workshop (ITW)*
  Rini, S., Kurniawan, E., Goldsmith, A.
  IEEE.2012: 227–231

- **Technical Notes and Correspondence** *IEEE TRANSACTIONS ON AUTOMATIC CONTROL*
  Garone, E., Sinopoli, B., Goldsmith, A., Casavola, A.
  2012; 2 (57): 451
- **Spatial mac in mimo communications and its application to underlay cognitive radio** *arXiv preprint arXiv*
  Noam, Y., Goldsmith, A.
  2012: 1202.0163
- **EE360 Project Progress Report: Channel Allocation in OFDMA for MUD**
  Singla, A., Goldsmith, A.
  2012
- **Practical Coding Schemes for Cognitive Overlay Radios** *IEEE Global Communications Conference (GLOBECOM)*
  Kurniawan, E., Goldsmith, A., Rini, S.
  IEEE.2012: 3760–3765
- **Blind Null-space Tracking for MIMO Underlay Cognitive Radio Networks** *IEEE Global Communications Conference (GLOBECOM)*
  Manolakos, A., Noam, Y., Dimou, K., Goldsmith, A. J.
  IEEE.2012: 1223–1229
- **Energy Efficient Cooperation for Two-Hop Relay Networks** *Annual Summit and Conference of the Asia-Pacific-Signal-and-Information-Processing-Association (APSIPA)*
  Kurniawan, E., Rini, S., Goldsmith, A.
  IEEE.2012
- **Structure-based learning in wireless networks via sparse approximation** *EURASIP JOURNAL ON WIRELESS COMMUNICATIONS AND NETWORKING*
  Levorato, M., Mitra, U., Goldsmith, A.
  2012
- **Reduced-Dimension Multiuser Detection** *IEEE International Conference on Communications (ICC)*
  Xie, Y., Eldar, Y. C., Goldsmith, A. J.
  IEEE.2012: 2265–2269
- **Blind Null-Space Learning for Spatial Coexistence in MIMO Cognitive Radios** *IEEE International Conference on Communications (ICC)*
  Noam, Y., Goldsmith, A. J.
  IEEE.2012: 1726–1731
- **Optimizing Cellular Network Architectures to Minimize Energy Consumption** *IEEE International Conference on Communications (ICC)*
  Kurniawan, E., Goldsmith, A.
  IEEE.2012
- **Channel Capacity under General Nonuniform Sampling** *IEEE International Symposium on Information Theory*
  Chen, Y., Eldar, Y. C., Goldsmith, A. J.
  IEEE.2012: 855–859
- **Fundamental limits on the power consumption of encoding and decoding** *IEEE International Symposium on Information Theory*
  Grover, P., Goldsmith, A., Sahai, A.
  IEEE.2012
- **Common Rate Support in Multi-Antenna Downlink Channels Using Semi-Orthogonal User Selection** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Yoo, T., Foschini, G. J., Valenzuela, R. A., Goldsmith, A. J.
  2011; 57 (6): 3449-3461
- **Beyond Shannon: The Quest for Fundamental Performance Limits of Wireless Ad Hoc Networks** *IEEE COMMUNICATIONS MAGAZINE*
  Goldsmith, A., Effros, M., Koetter, R., Medard, M., Ozdaglar, A., Zheng, L.
  2011; 49 (5): 195-205
- **MDA5 and TLR3 Initiate Pro-Inflammatory Signaling Pathways Leading to Rhinovirus-Induced Airways Inflammation and Hyperresponsiveness** *PLOS PATHOGENS*

Wang, Q., Miller, D. J., Bowman, E. R., Nagarkar, D. R., Schneider, D., Zhao, Y., Linn, M. J., Goldsmith, A. M., Bentley, J. K., Sajjan, U. S., Hershenson, M. B.
2011; 7 (5)

- **Study of Gaussian Relay Channels with Correlated Noises** *IEEE TRANSACTIONS ON COMMUNICATIONS*
  Zhang, L., Jiang, J., Goldsmith, A. J., Cui, S.
  2011; 59 (3): 863-876
- **Transceiver Design for MIMO systems with imperfect CSI at Transmitter and Receiver** *IEEE International Conference on Communications (ICC)*
  Thian, B. S., Zhou, S., Goldsmith, A.
  IEEE.2011
- **On Optimal Relay Placement and Sleep Control to Improve Energy Efficiency in Cellular Networks** *IEEE International Conference on Communications (ICC)*
  Zhou, S., Goldsmith, A. J., Niu, Z.
  IEEE.2011
- **Diversity-Multiplexing Tradeoff in a MIMO Gaussian Interference Channel with a Relay** *IEEE International Symposium on Information Theory (ISIT)*
  Maric, I., Goldsmith, A. J.
  IEEE.2011: 2622–2626
- **Joint pricing and resource allocation for OFDMA-based cognitive radio systems**
  Ghorbel, M. B., Goldsmith, A., Alouini, M.
  2011
- **The Capacity of the Interference Channel with a Cognitive Relay in Very Strong Interference** *arXiv preprint arXiv*
  Riniy, S., Tuninetti, D., Devroye, N., Goldsmith, A.
  2011: 1102.3227
- **Shannon meets Nyquist: The interplay between capacity and sampling**
  Chen, Y., Goldsmith, A. J., Eldar, Y. C.
  2011
- **Resource allocation for constrained backhaul in picocell networks**
  Maric, I., Bostjancic, B., Goldsmith, A.
  2011
- **Shannon meets Nyquist: capacity limits of sampled analog channels**
  Chen, Y., Eldar, Y. C., Goldsmith, A. J.
  2011
- **On optimal relay placement and sleep control to improve energy efficiency in cellular networks**
  Zhou, S., Goldsmith, A. J., Niu, Z.
  2011
- **Diversity-multiplexing tradeoff in a MIMO Gaussian interference channel with a relay**
  Maric, I., Goldsmith, A. J.
  2011
- **EE359 Project Report: Location Estimation using Wireless Multipath Signals**
  Singla, A., Goldsmith, A.
  2011
- **A reinforcement learning optimization framework for cognitive interference networks** *Communication, Control, and Computing (Allerton), 49th Annual Allerton ...*
  Levorato, M., Firouzabadi, S., Goldsmith, A.
  2011
- **Downlink performance and capacity of distributed antenna systems** *arXiv preprint arXiv*

Firouzabadi, S., Goldsmith, A.
2011: 1109.2957

- **Information theory meets circuit design: Why capacity-approaching codes require more chip area and power** *Communication, Control, and Computing (Allerton), 49th Annual Allerton ...*
  Grover, P., Goldsmith, A., Sahai, A., Rabaey, J.
  2011
- **Approaching the Capacity of Sampled Analog Channels** *IEEE Information Theory Workshop (ITW)*
  Chen, Y., Eldar, Y. C., Goldsmith, A. J.
  IEEE.2011
- **Coding Strategies for a Class of Decentralized Control Problems with Limited Communication** *50th IEEE Conference of Decision and Control (CDC)/European Control Conference (ECC)*
  Mirghaderi, R., Lall, S., Goldsmith, A.
  IEEE.2011: 4809–4816
- **Cognitive Interference Networks with Partial and Noisy Observations: a Learning Framework** *54th Annual IEEE Global Telecommunications Conference (GLOBECOM)*
  Levorato, M., Firouzabadi, S., Goldsmith, A.
  IEEE.2011
- **The Capacity of the Interference Channel with a Cognitive Relay in Strong Interference** *IEEE International Symposium on Information Theory (ISIT)*
  Rini, S., Tuninetti, D., Devroye, N., Goldsmith, A.
  IEEE.2011: 2632–2636
- **Optimal Placement of Distributed Antennas in Cellular Systems** *12th IEEE International Workshop on Signal Processing Advances in Wireless Communications*
  Firouzabadi, S., Goldsmith, A.
  IEEE.2011: 461–465
- **Optimization of ARQ Protocols in Interference Networks with QoS Constraints** *IEEE International Conference on Communications (ICC)*
  Levorato, M., O'Neill, D., Goldsmith, A., Mitra, U.
  IEEE.2011
- **SHANNON MEETS NYQUIST: CAPACITY LIMITS OF SAMPLED ANALOG CHANNELS** *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*
  Chen, Y., Eldar, Y. C., Goldsmith, A. J.
  IEEE.2011: 3104–3107
- **Minimizing Transmit Power in a Virtual-cell Downlink with Distributed Antennas** *54th Annual IEEE Global Telecommunications Conference (GLOBECOM)*
  Thian, B. S., Zhou, S., Goldsmith, A., Niu, Z.
  IEEE.2011
- **On the Capacity of a Class of Cognitive Z-interference Channels** *IEEE International Conference on Communications (ICC)*
  Jiang, J., Maric, I., Goldsmith, A., Shamai, S. (., Cui, S.
  IEEE.2011
- **Multiple Multicasts With the Help of a Relay** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Guenduez, D., Simeone, O., Goldsmith, A. J., Poor, H. V., Shamai (Shitz), S.
  2010; 56 (12): 6142-6158
- **Interference Channels With Correlated Receiver Side Information** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Liu, N., Guenduez, D., Goldsmith, A. J., Poor, H. V.
  2010; 56 (12): 5984-5998
- **Capacity Theorems for Discrete, Finite-State Broadcast Channels With Feedback and Unidirectional Receiver Cooperation** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Dabora, R., Goldsmith, A. J.

2010; 56 (12): 5958-5983

- **Adaptive Modulation for MIMO Systems with Channel Prediction Errors** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Fernandez-Plazaola, U., Martos-Naya, E., Paris, J. F., Goldsmith, A. J.
  2010; 9 (8): 2516-2527
- **Generalizing Capacity: New Definitions and Capacity Theorems for Composite Channels** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Effros, M., Goldsmith, A., Liang, Y. (.
  2010; 56 (7): 3069-3087
- **Characterization of spasticity in cerebral palsy: dependence of catch angle on velocity** *DEVELOPMENTAL MEDICINE AND CHILD NEUROLOGY*
  Wu, Y., Ren, Y., Goldsmith, A., Gaebler, D., Liu, S. Q., Zhang, L.
  2010; 52 (6): 563-569
- **Multi-Hop MIMO Relay Networks: Diversity-Multiplexing Trade-off Analysis** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Gunduz, D., Khojastepour, M. A., Goldsmith, A., Poor, H. V.
  2010; 9 (5): 1738-1747
- **The Capacity Region of the Degraded Finite-State Broadcast Channel** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Dabora, R., Goldsmith, A. J.
  2010; 56 (4): 1828-1851
- **The rise of instant wireless networks.** *Scientific American*
  Effros, M., Goldsmith, A., Médard, M.
  2010; 302 (4): 72-77
- **Hat Guessing Games and the Use of Coding for Decentralized Control** *49th IEEE Conference on Decision and Control (CDC)*
  Mirghaderi, R., Adlakha, S., Lall, S., Goldsmith, A.
  IEEE.2010: 979–985
- **Residential Demand Response Using Reinforcement Learning** *1st IEEE International Conference on Smart Grid Communications (SmartGridComm)*
  O'Neill, D., Levorato, M., Goldsmith, A., Mitra, U.
  IEEE.2010: 409–414
- **Distributed wireless network utility maximization**
  Firouzabadi, S., O'Neill, D. C., Goldsmith, A.
  2010
- **Redes inalámbricas instantáneas** *Investigación y Ciencia: Edición Española de Scientific American*
  Effros, M., Goldsmith, A., Medard, M.
  2010: 78-83
- **Communication over the Gaussian channel with rate-limited feedback**
  Mirghaderi, R., Goldsmith, A.
  2010
- **Achievable Error Exponents in the Gaussian Channel with Rate-Limited Feedback** *arXiv preprint arXiv*
  Mirghaderi, R., Goldsmith, A., Weissman, T.
  2010: 1007.1986
- **Analog network coding in the high-SNR regime**
  Maric, I., Goldsmith, A., Medard, M.
  2010
- **Outage capacity of bursty amplify-and-forward with incremental relaying** *Information Theory and its Applications (ISITA), International ...*
  Renk, T., Jäkel, H., Jondral, F. K., Gunduz, D., Goldsmith, A.
  2010

