

**THIRTY-EIGHTH
ASILOMAR CONFERENCE ON
SIGNALS, SYSTEMS AND
COMPUTERS**

**2004 Asilomar Conference
Code Ec/FA
Naval Postgraduate School
833 Dyer Road, Rm. 437
Monterey, CA 93943-5121**



November 7-10, 2004
Asilomar Hotel and
Conference Grounds

In Cooperation with



**THIRTY-EIGHTH
ASILOMAR CONFERENCE ON
SIGNALS, SYSTEMS & COMPUTERS**

Organized in cooperation with

**NAVAL POSTGRADUATE SCHOOL
Monterey, California**

**MISSION RESEARCH CORPORATION
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and

IEEE SIGNAL PROCESSING SOCIETY

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Welcome from the General Chairman

Prof. Keith A. Teague, Oklahoma State University

It is my distinct pleasure to welcome you to the Thirty-Eighth Asilomar Conference on Signals, Systems and Computers. For many of us who return year after year, this conference has a very special attraction. The technical program is consistently outstanding, providing an opportunity to interact with some of the top researchers in our field, yet the format is relaxed and casual encouraging a workshop-like atmosphere that is friendly and inviting for all. The conference grounds themselves are beautiful, and the Pacific coast is striking. If you are attending for the first time, I hope you will have an enjoyable experience that will bring you back again. If you are returning, I hope you'll have an opportunity to renew many friendships from past years.

This year for the opening Sydney Parker Memorial Lecture we are very fortunate to have Professor Edward J. Delp, The Silicon Valley Professor of Electrical and Computer Engineering and Professor of Biomedical Engineering at Purdue University in West Lafayette, Indiana. Ed's keynote address, Signal and Image Processing: What Went Wrong? will explore the impact that signal and image processing has had on society and whether we've really delivered on our promises. Ed's talk promises to be informative and provocative.

The finalists in this year's student paper contest, under the direction of Dr. Linda DeBrunner, will present their posters on Sunday evening during the welcome reception and social gathering. The top 10 papers, selected from 69 total student entries, will be presented and judged. A total of 629 papers were submitted this year, including 125 invited papers.

The success of this conference depends on the dedicated service of many people. Special thanks are extended to the Technical Program Chairman, Prof. Scott Acton, and his outstanding Technical Program Committee who have developed a marvelous technical program this year. Although the success of a technical conference depends on many people working together, the primary responsibility falls on the Technical Program Chairman. Scott Acton has done a remarkable job this year. Please be sure to thank him and the entire Technical Program Committee when you see them. Thanks are also extended to the conference steering and administrative committees, and the faculty and staff of the Naval Postgraduate School who work tirelessly every year to make this conference possible.

On behalf of the entire Conference Committee, I hope you enjoy the Thirty-Eighth Asilomar Conference on Signals, Systems and Computers.

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7. Speech, Image, and Video Processing

Prof. Jim Schroeder

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2004 Asilomar Conference Session Schedule

Sunday Afternoon, November 7

2:00 - 7:00 PM	Registration – Main Lodge
7:00 - 9:00 PM	Welcoming Reception and Student Paper Contest
	Poster Session at Asilomar – Merrill Hall

Monday Morning, November 8

7:30 - 9:00 AM	Breakfast – Crocker Dining Hall
8:00 AM - 6:00 PM	Registration
8:15 - 9:45 AM	MA1a – Conference Opening and Plenary Session
9:45 - 10:15 AM	Coffee Social

10:15 - 12:00 PM MORNING SESSIONS

MA1b	Radar and Remote Sensing	Randy Moses & Bin Yu
MA2b	Emerging Technologies	Graham Jullien
MA3b	Bioinformatics / Genomic Signal Processing	Gaurau Shaarma
MA4b	Power-Aware DSP Applications	Jeff Coleman
MA5b	Optical Communications and Networks	Leslie Rusch
MA6b	Application of Adaptive Filtering in Digital Communications	Rahul Singh
MA7b	Mathematical Models for Image Processing	Jonathan Manton

12:00 - 1:00 PM Lunch – Crocker Dining Hall

Monday Afternoon, November 8

1:30 - 5:10 PM AFTERNOON SESSIONS

MP1	Advanced Signal Processing in Biomedical Imaging	Mike Insana
MP2	Modulation and Detection	Tommy Guess
MP3	Adaptive Signal Processing	Louis Beex
MP4a	Radar Array Processing	Joe Guerri
MP4b	Space-time Coded/MIMO Radar	Frank Robey
MP5	OFDM	Ufuk Tureli
MP6	Image and Video Security, Retrieval, and Watermarking	Tom Lookabaugh
MP7	Speech and Audio Coding	Jerry Gibson
MP8a1	Digital System Implementation (Poster)	Neil Burgess
MP8a2	Image Processing for Biometrics (Poster)	Robert Ives
MP8b	Communications in Non-ideal Channels (Poster)	James Zeidler

Monday Evening, November 8

6:30 - 9:30 PM Conference Cocktail Social – Merrill Hall

2004 Asilomar Conference Session Schedule (continued)

Tuesday Morning, November 9

7:30 - 9:00 AM	Breakfast – Crocker Dining Hall
8:00 AM - 5:00 PM	Registration

8:30 AM - 12:10 PM MORNING SESSIONS

TA1	Multi-scale Modeling of Biological Systems	Shayn Peirce
TA2a	Wireless Implementations	Joe Cavalloro
TA2b	High Performance Processing	Carlo Luschi
TA3a	Signal Processing for Agile Sensors	Darryl Morrell
TA3b	Applications of Multirate Systems and Filter Banks in Modern Communications	P. Vaidyanathan
TA4	MIMO/Space-time Coding	Robert Health
TA5	CDMA	Ubli Mitra
TA6	Adaptive Filter Theory	Scott Douglas
TA7	Mathematical Models for Signal Processing	Lang White
TA8a	Communications I (Poster)	Maite Brandt-Pearce
TA8b	Communications II (Poster)	Hui Liu

12:00 - 1:00 PM Lunch – Crocker Dining Hall

Tuesday Afternoon, November 9

1:30 - 5:10 PM AFTERNOON SESSIONS

TP1	Sensor Array and Relay Networks	Yingbo Hua
TP2	Computer Arithmetic	Milos Ercegovic
TP3	Sensor Networks	Rich Baraniuk & Mark Coat
TP4	Sonar and Acoustical Array Processing	Jim Pitton
TP5	Networks	J. M. Chung
TP6	UWB Communications	Dennis Goeckel
TP7	Image and Video Enhancement and Filtering	Tamal Bose
TP8a1	Biomedical Signal Processing (Poster)	Dana Brooks
TP8a2	Biomedical Image Processing (Poster)	Yibin Zheng
TP8a3	Signal Processing in Genomics and Proteomics (Poster)	Yibin Zheng
TP8a4	Radar Interpretation and Analysis (Poster)	Seth Silverstein
TP8b1	Image and Video Coding (Poster)	Sheila Hemami
TP8b2	Array Processing for Wireless Communications (Poster)	Murat Torlak
TP8b3	Speech Recognition (Poster)	Tina Kholer

Tuesday Evening, November 9

8:00 - 10:00 PM Bonfire next to Crocker Hall

2004 Asilomar Conference Session Schedule
(continued)

Wednesday Morning, November 10

7:30 - 9:00 AM	Breakfast – Crocker Dining Hall	
8:00 AM - 12:00 PM	Registration – Papers must be turned in before the registration closes at 12:00 noon.	
8:30 AM - 12:10 PM	MORNING SESSIONS	
WA1	Advances in Biomedical Microscopy	Brian Helmke
WA2	VLSI	David Harris
WA3	Wireless	Narayan Mandayam
WA4	Array Processing Functions	Uf Tureli
WA5	FEC	Matt Valenti
WA6	Applications of Adaptive Filtering in Communications	Jamal Tuqan
WA7	Statistical Signal and Image Processing	Vaughan Clarkson
WA8a	DSP Applications (Poster)	Ralph Hippenstiel
WA8b1	Speech Processing (Poster)	Neeraj Magotra
WA8b2	Adaptive Array Processing, STAP (Poster)	Stephen Kogon
12:00 - 1:00 PM	Lunch, meal tickets may be purchased at registration desk. This meal is not included in the registration.	

Student Paper Contest

Poster session Sunday evening in Merrill Hall, judging 6:00 - 7:00 PM, papers to remain posted during Welcome Reception.

Category A – Communications Systems and Networking
“Code Design for the Relay Channel and Factor Graph Coding”
Mohammad Ali Khojastepour, Nasir Ahmed, and Behnaam Aazhang, Rice University

Category C – Array Processing and MIMO
“Uniform Channel Decomposition for MIMO Communications”
Yi Jiang and Jian Li, University of Florida
“On the Capacity of the Broadband Relay Networks”
Guoqing Li and Hui Liu, University of Washington

Category D - Biomedical Signal and Image Processing
“Automated Detection and Classification of Vascular Abnormalities in Diabetic Retinopathy”
Deepika Vallabha, Kamesh Namuduri, Ramprasath Dorairaj, Wichita State University and Hilary Thompson, Louisiana State University

Category E – Signal Processing Algorithms and Applications
“Maximum Likelihood Diffusive Source Localization Based on Binary Observations”
Yoav Levinbook and Tan Wong, University of Florida
“Detection Performance Limits of Channel Impaired Distributed Sensor Networks”
Qi Cheng, Biao Chen, Pramod Varshney, Syracuse University

Category F – Architecture and Implementation
“Optimal Tower Fields for Hyperelliptic Curve Cryptosystems”
Selcuk Baktir and Berk Sunar, Worchester Polytechnic Institute; Jan Pelzl, Thomas Wollinger, and Christof Paar, Ruhr University Bochum
“An Efficient 21.56Gbps AES Implementation on FPGA”
Xinmiao Zhang and Keshab Parhi, University of Minnesota

Category G – Speech, Image, and Video Processing
“A Generalisation of the Delogne-Kasa Method for Fitting Hyperspheres”
Emanuel Zelniker and Vaughan Clarkson, The University of Queensland
“Blind Image Deconvolution using Constrained Variance Maximization”
Dalong Li and Russell Mersereau, Georgia Institute of Technology; Steven Simske, Hewlett Packard

2004 Asilomar Conference Session Schedule

Coffee breaks will be at 10:10 AM and 3:10 PM. (Except on Monday morning when refreshments will be served outside Merrill Hall from 9:45-10:15 AM.)

Monday, November 8

CONFERENCE OPENING AND PLENARY SESSION 8:30 – 9:45 AM

1. Welcome from the General Chairperson:

Prof. Keith A. Teague
Oklahoma State University

2. Session MA1a Distinguished Lecture for the 2004
Asilomar Conference

Prof. Edward J. Delp
Video and Image Processing Laboratory
School of Electrical and Computer Engineering
Purdue University
West Lafayette, Indiana

Signal and Image Processing: What Went Wrong?

Abstract

Many of us in the signal and image processing community believe that signal processing has had a powerful impact on technology and has contributed many new ideas and products. Is this really true? In this talk I argue that perhaps we feel too good about our community and ourselves and maybe we should look a little harder at what we promised and what we delivered.

Biography

Edward J. Delp was born in Cincinnati, Ohio. He received the B.S.E.E. (cum laude) and M.S. degrees from the University of Cincinnati, and the Ph.D. degree from Purdue University. In May 2002 he received an Honorary Doctor of Technology from the Tampere University of Technology in Tampere, Finland. From 1980-1984, Dr. Delp was with the Department of Electrical and Computer Engineering at

the University of Michigan, Ann Arbor, Michigan. Since August 1984, he has been with the School of Electrical and Computer Engineering and the Department of Biomedical Engineering at Purdue University, West Lafayette, Indiana. In 2002 he received a chaired professorship and currently is The Silicon Valley Professor of Electrical and Computer Engineering and Professor of Biomedical Engineering. His research interests include image and video cosmpression, multimedia security, medical imaging, multimedia systems, communication and information theory. Dr. Delp is a Fellow of the IEEE, a Fellow of the SPIE, a Fellow of the Society for Imaging Science and Technology (IS&T), and a Fellow of the American Institute of Medical and Biological Engineering. In 2000 he was selected a Distinguished Lecturer of the IEEE Signal Processing Society. In 1990 he received the Honeywell Award and in 1992 the D. D. Ewing Award, both for excellence in teaching. In 2001 he received the Raymond C. Bowman Award for fostering education in imaging science from the Society for Imaging Science and Technology (IS&T). In 2004 he received the Wilfred Hesselberth Award for Teaching Excellence. In 2002 he was awarded a Nokia Fellowship.

**Program of 2004
Asilomar Conference
on
Signals, Systems, and Computers**

**Technical Program Chairman
Prof. Scott T. Acton
University of Virginia**

Session MA1b Radar and Remote Sensing

Chair: *Randy Moses & Bin Yu*

MA1b-1	Performance Prediction in Adaptive Noise Radar <i>Brian Rigling, Wright State University</i>	10:15 AM
MA1b-2	Nonparametric Spectral Analysis with Missing Data via the EM Algorithm <i>Jian Li, University of Florida; Petre Stoica, Uppsala University; Yanwei Wang, University of Florida; Thomas Marzetta, Bell Laboratories</i>	10:40 AM
MA1b-3	Synthetic Aperture Radar Visualization <i>Randolph Moses, Lee Potter, Emre Ertin, Christian Austin, The Ohio State University</i>	11:05 AM
MA1b-4	Gust Front Detection in weather radar images by Entropy Matched Functional Template: Summary <i>Osama Alkhoul, Victor DeBrunner, University of Oklahoma</i>	11:30 AM

Session MA2b Emerging Technologies

Chair: *Graham Jullien*

MA2b-1	Realizing Stochastically Assembled Nanoarrays <i>John E. Savage, Brown University</i>	10:15 AM
MA2b-2	Split Current Quantum-Dot Cellular Automata <i>Konrad Walus, University of Calgary; Rumi Zhang, Wei Wang, University of Western Ontario; Graham A. Jullien, University of Calgary</i>	10:40 AM
MA2b-3	How Computer Aided Design (and Computer Science) can help to Drive Physical Science at the Nano-scale. <i>Michael Niemier, Georgia Institute of Technology</i>	11:05 AM
MA2b-4	The Bridge: Electron Science driven technologies <i>Kamran Eshraghian, Edith Cowan University</i>	11:30 AM
MA2b-5	Robust Digital Control of Nonlinear Micro-Electro-Mechanical Actuators using Sliding-Mode Control <i>N. Yazdi, University of Michigan; H. S. Sane, United Technologies Research Lab; C. H. Mastrangelo, Corning Research Laboratory</i>	11:55 AM

Session MA3b Bioinformatics / Genomic Signal Processing

Chair: *Gaurau Shaarma*

MA3b-1	Classification M-FISH Images Using Fuzzy C-means Clustering Algorithm and Normalization Approaches <i>Yu-Ping Wang, Sunil Bharathi, University of Missouri, Kansas City; Kenneth Castleman, Advanced Digital Imaging Research</i>	10:15 AM
MA3b-2	DFT based DNA Splicing Algorithms for Prediction of Protein Coding Regions <i>Suprakash Datta, Amir Asif, York University</i>	10:40 AM
MA3b-3	Location Proteomics: Determining the Optimal Grouping of Proteins according to their Subcellular Location Patterns as determined from Fluorescence Microscope Images <i>Robert Murphy, Carnegie Mellon University</i>	11:05 AM
MA3b-4	Environment aware chem/bio detection and classification <i>Shubha Kadambe, William Barvosa-Cartet, Qin Jiang, HRL Laboratories, LLC</i>	11:30 AM
MA3b-5	A Communication Systems Framework for Microarray Data Acquisition <i>Gaurav Sharma, University of Rochester</i>	11:55 AM

Session MA4b Power-Aware DSP Applications

Chair: *Jeff Coleman*

MA4b-1	Improved multiple constant multiplication using a minimum spanning tree <i>Oscar Gustafsson, Henrik Ohlsson, Lars Wanhammar, Linkoping University</i>	10:15 AM
MA4b-2	Watermarking Multiple Constant Multiplications Solutions <i>Jennifer L. Wong, Miodrag Potkonjak, University of California, Los Angeles</i>	10:40 AM
MA4b-3	Comparison of Graphical and Sub-expression Elimination Methods for Design of Efficient Multipliers <i>Andrew G. Dempster, University of Westminster; Malcolm D. Macleod, QinetiQ Ltd.; Oscar Gustafsson, Linkping University</i>	11:05 AM
MA4b-4	Low-complexity hybrid form FIR filters using matrix multiple constant multiplication <i>Oscar Gustafsson, Linkoping University; Jeffrey O. Coleman, Naval Research Laboratory; Andrew G. Dempster, University of Westminster; Malcolm D. Macleod, QinetiQ Ltd.</i>	11:30 AM

Session MA5b Optical Communications and Networks

Chair: *Leslie Rusch*

MA5b-1	Effects of Crosstalk on the Performance and Design of All-Optical Networks with Fiber Nonlinearities <i>Maite Brandt-Pearce, Yvan Pointurier, University of Virginia</i>	10:15 AM
MA5b-2	Intensity noise reduction of incoherent sources using semiconductor optical amplifiers <i>David Richardson, A. D. Mc Coy, P. Horak, M. Ibsen, Ben Thomsen, University of Southampton</i>	10:40 AM
MA5b-3	Intensity Noise in Non-coherent to Coherent Wavelength Conversion in Optical Semiconductor Optical Amplifiers <i>Leslie Rusch, Pascal Lemieux, Walid Mathlouthi, Mathieu Roy, Université Laval</i>	11:05 AM
MA5b-4	Noise Suppression and Optical ASE Modulation in Saturated Semiconductor Optical Amplifiers <i>Fumio Koyama, Hiroyuki Uenohara, Tokyo Institute of Technology</i>	11:30 AM
MA5b-5	Impact of Beat Noise on an Incoherent OCDMA System with Temporal Spreading <i>Bin Ni, James Lehnert, Purdue University</i>	11:55 AM

Session MA6b Applications of Adaptive Filtering in Digital Communications

Chair: *Rahul Singh*

MA6b-1	On the Statistical Efficiency of LMS Algorithms <i>Bernard Widrow, Stanford University</i>	10:15 AM
MA6b-2	Adaptive Algorithms for OFDMA Wireless Ad Hoc Networks with Multiple Antennas <i>Vishwanath Venkataraman, John Shynk, University of California, Santa Barbara</i>	10:40 AM
MA6b-3	Mitigation of Unknown Narrowband Interference Using Instantaneous Error Updates <i>Arun Batra, University of California, San Diego; Takeshi Ikuma, Virginia Tech; James Zeidler, University of California, San Diego; A. A. (Louis) Beex, Virginia Tech; John Proakis, University of California, San Diego</i>	11:05 AM
MA6b-4	Assessment of the efficiency of the LMS algorithm based on spectra information <i>Aaron Flores, Bernard Widrow, Stanford University</i>	11:30 AM
MA6b-5	A Variable Leaky LMS Adaptive Algorithm <i>Max Kamenetsky, Bernard Widrow, Stanford University</i>	11:55 AM

Session MA7b Mathematical Models for Image Processing

Chair: *Jonathan Manton*

MA7b-1	Geometric Optimization for Pose Estimation of Quadratic Surfaces <i>Pei Yean Lee, John Moore, RSISE</i>	10:15 AM
MA7b-2	Newton-like Methods for Numerical Optimization on Manifolds <i>Knut Hueper, National ICT Australia Ltd.; Jochen Trumpf, Australian National University</i>	10:40 AM
MA7b-3	An Iterative Algorithm Converging to the Principal Subspace Projection Operator with Applications <i>Jonathan Manton, University of Melbourne; Yingbo Hua, University of California, Riverside; Jim Reilly, McMaster University</i>	11:05 AM
MA7b-4	Performance Analysis of Super-Resolution Imaging <i>Dirk Robinson, Peyman Milanfar, University of California, Santa Cruz</i>	11:30 AM

Session MP1 Advanced Signal Processing Biomedical Imaging

Chair: *Mike Insana*

MP1-1	Statistical Image Reconstruction for Lesion Detection <i>Jinyi Qi, University of California</i>	1:30 PM
MP1-2	Error bound for ultrasonic strain imaging with coded excitation <i>Jie Liu, Huini Du, Michael Insana, University of California, Davis</i>	1:55 PM
MP1-3	Synthetic Aperture Methods for Ultrasonic Angular Scatter Imaging <i>Drake Guenther, Karthik Ranganathan, M. J. McAllister, University of Virginia; K. W. Rigby, GE Global Research; William F. Walker, University of Virginia</i>	2:20 PM
MP1-4	Recursive identification of pulse echo impulse responses for multi-source transmission <i>Fredrik Gran, Jorgen Arendt Jensen, Technical University of Denmark</i>	2:45 PM
BREAK		3:10 PM
MP1-5	Spline Based Time Delay Estimation <i>Francesco Viola, William F. Walker, University of Virginia</i>	3:30 PM
MP1-6	Frequency Domain Algebraic Image Reconstruction Technique <i>Yibin Zheng, University of Virginia</i>	3:55 PM

MP1-7	Observer efficiency in discrimination tasks simulating malignant and benign breast lesions with ultrasound <i>Craig Abbey, Roger Zemp, Jie Liu, Michael Insana, University of California, Davis</i>	4:20 PM
MP1-8	3D In-Vivo MR-Elastography of the Breast <i>Ralph Sinkus, Philips Research</i>	4:45 PM

Session MP2 Modulation and Detection
Chair: *Tommy Guess*

MP2-1	Channel Estimation in Overloaded CDMA Systems <i>Satya Ponnaluri, Tommy Guess, University of Virginia</i>	1:30 PM
MP2-2	Code and constellation optimization for efficient noncoherent communication <i>Noah Jacobsen, Upamanyu Madhow, University of California, Santa Barbara</i>	1:55 PM
MP2-3	Will ET Write or Radiate: inscribed mass vs. electromagnetic channels <i>Christopher Rose, Rutgers University; Gregory Wright, Antiope Associates</i>	2:20 PM
MP2-4	A Low Complexity Iterative Detector for MIMO Systems <i>Costas Georgiades, Yongzhe Xie, Texas A&M University</i>	2:45 PM
	BREAK	3:10 PM
MP2-5	Outage Capacities for Multi-Antenna, Multi-Access Channels <i>Mahesh Varanasi, Narayan Prasad, University of Colorado</i>	3:30 PM
MP2-6	Matched Filtering with Rate Back-off for Low Complexity Communications in Very Large Delay Spread Channels <i>Majid Emami, Mai Vu, Jan Hansen, Arogyaswami Paulraj, Stanford University</i>	3:55 PM
MP2-7	Analog Precoder and Equalizer Design for Random Broadband Fading Multichannel Communication <i>Zhifei Fan, Louis L. Scharf, Colorado State University</i>	4:20 PM
MP2-8	Near Maximum Likelihood Detection Using An Interior Point Method and Semidefinite Programming <i>Hedi Laamari, Jean Claude Belfiore, ENST-Paris; Nicolas Ibrahim, Wavecom S.A.</i>	4:45 PM

Session MP3 Adaptive Signal Processing
Chair: *Louis Beex*

MP3-1	Mean-Square Performance of Adaptive Filters Using Averaging Theory <i>H.-C. Chin, Pohang University of Science and Technology; Ali H. Sayed, University of California, Los Angeles; Woo-Jin Song, Pohang University of Science and Technology</i>	1:30 PM
MP3-2	A Sparse Reconfigurable Adaptive Filter Based on a Photonic Switch <i>John Shynk, John Bowers, University of California, Santa Barbara</i>	1:55 PM
MP3-3	A Particle Swarm Optimization-LMS Hybrid Algorithm for Adaptive Filtering <i>D. J. Krusienski, W. Kenneth Jenkins, Pennsylvania State University</i>	2:20 PM
MP3-4	Statistical Analysis of a Pseudo Affine Projection Algorithm in Non-Stationary Environments <i>Sergio J. M. de Almeida, Catholic University of Pelotas; Neil J. Bershad, University of California, Irvine; Jose Carlos M. Bermudez, Federal University of Santa Catarina</i>	2:45 PM
	BREAK	3:10 PM
MP3-5	On Affine Projection Direction Vector (Non-) Whiteness <i>A. A. (Louis) Beex, Virginia Tech; Sundar G. Sankaran, ArrayComm, Inc.</i>	3:30 PM
MP3-6	Real-Valued Delayless Subband Affine Projection Algorithm for Acoustic Echo Cancellation <i>Hesu Huang, Chris Kyriakakis, University of Southern California</i>	3:55 PM
MP3-7	Multirate Signal Processing for Multiple Listener Low Frequency Room Acoustic Equalization <i>Sunil Bharitkar, Audyssey Labs., Inc; Chris Kyriakakis, University of Southern California</i>	4:20 PM
MP3-8	An Alternative Design for Multichannel And Multiple Listener Room Acoustic Equalization <i>Sunil Bharitkar, Audyssey Labs., Inc</i>	4:45 PM