- **Cooperative relaying in sensor networks** *Cognitive Radio Oriented Wireless Networks & Communications (CROWNCOM)*
  Gundüz, D., Erkip, E., Goldsmith, A., Poor, H. V.
  2010
- **Optimal power line communications control policies using stochastic optimization** *Power Line Communications and Its Applications (ISPLC), IEEE ...*
  Firouzabadi, S., O'Neill, D., Goldsmith, A. J.
  2010
- **Residential demand response using reinforcement learning**
  Levorato, M., Goldsmith, A., Mitra, U.
  2010
- **Residential demand response using reinforcement learning**
  O'Neill, D., Levorato, M., Goldsmith, A., Mitra, U.
  2010
- **L'essor des réseaux sans fil instantanés** *Pour la science*
  EFFROS, M., GOLDSMITH, A., MEDARD, M.
  2010: 52-57
- **Communication with Rate-Limited Feedback**
  Mirghaderi, R., Goldsmith, A.
  2010
- **Cognitive cellular systems within the TV spectrum**
  Sachs, J., Maric, I., Goldsmith, A.
  2010
- **LIvINg oN a NEW EaRTH 54 Boundaries for** *SCiENTifiC amEriCaN*
  Bell, E., Insel, T. R., Santina, C. D., Effros, M., Goldsmith, A., Médard, M.
  2010; 4 (302)
- **Channel Adaptive and Rate Allocation Techniques for Video Streaming Over Wireless Ad hoc Networks** *Wireless Communications*
  Daneshi, M., Goldsmith, A.
  2010
- **On the usage of antennas in MIMO and MISO interference channels**
  Kaynia, M., Goldsmith, A. J., Gesbert, D., Øien, G. E.
  2010
- **Do decode-and-forward relaying protocols beat transmit diversity?**
  Renk, T., Jaekel, H., Jondral, F. K., Goldsmith, A.
  2010
- **TECHNOLOGY-The Rise of Instant Wireless Networks-Wireless networks that form on the fly bring communications to the most foreboding environments.** *Scientific American*
  Effros, M., Goldsmith, A., Médard, M.
  2010: 72
- **Diversity-Multiplexing-Delay Tradeoffs in MIMO Multihop Networks with ARQ** *2010 IEEE International Symposium on Information Theory*
  Xie, Y., Goldsmith, A.
  IEEE.2010: 2208–2212
- **On Oblivious Equilibrium in Large Population Stochastic Games** *49th IEEE Conference on Decision and Control (CDC)*
  Adlakha, S., Johari, R., Weintraub, G. Y., Goldsmith, A.
  IEEE.2010: 3117–3124
- **Decoding for MIMO systems with imperfect channel state information** *IEEE Global Telecommunications Conference (GLOBECOM 2010)*
  Thian, B. S., Goldsmith, A.

IEEE.2010

- **Learning Interference Strategies in Cognitive ARQ Networks** *IEEE Global Telecommunications Conference (GLOBECOM 2010)*
  Firouzabadi, S., Levorato, M., O'Neill, D., Goldsmith, A.
  IEEE.2010
- **Optimizing Adaptive Modulation in Wireless Networks via Multi-Period Network Utility Maximization** *2010 IEEE International Conference on Communications*
  O'Neill, D., Akuiyibo, E., Boyd, S., Goldsmith, A. J.
  IEEE.2010
- **Capacity Regions and Bounds for a Class of Z-Interference Channels** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Liu, N., Goldsmith, A. J.
  2009; 55 (11): 4986-4994
- **Elastase- and LPS-exposed mice display altered responses to rhinovirus infection** *AMERICAN JOURNAL OF PHYSIOLOGY-LUNG CELLULAR AND MOLECULAR PHYSIOLOGY*
  Sajjan, U., Ganesan, S., Comstock, A. T., Shim, J., Wang, Q., Nagarkar, D. R., Zhao, Y., Goldsmith, A. M., Sonstein, J., Linn, M. J., Curtis, J. L., Hershenson, M. B.
  2009; 297 (5): L931-L944
- **Distortion Minimization in Gaussian Layered Broadcast Coding With Successive Refinement** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Ng, C. T., Guenduez, D., Goldsmith, A. J., Erkip, E.
  2009; 55 (11): 5074-5086
- **Source and Channel Coding for Correlated Sources Over Multiuser Channels** *IEEE International Symposium on Information Theory*
  Gunduz, D., Erkip, E., Goldsmith, A., Poor, H. V.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2009: 3927–44
- **Compound Multiple-Access Channels With Partial Cooperation** *46th Annual Allerton Conference on Communication, Control and Computing*
  Simeone, O., Gunduz, D., Poor, H. V., Goldsmith, A. J., Shamai (Shitz), S.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2009: 2425–41
- **Breaking Spectrum Gridlock With Cognitive Radios: An Information Theoretic Perspective** *PROCEEDINGS OF THE IEEE*
  Goldsmith, A., Jafar, S. A., Maric, I., Srinivasa, S.
  2009; 97 (5): 894-914
- **Performance Comparison of MRC and IC Under Transmit Diversity** *IEEE International Conference on Communications (ICC 2006)*
  Pena-Martin, J. P., Romero-Jerez, J. M., Aguilera, G., Goldsmith, A. J.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2009: 2484–93
- **Performance of Multichannel Reception with Transmit Antenna Selection in Arbitrarily Distributed Nagakami Fading Channels** *IEEE Global Communications Conference*
  Romero-Jerez, J. M., Goldsmith, A. J.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2009: 2006–13
- **Finite State Channels With Time-Invariant Deterministic Feedback** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Permuter, H. H., Weissman, T., Goldsmith, A. J.
  2009; 55 (2): 644-662
- **A Mean Field Approach to Competition in Large Scale Wireless Systems** *MobiHoc S3 Workshop*
  Adlakha, S., Johari, R., Weintraub, G., Goldsmith, A.
  ASSOC COMPUTING MACHINERY.2009: 13–15
- **Bit Error Rate Analysis in MIMO Channels with Fading and Interference** *69th IEEE Vehicular Technology Conference*
  Romero-Jerez, J. M., Pena-Martin, J. P., Goldsmith, A. J.
  IEEE.2009: 1533–1537
- **A Reduced-complexity MIMO Receiver via Channel Ordering** *IEEE Global Telecommunications Conference (GLOBECOM 09)*
  Thian, B. S., Goldsmith, A.

IEEE.2009: 3362–3367

- **The Multi-way Relay Channel** *IEEE International Symposium on Information Theory (ISIT 2009)*
  Gunduz, D., Yener, A., Goldsmith, A., Poor, H. V.
  IEEE.2009: 339–343
- **Decentralized Team Decision Via Coding** *47th Annual Allerton Conference on Communication, Control, and Computing*
  Adlakha, S., Mirghaderi, S. R., Lall, S., Goldsmith, A.
  IEEE.2009: 151–151
- **Achievable Rate Regions for Broadcast Channels With Cognitive Relays** *IEEE Information Theory Workshop (ITW)*
  Jiang, J., Maric, I., Goldsmith, A., Cui, S.
  IEEE.2009: 500–504
- **Multihop MIMO Relay Networks with ARQ** *IEEE Global Telecommunications Conference (GLOBECOM 09)*
  Xie, Y., Gunduz, D., Goldsmith, A.
  IEEE.2009: 6237–6242
- **Wireless NUM: Rate and Reliability Tradeoffs in Random Environments** *IEEE Wireless Communications and Networking Conference*
  O'Neill, D., Thian, B. S., Goldsmith, A., Boyd, S.
  IEEE.2009: 444–449
- **Oblivious Equilibrium: An Approximation to Large Population Dynamic Games with Concave Utility** *International Conference on Game Theory for Networks*
  Adlakha, S., Johari, R., Weintraub, G., Goldsmith, A.
  IEEE.2009: 68–69
- **Achievable Rates and Capacity for Gaussian Relay Channels with Correlated Noises** *IEEE International Symposium on Information Theory (ISIT 2009)*
  Jiang, J., Goldsmith, A., Cui, S.
  IEEE.2009: 179–183
- **An Outer Bound for the Gaussian Interference Channel with a Relay** *IEEE Information Theory Workshop (ITW)*
  Maric, I., Dabora, R., Goldsmith, A. J.
  IEEE.2009: 569–573
- **Bounds and Capacity Results for the Cognitive Z-interference Channel** *IEEE International Symposium on Information Theory (ISIT 2009)*
  Liu, N., Maric, I., Goldsmith, A. J., Shamai (Shitz), S.
  IEEE.2009: 2422–2426
- **Identification over Multiple Databases** *IEEE International Symposium on Information Theory (ISIT 2009)*
  Gunduz, D., Tuncel, E., Goldsmith, A., Poor, H. V.
  IEEE.2009: 2311–2315
- **IEEE Information Theory Society Newsletter**
  Goldsmith, A.
  2009
- **BER analysis for MIMO-OFDM beamforming with MRC under channel prediction and interpolation errors**
  López-Martínez, F. J., Martos-Naya, E., Paris, J. F., Goldsmith, A. J.
  2009
- **Outage capacity of incremental relaying at low signal-to-noise ratios**
  Renk, T., Jakel, H., Jondral, F. K., Gunduz, D., Goldsmith, A.
  2009
- **Bit error rate analysis in MIMO channels with fading and interference**
  Romero-Jerez, J. M., Pena-Martin, J. P., Goldsmith, A. J.
  2009
- **Source-Channel Coding and Separation for Generalized Communication Systems** *arXiv preprint arXiv*

Liang, Y., Goldsmith, A., Effros, M.
2009: 902.4647

- **Finite-state broadcast channels with feedback and receiver cooperation** *Networking and Information Theory, ITW IEEE Information Theory ...*
  Dabora, R., Goldsmith, A.
  2009
- **Distortion exponent in MIMO channels with feedback**
  Gunduz, D., Goldsmith, A., Poor, H. V.
  2009
- **Bit Error Rate Analysis in MIMO Channels with Fading and Interference** *69th IEEE Vehicular Technology Conference*
  Romero-Jerez, J. M., Pena-Martin, J. P., Goldsmith, A. J.
  IEEE.2009: 1533–1537
- **A Reduced-complexity MIMO Receiver via Channel Ordering** *IEEE Global Telecommunications Conference (GLOBECOM 09)*
  Thian, B. S., Goldsmith, A.
  IEEE.2009: 3362–3367
- **The Multi-way Relay Channel** *IEEE International Symposium on Information Theory (ISIT 2009)*
  Gunduz, D., Yener, A., Goldsmith, A., Poor, H. V.
  IEEE.2009: 339–343
- **Decentralized Team Decision Via Coding** *47th Annual Allerton Conference on Communication, Control, and Computing*
  Adlakha, S., Mirghaderi, S. R., Lall, S., Goldsmith, A.
  IEEE.2009: 151–151
- **Achievable Rate Regions for Broadcast Channels With Cognitive Relays** *IEEE Information Theory Workshop (ITW)*
  Jiang, J., Maric, I., Goldsmith, A., Cui, S.
  IEEE.2009: 500–504
- **Multihop MIMO Relay Networks with ARQ** *IEEE Global Telecommunications Conference (GLOBECOM 09)*
  Xie, Y., Gunduz, D., Goldsmith, A.
  IEEE.2009: 6237–6242
- **Wireless NUM: Rate and Reliability Tradeoffs in Random Environments** *IEEE Wireless Communications and Networking Conference*
  O'Neill, D., Thian, B. S., Goldsmith, A., Boyd, S.
  IEEE.2009: 444–449
- **Oblivious Equilibrium: An Approximation to Large Population Dynamic Games with Concave Utility** *International Conference on Game Theory for Networks*
  Adlakha, S., Johari, R., Weintraub, G., Goldsmith, A.
  IEEE.2009: 68–69
- **Achievable Rates and Capacity for Gaussian Relay Channels with Correlated Noises** *IEEE International Symposium on Information Theory (ISIT 2009)*
  Jiang, J., Goldsmith, A., Cui, S.
  IEEE.2009: 179–183
- **An Outer Bound for the Gaussian Interference Channel with a Relay** *IEEE Information Theory Workshop (ITW)*
  Maric, I., Dabora, R., Goldsmith, A. J.
  IEEE.2009: 569–573
- **Bounds and Capacity Results for the Cognitive Z-interference Channel** *IEEE International Symposium on Information Theory (ISIT 2009)*
  Liu, N., Maric, I., Goldsmith, A. J., Shamai (Shitz), S.
  IEEE.2009: 2422–2426
- **Identification over Multiple Databases** *IEEE International Symposium on Information Theory (ISIT 2009)*
  Gunduz, D., Tuncel, E., Goldsmith, A., Poor, H. V.
  IEEE.2009: 2311–2315