Session MP4a Radar Array Processing
Chair: *Joe Guerci*

MP4a-1	Computationally Efficient Beamforming on Real Experimental Data <i>Claudio Marino, Paul Chau, University of California, San Diego</i>	1:30 PM
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MP4a-2	A Novel Space-Time Adaptive Processing Algorithm <i>Harri Saarnisaari, Henri Puska, Centre for Wireless Communications</i>	1:55 PM	BREAK	3:10 PM	
MP4a-3	Three-Phase Sample Timing on a Wideband Triangular Array of 4/3 the Usual Density Reduces the Nyquist Rate for Far-Field Signals by Two Thirds <i>Jeffrey O. Coleman, Naval Research Laboratory</i>	2:20 PM	MP5-5	Maximum Likelihood Symbol Synchronization for OFDM-based WLANs in Unknown Frequency-Selective Fading Channels <i>Erchin Serpedin, Yik-Chung Wu, Texas A&M University</i>	3:30 PM
MP4a-4	Estimation of Space-Time Clutter Rank for Subarrayed Data <i>Louis Fertig, MIT Lincoln Laboratory</i>	2:45 PM	MP5-6	Improved Codes for Differential Space-Time-Frequency Coded OFDM <i>Qian Ma, Cihan Tepedelenlioglu, Arizona State University</i>	3:55 PM
Session MP4b Space-Time Coded/MIMO Radar Chair: <i>Frank Robey</i>			MP5-7	A Mixture Kalman Filter Approach for Blind OFDM Channel Estimation <i>Ruifeng Zhang, Wei Chen, Drexel University</i>	4:20 PM
MP4b-1	Transmit Beamforming for MIMO Radar Systems using Partial Signal Correlation <i>Daniel R. Fuhrmann, Geoffrey San Antonio, Washington University in St. Louis</i>	3:30 PM	MP5-8	Experimental Studies on Optimal Speace Frequency Group Codes <i>Yao Chen, Radhika Iyer, Uf Tureli, Stevens Institute of Technology</i>	4:45 PM
MP4b-2	MIMO Radar Theory and Experimental Results <i>Frank Robey, Scott Coutts, Jeff McHarg, Dennis Weikle, Kevin Cuomo, MIT Lincoln Laboratory</i>	3:55 PM	Session MP6 Image and Video Security, Retrieval, and Watermarking Chair: <i>Tom Lookabaugh</i>		
MP4b-3	Performance of MIMO Radar Systems: Advantages of Angular Diversity <i>Eran Fishler, New York University; Alex Haimovich, New Jersey Institute of Technology; Rick Blum, Lehigh University; Len Cimini, University of Delaware; Reinaldo Valenzuela, Bell Laboratories, Lucent Technologies</i>	4:20 PM	MP6-1	Watermarking to Track Motion Picture Theft <i>Jeffrey Bloom, Christos Polyzois, Sarnoff Corporation</i>	1:30 PM
MP4b-4	MIMO Radar Imaging System Performance Issues <i>Keith Forsythe, Dan Bliss, MIT Lincoln Laboratory</i>	4:45 PM	MP6-2	Lightweight Security Principles for Wireless Multimedia-Based Sensor Networks <i>Deepa Kundur, Takis Zourntos, Texas A&M University</i>	1:55 PM
Session MP5 OFDM Chair: <i>Ufuk Tureli</i>			MP6-3	Selective Encryption, Information Theory, and Compression <i>Tom Lookabaugh, University of Colorado</i>	2:20 PM
MP5-1	A Multiuser OFDM System With User Cooperation <i>Sarod Yatawatta, Athina Petropulu, Drexel University</i>	1:30 PM	MP6-4	Exposing Digital Content Piracy: Approaches, Issues, and Experiences <i>Patrick McDaniel, Simon Byers, Dave Kormann, AT&T; Lorrie Cranor, Computer Science Department, CMU; Eric Cronin, University of Pennsylvania</i>	2:45 PM
MP5-2	On the Optimality of the OFDMA Network <i>Guoqing Li, Hui Liu, University of Washington</i>	1:55 PM	BREAK	3:10 PM	
MP5-3	Coded Block OFDM for the Frequency Selective Fading Channel <i>Michael McCloud, University of Pittsburgh</i>	2:20 PM	MP6-5	A Cryptographic Watermark Embedding Technique <i>Jian Ren, Tongtong Li, Michigan State University; Mehrdad Nadooshan, Avaya, Inc.</i>	3:30 PM
MP5-4	Subcarrier Allocation in OFDMA Systems: Beyond water-filling? <i>Somsak Kittipiyakul, Tara Javidi, University of Washington</i>	2:45 PM	MP6-6	Compact representation and combination of MPEG-7 color and texture descriptors for efficient image retrieval <i>Ramprasath Dorairaj, Kamesh Namuduri, Wichita State University</i>	3:55 PM
			MP6-7	A time-frequency inspired robust image watermarking <i>Mahmood Al-khassaweneh, Selin Aviyente, Michigan State University</i>	4:20 PM

MP6-8 Sub-Gaussian Rotation-Invariant Features for 4:45 PM
Steerable Wavelet-Based Image Retrieval
*George Tzagkarakis, University of Crete; Baltasar
Beferull-Lozano, Swiss Federal Institute of Technology
(EPFL); Panagiotis Tsakalides, University of Crete*

Session MP7 Speech and Audio Coding

Chair: *Jerry Gibson*

MP7-1 Improving Upon Toll Quality Speech for 1:30 PM
VoIP
*Richard Cox, AT&T Labs; David Malah, Technion - Israel
Institute of Technology; David Kapilow, AT&T Labs*

MP7-2 Voice Over IP: The Challenges Behind the 1:55 PM
Vision
Fouad A. Tobagi, Stanford University

MP7-3 Packet Loss Concealment in a Secure Voice 2:20 PM
over IP Environment
*Christopher M. White, Keith A. Teague, Oklahoma State
University; Edward J. Daniel, Northrop Grumman*

MP7-4 Spectral Estimation Performance of Circular 2:45 PM
Linear Prediction Modeling for Real-Speech Signals
*Ali Erdem Ertan, Tom P. Barnwell III, Georgia Institute
of Technology*

BREAK 3:10 PM

MP7-5 A Fast Search Technique for Multistage 3:30 PM
Vector Quantization Based on the Introduction of
Tree-Structure to each Stage
Wai Chu, DoCoMo USA Labs

MP7-6 High Quality Sound from Small 3:55 PM
Loudspeakers Using the Exact Inverse
Khosrow Lashkari, DoCoMo USA Labs

MP7-7 SNR Scalability, Multiple Descriptions, and 4:20 PM
Perceptual Distortion Measures
Jerry Gibson, University of California, Santa Barbara

MP7-8 Improved Perceptually Inspired Speech 4:45 PM
Enhancement Using a Psychoacoustic Model
*Rongqiang Hu, David V. Anderson, Georgia institute of
Technology*

Session MP8a1 Digital System Implementations

Chair: *Neil Burgess*

MP8a1-1 Array based Architecture for EZW Image Encoding on
FPGA using HandelC
*Suchitra Sathyanarayana, Chai Soon Lim, Srikanthan
Thambipillai, Nanyang Technological University*

MP8a1-2 Achieving Hardware-Efficient Neural Network
Based Pattern Recognition System Through Linear
Approximation
*Siew Kei Lam, Srikanthan Thambipillai, Nanyang
Technological University; Christopher T. Clarke,
University of Bath; Han Sim (Eugene) Low, Nanyang
Technological University*

MP8a1-3 Bat on an FPGA: A bio-mimetic implementation of a
highly parallel signal processing system
Christopher T. Clarke, Lin Qiang, University of Bath

MP8a1-4 Efficient Implementation of Digital Filters Using Novel
Reconfigurable Multiplier Blocks (ReMB)
*Suleyman Sirri Demirsoy, Andrew G. Dempster, Izzet
Kale, University of Westminster*

MP8a1-5 An Efficient 21.56Gbps AES Implementation on FPGA
Xinmiao Zhang, Keshab K. Parhi, University of Minnesota

MP8a1-6 Implementation of Scalable Elliptic Curve Cryptosystem
Crypto-Accelerators for GF(2^m)
Aaron Cohen, Keshab K. Parhi, University of Minnesota

MP8a1-7 On the Design of an On-line Complex FIR Filter
*Robert McIlhenny, California State University,
Northridge; Milos D. Ercegovac, University of California,
Los Angeles*

MP8a1-8 A Dual-field Modular Division Algorithm and
Architecture for Application Specific Hardware
*Alexandre Tenca, Lo'ai Tawalbeh, Song Park, Cetin Koc,
Oregon State University*

MP8a1-9 Interfacing a High Speed Crypto Accelerator to an
Embedded CPU
*Alireza Hodjat, Ingrid Verbauwhede, University of
California, Los Angeles*

MP8a1-10 Real Time STAP for UESA RADAR
*R. David Dikeman, Carleton Moore, Lockheed Martin
Corp.; Kristine Bell, Harry Van Trees, George Mason
University*

MP8a1-11 Balancing the Tradeoffs Between Coefficient
Quantization and Internal Quantization in FIR Digital
Filters
*Minoda Magar, Linda DeBrunner, University of
Oklahoma*

MP8a1-12 On-Line IEEE Floating-Point Multiplication and
Division for Reduced Power Dissipation
Peter-Michael Seidel, Southern Methodist University

MP8a1-13 An Efficient PIM (Processor-In-Memory) Architecture
for BLAST
*Jung-Yup Kang, University of Southern California; Jean-
Luc Gaudiot, University of California, Irvine*

MP8a1-14 Error Bound Reduction for Fixed-Width Modified Booth
Multiplier
*Kyung-Ju Cho, Seong-Min Lee, Seong-Hun Park, Jin-
Gyun Chung, Chonbuk National University*

- MP8a1-15 A Reconfigurable Unsigned/Signed Binary Multiplier
Guoping Wang, Indiana University-Purdue University
- MP8a1-16 Sub-Pico Joule Switching High-Speed Reliable CMOS Circuits Are Feasible
Jabulani Nyathi, Valeriu Beiu, Washington State University; Snorre Aunet, University of Oslo
- MP8a1-17 3D Graphics Tile-Based Systolic Scan-Conversion
Dan Crisu, Stamatis Vassiliadis, Sorin Cotofana, Delft University of Technology; Petri Liuha, Nokia Research Center
- MP8a1-18 Optimal Tower Fields for Hyperelliptic Curve Cryptosystems
Selcuk Baktir, Worcester Polytechnic Institute; Jan Pelzl, Thomas Wollinger, Ruhr University Bochum; Berk Sunar, Worcester Polytechnic Institute; Christof Paar, Ruhr University Bochum
- MP8a1-19 Unified Decoder Architectures for Repeat-Accumulate and LDPC Codes
Mohammad Mansour, American University of Beirut
- MP8a1-20 Sparse-coefficient polynomial approximations for hardware implementations
Nicolas Brisebarre, Jean-Michel Muller, Arnaud Tisserand, LIP ENS Lyon
- MP8a1-21 Design and performance analysis of OFDMA Modulator based on IEEE 802.16a standard
Hyeong Sook Park, Electronics and Telecommunications Research Instit
- MP8a1-22 Efficient High-Speed Quasi-Cyclic LDPC Decoder Architecture
Yuping Zhang, University of Minnesota; Zhongfeng Wang, Oregon State University; Keshab K. Parhi, University of Minnesota
- MP8a1-23 Implementation and Evaluation of an OFDM-Based MIMO System
Zhipeng Liu, Jeremy Parks, Scott Morrison, Karl Gugel, University of Florida
- MP8a1-24 Implementation of an LDPC Decoder on a Vector Signal Processor
Gottfried Lechner, Telecommunications Research Center Vienna (ftw.); Andreas Bolzer, On Demand Microelectronics; Jossy Sayir, Telecommunications Research Center Vienna (ftw.); Markus Rupp, Technical University of Vienna

Session MP8a2 Image Processing for Biometrics

Chair: *Robert Ives*

- MP8a2-1 Investigations in Uncooled Infrared Imaging Face Recognition
Colin Lee, Monique Fargues, Gamani Karunasiri, Naval Postgraduate School

- MP8a2-2 Iris Recognition using Histogram Analysis
Robert Ives, Anthony Guidry, Delores Etter, U.S. Naval Academy
- MP8a2-3 Palmprint Recognition Using Correlation Filter Classifiers
Pablo Hennings, B.V.K. Vijayakumar, Carnegie Mellon University
- MP8a2-4 A Pseudo-spectral Fusion Approach to Fingerprint Matching.
Sanjeev Malalur, Michael Manry, University of Texas, Arlington
- MP8a2-5 Secure Fuzzy Vault Based Fingerprint Verification System
Shenglin Yang, Ingrid Verbauwhede, University of California, Los Angeles
- MP8a2-6 Iris Pattern Extraction using Bit-Plane Analysis
Bradford Bonney, Robert Ives, Delores Etter, Yingzi Du, U.S. Naval Academy
- MP8a2-7 Efficient Boosting for Synthesizing a Minimally Compact Reduced Complexity Correlation Filter Bank for Biometric Identification
Marios Savvides, B.V.K. Vijayakumar, Pradeep Khosla, Carnegie Mellon University
- MP8a2-8 Face Authentication of Variable Illumination Low-Bitrate JPEG2000 Wavelet Face Images using Advanced Correlation Filters for mobile devices
Surya Wijaya, Marios Savvides, B.V.K. Vijayakumar, Carnegie Mellon University

Session MP8b Communications in Non-Ideal Channels

Chair: *Amy Bell*

- MP8b-1 Precise Performance Analysis of MRC Diversity in Micro-Cellular system with cochannel interference
Kathiravetpillai Sivanesan, Norman C. Beaulieu, University of Alberta
- MP8b-2 On the Performance of V-BLAST with Zero-Forcing Successive Interference Cancellation Detector
Cong Shen, Tsinghua University
- MP8b-3 Blind Image Suppression and Carrier Tracking in Direct-Conversion Receivers Based on I/Q Signal Separation
Mikko Valkama, Markku Renfors, Tampere University of Technology; Visa Koivunen, Helsinki University of Technology
- MP8b-4 Space-Time Coded CDMA: Blind Equalization and Multiuser Detection
Xiaodong Yue, Central Missouri State University; Weihua Zhu, Howard Fan, University of Cincinnati