- **The Impact of CSI and Power Allocation on Relay Channel Capacity and Cooperation Strategies** *IEEE International Conference on Communications (ICC 2006)*
  Ng, C. T., Goldsmith, A. J.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2008: 5380–89
- **Exact BER Analysis for M-QAM Modulation with Transmit Beamforming under Channel Prediction Errors** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Martos-Naya, E., Paris, J. F., Fernandez-Plazaola, U., Goldsmith, A. J.
  2008; 7 (10): 3674-3678
- **On the capacity of interference channels with one cooperating transmitter** *EUROPEAN TRANSACTIONS ON TELECOMMUNICATIONS*
  Maric, I., Goldsmith, A., Kramer, G., Shamai (Shitz), S.
  2008; 19 (4): 405-420
- **Joint source and channel coding for MIMO systems: Is it better to be robust or quick?** *IEEE International Conference on Communications (ICC 2006)*
  Holliday, T., Goldsmith, A. J., Poor, H. V.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2008: 1393–1405
- **Receive antenna array strategies in fading and interference: An outage probability comparison** *IEEE International Conference on Communications (ICC 2007)*
  Romero-Jerez, J. M., Goldsmith, A. J.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2008: 920–32
- **Linear coherent decentralized estimation** *IEEE Global Telecommunications Conference (GLOBECOM 06)*
  Xiao, J., Cui, S., Luo, Z., Goldsmith, A. J.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2008: 757–70
- **Interference Forwarding in Multiuser Networks** *IEEE Global Telecommunications Conference (GLOBECOM 08)*
  Dabora, R., Maric, I., Goldsmith, A.
  IEEE.2008
- **Transmission of correlated sources over multiuser channels** *IEEE Trans. on Information Theory*
  Gündüz, D., Erkip, E., Goldsmith, A., Poor, H. V.
  2008
- **An analysis of MIMO techniques for mobile WiMAX systems** *Mobile WiMAX*
  Muquet, B., Biglieri, E., Goldsmith, A., Sari, H.
  2008: 13-30
- **MIMO two-way relay channel: Diversity-multiplexing tradeoff analysis**
  Gunduz, D., Goldsmith, A., Poor, H. V.
  2008
- **Exact Error Rates of MRC with Transmit Antenna Selection in Non-Identically Distributed Nakagami Fading Channels**
  Romero-Jerez, J. M., Goldsmith, A. J.
  2008
- **Distortion Minimization in Gaussian Source Coding with Fading Side Information**
  Ng, C. T., Shamai, S., Goldsmith, A. J., Tian, C.
  2008
- **The capacity region of the degraded finite-state broadcast channel** *IEEE Information Theory Workshop*
  Dabora, R., Goldsmith, A.
  IEEE.2008: 11–15
- **Wireless Network Utility Maximization** *IEEE Military Communications Conference (MILCOM 2008)*
  O'Neill, D., Goldsmith, A., Boyd, S.
  IEEE.2008: 2314–2321

- **Information State for Markov Decision Processes with Network Delays** *47th IEEE Conference on Decision and Control*
  Adlakha, S., Lall, S., Goldsmith, A.
  IEEE.2008: 3840–3847
- **Superposition Encoding and Partial Decoding Is Optimal for a Class of Z-interference Channels** *IEEE International Symposium on Information Theory*
  Liu, N., Goldsmith, A.
  IEEE.2008: 564–568
- **On the Capacity of the Interference Channel with a Relay** *IEEE International Symposium on Information Theory*
  Marric, I., Dabora, R., Goldsmith, A.
  IEEE.2008: 554–558
- **Cross-Layer Design with Adaptive Modulation: Delay, Rate, and Energy Tradeoffs** *IEEE Global Telecommunications Conference (GLOBECOM 08)*
  O'Neill, D., Goldsmith, A. J., Boyd, S.
  IEEE.2008
- **Capacity Theorems for the Finite-State Broadcast Channel with Feedback** *IEEE International Symposium on Information Theory*
  Dabora, R., Goldsmith, A.
  IEEE.2008: 1716–1720
- **Power and bandwidth allocation in cooperative dirty paper coding** *IEEE International Conference on Communications (ICC 2008)*
  Ng, C. T., Jindal, N., Goldsmith, A. J., Mitra, U.
  IEEE.2008: 1018–1023
- **Interference Channels with Correlated Receiver Side Information** *46th Annual Allerton Conference on Communication, Control and Computing*
  Liu, N., Guenduez, D., Goldsmith, A. J., Poor, H. V.
  IEEE.2008: 547–554
- **Generalized Relaying in the Presence of Interference** *42nd Asilomar Conference on Signals, Systems and Computers*
  Maric, I., Dabora, R., Goldsmith, A.
  IEEE.2008: 1579–1582
- **Optimizing adaptive modulation in wireless networks via utility maximization** *IEEE International Conference on Communications (ICC 2008)*
  O'Neill, D., Goldsmith, A. J., Boyd, S.
  IEEE.2008: 3372–3377
- **Relay strategies for interference-forwarding** *IEEE Information Theory Workshop*
  Dabora, R., Maric, I., Goldsmith, A.
  IEEE.2008: 46–50
- **Oblivious Equilibrium for Stochastic Games with Concave Utility** *46th Annual Allerton Conference on Communication, Control and Computing*
  Adlakha, S., Johari, R., Weintraub, G., Goldsmith, A.
  IEEE.2008: 1304–1308
- **Generalized Capacity and Source-Channel Coding for Packet Erasure Channels** *IEEE Global Telecommunications Conference (GLOBECOM 08)*
  Liang, Y., Goldsmith, A., Effros, M.
  IEEE.2008
- **Oblivious Equilibrium for Large-Scale Stochastic Games with Unbounded Costs** *47th IEEE Conference on Decision and Control*
  Adlakha, S., Johari, R., Weintraub, G., Goldsmith, A.
  IEEE.2008: 5531–5538
- **Encoding against an Interferer's Codebook** *46th Annual Allerton Conference on Communication, Control and Computing*
  Maric, I., Liu, N., Goldsmith, A.
  IEEE.2008: 523–530
- **Large On the Capacity of Indecomposable Finite-State Channels with Feedback** *46th Annual Allerton Conference on Communication, Control and Computing*

Dabora, R., Goldsmith, A.
IEEE.2008: 1045–1052

- **Evolution of base stations in cellular networks: Denser deployment versus coordination** *IEEE International Conference on Communications (ICC 2008)*
  Liang, Y., Goldsmith, A., Foschini, G., Valenzuela, R., Chizhik, D.
  IEEE.2008: 4128–4132
- **A Bayesian Network Approach to Control of Networked Markov Decision Processes** *46th Annual Allerton Conference on Communication, Control and Computing*
  Adlakha, S., Lall, S., Goldsmith, A.
  IEEE.2008: 446–451
- **Interference Channels with Correlated Receiver Side Information** *46th Annual Allerton Conference on Communication, Control and Computing*
  Liu, N., Guenduez, D., Goldsmith, A. J., Poor, H. V.
  IEEE.2008: 547–554
- **Generalized Relaying in the Presence of Interference** *42nd Asilomar Conference on Signals, Systems and Computers*
  Maric, I., Dabora, R., Goldsmith, A.
  IEEE.2008: 1579–1582
- **Optimizing adaptive modulation in wireless networks via utility maximization** *IEEE International Conference on Communications (ICC 2008)*
  O'Neill, D., Goldsmith, A. J., Boyd, S.
  IEEE.2008: 3372–3377
- **Relay strategies for interference-forwarding** *IEEE Information Theory Workshop*
  Dabora, R., Maric, I., Goldsmith, A.
  IEEE.2008: 46–50
- **Oblivious Equilibrium for Stochastic Games with Concave Utility** *46th Annual Allerton Conference on Communication, Control and Computing*
  Adlakha, S., Johari, R., Weintraub, G., Goldsmith, A.
  IEEE.2008: 1304–1308
- **Generalized Capacity and Source-Channel Coding for Packet Erasure Channels** *IEEE Global Telecommunications Conference (GLOBECOM 08)*
  Liang, Y., Goldsmith, A., Effros, M.
  IEEE.2008
- **Oblivious Equilibrium for Large-Scale Stochastic Games with Unbounded Costs** *47th IEEE Conference on Decision and Control*
  Adlakha, S., Johari, R., Weintraub, G., Goldsmith, A.
  IEEE.2008: 5531–5538
- **Encoding against an Interferer's Codebook** *46th Annual Allerton Conference on Communication, Control and Computing*
  Maric, I., Liu, N., Goldsmith, A.
  IEEE.2008: 523–530
- **Large On the Capacity of Indecomposable Finite-State Channels with Feedback** *46th Annual Allerton Conference on Communication, Control and Computing*
  Dabora, R., Goldsmith, A.
  IEEE.2008: 1045–1052
- **Evolution of base stations in cellular networks: Denser deployment versus coordination** *IEEE International Conference on Communications (ICC 2008)*
  Liang, Y., Goldsmith, A., Foschini, G., Valenzuela, R., Chizhik, D.
  IEEE.2008: 4128–4132
- **A Bayesian Network Approach to Control of Networked Markov Decision Processes** *46th Annual Allerton Conference on Communication, Control and Computing*
  Adlakha, S., Lall, S., Goldsmith, A.
  IEEE.2008: 446–451

- **Modeling and optimization of transmission schemes in energy-constrained wireless sensor networks** *IEEE-ACM TRANSACTIONS ON NETWORKING*
  Madan, R., Cui, S., Lall, S., Goldsmith, A. J.
  2007; 15 (6): 1359-1372
- **Capacity gain from two-transmitter and two-receiver cooperation** *IEEE Information Theory Workshop*
  Ng, C. T., Jindal, N., Goldsmith, A. J., Mitra, U.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2007: 3822–27
- **Cross-layer energy and delay optimization in. small-scale sensor networks** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Cui, S., Madan, R., Goldsmith, A. J., Lall, S.
  2007; 6 (10): 3688-3699
- **Multi-antenna downlink channels with limited feedback and user selection** *IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS*
  Yoo, T., Jindal, N., Goldsmith, A.
  2007; 25 (7): 1478-1491
- **Estimation diversity and energy efficiency in distributed sensing** *30th IEEE International Conference on Acoustics, Speech, and Signal Processing*
  Cui, S., Xiao, J., Goldsmith, A. J., Luo, Z., Poor, H. V.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2007: 4683–95
- **Optimization of MIMO transceivers for realistic communication networks: Challenges and opportunities** *IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS*
  Palomar, D., Davidson, T., Barbarossa, S., GOLDSMITH, A., Giannakis, G.
  2007; 25 (7): 1265-1268
- **A game-theoretic approach to energy-efficient modulation in CDMA networks with delay QoS constraints** *IEEE Radio and Wireless Symposium*
  Meshkati, F., Goldsmith, A. J., Poor, H. V., Schwartz, S. C.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2007: 1069–78
- **Outage probability of MRC with arbitrary power cochannel interferers in Nakagami fading** *15th IEEE International Symposium on Personal, Indoor, Mobile, Radio Communications (PIMRC 2004)*
  Romero-Jerez, J. M., Pena Martin, J. P., Goldsmith, A. J.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2007: 1283–86
- **Capacity of time-varying channels with causal channel side information** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Goldsmith, A. J., Medard, M.
  2007; 53 (3): 881-899
- **On the capacity of interference channels with a partially-cognitive transmitter** *IEEE International Symposium on Information Theory*
  Maric, I., Goldsmith, A., Kramer, G., Shamai (Shitz), S.
  IEEE.2007: 2156–2160
- **A game-theoretic approach to energy-efficient modulation in CDMA networks with delay constraints** *IEEE Radio and Wireless Symposium*
  Meshkati, F., Goldsmith, A. J., Poor, H. V., Schwartz, S. C.
  IEEE.2007: 289–292
- **LQG control for distributed systems over TCP-like erasure channels** *46th IEEE Conference on Decision and Control*
  Garone, E., Sinopoli, B., Goldsmith, A., Casavola, A.
  IEEE.2007: 5761–5766
- **Analysis of MIMO beamforming with channel response variations over the frame interval** *IEEE Global Telecommunications Conference (GLOBECOM 07)*
  Martos-Naya, E., Paris, J. F., Fernandez-Plazaola, U., Goldsmith, A. J.
  IEEE.2007: 1597–1601
- **Multi-antenna broadcast channels with limited feedback and user selection," to appear** *IEEE Journal Sel. Areas in Communications*
  Yoo, T., Jindal, N., Goldsmith, A.

2007

- **Competition in wireless systems via Bayesian interference games** *arXiv preprint arXiv*
  Adlakha, S., Johari, R., Goldsmith, A.
  2007: 709.0516
- **Joint relaying and network coding in wireless networks**
  Katti, S., Maric, I., Goldsmith, A., Katabi, D., Medard, M.
  2007
- **Analysis of MIMO beamforming with channel response variations over the frame interval**
  Martos-Naya, E., Paris, J. F., Fernández-Plazaola, U., Goldsmith, A. J.
  2007
- **Diversity, interference cancellation and spatial multiplexing in MIMO mobile WiMAX systems**
  Biglieri, E., Goldsmith, A., Muquet, B., Sari, H.
  2007
- **Application-driven design of smart camera networks**
  Hengstler, S., Aghajan, H., Goldsmith, A.
  2007
- **Consummating the Union Between Control and Communications**
  Goldsmith, A.
  2007
- **Bit rearrangement for MIMO retransmissions**
  Moon, S. H., Park, H. H., Goldsmith, A., Oh, M.
  2007
- **Capacity definitions of general channels with receiver side information**
  Effros, M., Goldsmith, A., Liang, Y.
  2007
- **Antenna array processing in fading and interference: An interference-cancellation vs. diversity comparative performance** *IEEE International Conference on Communications (ICC 2007)*
  Romero-Jerez, J. M., Goldsmith, A. J.
  IEEE.2007: 1108–1113
- **Application-oriented design of smart camera networks**
  Hengstler, S., Aghajan, H., Goldsmith, A.
  2007
- **MIMO wireless communications**
  Biglieri, E.
  Cambridge University Press.2007
- **Estimation diversity and energy efficiency in distributed sensing** *Signal Processing, IEEE Transactions*
  Cui, S., Xiao, J. J., Goldsmith, A. J., Luo, Z. Q., Poor, H. V.
  2007; 9 (55): 4683-4695
- **Adaptive channel reuse in cellular systems** *IEEE International Conference on Communications (ICC 2007)*
  Liang, Y., Goldsmith, A.
  IEEE.2007: 857–862
- **On the capacity of interference channels with a cognitive transmitter** *IEEE Information Theory and Applications Workshop*
  Maric, I., Goldsmith, A., Kramer, G., Shamai, S. (.
  IEEE.2007: 266–271
- **Interference suppression in wireless cellular networks through picocells** *41st Asilomar Conference on Signals, Systems and Computers*
  Liang, Y., Valenzuela, R., Foschini, G., Chizhik, D., Goldsmith, A.

IEEE.2007: 1041–1045

- **Joint capacity, flow and rate allocation for multiuser video streaming over wireless ad-hoc networks** *IEEE International Conference on Communications (ICC 2007)*
  Adlakha, S., Zhu, X., Girod, B., Goldsmith, A. J.
  IEEE.2007: 1747–1753
- **An achievable rate region for interference channels with one cooperating transmitter** *41st Asilomar Conference on Signals, Systems and Computers*
  Maric, I., Goldsmith, A., Kramer, G., Shamai (Shitz), S.
  IEEE.2007: 888–892
- **Optimal control of distributed Markov decision processes with network delays** *46th IEEE Conference on Decision and Control*
  Adlakha, S., Madan, R., Lall, S., Goldsmith, A.
  IEEE.2007: 4804–4810
- **Distortion metrics of composite channels with receiver side information** *IEEE Information Theory Workshop*
  Liang, Y., Goldsmith, A., Effros, M.
  IEEE.2007: 559–564
- **Recursive power allocation in Gaussian layered broadcast coding with successive refinement** *IEEE International Conference on Communications (ICC 2007)*
  Ng, C. T., Gunduz, D., Goldsmith, A. J., Erkip, E.
  IEEE.2007: 889–896
- **Source transmission over relay channel with correlated relay side information** *IEEE International Symposium on Information Theory*
  Gunduz, D., Ng, C. T., Erkip, E., Goldsmith, A. J.
  IEEE.2007: 611–615
- **Information-theoretic relaying for multicast in wireless networks** *IEEE Military Communications Conference (MILCOM 2007)*
  Maric, I., Goldsmith, A., Medard, M.
  IEEE.2007: 3071–3077
- **Optimal sensing rate for estimation over shared communication links** *26th American Control Conference*
  Adlakha, S., Sinopoli, B., Goldsmith, A.
  IEEE.2007: 2773–2775
- **Minimum expected distortion in Gaussian layered broadcast coding with successive refinement** *IEEE International Symposium on Information Theory*
  Ng, C. T., Gunduz, D., Goldsmith, A. J., Erkip, E.
  IEEE.2007: 2226–2230
- **Minimum expected distortion in Gaussian source coding with uncertain side information** *IEEE Information Theory Workshop*
  Ng, C. T., Tian, C., Goldsmith, A. J., Shamai (Shitz), S.
  IEEE.2007: 454–459
- **Minimum expected distortion in Gaussian layered broadcast coding with successive refinement** *IEEE International Symposium on Information Theory*
  Ng, C. T., Gunduz, D., Goldsmith, A. J., Erkip, E.
  IEEE.2007: 2226–2230
- **Minimum expected distortion in Gaussian source coding with uncertain side information** *IEEE Information Theory Workshop*
  Ng, C. T., Tian, C., Goldsmith, A. J., Shamai (Shitz), S.
  IEEE.2007: 454–459
- **Cross-layer design for lifetime maximization in interference-limited wireless sensor networks** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Madan, R., Cui, S., Lall, S., Goldsmith, A.
  2006; 5 (11): 3142-3152
- **Capacity of finite state channels based on Lyapunov exponents of random matrices** *IEEE International Symposium on Information Theory*

Holliday, T., Goldsmith, A., Glynn, P.
IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2006: 3509–32

- **New media access protocols for wireless ad hoc networks based on cross-layer principles** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Toumpis, S., Goldsmith, A. J.
  2006; 5 (8): 2228-2241
- **Advances in smart antennas** *IEEE WIRELESS COMMUNICATIONS*
  Lozano, A., Goldsmith, A., Valenzuela, R. A., Lagunas, M. A., Gesbert, D.
  2006; 13 (4): 6-7
- **Cross-layer design of energy-constrained networks using cooperative MIMO techniques** *SIGNAL PROCESSING*
  Cui, S., Goldsmith, A. J.
  2006; 86 (8): 1804-1814
- **Adaptive hierarchical modulation for simultaneous voice and multiclass data transmission over fading channels** *4th IEEE Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*
  Hossain, J., Vitthaladevuni, P. K., Alouini, M., Bhargava, V. K., Goldsmith, A. J.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2006: 1181–94
- **On the capacity of the vector MAC with feedback** *41st Annual Allerton Conference on Communication, Control and Computing*
  Jafar, S., Goldsmith, A.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2006: 3259–64
- **Capacity and power allocation for fading MIMO channels with channel estimation error** *IEEE International Conference on Communications (ICC 2004)*
  Yoo, T., Goldsmith, A.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2006: 2203–14
- **On the optimality of multiantenna broadcast scheduling using zero-forcing beamforming** *IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS*
  Yoo, T., Goldsmith, A.
  2006; 24 (3): 528-541
- **Power scheduling of universal decentralized estimation in sensor networks** *1st Annual IEEE-Communications-Society Conference on Sensor and Ad Hoc Communications and Networks (SECON 2004)*
  Xiao, J. J., Cui, S. G., Luo, Z. Q., Goldsmith, A. J.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2006: 413–22
- **Capacity and Power Allocation for Transmitter and Receiver Cooperation in Fading Channels** *IEEE International Conference on Communications (ICC 2006)*
  Ng, C. T., Goldsmith, A. J.
  IEEE.2006: 3741–3746
- **Linear Coherent Decentralized Estimation**
  Xiao, J., Cui, S., Luo, Z., Goldsmith, A., IEEE
  IEEE.2006
- **The Impact of Delay on the Diversity, Multiplexing, and ARQ Tradeoff**
  Holliday, T., Goldsmith, A., Poor, H., IEEE
  IEEE.2006: 1445–49
- **Cross-layer design for MIMO systems**
  Holliday, T., Goldsmith, A., IEEE
  IEEE.2006: 1114–19
- **Estimation Diversity with Multiple Heterogeneous Sensors** *IEEE International Conference on Communications (ICC 2006)*
  Cui, S., Xiao, J., Goldsmith, A. J., Luo, Z., Poor, H. V.
  IEEE.2006: 1549–1554

- **Adaptive Modulation for MIMO Beamforming under Average BER Constraints and Imperfect CSI** *IEEE International Conference on Communications (ICC 2006)*
  Paris, J. F., Goldsmith, A. J.
  IEEE.2006: 1312–1317
- **Adaptive Modulation for MIMO Multiplexing under Average BER Constraints and Imperfect CSI** *IEEE International Conference on Communications (ICC 2006)*
  Paris, J. F., Goldsmith, A. J.
  IEEE.2006: 1318–1325
- **Adaptive modulation for MIMO beamforming under average BER constraints and imperfect CSI**
  Paris, J. F., Goldsmith, A. J.
  2006
- **Performance of MIMO MRC Systems with Co-Channel Interference** *IEEE International Conference on Communications (ICC 2006)*
  Romero-Jerez, J. M., Pena-Martin, J. P., Aguilera, G., Goldsmith, A. J.
  IEEE.2006: 1343–1349
- **Cross-layer design for MIMO systems**
  Holliday, T., Goldsmith, A.
  2006
- **Adaptive modulation for MIMO multiplexing under average BER constraints and imperfect CSI**
  Paris, J. F., Goldsmith, A. J.
  2006
- **IEEE Information Theory Workshop**
  Roth, R., Effros, M., Goldsmith, A., Kontoyiannis, I., Krawczyk, H., Lugosi, G.
  2006
- **The role of SNR in achieving MIMO rates in cooperative systems**
  Ng, C. T., Laneman, J. N., Goldsmith, A. J.
  2006
- **The impact of delay on the diversity, multiplexing, and ARQ tradeoff**
  Holliday, T., Goldsmith, A., Poor, H. V.
  2006
- **Estimation diversity with multiple heterogeneous sensors**
  Cui, S., Xiao, J., Goldsmith, A. J., Luo, Z. Q., Poor, H. V.
  2006
- **CTH15-1: Linear Coherent Decentralized Estimation**
  Xiao, J., Cui, S., Luo, Z. Q., Goldsmith, A.
  2006
- **wireless communication systems. From the beginning of 2006 he is serving as the vice-chair of Working Group 5 (short-range communications) for the Wireless World Research Forum (WWRF). AndersBrødløsOlsenreceivedhisM. Sc. EE degree insignalprocessingwith specialization in Applied Signal Processing and Implementation from Aalborg** *Cooperation in Wireless Networks: Principles and Applications: Real Egoistic ...*
  Goldsmith, A. J.
  2006
- **IEEE Communications Society**
  Goldsmith, A., Cheung, N., Atkinson, S., Siller, C., Ben-Letaief, K., Bauer, F.
  2006
- **COOPERATIONTECHNIQUESINCROSS-LAYER DESIGN** *Cooperation in Wireless Networks: Principles and Applications: Real Egoistic ...*
  Cui, S., Goldsmith, A. J.
  2006