- MP8b-5 On the Effect of Power and Channel Estimation in Equalized Blind PIC for Downlink Multirate CDMA Communications
Belkacem Mouhouche, Wavecom S.A. and Telecom Paris; Karim Abed-Meraim, Telecom Paris; Nicolas Ibrahim, Wavecom S.A.
- MP8b-6 Time-Hopping Code Characterization for Multi-User Interference Mitigation in Ultra Wide Band Impulse Radio
Anne-Laure Deleuze, Christophe Le Martret, THALES Land and Joint Systems; Philippe Ciblat, Ecole Nationale Supérieure des Telecommunications
- MP8b-7 Iterative Joint Channel Estimation and Interference Cancellation Using a SISO-SAGE Algorithm for Coded DS-CDMA
Bin Hu, Alexander Kocian, Bernard Fleury, Aalborg University; Lars Rasmussen, University of South Australia; Asger Hviid, Romain Piton, Aalborg University
- MP8b-8 Ternary 2D Orthogonal Variable-Spreading-Factor Codes for Multichannel DS-UWB
Di Wu, Predrag Spasojevic, Ivan Seskar, Rutgers University
- MP8b-9 Dynamic Resource Allocation for Frequency- Selective Orthogonal QS-CDMA Systems
Slawomir Stanczak, Fraunhofer German-Sino Lab for Mobile Comm.; Angela Feistel, Technical University of Berlin
- MP8b-10 Blind Identification of Two Dimensional Volterra Models Using Minimax Type of Optimization and Higher Order Cumulants
Duangrat Gansawat, Tania Stathaki, Imperial College London
- MP8b-11 Blind Timing and Channel Estimation for Ultra-Wideband Multi-User Ad Hoc Access
Xiliang Luo, Georgios B. Giannakis, University of Minnesota
- MP8b-12 Optimal Integration Time Analysis for Ultra-wideband Cross-correlation Receiver
Yi-Ling Chao, University of Southern California
- MP8b-13 Novel Ultra-wideband Transmitted Reference Systems
Yi-Ling Chao, Robert A Scholtz, University of Southern California
- MP8b-14 A New Pulse Shaped Frequency Division Multiplexing Technique for Doubly Dispersive Channels
Sibasish Das, Philip Schniter, The Ohio State University
- MP8b-15 A Multicarrier Receiver for Partial Retransmissions
Jeremy Roberson, Zhi Ding, University of California, Davis
- MP8b-16 Iterative Frequency-Domain Equalization for Single-Carrier Systems in Doubly-Dispersive Channels
Philip Schniter, Hong Liu, The Ohio State University
- MP8b-17 A Multi-Code Space-Frequency RAKE Receiver
Haifeng Chen, Volker Jungnickel, Volker Pohl, Fraunhofer Institute for Telecommunications; Clemens von Helmolt, Fraunhofer Institute for Telecommunications
- MP8b-18 A model averaging approach for equalizing sparse communication channels
Yngve Selen, Peter Stoica, Niclas Sandgren, Uppsala University
- MP8b-19 A Low-Cost Scalable Matched Filter Bank Receiver for GFSK Signals with Carrier Frequency and Modulation Index Offset Compensation
Charles Tibenderana, Stephan Weiss, University of Southampton
- MP8b-20 Multiple-Channel Optimized Quantizers for Rayleigh Fading Channels
Yugang Zhou, Wai-Yip Chan, Tiago Falk, Queen's University
- MP8b-21 Semi-blind Multi-channel Identification in Asynchronous Multi-user OFDM Systems
Hyejung Jung, Michael Zoltowski, Purdue University
- MP8b-22 Adaptive Wiener Interpolation Channel Estimation for Pilot Symbol Assisted MIMO OFDM in low mobility environment
Weijun Zhu, Michael Fitz, University of California, Los Angeles
- MP8b-23 On The Diversity Order of Single-Carrier Zero-Forcing Frequency-Domain Linear Equalizers
Ahmadreza Hedayat, Aria Nosratinia, Naofal Al-dahar, University of Texas, Dallas
- MP8b-24 Performance of Space-Frequency Codes in MIMO Channels with Frequency Offset
Dung Ngoc Dao, Chintha Tellambura, University of Alberta
- MP8b-25 Interference Suppression for MC-CDMA by Frequency Domain Oversampling
Brandon Hombs, James Lehnert, Purdue University
- MP8b-26 Optimization of SNDR in the Presence of Amplitude Limited Nonlinearity and Multipath Fading
Hua Qian, Raviv Raich, Guotong Zhou, Georgia Institute of Technology
- MP8b-27 Performance Analysis of Multiuser OFDM with Optimum Combining
Siamak Sorooshyari, David Daut, Rutgers University
- MP8b-28 Estimating Parameters of Received UWB Monocycles
Chee-Cheon Chui, Robert A Scholtz, University of Southern California
- MP8b-29 A Novel Decision Feedback Equalizer Design Based on Generalized Space Translation
Chiang-yu Chen, Stanford University; Conor Heneghan, University College Dublin; John Cioffi, Stanford University

MP8b-30 Long Range Channel Prediction for Adaptive OFDM Systems
Ian Wong, Antonio Forenza, Robert W. Heath, Jr., Brian L. Evans, University of Texas, Austin

Session TA1 Multi-Scale Modeling of Biological Systems

Chair: *Shayn Peirce*

- TA1-1 Functionally and Structurally Integrated Computational Models of the Heart
Andrew McCulloch, University of California, San Diego 8:30 AM
- TA1-2 Cellular Automata Models of Biological Patterning
Shayn Peirce, University of Virginia 8:55 AM
- TA1-3 Building Blocks for Computational Models of Angiogenesis
Aleksander S. Popel, Feilim Mac Gabhann, Emmanouil D. Karagiannis, Johns Hopkins University 9:20 AM
- TA1-4 Multivariate approaches for revealing biological signal-response relationships
Kevin Janes, Douglas Lauffenburger, Massachusetts Institute of Technology 9:45 AM
- BREAK 10:10 AM
- TA1-5 Identification of Extended Hammerstein Model for Renal Hemodynamics
Mathieu Lorentz, Geoffrey A. Williamson, Illinois Institute of Technology; Karen A. Griffin, Anil K. Bidani, Loyola University Medical Center 10:30 AM
- TA1-6 On Nonlinear System Modeling Using Principal Dynamic Modes
Geoffrey A. Williamson, Illinois Institute of Technology; Rifat Hacıoglu, Zonguldak Karaelmas University 10:55 AM
- TA1-7 A Self Organizing Map Approach to Physiological Data Analysis For Enhanced Group Performance
Adele Doser, Sandia National Laboratories 11:20 AM
- TA1-8 Measurement of Nonlinear 2nd-Order Kernels Using Gaussian and Natural Inputs
Ulrich Nuding, Ludwig-Maximilians-University Munich; Christoph Zetzsche, Kerstin Schill, University of Bremen; Gert Hauske, Technical University Munich 11:45 AM

Session TA2a Wireless Implementations

Chair: *Joe Cavalloro*

- TA2a-1 Compact FPGA Hardware Accelerator for Functional Verification & Rapid Prototyping of 4G Wireless Systems
Yuanbin Guo, Dennis McCain, Nokia Inc. 8:30 AM

TA2a-2 Implementation Issues in Spectrum Sensing for Cognitive Radios
Danijela Cabric, Shridhar Mubaraq Mishra, Robert W. Brodersen, BWRC 8:55 AM

TA2a-3 Options for Arbitrary Resamplers in FPGA-Based Modulators
Chris Dick, Xilinx; fred harris, San Diego State University 9:20 AM

TA2a-4 Trained versus Noncoherent Space-Time Coding: Validation in Field Testing
Weijun Zhu, Heechoon Lee, Daniel Liu, ShingWa Wong, David Browne, Sunder Venkateswaren, Michael Fitz, University of California, Los Angeles 9:45 AM

Session TA2b High Performance Processing

Chair: *Carlo Luschi*

- TA2b-1 Implementation Aspects of High-Speed Wireless Multicarrier LAN/PAN Systems
Stephan ten Brink, Ravi Mahadevappa, Realtek Semiconductors 10:30 AM
- TA2b-2 Exact and Approximated Expressions of the Log-Likelihood Ratio for 16-QAM Signals
Steve Allpress, Carlo Luschi, Steve Felix, Icera Semiconductor 10:55 AM
- TA2b-3 Performance and Implementation Aspects of a 3GPP HSDPA Mobile Receiver
Rudolf Tanner, Moritz Harteneck, UbiNetics Ltd. 11:20 AM
- TA2b-4 Computing the feedback filter of the decision feedback equalizer at the FFT speed
Arnaldo Spalvieri, Maurizio Magarini, Politecnico di Milano 11:45 AM

Session TA3a Signal Processing for Agile Sensors

Chair: *Darryl Morrell*

- TA3a-1 Sensor Scheduling Approaches for SWARMS and Ballistic Missile Defense
C. O. Savage, W. Moran, D. E. Waagen, H. A. Schmitt, Raytheon Missile Systems 8:30 AM
- TA3a-2 Computational Origami for Sensor Configuration and Control
H. A. Schmitt, D. E. Waagen, I. Streinu, G. Barbastathis, Raytheon Missile Systems 8:55 AM
- TA3a-3 Optimal Quantization Employing Programmable Flash Analog to Digital Converters
Venkatesh Krishnan, Chris Duffey, David V. Anderson, Paul Hasler, Georgia Institute of Technology 9:20 AM
- TA3a-4 Waveform Design and Scheduling for Agile Sensors for Target Tracking
Sandeep Sira, Darryl Morrell, Antonia Papandreou-Suppappola, Arizona State University 9:45 AM

**Session TA3b Applications of Multirate Systems
and Filter Banks in Modern
Communications**

Chair: *P. Vaidyanathan*

TA3b-1	Optimum Resource Allocation in DMT Systems: A Separation Principle <i>Soura Dasgupta, University of Iowa; Ashish Pandharipande, Samsung</i>	10:30 AM
TA3b-2	A Guard Band Configuration Scheme for Single-Antenna Vector OFDM Systems <i>Hong Zhang, Xiang-Gen Xia, University of Delaware</i>	10:55 AM
TA3b-3	Analysis of certain new methods for blind identification of FIR channels <i>P. P. Vaidyanathan, Borching Su, California Institute of Technology</i>	11:20 AM
TA3b-4	Real-Orthogonal STBC Representation Using Filter Banks <i>Ka Shun Carson Pun, Truong Nguyen, University of California, San Diego</i>	11:45 AM

Session TA4 MIMO/Space-Time Coding

Chair: *Robert Heath*

TA4-1	Opportunistic Multicasting <i>Hesham El Gamal, Praveen Kumar, Ohio State University</i>	8:30 AM
TA4-2	Asymptotics of downlink system capacity <i>Howard Huang, Sivarama Venkatesan, Bell Labs, Lucent Technologies</i>	8:55 AM
TA4-3	Uniform Channel Decomposition for MIMO Communications <i>Yi Jiang, Jian Li, University of Florida</i>	9:20 AM
TA4-4	Space Time Block Coding with Transmitter Interference Reduction <i>Oghenekome Oteri, Arogyaswami Paulraj, Stanford University</i>	9:45 AM
	BREAK	10:10 AM
TA4-5	Information Theoretic Comparison of MIMO Wireless Communication Receivers in the Presence of Interference <i>Dan Bliss, Keith Forsythe, MIT Lincoln Laboratory</i>	10:30 AM
TA4-6	Code Design for Optical MIMO Systems Over Fading Channels <i>Maite Brandt-Pearce, University of Virginia; Stephen Wilson, University of Virginia; Qianling Cao, Michael Baedke, University of Virginia</i>	10:55 AM
TA4-7	A Lower Bound on Outage Probability of Limited Feedback MIMO Beamforming Systems <i>Bishwarup Mondal, Robert W. Heath, Jr., University of Texas, Austin</i>	11:20 AM

TA4-8	On Iterative Decoding Methods for Lattice Based Space-Time Coded Systems with EXIT Chart Analyses <i>Yabo Li, Xiang-Gen Xia, University of Delaware</i>	11:45 AM
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Session TA5 CDMA

Chair: *Ubil Mitra*

TA5-1	Optimization Issues in Combined Chip and Symbol Level Equalization for Downlink WCDMA Receivers <i>Ahmet Bastug, Dirk Slock, Eurecom Institute</i>	8:30 AM
TA5-2	Robust Blind Channel Estimation and Detection for Multi-carrier CDMA <i>Hongbin Li, Rensheng Wang, Stevens Institute of Technology</i>	8:55 AM
TA5-3	On the Impact of Arrays of Heterogeneous Antennas on the Performance of CDMA Systems <i>Brian Hughes, Huaiyu Dai, North Carolina State University</i>	9:20 AM
TA5-4	SPREAD-SPECTRUM TECHNIQUES FOR DISTRIBUTED SPACE-TIME COMMUNICATION IN SENSOR NETWORKS <i>Gwen Barriac, Raghuraman Mudumbai, Upamanyu Madhow, University of California, Santa Barbara</i>	9:45 AM
	BREAK	10:10 AM
TA5-5	Iterative MAP Channel Estimation and Multiuser Detection for DS-CDMA in Frequency-Selective Fading Channels <i>Sau-Hsuan Wu, Urbashi Mitra, C.-C. Jay Kuo, University of Southern California</i>	10:30 AM
TA5-6	Reduced Rank Noncoherent Interference Suppression for CDMA Communications <i>Ali Taha Koc, Ozgur Ozdemir, Murat Torlak, University of Texas, Dallas</i>	10:55 AM
TA5-7	A Cyclostationary Receiver for Aperiodic CDMA Signals <i>Vishwanath Venkataraman, John Shynk, University of California, Santa Barbara; Richard Gooch, Applied Signal Technology, Inc.</i>	11:20 AM
TA5-8	Joint Channel Estimation and Signal Detection for Uplink MC-CDMA Systems over Time-Varying Multiple Channels <i>Huahui Wang, Michigan State University; Tongtong Li, Michigan State University</i>	11:45 AM