- **Capacity and cooperation in wireless networks**
  Ng, C. T., Goldsmith, A. J.
  2006
- **Event-driven geographic routing for wireless image sensor networks**
  Savidge, L., Lee, H., Aghajan, H., Goldsmith, A.
  2006
- **Receding horizon networked control**
  Gupta, V., Sinopoli, B., Adlakha, S., Goldsmith, A., Murray, R.
  2006
- **CTH13-3: Symmetric Rate Capacity of Cellular Systems with Cooperative Base Stations**
  Liang, Y., Goldsmith, A.
  2006
- **Cooperation Techniques in Cross-Layer Design** *Cooperation in Wireless Networks: Principles and Applications*
  Cui, S., Goldsmith, A. J.
  2006: 101-126
- **Coverage, spectral efficiency of cellular systems with cooperative base stations** *40th Asilomar Conference on Signals, Systems and Computers*
  Liang, Y., Yoo, T., Goldsmith, A.
  IEEE.2006: 349–353
- **Coverage Spectral Efficiency of Cellular Systems with Cooperative Base Stations** *IEEE Global Telecommunications Conference (GLOBECOM 06)*
  Liang, Y., Yoo, T., Goldsmith, A.
  IEEE.2006
- **Finite-rate feedback MIMO broadcast channels with a large number of users** *IEEE International Symposium on Information Theory*
  Yoo, T., Jindal, N., Goldsmith, A.
  IEEE.2006: 1214–1218
- **Symmetric Rate Capacity of Cellular Systems with Cooperative Base Stations** *IEEE Global Telecommunications Conference (GLOBECOM 06)*
  Liang, Y., Goldsmith, A.
  IEEE.2006
- **Iterative and one-shot conferencing in relay channels** *IEEE Information Theory Workshop*
  Ng, C. T., Maric, I., Goldsmith, A. J., Shitz, S. S., Yates, R. D.
  IEEE.2006: 193–197
- **Capacity of finite-state channels with time-invariant deterministic feedback** *IEEE International Symposium on Information Theory*
  Permuter, H., Weissman, T., Goldsmith, A.
  IEEE.2006: 64–68
- **Energy-constrained modulation optimization** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Cui, S. G., Goldsmith, A. J., Bahai, A.
  2005; 4 (5): 2349-2360
- **Cross-layer design of ad hoc networks for real-time video streaming** *IEEE WIRELESS COMMUNICATIONS*
  Setton, E., Yoo, T., Zhu, X. Q., Goldsmith, A., Girod, B.
  2005; 12 (4): 59-65
- **Dirty-paper coding versus TDMA for MIMO broadcast channels** *IEEE International Conference on Communications (ICC 2004)*
  Jindal, N., Goldsmith, A.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2005: 1783–94
- **Mulltiple-antenna capacity in correlated Rayleigh fading with channel covariance information** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*

Jafar, S. A., Goldsmith, A.
2005; 4 (3): 990-997

- **Sum power iterative water-filling for multi-antenna Gaussian broadcast channels** *IEEE International Symposium on Information Theory*
  Jindal, N., Rhee, W., Vishwanath, S., Jafar, S. A., Goldsmith, A.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2005: 1570–80
- **Outage capacities and optimal power allocation for fading multiple-access channels** *IEEE International Symposium on Information Theory (ISIT 2000)*
  Li, L. F., Jindal, N., Goldsmith, A.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2005: 1326–47
- **Isotropic fading vector broadcast channels: The scalar upper bound and loss in degrees of freedom** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Jafar, S. A., Goldsmith, A. J.
  2005; 51 (3): 848-857
- **QoS-Based Geographic Routing for Event-Driven Image Sensor Networks** *2nd International Conference on Broadband Networks (BroadNets 05)*
  Savidge, L., Lee, H., Aghajan, H., Goldsmith, A.
  IEEE.2005: 68-?
- **Optimizing end-to-end distortion in MIMO systems** *IEEE International Symposium on Information Theory and Its Applications*
  Holliday, T., GOLDSMITH, A.
  IEEE.2005: 1671–1675
- **Optimality of zero-forcing beamforming with multiuser diversity** *ICC 2005: IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, VOLS 1-5*
  Yoo, T., GOLDSMITH, A.
  2005: 542-546
- **Sum-rate optimal multi-antenna downlink beamforming strategy based on clique search** *GLOBECOM '05: IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, VOLS 1-6*
  Yoo, T., GOLDSMITH, A.
  2005: 1510-1514
- **Energy-efficient joint estimation in sensor networks: Analog vs. digital** *30th IEEE International Conference on Acoustics, Speech, and Signal Processing*
  Cui, S. G., Xiao, J. J., Goldsmith, A. J., Luo, Z. Q., Poor, H. V.
  IEEE.2005: 745–748
- **Performance bounds for large wireless networks with mobile nodes and multicast traffic** *International Workshop on Wireless Ad-Hoc Networks*
  Toumpis, S., Goldsmith, A. J.
  IEEE.2005: 125–129
- **Load balancing and switch scheduling** *IEEE International Conference on Communications (ICC 2005)*
  Liu, X. H., Goldsmith, A.
  IEEE.2005: 1010–1014
- **Cross-layer optimization of sensor networks based on cooperative MIMO techniques with rate adaptation** *6th IEEE Workshop on Signal Processing Advances in Wireless Communications*
  Cui, S. G., Goldsmith, A. J.
  IEEE.2005: 960–964
- **Cross-layer design for lifetime maximization in interference-limited wireless sensor networks** *24th Annual Joint Conference of the IEEE Computer and Communications Societies*
  Madan, R., Cui, S. G., Lall, S., Goldsmith, A.
  IEEE COMPUTER SOC.2005: 1964–1975
- **Energy efficient routing based on cooperative MIMO techniques** *30th IEEE International Conference on Acoustics, Speech, and Signal Processing*

Cui, S. G., Goldsmith, A. J.
IEEE.2005: 805–808

- **Capacity gain from transmitter and receiver cooperation** *IEEE International Symposium on Information Theory and Its Applications*
  Ng, C. T., Goldsmith, A. J.
  IEEE.2005: 397–401
- **Cross-layer design of control over wireless networks** *Symposium on Systems, Control, and Networks*
  Liu, X. G., Goldsmith, A.
  BIRKHAUSER BOSTON.2005: 111–136
- **Energy-delay tradeoffs for data collection in TDMA-based sensor networks** *IEEE International Conference on Communications (ICC 2005)*
  Cui, S. G., Madan, R., Goldsmith, A., Lall, S.
  IEEE.2005: 3278–3284
- **Load balancing and switch scheduling**
  Liu, X., Goldsmith, A.
  2005
- **Energy-delay tradeoffs for data collection in TDMA-based sensor networks**
  Cui, S., Madan, R., Goldsmith, A., Lall, S.
  2005
- **Capacity gain from transmitter and receiver cooperation**
  Ng, C. T., Goldsmith, A. J.
  2005
- **Cross-layer optimization of sensor networks based on cooperative MIMO techniques with rate adaptation**
  Cui, S., Goldsmith, A. J.
  2005
- **Mixed integer-linear programming for link scheduling in interference-limited networks**
  Madan, R., Cui, S., Lall, S., Goldsmith, A. J.
  2005
- **Capacity of fading broadcast channels with transmitter ordering csi**
  Agarwal, R., Liang, Y., Goldsmith, A.
  2005
- **Shannon Meets Lyapunov: Connections between Information Theory and Dynamical Systems**
  Holliday, T., Glynn, P., Goldsmith, A.
  2005
- **Optimizing end-to-end distortion in MIMO systems**
  Holliday, T., Goldsmith, A.
  2005
- **Wireless communications**
  Goldsmith, A.
  Cambridge University Press.2005
- **Sum-rate optimal multi-antenna downlink beamforming strategy based on clique search**
  Yoo, T., Goldsmith, A.
  2005
- **Energy-efficient joint estimation in sensor networks: Analog vs. digital**
  Cui, S., Xiao, J. J., Goldsmith, A. J., Luo, Z. Q., Poor, H. V.
  2005
- **Rate regions and optimal power allocation for TD fading broadcast channels without CSIT** *Allerton, Monticello Illinois USA*
  Liang, Y., Goldsmith, A.

2005

- **Power-efficient analog forwarding transmission in an inhomogeneous gaussian sensor network** *Signal Processing Advances in Wireless Communications, IEEE 6th ...*
  Xiao, J. J., Luo, Z. Q., Cui, S., Goldsmith, A. J.
  2005
- **Joint optimization of wireless communication and networked control systems** *European Summer School on Multi-Agent Control*
  Xiao, L., Johansson, M., Hindi, H., Boyd, S., GOLDSMITH, A.
  SPRINGER-VERLAG BERLIN.2005: 248–272
- **Optimality of zero-forcing beamforming with multiuser diversity**
  Yoo, T., Goldsmith, A.
  2005
- **Networked control system design over a wireless LAN**
  Drew, M., Liu, X., Goldsmith, A., Hedrick, K.
  2005
- **Energy efficient routing based on cooperative MIMO techniques**
  Cui, S., Goldsmith, A. J.
  2005
- **Cross-layer design of control over wireless networks** *Advances in Control, Communication Networks, and Transportation Systems*
  Liu, X., Goldsmith, A.
  2005: 111-136
- **Joint routing, MAC, and link layer optimization in sensor networks with energy constraints** *IEEE International Conference on Communications (ICC 2005)*
  Cui, S. G., Madan, R., Goldsmith, A., Lall, S.
  IEEE.2005: 725–729
- **Energy-efficiency of MIMO and cooperative MIMO techniques in sensor networks** *IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS*
  Cui, S. G., Goldsmith, A. J., Bahai, A.
  2004; 22 (6): 1089-1098
- **Transmitter optimization and optimality of beamforming for multiple antenna systems** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Jafar, S. A., Goldsmith, A.
  2004; 3 (4): 1165-1175
- **Channel capacity of adaptive transmission with maximal ratio combining in correlated Rayleigh fading** *IEEE International Symposium on Information Theory*
  Mallik, R. K., Win, M. Z., Shao, J. W., Alouini, M. S., Goldsmith, A. J.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2004: 1124–33
- **On the duality of Gaussian multiple-access and broadcast channels** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Jindal, N., Vishwanath, S., Goldsmith, A.
  2004; 50 (5): 768-783
- **PhantomNet: Exploring optimal multicellular multiple antenna systems** *EURASIP JOURNAL ON APPLIED SIGNAL PROCESSING*
  Jafar, S. A., Foschini, G. J., Goldsmith, A. J.
  2004; 2004 (5): 591-604
- **Capacity of time-slotted ALOHA packetized multiple-access systems over the AWGN channel** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Medard, M., Huang, J. Y., Goldsmith, A. J., Meyn, S. P., Coleman, T. P.
  2004; 3 (2): 486-499
- **Cross-layer design of wireless networks with resource-constrained nodes** *STANFORD UNIV CA*

Goldsmith, A.
2004

- **Joint modulation and multiple access optimization under energy constraints**
  Cui, S., Goldsmith, A., Bahai, A.
  2004
- **Capacity of ad-hoc networks with node cooperation**
  Jindal, N., Mitra, U., Goldsmith, A.
  2004
- **Performance bounds for large wireless networks with mobile nodes and multicast traffic** *Wireless Ad-Hoc Networks, International Workshop*
  Toumpis, S., Goldsmith, A. J.
  2004: 125-129
- **Optimal power scheduling of universal decentralized estimation in sensor networks** *November*
  Xiao, J. J., Cui, S., Goldsmith, A. J.
  2004
- **On the capacity region of the vector fading broadcast channel with no CSIT.** *ICC*
  Jafar, S. A., Goldsmith, A.
  2004: 468-472
- **Wireless network design for distributed control**
  Liu, X., Goldsmith, A.
  2004
- **Can Cross-Layer Techniques Enhance the Performance of Tactical Military Networks-Panel Discussion** *STANFORD UNIV CA*
  Goldsmith, A.
  2004
- **Optimal power allocation for parallel gaussian broadcast channels with independent and common information**
  Jindal, N., Goldsmith, A.
  2004
- **Large wireless networks under fading, mobility, and delay constraints**
  Toumpis, S., Goldsmith, A. J.
  2004
- **Cross-layer energy minimization in TDMA-based sensor networks**
  Cui, S., Madan, R., Goldsmith, A. J., Lall, S.
  2004
- **Capacity and dirty paper coding for Gaussian broadcast channels with common information**
  Jindal, N., Goldsmith, A.
  2004
- **Joint estimation in sensor networks under energy constraints** *Sensor and Ad Hoc Communications and Networks, IEEE SECON 2004.*
  Xiao, J. J., Cui, S., Luo, Z. Q., Goldsmith, A. J.
  2004
- **Wireless medium access control in networked control systems** *American Control Conference*
  Liu, X. H., Goldsmith, A.
  IEEE.2004: 3605–3610
- **Capacity of fading MIMO channels with channel estimation error** *IEEE International Conference on Communications (ICC 2004)*
  Yoo, T., Goldsmith, A.
  IEEE.2004: 808–813
- **Dirty paper coding vs. TDMA for MIMO broadcast channels** *IEEE International Conference on Communications (ICC 2004)*
  Jindal, N., Goldsmith, A.

IEEE.2004: 682–686

- **Joint estimation in sensor networks under energy constraints** *1st Annual IEEE-Communications-Society Conference on Sensor and Ad Hoc Communications and Networks (SECON 2004)*
  Xiao, J. J., Cui, S. G., Luo, Z. Q., Goldsmith, A. J.
  IEEE.2004: 264–271
- **On source and channel codes for multiple inputs and outputs: Does multiple description beat space time?** *IEEE Information Theory Workshop*
  Effros, M., Koetter, R., Goldsmith, A. J., Medard, M.
  IEEE.2004: 324–329
- **On the capacity region of the vector fading broadcast channel with no CSIT** *IEEE International Conference on Communications (ICC 2004)*
  Jafar, S. A., Goldsmith, A.
  IEEE.2004: 468–472
- **Distributed power and admission control for time-varying wireless networks** *IEEE International Symposium on Information Theory*
  Holliday, T., Goldsmith, A., Bambos, N., Glynn, P.
  IEEE.2004: 351–351
- **Kalman filtering with partial observation losses**
  Liu, X., Goldsmith, A.
  2004
- **Distributed power and admission control for time-varying wireless networks**
  Holliday, T., Goldsmith, A., Bambos, N., Glynn, P.
  2004
- **Capacity of fading broadcast channels with rate constraints**
  Ng, C. T., Goldsmith, A. J.
  2004
- **Transmitter cooperation in ad-hoc wireless networks: Does dirty-paper coding beat relaying?** *Information Theory Workshop, IEEE*
  Ng, C. T., Goldsmith, A. J.
  2004: 277-282
- **Cross-layer optimization in sensor networks with energy constraints** *IEEE Trans. on Wireless Communications*
  Cui, S., Goldsmith, A. J.
  2004
- **Capacity bounds for Gaussian vector broadcast channels** *DIMACS SERIES IN DISCRETE MATHEMATICS AND THEORETICAL COMPUTER SCIENCE 62 ...*
  Vishwanath, S., Kramer, G., Shamai, S., Jafar, S., Goldsmith, A.
  2004
- **Cross-layer design for video streaming over wireless ad hoc networks** *6th IEEE Workshop on Multimedia Signal Processing*
  Yoo, T., Setton, E., Zhu, X. Q., Goldsmith, A., Girod, B.
  IEEE.2004: 99–102
- **On source and channel codes for multiple inputs and outputs: Does multiple description beat space time?** *Information Theory Workshop. IEEE*
  Effros, M., Koetter, R., Goldsmith, A. J., Médard, M.
  2004: 324-329
- **MIMO capacity with channel uncertainty: Does feedback help?**
  Yoo, T., Yoon, E., Goldsmith, A.
  2004
- **Capacity of fading MIMO channels with channel estimation error**
  Yoo, T., Goldsmith, A.
  2004

- **Multicarrier Modulation** *a report on OFDM*
  Andrews, G. G., Goldsmith, A. J.
  2004
- **Joint rate allocation and routing for multi-hop wireless networks with delay-constrained data** *Wireless Systems Lab, Stanford University, CA, USA, Tech. Rep*
  Agarwal, R., Goldsmith, A.
  2004
- **Wireless medium access control in networked control systems**
  Liu, X., Goldsmith, A.
  2004
- **The effect of time synchronization errors on the performance of cooperative MISO systems**
  Jagannathan, S., Aghajan, H., Goldsmith, A.
  2004
- **Joint source and channel coding for MIMO systems**
  Holliday, T., Goldsmith, A.
  2004
- **Joint modulation and multiple access optimization under energy constraints**
  Cui, S., Goldsmith, A., Bahai, A.
  2004
- **Capacity of ad-hoc networks with node cooperation**
  Jindal, N., Mitra, U., Goldsmith, A.
  2004
- **Performance bounds for large wireless networks with mobile nodes and multicast traffic** *Wireless Ad-Hoc Networks, International Workshop*
  Toumpis, S., Goldsmith, A. J.
  2004: 125-129
- **Optimal power scheduling of universal decentralized estimation in sensor networks** *November*
  Xiao, J. J., Cui, S., Goldsmith, A. J.
  2004
- **On the capacity region of the vector fading broadcast channel with no CSIT.** *ICC*
  Jafar, S. A., Goldsmith, A.
  2004: 468-472
- **Wireless network design for distributed control**
  Liu, X., Goldsmith, A.
  2004
- **Can Cross-Layer Techniques Enhance the Performance of Tactical Military Networks-Panel Discussion** *STANFORD UNIV CA*
  Goldsmith, A.
  2004
- **Optimal power allocation for parallel gaussian broadcast channels with independent and common information**
  Jindal, N., Goldsmith, A.
  2004
- **Large wireless networks under fading, mobility, and delay constraints**
  Toumpis, S., Goldsmith, A. J.
  2004
- **Cross-layer energy minimization in TDMA-based sensor networks**
  Cui, S., Madan, R., Goldsmith, A. J., Lall, S.
  2004

- **Capacity and dirty paper coding for Gaussian broadcast channels with common information**
  Jindal, N., Goldsmith, A.
  2004
- **Joint estimation in sensor networks under energy constraints** *Sensor and Ad Hoc Communications and Networks, IEEE SECON 2004.*
  Xiao, J. J., Cui, S., Luo, Z. Q., Goldsmith, A. J.
  2004
- **Capacity and optimal power allocation for fading broadcast channels with minimum rates** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Jindal, N., GOLDSMITH, A.
  2003; 49 (11): 2895-2909
- **Empirical analysis of transcriptional activity in the Arabidopsis genome** *SCIENCE*
  Yamada, K., Lim, J., Dale, J. M., Chen, H. M., Shinn, P., Palm, C. J., Southwick, A. M., Wu, H. C., Kim, C., Nguyen, M., Pham, P., Cheuk, R., Karlin-Newmann, et al
  2003; 302 (5646): 842-846
- **Duality, achievable rates, and sum-rate capacity of Gaussian MIMO broadcast channels** *IEEE International Conference on Communications*
  Vishwanath, S., Jindal, N., Goldsmith, A. G.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2003: 2658–68
- **Capacity regions for wireless ad hoc networks** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Toumpis, S., Goldsmith, A. J.
  2003; 2 (4): 736-748
- **Adaptive turbo-coded modulation for flat-fading channels** *IEEE International Symposium on Information Theory*
  Vishwanath, S., Goldsmith, A.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2003: 964–72
- **Capacity limits of MIMO channels** *IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS*
  Goldsmith, A., Jafar, S. A., Jindal, N., Vishwanath, S.
  2003; 21 (5): 684-702
- **Adaptive multirate CDMA for uplink throughput maximization** *IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS*
  Jafar, S. A., GOLDSMITH, A.
  2003; 2 (2): 218-228
- **Capacity of finite state Markov channels with general inputs** *IEEE International Symposium on Information Theory*
  Holliday, T., Goldsmith, A., Glynn, P.
  IEEE.2003: 289–289
- **Capacity of fading MIMO channels with channel estimation error**
  Yoo, T., Goldsmith, A.
  2003
- **Power estimation for Viterbi decoders** *Wireless Systems Lab, Stanford University, Available at http://wsl. stanford ...*
  Cui, S., Goldsmith, A. J., Bahai, A.
  2003
- **On the capacity of large wireless networks under fading, mobility and delay constraints** *Engineering Library, Stanford University, Tech. Rep.*
  Toumpis, S., Goldsmith, A. J.
  2003
- **The" Z" channel.**
  Vishwanath, S., Jindal, N., Goldsmith, A.
  2003
- **Capacity bounds for large wireless networks under fading and node mobility**
  Toumpis, S., Goldsmith, A. J.

2003

- **Joint optimization of communication rates and linear systems** *IEEE TRANSACTIONS ON AUTOMATIC CONTROL*
  Xiao, L., Johansson, M., Hindi, H., Boyd, S., Goldsmith, A.
  2003; 48 (1): 148-153
- **Multiple-antenna capacity in correlated Rayleigh fading with channel covariance information** *IEEE International Symposium on Information Theory*
  Jafar, S. A., Goldsmith, A.
  IEEE.2003: 470–470
- **Sum power iterative waterfilling for Gaussian vector broadcast channels** *IEEE International Symposium on Information Theory*
  Vishwanath, S., Rhee, W., Jindal, N., Jafar, S., Goldsmith, A.
  IEEE.2003: 467–467
- **On the Capacity of Three-dimensional Wireless Ad Hoc Networks**
  Toumpis, S., Goldsmith, A. J.
  2003
- **Energy-constrained modulation optimization for coded systems** *IEEE Global Telecommunications Conference (GLOBECOM 03)*
  Cui, S., Goldsmith, A. J., Bahai, A.
  IEEE.2003: 372–376
- **Optimal power control for CDMA systems in the wideband limit**
  Holliday, T., Goldsmith, A., Glynn, P.
  2003
- **On the Capacity of the Vector MAC and BC with Feedback**
  Jafar, S. A., Goldsmith, A.
  2003
- **Modulation optimization under energy constraints**
  Cui, S., Goldsmith, A. J., Bahai, A.
  2003
- **Worst-case capacity of Gaussian vector channels**
  Vishwanath, S., Boyd, S., Goldsmith, A.
  2003
- **A duality theory for channel capacity**
  Vishwanath, S., Goldsmith, A.
  2003
- **Performance, optimization, and cross-layer design of media access protocols for wireless ad hoc networks**
  Toumpis, S., Goldsmith, A. J.
  2003
- **On the duality between general multiple-access/broadcast channels**
  Jindal, N., Vishwanath, S., Goldsmith, A.
  2003
- **Capacity of fading MIMO channels with channel estimation error**
  Yoo, T., Goldsmith, A.
  2003
- **Power estimation for Viterbi decoders** *Wireless Systems Lab, Stanford University, Available at http://wsl. stanford ...*
  Cui, S., Goldsmith, A. J., Bahai, A.
  2003
- **On the capacity of large wireless networks under fading, mobility and delay constraints** *Engineering Library, Stanford University, Tech. Rep.*
  Toumpis, S., Goldsmith, A. J.