Session TA6 Adaptive Filtering Theory

Chair: *Scott Douglas*

TA6-1	Phase-Only Adaptive Filters: Theory and Algorithms <i>Scott Douglas, Southern Methodist University</i>	8:30 AM
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TA6-2	Window Optimization Issues in Recursive Least-Squares Adaptive Filtering and Tracking <i>Tayeb Sadiki, Mahdi Triki, Dirk Slock, Eurecom Institute</i>	8:55 AM
TA6-3	Multiple Principal Components Proportionate Normalized Least Mean Squares <i>Steven Grant, Steven Gay, University of Missouri-Rolla</i>	9:20 AM
TA6-4	Affine Projection and Recursive Least Squares Adaptive Filters Employing Partial Updates <i>Patrick Naylor, Andy Khong, Imperial College London</i>	9:45 AM
	BREAK	10:10 AM
TA6-5	An improved variable tap-length algorithm for structure adaptation <i>Yu Gong, Colin Cowan, Queen's University, Belfast</i>	10:30 AM
TA6-6	Equally constrained affine projection algorithm <i>Sung Eun Jo, Sang-Woo Kim, Pohang University of Science and Technology</i>	10:55 AM
TA6-7	Adaptive Projected Subgradient Method and Set Theoretic Adaptive Filtering with Multiple Convex Constraints <i>Konstantinos Slavakis, Isao Yamada, Nobuhiko Ogura, Tokyo Institute of Technology</i>	11:20 AM
TA6-8	A New Order Recursive Multiple Order Multichannel Fast QRD-RLS Algorithm <i>Antonio Ramos, Jos Apolinrio Jr., Instituto Militar de Engenharia; Marcio Siqueira, Cisco Systems</i>	11:45 AM

Session TA7

Mathematical Models for Signal Processing

Chair: *Lang White*

TA7-1	Signal Design for MIMO Tracking Radar <i>Langford White, Pinaki Ray, University of Adelaide</i>	8:30 AM
TA7-2	Joint Data Compression and Error Protection over Wireless Fading Channels using LDPC Codes <i>Haitong Sun, Mihaela Vanderschaar, Zhi Ding, University of California, Davis</i>	8:55 AM
TA7-3	Convolutive Blind Signal Separation in Acoustics by Joint Approximate Diagonalization of Spatiotemporal Correlation Matrices <i>Marcel Joho, Phonak</i>	9:20 AM
TA7-4	A Bayesian Approach to Blind Source Recovery <i>Mike Daly, Jim Reilly, McMaster University; Jonathan Manton, University of Melbourne</i>	9:45 AM
	BREAK	10:10 AM
TA7-5	Empirical Canonical Correlation Analysis in Subspaces <i>Ali Pezeshki, Colorado State Uiversity; Louis L. Scharf, Mahmood R. Azimi-Sadjadi, Colorado State University</i>	10:30 AM

TA7-6	A Whitener for a Complex Signal Using a Complex Toeplitz + Hankel Solver <i>Todd Moon, Utah State University; Fred Kochman, Maureen Quirk, Center for Communications Research</i>	10:55 AM
TA7-7	High SNR Performance Analysis of F-ESPRIT <i>Joakim Gunnarsson, Tomas McKelvey, Chalmers University of Technology</i>	11:20 AM
TA7-8	Maximum Likelihood Diffusive Source Localization Based On Binary Observations <i>Yoav Levinbook, Tan Wong, University of Florida</i>	11:45 AM

Session TA8a

Communications I

Chair: *Maite Brandt-Pearce*

TA8a-1	Fast Timing Recovery for Linearly and Non-linearly Modulated Systems <i>Kai Shi, Erchin Serpedin, Texas A&M University</i>	
TA8a-2	A Low-Sensitivity On-Chip Impulse Radio Pulse Generation Method <i>Murat Demirkan, Richard Spencer, University of California, Davis</i>	
TA8a-3	Interspersed Sinusoidal Transforms for OFDM Systems <i>Giridhar Mandyam, Nokia Inc.</i>	
TA8a-4	Practical Bit Loading Schemes for Multi-Antenna Multi-User Wireless OFDM Systems <i>Diego Bartolome, Telecommunications Technological Center Catalonia; Ana I. Perez-Neira, Technical University of Catalonia (UPC)</i>	
TA8a-5	Evaluation of the Union bounds for Higher Order Coded Modulation Systems with Non-Ideal Bit Interleaving and Reception Diversity <i>Krishnakamal Sayana, Saul Gelfand, Purdue University</i>	
TA8a-6	COHERENCE: A Fundamental Overhaul of Its Definition <i>S. Lawrence Marple, Jr., Oregon State University</i>	
TA8a-7	Optimal OFDM downlink scheduling for UMTS HSDPA evolution <i>Gerhard Wunder, Chan Zhou, Fraunhofer MCI</i>	
TA8a-8	Cross-Layer (MAC and Transport) Optimal Rate Assignment in CDMA-Based Wireless Broadband Networks <i>Jennifer Price, Tara Javidi, University of Washington</i>	
TA8a-9	A Capacity Comparison between Time-Multiplexed and Superimposed Pilots <i>Mikael Tapio, Patrik Bohlin, Chalmers University of Technology</i>	
TA8a-10	Approximate ML Detection for MIMO Systems with Multistage Sphere Decoding <i>Tao Cui, Chintha Tellambura, University of Alberta</i>	

TA8a-11	Performance Analysis of Full-Rate, Full-Diversity Space-Time Code in Asynchronous DS/CDMA <i>Jin Zhang, James Lehnert, Purdue University</i>	TA8a-24	A Denoising Source Separation based approach to Interference Cancellation for DS-CDMA Array Systems <i>Karthikesh Raju, Jaakko Sarela, Helsinki University of Technology</i>
TA8a-12	A Low Complexity Packet Detection Algorithm for a CPM Modem <i>Ryan Penrod, University of California, Los Angeles; Oscar Takeshita, The Ohio State University; Michael Fitz, Weijun Zhu, University of California, Los Angeles</i>	TA8a-25	Simplified Trellis Decoding of Block Codes by Selective Pruning <i>Eric Bertrand, Fabrice Labeau, McGill University</i>
TA8a-13	Channel Coding for Polarization-Mode Dispersion Limited Optical Fiber Transmission <i>Zhenyu Zhu, Matthew Puzio, Rick Blum, Peter Andrekson, Tiffany Li, Lehigh University; Hamid Sadjadpour, University of California, Santa Cruz</i>	TA8a-26	New Linear Binary Block Codes for the AWGN Channel <i>Panayiotis Papadimitriou, Texas A&M University / Nokia Research Center; Costas Georgiades, Texas A&M University</i>
TA8a-14	Inter-cell Interference in CSMA-CA Wireless Networks for Different Bandwidth Divisions <i>Maryam Owrang, Benjamin Friedlander, University of California, Santa Cruz</i>	TA8a-27	Optimum Frame Synchronization for Preamble-less Packet Transmission of Turbo Codes <i>Jian Sun, Matthew Valenti, West Virginia University</i>
TA8a-15	Bounds on Achievable Rates for Cooperative Channel Coding <i>Ameesh Pandya, Greg Pottie, University of California, Los Angeles</i>	TA8a-28	Design and Performance of Assymetric Turbo Coded Hybrid-ARQ <i>Kingsley Oteng-Amoako, University of New South Wales</i>
TA8a-16	Space-Time Block Coding for Correlated Fading <i>Benjamin Friedlander, University of California, Santa Cruz; Joseph Francos, Ben Gurion University</i>	TA8a-29	Quantum Convolutional Codes Design and Their Encoder Architectures <i>Jun Jin Kong, Keshab K. Parhi, University of Minnesota</i>
TA8a-17	Synchronization Probabilities for Matched Filter Code Acquisition Using DOA Estimation and Beamforming <i>Henri Puska, Harri Saarnisaari, Jari Iinatti, University of Oulu / CWC</i>	TA8a-30	On Recursive Structure of Binary Hamming Codes <i>Pavel Loskot, Norman C. Beaulieu, University of Alberta</i>
TA8a-18	Accurate Simple Closed-Form Approximations to the Distributions and Densities of a Sum of Independent Rayleigh Random Variables <i>Jeremiah Hu, Norman C. Beaulieu, University of Alberta</i>	TA8a-31	Accelerating LDPC decoding using multiple-cycle eigenmessages <i>Todd Moon, Jacob Gunther, Ojas Chauhan, John Crockett, Utah State University</i>
TA8a-19	How Quickly Can We Approach Capacity for the Gaussian Channel? <i>Dror Baron, Mohammad Ali Khojastepour, Richard Baraniuk, Rice University</i>	Session TA8b Communications II Chair: <i>Hui Liu</i>	
TA8a-20	An improved ARQ Scheme with Application to Multi-Level Modulation Techniques <i>Mikael Gidlund, Royal Institute of Technology</i>	TA8b-1	Capacity of MIMO Systems in Rayleigh Fading and Shadowing <i>Laxminarayana Pillutla, Sudharman Jayaweera, Wichita State University</i>
TA8a-21	Directional Time-based Location Management Method in PCS Networks <i>S. M. Saeed Masajedian, Ferdowsi University</i>	TA8b-2	Transceiver Design Using Generalized Triangular Decomposition for MIMO Communications with QoS Constraints <i>Yi Jiang, Jian Li, William Hager, University of Florida</i>
TA8a-22	Iterative Multiuser Receiver for Multi-resolution Broadcasting <i>Christian Ibars, Centre Tecnologic de Telecom.de Catalunya</i>	TA8b-3	Near Maximum-Likelihood Detection with Reduced-Complexity for Multiple-Input Single-Output Antenna Systems <i>Kai-Kit Wong, The University of Hong Kong; Arogyaswami Paulraj, Stanford University</i>
TA8a-23	Physical Layer Built-in Security Enhancement of DS-CDMA Systems Using Secure Block Interleaving <i>Qi Ling, Tongtong Li, Jian Ren, Michigan State University</i>	TA8b-4	Blind Identification of Laguerre Systems <i>Jacob Gunther, Utah State University</i>
		TA8b-5	Representation of Real STBC using Filter Banks and Properties of Integer Version of Non-Rate-One STBC <i>Ka Shun Carson Pun, Truong Nguyen, University of California, San Diego</i>
		TA8b-6	MIMO Frequency-Selective Channel Modeling based on Pathwise Dynamics <i>Maxime Guillaud, Dirk Slock, Eurecom Institute</i>