2003

- **The" Z" channel.**
  Vishwanath, S., Jindal, N., Goldsmith, A.
  2003
- **Capacity bounds for large wireless networks under fading and node mobility**
  Toumpis, S., Goldsmith, A. J.
  2003
- **Joint optimization of communication rates and linear systems** *IEEE TRANSACTIONS ON AUTOMATIC CONTROL*
  Xiao, L., Johansson, M., Hindi, H., Boyd, S., Goldsmith, A.
  2003; 48 (1): 148-153
- **Multiple-antenna capacity in correlated Rayleigh fading with channel covariance information** *IEEE International Symposium on Information Theory*
  Jafar, S. A., Goldsmith, A.
  IEEE.2003: 470–470
- **Sum power iterative waterfilling for Gaussian vector broadcast channels** *IEEE International Symposium on Information Theory*
  Vishwanath, S., Rhee, W., Jindal, N., Jafar, S., Goldsmith, A.
  IEEE.2003: 467–467
- **Energy-aware ad hoc wireless networks** *IEEE WIRELESS COMMUNICATIONS*
  Goldsmith, A., Wicker, S. B.
  2002; 9 (4): 6-7
- **Design challenges for energy-constrained ad hoc wireless networks** *IEEE WIRELESS COMMUNICATIONS*
  Goldsmith, A. J., Wicker, S. B.
  2002; 9 (4): 8-27
- **A new approach for evaluating clipping distortion in multicarrier systems** *IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS*
  Bahai, A. R., Singh, M., Goldsmith, A. J., Saltzberg, B. R.
  2002; 20 (5): 1037-1046
- **Low-complexity maximum-likelihood detection of coded signals sent over finite-state Markov channels** *IEEE TRANSACTIONS ON COMMUNICATIONS*
  Li, L. F., Goldsmith, A. J.
  2002; 50 (4): 524-531
- **Effect of mobility on PRMA** *IEEE International Conference on Communications (ICC 99)*
  Mehta, N. B., Goldsmith, A. J.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2002: 400–405
- **Differential gene expression profiling of adult murine hematopoietic stem cells** *BLOOD*
  Park, I. K., He, Y. Q., Lin, F. M., Laerum, O. D., Tian, Q., Bumgarner, R., Klug, C. A., Li, K. J., Kuhr, C., Doyle, M. J., Xie, T., Schummer, M., Sun, et al
  2002; 99 (2): 488-498
- **Optimal power control and source-channel coding for delay constrained traffic over wireless channels** *IEEE International Conference on Communications*
  Holliday, T., GOLDSMITH, A.
  IEEE.2002: 831–835
- **Optimal power allocation over fading channels with stringent delay constraints** *IEEE International Conference on Communications*
  Liu, X. G., Goldsmith, A. J.
  IEEE.2002: 1413–1418
- **Optimal power allocation over fading channels with stringent delay constraints**
  Liu, X., Goldsmith, A. J.
  2002

- **Achievable uniform rates for ad hoc networks**
  Oteri, O., Goldsmith, A.
  2002
- **EE359 wireless communications**
  Goldsmith, A.
  Stanford University Press.2002
- **Guest editorial: energy-aware ad hoc wireless networks** *Wireless Communications, IEEE*
  Goldsmith, A., Wicker, S. B.
  2002; 4 (9): 6-7
- **Entropy and mutual information for Markov channels with general inputs**
  Holliday, T., Goldsmith, A., Glynn, P.
  2002
- **Fundamental capacity of MIMO channels** *IEEE J. Select. Areas Commun*
  Goldsmith, A., Jafar, S. A., Jindal, N., Vishwanath, S.
  2002
- **Optimal link adaptation in wideband CDMA systems** *IEEE Global Telecommunications Conference (GLOBECOM 02)*
  Holliday, T., GOLDSMITH, A., Glynn, P.
  IEEE.2002: 721–726
- **Entropy, Mutual Information, and Capacity for Markov Channels with General Inputs**
  Holliday, T., Goldsmith, A., Glynn, P.
  Stanford University.2002
- **Design challenges for future wireless systems** *Frontiers of Engineering: Reports on Leading-Edge Engineering from the 2001 ...*
  GOLDSMITH, A.
  2002
- **Duality, dirty paper coding, and capacity for multiuser wireless channels** *Information, Coding and Mathematics*
  Jindal, N., Vishwanath, S., Goldsmith, A.
  2002: 239-256
- **PhantomNet: Exploring optimal multicellular multiple antenna systems** *56th IEEE Vehicular Technology Conference*
  Jafar, S. A., Foschini, G. J., Goldsmith, A. J.
  IEEE.2002: 261–265
- **On the capacity of multiple input multiple output broadcast channels** *IEEE International Conference on Communications*
  Vishwanath, S., Jindal, N., GOLDSMITH, A.
  IEEE.2002: 1444–1450
- **Transmitter optimization for multiple antenna cellular systems** *IEEE International Symposium on Information Theory*
  Jafar, S. A., Goldsmith, A. J.
  IEEE.2002: 50–50
- **Wireless link adaptation policies: QoS for deadline constrained traffic with imperfect channel estimates** *IEEE International Conference on Communications*
  Holliday, T., GOLDSMITH, A., Glynn, P.
  IEEE.2002: 3366–3371
- **Capacity regions for wireless ad hoc networks** *IEEE International Conference on Communications*
  Toumpis, S., GOLDSMITH, A.
  IEEE.2002: 3168–3173
- **Linear models and capacity bounds for continuous phase modulation** *IEEE International Conference on Communications*
  Yu, K. C., Goldsmith, A. J.
  IEEE.2002: 722–726

- **On the duality of Gaussian multiple-access and broadcast channels** *IEEE International Symposium on Information Theory*
  Jindal, N., Vishwanath, S., Goldsmith, A.
  IEEE.2002: 500–500
- **Degrees of freedom in adaptive modulation: A unified view** *Conference on Mid- and Long-Term Analysis of the Current Account in Japan*
  Chung, S. T., Goldsmith, A. J.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2001: 1561–71
- **Capacity and optimal resource allocation for fading broadcast channels - Part II: Outage capacity** *8th Communication Theory Mini-Conference (CTMC '99)*
  Li, L. F., Goldsmith, A. J.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2001: 1103–27
- **Degrees of freedom in adaptive modulation: A unified view** *53rd IEEE Vehicular Technology Conference (VTC)*
  Chung, S. T., Goldsmith, A.
  IEEE.2001: 1267–1271
- **Space-Time Turbo Codes: Decorrelation Properties**
  Vishwanath, S., Yu, W., Goldsmith, A., Negi, R.
  2001
- **Optimum power and rate allocation strategies for multiple access fading channels** *53rd IEEE Vehicular Technology Conference (VTC)*
  Vishwanath, S., Jafar, S. A., Goldsmith, A.
  IEEE.2001: 2888–2892
- **Capacity and optimal power allocation for fading broadcast channels with minimum rates** *IEEE Global Telecommunications Conference (GLOBECOM 01)*
  Jindal, N., GOLDSMITH, A.
  IEEE.2001: 1292–1296
- **Adaptive multicode CDMA for uplink throughput maximization** *53rd IEEE Vehicular Technology Conference (VTC)*
  Jafar, S. A., GOLDSMITH, A.
  IEEE.2001: 546–550
- **Throughput maximization with multiple codes and partial outages** *IEEE Global Telecommunications Conference (GLOBECOM 01)*
  Jafar, S. A., Vishwanath, S., GOLDSMITH, A.
  IEEE.2001: 1307–1311
- **Admission control and adaptive CDMA for integrated voice and data systems**
  Tang, X., Goldsmith, A.
  2001
- **Capacity and optimal resource allocation for fading broadcast channels. I. Ergodic capacity** *Information Theory, IEEE Transactions*
  Li, L., Goldsmith, A. J.
  2001; 3 (47): 1083-1102
- **Capacity of finite energy channels**
  Mandyam, H., Goldsmith, A.
  2001
- **Performance analysis of single carrier and multicarrier DS#CDMA systems over generalized fading channels** *Wireless Communications and Mobile Computing*
  Alouini, M. S., Simon, M. K., Goldsmith, A. J.
  2001; 1 (1): 93-110
- **Vector MAC capacity region with covariance feedback**
  Jafar, S. A., Vishwanath, S., Goldsmith, A.
  2001
- **On the duality of multiple-access and broadcast channels**

Jindal, N., Vishwanath, S., Goldsmith, A.
2001

- **On optimality of beamforming for multiple antenna systems with imperfect feedback**
  Jafar, S. A., Goldsmith, A.
  2001
- **Effects of communication delay on string stability in vehicle platoons**
  Liu, X., Goldsmith, A., Mahal, S. S., Hedrick, J. K.
  2001
- **Channel capacity and beamforming for multiple transmit and receive antennas with covariance feedback**
  Jafar, S. A., Vishwanath, S., Goldsmith, A.
  2001
- **The capacity region of broadcast channels with intersymbol interference and colored Gaussian noise** *IEEE TRANSACTIONS ON INFORMATION THEORY*
  Goldsmith, A. J., Effros, M.
  2001; 47 (1): 219-240
- **Throughput analysis of link adaptation in interference-limited cellular systems**
  Mehta, N. B., Goldsmith, A. J.
  2001
- **Adaptive resource allocation in composite fading environments**
  Vishwanath, S., Jafar, S. A., Goldsmith, A.
  2001
- **Space-Time Turbo Codes: Decorrelation Properties**
  Vishwanath, S., Yu, W., Goldsmith, A., Negi, R.
  2001
- **Optimum power and rate allocation strategies for multiple access fading channels** *53rd IEEE Vehicular Technology Conference (VTC)*
  Vishwanath, S., Jafar, S. A., Goldsmith, A.
  IEEE.2001: 2888–2892
- **Capacity and optimal power allocation for fading broadcast channels with minimum rates** *IEEE Global Telecommunications Conference (GLOBECOM 01)*
  Jindal, N., GOLDSMITH, A.
  IEEE.2001: 1292–1296
- **Adaptive multicode CDMA for uplink throughput maximization** *53rd IEEE Vehicular Technology Conference (VTC)*
  Jafar, S. A., GOLDSMITH, A.
  IEEE.2001: 546–550
- **Throughput maximization with multiple codes and partial outages** *IEEE Global Telecommunications Conference (GLOBECOM 01)*
  Jafar, S. A., Vishwanath, S., GOLDSMITH, A.
  IEEE.2001: 1307–1311
- **Adaptive modulation over Nakagami fading channels** *WIRELESS PERSONAL COMMUNICATIONS*
  Alouini, M. S., Goldsmith, A. J.
  2000; 13 (1-2): 119-143
- **Performance analysis of link adaptation in wireless data networks** *IEEE Global Telecommunications Conference (GLOBECOM 00)*
  Mehta, N. B., Goldsmith, A. J.
  IEEE.2000: 1422–1426
- **Capacity of time-slotted ALOHA systems** *IEEE International Symposium on Information Theory*
  Medard, M., Meyn, S. P., Huang, J. Y., Goldsmith, A. J.
  IEEE.2000: 407–407

- **Minimum outage probability and optimal power allocation for fading multiple-access channels** *IEEE International Symposium on Information Theory*
  Li, L. F., GOLDSMITH, A.
  IEEE.2000: 305–305
- **Joint design of vector quantizers and RCPC channel codes for Rayleigh fading channels** *IEEE Global Telecommunications Conference (GLOBECOM 00)*
  Shen, Y. R., Goldsmith, A. J., Effros, M.
  IEEE.2000: 1611–1615
- **Joint design of vector quantizers and RCPC channel codes for Rayleigh fading channels**
  Shen, Y., Goldsmith, A. J., Effros, M.
  2000
- **Optimal rate and power adaptation for multirate CDMA**
  Jafar, S. A., Goldsmith, A.
  2000
- **Truncated power control in code-division multiple-access communications** *Vehicular Technology, IEEE Transactions*
  Kim, S. W., Goldsmith, A. J.
  2000; 3 (49): 965-972
- **Minimum outage probability and optimal power allocation for fading multiple-access channels**
  Li, L., Goldsmith, A. J.
  2000
- **Comparison of fading channel capacity under different CSI assumptions**
  Alouini, M. S., Goldsmith, A. J.
  2000
- **Some capacity results for Ad Hoc networks**
  Toumpis, S., Goldsmith, A.
  2000
- **Exploring adaptive turbo coded modulation for flat fading channels** *52nd IEEE Vehicular Technology Conference (VTC 2000)*
  Vishwanath, S., Goldsmith, A.
  IEEE.2000: 1778–1783
- **Effect of fixed and interference-induced packet error probability on PRMA** *IEEE International Conference on Communications (ICC 2000)*
  Mehta, N. B., Goldsmith, A.
  IEEE.2000: 362–366
- **BER bounds for turbo coded modulation and their application to adaptive modulation** *IEEE International Symposium on Information Theory*
  Vishwanath, S., GOLDSMITH, A.
  IEEE.2000: 193–193
- **Adaptive multicarrier modulation for wireless systems** *34th Asilomar Conference on Signals, Systems, and Computers*
  Chung, S. T., GOLDSMITH, A.
  IEEE.2000: 1603–1607
- **Space-time turbo codes: Decorrelation properties and performance analysis for fading channels** *IEEE Global Telecommunications Conference (GLOBECOM 00)*
  Vishwanath, S., Yu, W., Negi, R., GOLDSMITH, A.
  IEEE.2000: 1016–1020
- **Ad hoc network capacity** *34th Asilomar Conference on Signals, Systems, and Computers*
  Toumpis, S., GOLDSMITH, A.
  IEEE.2000: 1265–1269
- **Effect of channel estimation error on M-QAM BER performance in Rayleigh fading** *49th IEEE Vehicular Technology Conference (VTC 99)*

Tang, X. Y., Alouini, M. S., Goldsmith, A. J.
IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.1999: 1856–64

- **Area spectral efficiency of cellular mobile radio systems** *IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY*
  Alouini, M. S., Goldsmith, A. J.
  1999; 48 (4): 1047-1066
- **Capacity of Rayleigh fading channels under different adaptive transmission and diversity-combining techniques** *IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY*
  Alouini, M. S., Goldsmith, A. J.
  1999; 48 (4): 1165-1181
- **An adaptive modulation scheme for simultaneous voice and data transmission over fading channels** *48th IEEE Vehicular Technology Conference (VTC 98)*
  Alouini, M. S., Tang, X. Y., Goldsmith, A. J.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.1999: 837–50
- **Capacity of time-slotted ALOHA systems**
  Médard, M., Goldsmith, A. J.
  1999
- **An adaptive modulation scheme for simultaneous voice and data transmission over fading channels** *Selected Areas in Communications, IEEE Journal*
  Alouini, M. S., Tang, X., Goldsmith, A. J.
  1999; 5 (17): 837-850
- **Progress in Air to Air Channel Modeling**
  Toumpis, S., Goldsmith, A.
  1999
- **Iterative weighted interference cancellation for CDMA systems with RAKE reception**
  Nambiar, R., Goldsmith, A.
  1999
- **Iterative Interference Cancellation for CDMA Systems with RAKE Reception**
  Goldsmith, A., Nambiar, R.
  1999
- **Capacity of time-varying channels with channel side information at the sender and receiver**
  Médard, M., Goldsmith, A. J.
  1999
- **Adaptive modulation and coding for fading channels**
  Goldsmith, A.
  1999
- **A unified approach for calculating error rates of linearly modulated signals over generalized fading channels** *Communications, IEEE Transactions*
  Alouini, M. S., Goldsmith, A. J.
  1999; 9 (47): 1324-1334
- **Effect of channel estimation error on M-QAM BER performance in Rayleigh fading** *Communications, IEEE Transactions*
  Tang, X., Alouini, M. S., Goldsmith, A. J.
  1999; 12 (47): 1856-1864
- **E ect of mobility on PRMA,"**
  Mehta, N. B., Goldsmith, A.
  1999
- **Outage capacities of broadcast fading channels with channel side information under different spectrum-sharing techniques**
  Li, L., Goldsmith, A.

1999

- **Effect of Channel Estimate Error on M-QAM BER Performance in Rayleigh Fading**
  Goldsmith, A., Alouini, M. S., Tang, X.
  1999
- **Outage capacities of broadcast fading channels with channel side information under different spectrum-sharing techniques**
  Li, L., Goldsmith, A.
  1999
- **Effect of Channel Estimate Error on M-QAM BER Performance in Rayleigh Fading**
  Goldsmith, A., Alouini, M. S., Tang, X.
  1999
- **Joint design of fixed-rate source codes and multiresolution channel codes** *IEEE International Communications Conference*
  Goldsmith, A. J., Effros, M.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.1998: 1301–12
- **Adaptive coded modulation for fading channels** *Global Communication Conference (GLOBECOM)*
  Goldsmith, A. J., Chua, S. G.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.1998: 595–602
- **Joint design of fixed-rate source codes and UEP channel codes for fading channels**
  Tie, H. X., Goldsmith, A., Effros, M.
  1998
- **A unified approach for calculating error rates of linearly modulated signals over generalized fading channels** *IEEE International Conference on Communications*
  Alouini, M. S., GOLDSMITH, A.
  IEEE.1998: 459–464
- **Prediction-based techniques for hand-off prioritization in channel assignment schemes** *IEEE Global Telecommunications Conference (GLOBECOM 98)*
  Mehta, N. B., GOLDSMITH, A.
  IEEE.1998: 2599–2604
- **Joint design of fixed-rate source codes and UEP channel codes for fading channels** *32nd Asilomar Conference on Signals, Systems and Computers*
  Tie, H. X., GOLDSMITH, A., Effros, M.
  IEEE.1998: 92–96
- **An adaptive modulation scheme for simultaneous voice and data transmission over fading channels** *Symposium on Culture and Environment in the Ancient Southwest*
  Alouini, M. S., Tang, X. Y., GOLDSMITH, A.
  IEEE.1998: 939–943
- **Prediction-based techniques for hand-off prioritization in channel assignment schemes**
  Mehta, N. B., Goldsmith, A.
  1998
- **Smart antennas** *Personal Communications, IEEE*
  Goldsmith, A.
  1998; 1 (5): 9-9
- **Capacity definitions and coding strategies for general channels with receiver side information**
  Effros, M., Goldsmith, A.
  1998
- **Capacity and optimal resource allocation for fading broadcast channels**
  Li, L., Goldsmith, A.
  1998

- **A unified performance analysis of DS-CDMA systems over generalized frequency-selective fading channels**
  Alouini, M. S., Simon, M. K., Goldsmith, A.
  1998
- **Joint design of fixed-rate source codes and multiresolution channel codes** *Communications, IEEE Transactions*
  Goldsmith, A. J., Effros, M.
  1998; 10 (46): 1301-1312
- **Adaptive coded modulation for fading channels** *Communications, IEEE Transactions*
  Goldsmith, A. J., Chua, S. G.
  1998; 5 (46): 595-602
- **Variable-rate variable-power MQAM for fading channels** *IEEE 46th Vehicular Technology Conference - Mobile Technology for the Human Race (VTC 96)*
  Goldsmith, A. J., Chua, S. G.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.1997: 1218–30
- **Adaptive coded modulation for fading channels** *1997 IEEE International Conference on Communications - Towards the Knowledge Millennium (ICC 97)*
  Chua, S. G., GOLDSMITH, A.
  IEEE.1997: 1488–1492
- **Effect of average power estimation error on adaptive MQAM modulation** *1997 IEEE International Conference on Communications - Towards the Knowledge Millennium (ICC 97)*
  GOLDSMITH, A., Greenstein, L.
  IEEE.1997: 1105–1109
- **Area spectral efficiency of cellular mobile radio systems** *IEEE 47th Vehicular Technology Conference - Technology in Motion (VTC 97)*
  Alouini, M. S., GOLDSMITH, A.
  IEEE.1997: 652–656
- **Area spectral efficiency of cellular systems with Nakagami multipath fading** *1997 IEEE International Conference on Communications - Towards the Knowledge Millennium (ICC 97)*
  Alouini, M. S., GOLDSMITH, A.
  IEEE.1997: 76–80
- **Capacity of Nakagami multipath fading channels** *IEEE 47th Vehicular Technology Conference - Technology in Motion (VTC 97)*
  Alouini, M. S., GOLDSMITH, A.
  IEEE.1997: 358–362
- **A decision-feedback maximum-likelihood decoder for fading channels** *IEEE Global Telecommunications Conference (GLOBECOM 97)*
  Li, L. F., GOLDSMITH, A.
  IEEE.1997: 332–336
- **RAKE reception with maximal-ratio and equal-gain combining for DS-CDMA systems in Nakagami fading** *1997 IEEE 6th International Conference on Universal Personal Communications Record (ICUPC 97)*
  Alouini, M. S., Kim, S. W., GOLDSMITH, A.
  IEEE.1997: 708–712
- **Iterative joint design of source codes and multiresolution channel codes** *1997 IEEE International Conference on Communications - Towards the Knowledge Millennium (ICC 97)*
  GOLDSMITH, A., Effros, M.
  IEEE.1997: 319–323
- **Capacity of time-varying channels with channel side information**
  Médard, M., Goldsmith, A.
  1997
- **A decision-feedback maximum-likelihood decoder for fading channels**
  Li, L., Goldsmith, A.

1997

- **Capacity of fading channels with channel side information** *Information Theory, IEEE Transactions*
  Goldsmith, A. J., Varaiya, P. P.
  1997; 6 (43): 1986-1992
- **Area spectral efficiency of cellular systems with Nakagami multipath fading**
  Alouini, M. S., Goldsmith, A.
  1997
- **Capacity of Nakagami multipath fading channels**
  Alouini, M. S., Goldsmith, A.
  1997
- **Truncated Power Adaptation in Mobile Multimedia CDMA** *Workshop on Mobile Multimedia ...*
  Goldsmith, A.
  1997
- **Adaptive M-QAM modulation over Nakagami fading channels**
  Alouini, M., Goldsmith, A.
  1997
- **RAKE reception with maximal-ratio and equal-gain combining for DS-CDMA systems in Nakagami fading**
  Alouini, M. S., Kim, S. W., Goldsmith, A.
  1997
- **Variable-rate variable-power MQAM for fading channels** *Communications, IEEE Transactions*
  Goldsmith, A. J., Chua, S. G.
  1997; 10 (45): 1218-1230
- **The capacity of downlink fading channels with variable rate and power** *Vehicular Technology, IEEE Transactions*
  Goldsmith, A. J.
  1997; 3 (46): 569-580
- **Effect of average power estimation error on adaptive MQAM modulation**
  Goldsmith, A., Greenstein, L.
  1997
- **Truncated power control in code division multiple access communications**
  Kim, S. W., Goldsmith, A.
  1997
- **The capacity region of broadcast channels with memory**
  Goldsmith, A., Effros, M.
  1997
- **Iterative joint design of source codes and multiresolution channel codes** *Communications, ICC 97 Montreal,'Towards the Knowledge Millennium ...*
  Goldsmith, A., Effros, M.
  1997
- **Capacity of broadcast fading channels with variable rate and power**
  Goldsmith, A.
  1996
- **Variable-rate variable-power MQAM for fading channels** *IEEE 46th Vehicular Technology Conference - Mobile Technology for the Human Race (VTC 96)*
  Chua, S. G., GOLDSMITH, A.
  IEEE.1996: 815–819
- **Variable-rate variable-power MQAM for fading channels**

Chua, S. G., Goldsmith, A.
1996

- **Capacity, mutual information, and coding for finite-state Markov channels** *Information Theory, IEEE Transactions*
  Goldsmith, A. J., Varaiya, P. P.
  1996; 3 (42): 868-886
- **Capacity and dynamic resource allocation in broadcast fading channels**
  Goldsmith, A.
  1995
- **Joint source/channel coding for wireless channels**
  Goldsmith, A.
  1995
- **ERROR STATISTICS OF REAL-TIME POWER MEASUREMENTS IN CELLULAR CHANNELS WITH MULTIPATH AND SHADOWING** *IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY*
  Goldsmith, A. J., Greenstein, L. J., FOSCHINI, G. J.
  1994; 43 (3): 439-446
- **Design and performance of high-speed communication systems over time-varying radio channels** *UNIVERSITY of CALIFORNIA*
  Goldsmith, A. J.
  1994
- **A decision-feedback maximum-likelihood decoder for finite-state Markov channels**
  Goldsmith, A., Varaiya, P.
  1994
- **Mini-Conference Author Index** *IEEE GLOBECOM: communications, the global bridge: San Francisco ...*
  Goldsmith, A., Aazhang, B., Abdel-Ghaffar, H. S., Alsugair, A. A., Aoyagi, Y., Bar-Ness, Y.
  1994
- **Multiuser capacity of cellular time-varying channels**
  Goldsmith, A.
  1994
- **Multiuser capacity of cellular time-varying channels**
  Goldsmith, A.
  1994
- **A MEASUREMENT-BASED MODEL FOR PREDICTING COVERAGE AREAS OF URBAN MICROCELLS** *IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS*
  Goldsmith, A. J., Greenstein, L. J.
  1993; 11 (7): 1013-1023
- **A measurement-based model for predicting coverage areas of urban microcells** *Selected Areas in Communications, IEEE Journal*
  Goldsmith, A. J., Greenstein, L. J.
  1993; 7 (11): 1013-1023
- **ERROR STATISTICS OF REAL-TIME POWER MEASUREMENTS IN CELLULAR CHANNELS WITH MULTIPATH AND SHADOWING** *43RD IEEE VEHICULAR TECHNOLOGY CONF - PERSONAL COMMUNICATION : FREEDOM THROUGH WIRELESS TECHNOLOGY (VTC 93)*
  Goldsmith, A. J., Greenstein, L. J., FOSCHINI, G. J.
  I E E E.1993: 108–111
- **Increasing spectral efficiency through power control**
  Goldsmith, A., Varaiya, P.
  1993
- **An empirical model for urban microcells, with applications and extensions**
  Goldsmith, A. J., Greenstein, L. J.
  1992

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