TA8b-7	A Comparative Study of Coded MIMO-OFDM Systems <i>Yan Xin, National University of Singapore; Syed Aon Mujtaba, Agere Systems Inc.</i>	TA8b-22	Detection and Tracking of Multiple Targets within a Three Dimensional Medium <i>Mark M. Brown, Mohsin M. Jamali, University of Toledo</i>
TA8b-8	Capacity of the Isotropic Fading Vector Channel with Quantized Channel Direction Feedback <i>Syed Jafar, University of California, Irvine</i>	TA8b-23	Object Tracking in a 2D UWB Sensor Network <i>Cheng Chang, EECS Department , UC Berkeley; Anant Sahai, EECS Department , UC Berkeley</i>
TA8b-9	Space-Time Coded Turbo Equalization and Multiuser Detection - Asympotic Performance Analysis in the Presence of Unknown Interference <i>Nenad Veselinovic, Tadashi Matsumoto, CWC/University of Oulu</i>	TA8b-24	On the Convergence Behavior of Weighted Space-Time Bit-Interleaved Coded Modulation <i>Thanh Tung Kim, George Jongren, Mikael Skoglund, Royal Institute of Technology</i>
TA8b-10	Spatially Correlated MIMO Rician Channel Capacity <i>Tharmalingam Ratnarajah, Queen's University, Belfast</i>	TA8b-25	On the Serial Concatenation of Soft RS Codes and Space-Time Block Codes over Quasi-Static Fading Channels <i>Cheng Zhong, Haitao Xia, J. R. Cruz, University of Oklahoma</i>
TA8b-11	Soft Data Detection Algorithms for an Iterative Turbo Coded MIMO OFDM Systems <i>Kyeong Jin Kim, Tony Reid, Nokia Research Center; Ronald A. Iltis, University of California, Santa Barbara</i>	TA8b-26	On Modal Subspaces of Extended Alamouti Space-Time Block Codes <i>Markus Rupp, Vienna University of Technology; Christoph Mecklenbrucker, Forschungszentrum Telekommunikation Wien; Gerhard Gritsch, Vienna University of Technology</i>
TA8b-12	Performance of a Differential Modulation Scheme with Wireless Relays in Rayleigh Fading Channels <i>Hongbin Li, Qiang Zhao, Stevens Institute of Technology</i>	TA8b-27	Space-time Coding for Wireless Sensor Network with Cooperative Routing Diversity <i>Lichuan Liu, Hongya Ge, New Jersey Institute of Technology</i>
TA8b-13	Multiple Access Control for Broadband Relay Network <i>Guoqing Li, Hui Liu, University of Washington</i>	TA8b-28	Cross-Layer Sensor Network Synchronization <i>Zhi Tian, Michigan Technological University; Georgios B. Giannakis, University of Minnesota</i>
TA8b-14	Performance Evaluation of Decoding Algorithms for Multi-Layered STBC-OFDM system <i>Samir Al-Ghadhban, Mohammad Maruf, Virginia Tech</i>	TA8b-29	Cooperative Transmissions in Wireless Sensor Networks with Imperfect Synchronization <i>Xiaohua Li, Mo Chen, State University of New York at Binghamton; Wenyu Liu, Motorola</i>
TA8b-15	Multi User Communications in the Presence of Correlated Fading <i>Rui Li, Benjamin Friedlander, University of California, Santa Cruz</i>	TA8b-30	Spatial Fidelity And Estimation in Sensor Networks <i>Ameesh Pandya, Huiyu Luo, Greg Pottie, University of California, Los Angeles</i>
TA8b-16	Reduced Complexity Sphere Decoding Using Forcing Rules <i>Tao Cui, Chintha Tellambura, Wen Chen, University of Alberta</i>	TA8b-31	Efficient Distributed Algorithms for State Estimation and Positioning in Sensor Networks <i>Andrew Brown, Ronald A. Iltis, University of California, Santa Barbara</i>
TA8b-17	CFAR adaptive detection of distributed signals <i>Yuan-Wei Jin, Benjamin Friedlander, University of California, Santa Cruz</i>	TA8b-32	Antenna Selection with Capacity-Approaching Space-Time Block Codes <i>Aydin Sezgin, Fraunhofer-Institute for Telecommunications, HHI; Tobias J. Oechtering, Faculty of EECS, Technical University of Berlin</i>
TA8b-18	Beamforming and Scheduling Strategies for Time Slotted Multiuser MIMO Systems <i>Semih Serbetli, Aylin Yener, Pennsylvania State University</i>	Session TP1 Sensor Array and Relay Networks	
TA8b-19	Comparison of Adaptive Beamforming and Adaptive STBC with Outdated Channel Feedback <i>Youngwook Ko, Cihan Tepedelenioglu, Arizona State University</i>	Chair: <i>Yingbo Hua</i>	
TA8b-20	Ultra-Wideband Vector Antennas for Sensing and Positioning <i>Sandeep Krishnamurthy, Anand Konanur, Gianluca Lazzi, Brian Hughes, North Carolina State University</i>	TP1-1	Group Testing in sensor networks: The value of asking the right questions <i>Yao-Win Hong, Anna Scaglione, Cornell University</i>
TA8b-21	Nonstationary Array Processing for Sources with Time-Varying Polarizations <i>Yimin Zhang, Baha Obeidat, Moeness Amin, Villanova University</i>		1:30 PM

TP1-2	Diversity Analysis of Space-Time Modulations Using the Hurwitz-Radon Matrices <i>Yu Chang, Yingbo Hua, University of California, Riverside</i>	1:55 PM
TP1-3	Cooperative Diversity for Wireless Fading Channels without Channel State Information <i>J. Nicholas Laneman, University of Notre Dame</i>	2:20 PM
TP1-4	Exploiting Diversity in Ad Hoc Sensor Networks <i>Jifeng Geng, Urbashi Mitra, University of Southern California</i>	2:45 PM
	BREAK	3:10 PM
TP1-5	On the Capacity of the Broadband Relay Networks <i>Guoqing Li, Hui Liu, University of Washington</i>	3:30 PM
TP1-6	Localization and Tracking of Multiple Near-Field Sources Using Randomly Distributed Sensors <i>Deva Borah, Arun Balagopal, New Mexico State University</i>	3:55 PM
TP1-7	Acoustic Source Localization in Distributed Sensor Networks <i>Thibaut Ajdler, Ecole Polytechnique Federale de Lausanne (EPFL); Igor Kozintsev, Rainer Lienhart, Intel Labs, Intel Corporation; Martin Vetterli, Ecole Polytechnique Federale de Lausanne (EPFL)</i>	4:20 PM
TP1-8	A throughput scaling law for a class of wireless relay networks <i>Prashant Udupa Sripathi, James Lehnert, Purdue University</i>	4:45 PM

Session TP2 Computer Arithmetic

Chair: *Milos Ercegovac*

TP2-1	Functions approximable by E-fractions <i>Jean-Michel Muller, CNRS/LIP, Ecole Normale Supérieure de Lyon; Nicolas Brisebarre, INRIA-LIP/ Ecole Normale Supérieure de Lyon</i>	1:30 PM
TP2-2	35+ Years of Computer Arithmetic: A View From the Trenches <i>Earl Swartzlander, University of Texas, Austin</i>	1:55 PM
TP2-3	High speed binary addition <i>Robert Jackson, Sunil Talwar, Eric Mahurin, Arithmatica</i>	2:20 PM
TP2-4	Circuit Design Based on Majority Gates for Applications with Quantum-Dot Cellular Automata <i>Konrad Walus, University of Calgary; Rumi Zhang, Wei Wang, University of Western Ontario; Graham A. Jullien, University of Calgary</i>	2:45 PM
	BREAK	3:10 PM
TP2-5	Logical Effort of Higher Valency Adders <i>David Harris, Harvey Mudd College</i>	3:30 PM

TP2-6	Fast Saturating Counters <i>Israel Koren, University of Massachusetts</i>	3:55 PM
TP2-7	Generalized transfer signal functions for fast adder implementations <i>T. J. H. Kluter, Vojin G. Oklobdzija, EPFL</i>	4:20 PM
TP2-8	A Hybrid Ling Carry-Select Adder <i>Johannes Grad, James Stine, Illinois Institute of Technology</i>	4:45 PM

Session TP3 Sensor Networks

Chair: *Rich Baraniuk & Mark Coat*

TP3-1	Efficient Communication Strategies For Distributed Signal Field Estimation <i>Waheed Bajwa, Akbar Sayeed, Robert Nowak, University of Wisconsin-Madison</i>	1:30 PM
TP3-2	Actuator Networks: Distributed Evaluation of Causal Effect <i>Mark Coates, Garrick Ing, McGill University</i>	1:55 PM
TP3-3	Distributed Alternating Localization-Estimation of Camera Networks <i>William Mantzel, Richard Baraniuk, Hyeokho Choi, Rice University</i>	2:20 PM
TP3-4	Distributed data storage in sensor networks using decentralized erasure codes <i>Alexandros G. Dimakis, Kannan Ramchandran, Vinod Prabhakaran, University of California, Berkeley</i>	2:45 PM
	BREAK	3:10 PM
TP3-5	Blind Localization and Counting of Multiple Acoustic Sources in Randomly Distributed Sensor System <i>Yao Chen, Uf Tureli, Stevens Institute of Technology</i>	3:30 PM
TP3-6	Joint Source-Channel Coding for Distributed Sensor Networks <i>Bin Liu, Biao Chen, Syracuse University</i>	3:55 PM
TP3-7	Multi-sensor tracking of a vehicle on a grid <i>Dave Sworder, University of California, San Diego; John Boyd, Cubic Defense Systems; Gary Hutchins, Naval Postgraduate School; Robert Elliott, University of Calgary</i>	4:20 PM
TP3-8	Bandwidth-Constrained Distributed Estimation for Wireless Sensor Networks <i>Alejandro Ribeiro, Georgios B. Giannakis, University of Minnesota</i>	4:45 PM

Session TP4 Sonar and Acoustical Array Processing

Chair: *Jim Pitton*

TP4-1	Improving ocean acoustic travel-time measurements with a rake correlator <i>Matthew Dzieciuch, University of California, San Diego</i>	1:30 PM
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TP4-2	Mode Filtering Approaches to Acoustic Source Depth Discrimination <i>Vincent Premus, James Ward, MIT Lincoln Laboratory</i>	1:55 PM
TP4-3	Turbo Array Receiver for Underwater Telemetry <i>John Flynn, James Ritcey, University of Washington</i>	2:20 PM
TP4-4	Towed Array Shape Self-Calibration via Multistage Constant Modulus Array <i>Jie Zhuo, Chao Sun, Jie Feng, Northwestern Polytechnical University</i>	2:45 PM
	BREAK	3:10 PM
TP4-5	Blind Separation of Interference for Synthetic Aperture Sonar and the Lessons Learned from Real Data <i>Ivars Kirsteins, Naval Undersea Warfare Center</i>	3:30 PM
TP4-6	Model-Based Space-Time Adaptive Processing for Active Sonar <i>Vijay Varadarajan, Jeffrey L. Krolik, Duke University</i>	3:55 PM
TP4-7	Approximate Mode Filtering <i>Kathleen Wage, George Mason University</i>	4:20 PM
TP4-8	Minimum radar cross section bounds for passive radar responsive tags. <i>Patrick Bidigare, Troy Stevens, Bill Correll, General Dynamics</i>	4:45 PM

Session TP5 Networks

Chair: *JM Chung*

TP5-1	Network Security: Mapping Intrusion & Anomaly Detection to Very-High-Degree Polynomials <i>Raymond C. Garcia, Shadowband Systems Inc.</i>	1:30 PM
TP5-2	Interference-avoiding features of ultra-wideband communication and wideband ALOHA <i>John Metzner, Pennsylvania State University</i>	1:55 PM
TP5-3	Enhanced Broadband Wireless Networking Through Macroscopic Diversity Combining Applications of MIMO Technology <i>Wun-Cheol Jeong, Jong-Moon Chung, Oklahoma State University</i>	2:20 PM
TP5-4	Throughput Maximization for ARQ-like Systems in Fading Channels with Coding and Queuing Delay Constraints <i>Nadeem Ahmed, Richard Baraniuk, Rice University</i>	2:45 PM
	BREAK	3:10 PM
TP5-5	Impact of Physical Layer Tradeoffs on the MAC Throughput of IEEE 802.11 Wireless LANs <i>Yan Li, Stanford University; Xiaowen Wang, Syed Aon Mujtaba, Agere Systems</i>	3:30 PM

TP5-6	SNR and Power Efficiency of Cooperative Transmission in Wireless Networks with Orthogonal Users <i>Donald Brown, Worcester Polytechnic Institute</i>	3:55 PM
TP5-7	Reducing Delay while Maintaining Capacity in Mobile Ad-hoc Networks Using Multiple Random Routes <i>Renato Moraes, Hamid Sadjadpour, J. J. Garcia-Luna-Aceves, University of California, Santa Cruz</i>	4:20 PM
TP5-8	Increased Outdoor FSO Communication Reliability: A Novel Design for an Ultra-short Pulsed FSO Communication System <i>Mohsen Kavehrad, Belal Hamzeh, Pennsylvania State University</i>	4:45 PM

Session TP6 UWB Communications

TP6-1	Semi-Blind ML Synchronization for UWB Transmitted Reference Systems <i>Cecilia Carbonelli, Umberto Mengali, University of Pisa; Stefan Franz, Urbashi Mitra, University of Southern California</i>	1:30 PM
TP6-2	Joint Scale-Lag Diversity in Mobile Ultra-Wideband Systems <i>Adam Margetts, Philip Schniter, The Ohio State University</i>	1:55 PM
TP6-3	Performance Analysis of UWB Impulse Radio with Noisy Template <i>Xianren Wu, Lin Wu, Zhi Tian, Michigan Technological University</i>	2:20 PM
TP6-4	Blind synchronization in asynchronous multiuser UWB networks based on the transmit-reference scheme <i>Relja Djapic, Technical University Delft; Geert Leus, Alle-Jan van der Veen, Delft University of Technology</i>	2:45 PM
	BREAK	3:10 PM
TP6-5	Cross-Band Flexible UWB Access for High-Rate Multi-Piconet WPANs <i>Liuqing Yang, Georgios B. Giannakis, University of Minnesota</i>	3:30 PM
TP6-6	On MIMO capacity in the ultra-wideband regime <i>Ray Siddharth, Medard Muriel, Zheng Lizhong, MIT</i>	3:55 PM
TP6-7	Optimal UWB Waveform Synthesis with Power Spectral Density Constraints <i>Terry Lewis, Robert A Scholtz, University of Southern California</i>	4:20 PM
TP6-8	On Transmitted Reference UWB Communications <i>Moe Win, Wesley Gifford, MIT</i>	4:45 PM

Session TP7 Image and Video Enhancement and Filtering

Chair: *Tamal Bose*

TP7-1	Real-Time Registration and Display of Confocal Microscope Imagery for Multiple-band Analysis <i>Scott Budge, Anoop Mayampurath, Utah State University; James Solinsky, Pacific Northwest National Laboratory</i>	1:30 PM
TP7-2	Adaptable Image Retrieval with Application to Underwater Target Identification <i>Mahmood R. Azimi-Sadjadi, SaravanaKumar Srinivasan, Jaime Salazar, Colorado State University</i>	1:55 PM
TP7-3	Multiple Non-Orthogonal Bases Representations for Images <i>Pradeep Ragothaman, Wasfy Mikhael, University of Central Florida</i>	2:20 PM
TP7-4	Logo Recognition Using Retinal Coding <i>Kathleen Zyga, Air Force Research Laboratory/SNRD; Richard Price, Defence Science and Technology Organisation; Jim Schroeder, University of Adelaide</i>	2:45 PM
	BREAK	3:10 PM
TP7-5	Transient Analysis of the Euclidean Direction Search (EDS) Algorithm <i>Zhongkai Zhang, Tamal Bose, Jacob Gunther, Utah State University</i>	3:30 PM
TP7-6	Optimal Order EDS and FEDS Algorithms <i>Zhongkai Zhang, Tamal Bose, Jacob Gunther, Utah State University</i>	3:55 PM
TP7-7	Enhancement for Face Video from Omni-directional Video Camera <i>Junwen Wu, Mohan Trivedi, University of California, San Diego</i>	4:20 PM
TP7-8	An Improved Method to Remove Impulse Noise in Corrupted Images <i>Javad Ahmadi-Shokouh, University of Waterloo</i>	4:45 PM

Session TP8a1 Biomedical Signal Processing

Chair: *Dana Brooks*

TP8a1-1	Detection of Cochlear Hearing Loss Applying Wavelet Packets and Support Vector Machines <i>Hubert Dietl, Stephan Weiss, University of Southampton</i>	
TP8a1-2	Novel Intelligent Wavelet Filtering of Embolic Signals from TCD Ultrasound <i>Salman Marvasti, Imperial College London; Duncan Gillies, Imperial College University of London</i>	
TP8a1-3	Genetic Algorithm Optimization of Fuzzy outputs for Classification of Epilepsy Risk Levels from EEG Signals <i>Harikumar Rajaguru, R. Sukanesh, Thiagarajar College of Engineering; Aravindan Bharathi, Amrita Institute of Technology</i>	

TP8a1-4	EEG Noise Cancellation Using Independent Component Analysis <i>Ravi Visvanathan, Anna University</i>	
TP8a1-5	A Level Set Algorithm for the Inverse Problem of Electrocardiography <i>Alireza Ghodrati, Felipe Calderero, Dana H. Brooks, Gilead Tadmor, Northeastern University; Rob MacLeod, University of Utah</i>	
TP8a1-6	Electrical Impedance Tomography Using a 3-D Boundary Element Inverse Solution <i>Saeed Babaeizadeh, Dana H. Brooks, Northeastern University; David Isaacson, Rensselaer Polytechnic Institute</i>	
TP8a1-7	Quadratic equalization: a method for producing extended uniform depth of focus in high frame rate medical ultrasound B scans <i>Yibin Zheng, Seth Silverstein, University of Virginia</i>	
TP8a1-8	Frequency-selective SVD-based magnetic resonance spectroscopy with prior knowledge <i>Niclas Sandgren, Petre Stoica, Yngve Selen, Uppsala University</i>	

Session TP8a2 Biomedical Image Processing

Chair: *Yibin Zheng*

TP8a2-1	Classification of Hyperspectral Colon Tissue Images Using Vocal Synthesis Models <i>Ryan J. Cassidy, Stanford University</i>	
TP8a2-2	Segmentation of the Myocardium from Myocardial Contrast Echocardiography <i>John Pickard, Rob Janiczek, Scott Acton, University of Virginia</i>	
TP8a2-3	Identification of disease in CT of the lung using texture-based image analysis <i>John Malone, Jonathan Rossiter, Bristol University; Sanjay Prabhu, Paul Goddard, Bristol Royal Infirmary</i>	
TP8a2-4	Automated Detection and Classification of Vascular Abnormalities in Diabetic Retinopathy <i>Deepika Vallabha, Kamesh Namuduri, Ramprasath Dorairaj, Wichita State University; Hilary Thompson, Louisiana State University</i>	
TP8a2-5	Decision Support for Automated Screening of Diabetic Retinopathy <i>Pallavi Kahai, Kamesh Namuduri, Wichita State University; Hilary Thompson, Louisiana State University</i>	
TP8a2-6	Comparison of three Gaussian mixture modeling and spatial encoding methods for segmenting human brain MRI <i>Mahmood Zeydabadi-Nejad, Reza A. Zoroofi, Tehran University; Hamid Soltanian-Zadeh, Henry Ford Health System</i>	

- TP8a2-7 Iterative gridding for automated microarray image analysis
Dan Bozinov, Peter-Michael Seidel, Southern Methodist University
- TP8a2-8 Automatic Determination of the Malignancy of the Pathological Images of the Prostate
Reza Farjam, Reza Aghaizadeh Zoroofi, University of Tehran; Hamid Soltanian-Zadeh, Henry Ford Health System

Session TP8a3 Signal Processing in Genomics and Proteomics

Chair: *Yibin Zheng*

- TP8a3-1 Multirate DSP Models for Gene Detection
Raymond Guan, Jamal Tuqan, University of California, Davis
- TP8a3-2 Computation of probability distributions of molecules in enzyme reactions
Xueying Zhang, Katrien De Cock, Monica Bugallo, Petar Djuric, Stony Brook University
- TP8a3-3 HMM with Auxiliary Memory: A New Tool for Modeling RNA Secondary Structures
Byung-Jun Yoon, P. P. Vaidyanathan, California Institute of Technology
- TP8a3-4 Identification and Location of Hot Spots in Proteins Using the Short-Time Fourier Transform
Parameswaran Ramachandran, Andreas Antoniou, University of Victoria; P. P. Vaidyanathan, California Institute of Technology

Session TP8a4 Radar Interpretation and Analysis

Chair: *Seth Silverstein*

- TP8a4-1 Synthetic aperture radar image signatures of rotating objects
Seth Silverstein, University of Virginia; Coy Hawkins III., U.S. Army National Ground Intelligence Center
- TP8a4-2 Techniques for detection and tracking airplanes using weather radar WSR-88D.
Svetlana Bachmann, National Severe Storms Laboratory; Victor DeBrunner, University of Oklahoma; Dusan Zrnic, National Severe Storms Laboratory; Mark Yeary, University of Oklahoma
- TP8a4-3 Closed-form Location Estimator using Angular Spread Measurements
Qun Wan, Zhang-xin Chen, Xian-ning Chen, Wan-lin Yang, University of Electronic Science and Technology; Ying-ning Peng, Tsinghua University
- TP8a4-4 High Range Resolution using a Wigner Distribution Deconvolution Algorithm
Steven R. Newton, Mervin C. Budge, Jr., Dynetics, Inc.; Reza R. Adhami, University of Alabama in Huntsville

- TP8a4-5 Compression of complex SAR data for real-valued SAR imagery
Hanna E. Witzgall, J. Scott Goldstein, SAIC
- TP8a4-6 Modeling of Earths Rotation for Space Based Radar
Braham Himed, Air Force Research Laboratory; Unnikrishna Pillai, Polytechnic University; Ke Yong Li, C & P Technologies Inc.
- TP8a4-7 Covariance estimation with regularization by the averages of grouped eigenvalues and its application to image classification
Sangho Yoon, Stanford University
- TP8a4-8 Two-Dimensional Autoregressive Modelling Technique Using a Constrained Optimisation Formulation and Minimum Hierarchical Clustering Scheme
Sarah Lee, Tania Stathaki, Imperial College London
- TP8a4-9 Estimation of Cloud Phase from Satellite Imagery Data
Amanda Falcone, Mahmood R. Azimi-Sadjadi, Adam Kankiewicz, Donald Reinke, Colorado State University
- TP8a4-10 Identifying and Tracking Turbulence Structures
Timothy Hoar, National Center for Atmospheric Research; Thomas Lee, Colorado State University; Douglas Nychka, National Center for Atmospheric Research; Curtis Storlie, Colorado State University; Jeffrey Weiss, University of Colorado at Boulder; Brandon Whitcher, GlaxoSmithKline
- TP8a4-11 Data Compression for Data Analysis in Remote Sensing
Amy Braverman, Eric Fetzer, Jet Propulsion Laboratory
- TP8a4-12 Fusing Information from MISR and MODIS for Polar Cloud Detection
Tao Shi, Bin Yu, University of California, Berkeley; Eugene Clothiaux, Pennsylvania State University; Amy Braverman, Jet Propulsion Laboratory

Session TP8b1 Image and Video Coding

Chair: *Sheila Hemami*

- TP8b1-1 Convexity Results for a Predictive Video Coder
Yegnaswamy Sermadevi, Sheila Hemami, Cornell University
- TP8b1-2 Motion Optimized Spatial-Temporal Coding Based on Wavelet Transform
Zhigang Gao, Yuan Zheng, The Ohio State University
- TP8b1-3 Low-Bit Rate Motion JPEG Using Differential Encoding
Sanmati Kamath, Joel Jackson, Georgia Institute of Technology
- TP8b1-4 Low Bit Rate 3D Video Coding : A Simplified Approach
Ravi Kishore Paruchuru, Sumana Gupta, IIT Kanpur
- TP8b1-5 Efficient phase correlation motion estimation using approximate normalization
Sanjeev Kumar, Mainak Biswas, Truong Nguyen, University of California, San Diego

TP8b1-6 Smooth Motion Vector Resampling for Standard Compatible Video Post-processing
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Teahyung Lee, David V. Anderson, Georgia Institute of Technology

TP8b1-8 A Fast Block-based Motion Compensation Video Frame Interpolation Approach
Jinsong Wang, Wayne State University; Nilesh Patel, William Grosky, University of Michigan, Dearborn

TP8b1-9 Model-based tracking of 3D object based on a Sequential Monte-Carlo method
Jean-Charles Noyer, Patrick Lanvin, Mohammed Benjelloun, Université du Littoral Côte d'Opale

TP8b1-11 Vector Quantization of Still Images Using Reflected Subcodevectors
Vishnu Makkapati, Honeywell Technology Solutions Lab

TP8b1-13 Visual Information Processing using Redundant Dictionaries
Pierre Vandergheynst, Pascal Frossard, Swiss Federal Institute of Technology (EPFL)

TP8b1-16 High-Order State Space Models in Dynamic Linear Inverse Problems
Yiheng Zhang, Dana H. Brooks, Northeastern University

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Satyabrata Rout, Amy Bell, Virginia Tech

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Dalong Li, Georgia Institute of Technology; Steven Simske, Hewlett Packard; Russell Mersereau, Georgia Institute of Technology

TP8b1-19 Optimization-based Design of 2-D Zero-phase IIR Filters
Dimitry Gorinevsky, Stephen Boyd, Stanford University

TP8b1-20 A Quasi-Linear Time Design for a Near Optimal Entropy-Constrained Scalar Quantizer
Kivanc Ozonat, Stanford University

Session TP8b2 Array Processing for Wireless Communications

Chair: *Murat Torlak*

TP8b2-1 Extensions to the capacity-maximizing antenna selection algorithms
Shahab Sanayei, Aria Nosratinia, University of Texas, Dallas

TP8b2-2 Robust Transmit Eigen-Beamforming Based on Imperfect Channel Correlations
Ayman Abdel-Samad, University of Duisburg-Essen; Alex Gershman, McMaster University

TP8b2-3 Fast Receive Antenna Selection for MIMO Systems
Jiansong Chen, Xiaoli Yu, University of Southern California

TP8b2-4 Fast Computation of Finite-Length MIMO MMSE Decision Feedback Equalizers
Nabil Yousef, Broadcom Corp.; Ricardo Merched, Federal University of Rio de Janeiro

TP8b2-5 Cramer-Rao Bound for Angular Propagation Parameter Estimation in MIMO Systems
Cassio Ribeiro, Esa Ollila, Visa Koivunen, Helsinki University of Technology

TP8b2-6 Maximum-Likelihood Ratio Bounds for Stochastic and Deterministic Maximum-Likelihood Array Processing
Yuri Abramovich, Defence Science and Technology Organisation; Alexandr Kuzminski, Bell Laboratories; Alexei Gorokhov, Qualcomm Inc.

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Chair: *Tina Kohler*

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Alexander Iliev, Michael Scordilis, University of Miami

TP8b3-3 Comparison and implementation of a 16-bit fixed point audio resampler
Wen Jin, University of Miami

TP8b3-4 Phoneme-less Hierarchical Accent Classification
Xiaofan Lin, Steven Simske, Hewlett Packard Laboratories

TP8b3-5 Multi-sensor Segmentation of the Voiced Speech Signal Using Hidden Markov Models
Cenk Demiroglu, Georgia Institute of Technology

TP8b3-6 Isolated Word, Speaker Dependent Recognition under the Presence of Noise, based on an Audio Retrieval Algorithm
Nikolaos Vasiloglou, Ronald Schafer, Georgia Institute of Technology; Mai Hans, Hewlett Packard Laboratories

TP8b3-7 Speech Recognition for Modular Robotics using Neural Network
Abhisek Ukil, Berthold Bützer, University of Applied Sciences

TP8b3-8 Speaker Verification Using Time Cepstral Principal Components Derived from a Pole-Zero Model
Anjali Sharma, John Gowdy, Clemson University

Session WA1 Advances in Biomedical Microscopy

Chair: *Brian Helmke*

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Green Fluorescent Protein Dynamics: Application
to Yeast Cell Division
David Odde, University of Minnesota

WA1-2 Time-resolved fluorescence microscopy of 8:55 AM
intact membranes of living endothelial cells
Peter J. Butler, Pennsylvania State University

WA1-3 The Open Microscopy Environment (OME): 9:20 AM
Image informatics for functional genomics.
*Ilya Goldberg, NIA / NIH - IRP; Jason Swedlow,
University of Dundee; Peter Sorger, MIT*

WA1-4 Extracting Subcellular Structural Dynamics 9:45 AM
from Multi-Wavelength 4-D Fluorescence Images
Brian P. Helmke, Rosalind E. Mott, University of Virginia

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WA1-5 Automated Leukocyte Detection In Vivo 10:30 AM
*Gang Dong, Nilanjan Ray, Scott Acton, University of
Virginia*

WA1-6 Incorporating Variance within Binary Flow 10:55 AM
for Leukocyte Tracking
*Rob Janiczek, Jinshan Tang, Scott Acton, University of
Virginia*

WA1-7 Epi-fluorescent Image Modeling for Viral 11:20 AM
Infection Analysis
*Satyabrata Rout, Virginia Tech; Vy Lam, University of
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WA1-8 Fiber- and micro-optic imaging in the live 11:45 AM
mammalian brain at the cellular level
Mark J. Schnitzer, Stanford University

Session WA2 VLSI

Chair: *David Harris*

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Recurrence
*Jo Ebergen, Ivan Sutherland, Ajanta Chakraborty, Sun
Microsystems*

WA2-2 Comparing Fast Implementations of Bit 8:55 AM
Permutation Instructions
*Yedidya Hilewitz, Zhijie Shi, Ruby Lee, Princeton
University*

WA2-3 Residue arithmetic techniques for hardware 9:20 AM
reduction in pseudo-random sequence correlators
*Christopher T. Clarke, University of Bath; Thambipillai
Srikanthan, Nanyang Technological University*

WA2-4 CT-Bus: A Heterogeneous CDMA/TDMA 9:45 AM
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*Bo-Cheng Charles Lai, Patrick Schaumont, Ingrid
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WA2-5 Exploration and Evaluation of PLX 10:30 AM
Floating-point Instructions and Implementations for
3D Graphics
*Xiao Yang, Princeton University; Shamik Valia, Michael
Schulte, University of Wisconsin-Madison; Ruby Lee,
Princeton University*

WA2-6 A New Floating-Point Architecture for 10:55 AM
Wireless 3D Graphics
David Lutz, Chris Hinds, ARM

WA2-7 Novel Schemes for High-Throughput Image 11:20 AM
Rotation
*Suchitra Sathyanarayana, Siew Kei Lam, Srikanthan
Thambipillai, Nanyang Technological University*

WA2-8 A Composite Arithmetic Scheme for 11:45 AM
Evaluation of Multinomials
*Milos D. Ercegovic, Pavan Adharapurapu, University of
California, Los Angeles*

Session WA3 Wireless

Chair: *Narayan Mandayam*

WA3-1 Unified Multi-Antenna Code Design for 8:30 AM
Fading Channels With Spatio-Temporal
Correlations
Mahesh Varanasi, Pranav Dayal, University of Colorado

WA3-2 Resource Allocation for Wireless Relay 8:55 AM
Channels
*Venugopal Veeravalli, Yingbin Liang, University of
Illinois at Urbana-Champaign*

WA3-3 Power and Bandwidth Allocation for 9:20 AM
Cooperative Strategies in Gaussian Relay Networks
Ivana Maric, Roy Yates, WINLAB, Rutgers University

WA3-4 Hierarchical Wireless Networks: Capacity 9:45 AM
Bounds and Cooperative Strategies using the
Multiple-Access Relay Channel Model
*Lalitha Sankaranarayanan, WINLAB, Rutgers University;
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WA3-5 Performance and Cross-Layer Design of 10:30 AM
Persistent CSMA for Wireless Networks with
Multipacket Reception
Douglas Chan, Toby Berger, Cornell University

WA3-6 A New Wireless Network Medium Access 10:55 AM
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Rui Lin, Athina Petropulu, Drexel University

WA3-7 The propagation of self-similarity via wireless 11:20 AM
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Jie Yu, Athina Petropulu, Drexel University

WA3-8 Distributed Spatial Multiplexing in a Wireless Network 11:45 AM
Boris Rankov, Armin Wittneben, Swiss Federal Institute of Technology (ETH) Zurich

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Moritz Borgmann, Helmut Bolcskei, ETH Zurich

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Baha Obeidat, Yimin Zhang, Moeness Amin, Villanova University

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Fredrik Athley, Christer Engdahl, Per Sunnergren, Ericsson Microwave Systems AB

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June Chul Roh, Bhaskar D. Rao, University of California, San Diego

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Pavel Loskot, Norman C. Beaulieu, University of Alberta

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Arshad Ahmed, Ralf Koetter, Naresh R. Shanbhag, University of Illinois at Urbana-Champaign

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Mohammad Ali Khojastepour, Nasir Ahmed, Behnaam Aazhang, Rice University

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Chair: *Jamal Tuqan*

WA6-1 Exploiting Spatio-Temporal Correlation for Rate-Efficient Transmit Beamforming 8:30 AM
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WA6-2 On The Diversity Order of Single-Carrier Zero-Forcing Frequency-Domain Linear Equalizers 8:55 AM
Ahmadreza Hedayat, Aria Nosratinia, Naofal Al-Dhahir, University of Texas, Dallas

WA6-3 Minimum Mean Square Error Non Uniformly Spaced Equalizers 9:20 AM
Jamal Tuqan, Yan Huang, University of California, Davis

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Hiroto Imamura, Hiroshi Ochi, Kyushu Institute of Technology

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Gabriel Velarde-Torres, Stanford University

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Chair: *Vaughan Clarkson*

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WA7-3	Capacity of the Kronecker MIMO Channel <i>Alex Grant, University of South Australia; Leif Hanlen, National ICT Australia Ltd.</i>	9:20 AM
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DSP Applications

Chair: *Ralph Hippenstiel*

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WA8a-3	Target Tracking Using an Image Sensor with a Configurable Active Area <i>Fengjun Xi, Darryl Morrell, Arizona State University</i>
WA8a-4	MUSIC and notch filters <i>Kaushik Mahata, University of Newcastle</i>
WA8a-5	Modulation Identifications Using a Neural Network Based Wavelet Domain Approach. <i>Ralph Hippenstiel, Hassan El-Kishky, Chad Frick, Sandeep Dattaprasad, University of Texas, Tyler</i>
WA8a-6	On Time Series Analysis and Digital Signal Classification <i>Ralph Hippenstiel, Hassan El-Kishky, Penio (Pepe) Radev, University of Texas, Tyler</i>
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WA8a-9	Structured tensor based-algorithm for damped exponential fitting <i>Remy Boyer, Université Paris XI; Karim Abed-Meraim, GET-ENST</i>
WA8a-10	A Recursive Filter-Based Algorithm for Maximum Liklihood Localization of Narrow Band Autoregressive Sources <i>William Malcolm, Robert Elliott, University of Calgary</i>
WA8a-11	Optimal Reconstruction of Periodically Sampled Signals with Probabilistic Timing Delays <i>Ryan Prendergast, Truong Nguyen, University of California, San Diego</i>
WA8a-12	Probabilistic Model Approximation Measure and Multiple Model Estimation <i>Z. L. Zhao, University of New Orleans; X. Rong Li, University of New Orleans</i>
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- WA8a-15 RSS Localization in Wireless Nakagami-m Fading Channels
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- WA8a-19 Detection of Frequency Hopping Signals With a Sweeping Channelized Radiometer
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- WA8a-29 Theory and Design of An Optimal Personalized Surround Audio System Through Orthonormal Decomposition
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Session WA8b1 Speech Processing

Chair: Neeraj Magotra

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- WA8b1-2 A Noise Robust Speech Activity Detection Algorithm for Voice Activated Hands-free Applications in Car
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- WA8b1-3 A hybrid parametric-waveform approach to bitstream scalable audio coding
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- WA8b1-6 An Adaptive UEP Transmission System for JPEG2000
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Session WA8b2 Adaptive Array Processing, STAP

Chair: *Stephen Kogon*

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- WA8b2-3 A new high-resolution-and-capacity DOA estimation
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Amin, Moeness	WA4.2	Bell, Kristine	MP8a1.10
Amin, Moeness	TA8b.21	Belloni, Fabio	WA4.5
Amran, Prihamdhani	WA8a.15	Benitz, Gerald	WA8b2.7
Andersen, Soren Vang	WA8b1.13	Benjelloun, Mohammed	TP8b1.9
Anderson, David V.	TP8b1.7	Berger, Toby	WA3.5
Anderson, David V.	WA8b1.19	Bermudez, Jose Carlos M.	MP3.4
Anderson, David V.	MP7.8	Bershad, Neil J.	MP3.4
Anderson, David V.	TA3a.3	Bertrand, Eric	TA8a.25
Andrekson, Peter	TA8a.13	Bharathi, Aravindan	TP8a1.3
Andrews, Walter	TP8b3.1	Bharathi, Sunil	MA3b.1
Antoniou, Andreas	TP8a3.4	Bharitkar, Sunil	MP3.7
Apolinrio Jr., Jos	TA6.8	Bharitkar, Sunil	MP3.8
Aschbacher, Ernst	WA8a.23	Bidani, Anil K.	TA1.5
Asif, Amir	MA3b.2	Bidigare, Patrick	TP4.8
Athley, Fredrik	WA4.3	Bidigare, T. Patrick	WA8b2.9
Aunet, Snorre	MP8a1.16	Biswas, Mainak	TP8b1.5
Austin, Christian	MA1b.3	Bitzer, Berthold	TP8b3.7
Aviyente, Selin	WA7.8	Bliss, Dan	TA4.5
Aviyente, Selin	MP6.7	Bliss, Dan	MP4b.4
Ayewah, Mahmood R.	WA8b1.18	Bloom, Jeffrey	MP6.1
Azimi-Sadjadi, Mahmood R.	TP8a4.9	Blum, Rick	MP4b.3
Azimi-Sadjadi, Mahmood R.	TA7.5	Blum, Rick	TA8a.13
Azimi-Sadjadi, Mahmood R.	TP7.2	Böhlin, Patrik	TA8a.9
Babaeizadeh, Saeed	TP8a1.6	Bolcskei, Helmut	WA4.1
Babaii Rizvandi, Nikzad	WA8a.7	Bolzer, Andreas	MP8a1.24
Bachmann, Svetlana	TP8a4.2	Bonney, Bradford	MP8a2.6
Baedke, Michael	TA4.6	Borah, Deva	TP1.6
Bagur, Harsha	WA8b1.2	Borgmann, Moritz	WA4.1

NAME	SESSION	NAME	SESSION
Bose, Tamal	TP7.5	Chen, Zhang-xin	TP8a4.3
Bose, Tamal	TP7.6	Cheng, Qi	WA8a.26
Bose, Tamal	WA8a.8	Cheng, Shi	WA5.8
Bowers, John	MP3.2	Chhetri, Amit	WA8a.2
Boyd, John	TP3.7	Chin, H.-C.	MP3.1
Boyd, Stephen	TP8b1.19	Cho, Grace Yoona	WA8a.18
Boyer, Remy	WA8a.9	Cho, Kyung-Ju	MP8a1.14
Boyer, Remy	WA8a.16	Choi, Hyeokho	TP3.3
Bozinov, Dan	TP8a2.7	Christensen, Mads	WA8b1.9
Brandt-Pearce, Maite	MA5b.1	Chu, Chia-Te	WA8b1.14
Brandt-Pearce, Maite	TA4.6	Chu, Wai	MP7.5
Braverman, Amy	TP8a4.12	Chui, Chee-Cheon	MP8b.28
Braverman, Amy	TP8a4.11	Chung, Jin-Gyun	MP8a1.14
Brisebarre, Nicolas	TP2.1	Chung, Jong-Moon	TP5.3
Brisebarre, Nicolas	MP8a1.20	Ciblat, Philippe	MP8b.6
Brodersen, Robert W.	TA2a.2	Cimini, Len	MP4b.3
Brooks, Dana H.	TP8a1.6	Cioffi, John	MP8b.29
Brooks, Dana H.	TP8b1.16	Claesson, Ingvar	WA8b1.10
Brooks, Dana H.	TP8a1.5	Clarke, Christopher T.	WA2.3
Brown, Andrew	TA8b.31	Clarke, Christopher T.	MP8a1.3
Brown, Donald	TP5.6	Clarke, Christopher T.	MP8a1.2
Brown, Mark M.	TA8b.22	Clarkson, Vaughan	WA7.1
Browne, David	TA2a.4	Clarkson, Vaughan	WA8a.20
Budge, Scott	TP7.1	Clarkson, Vaughan	WA7.7
Budge, Jr., Mervin C.	TP8a4.4	Clements, Mark	WA8b1.19
Bugallo, Monica	TP8b3.2	Clothiaux, Eugene	TP8a4.12
Butler, Peter J.	WA1.2	Coates, Mark	TP3.2
Byers, Simon	MP6.4	Cohen, Aaron	MP8a1.6
Cabric, Danijela	TA2a.2	Coleman, Jeffrey O.	MP4a.3
Cain, Gerald	WA8a.21	Coleman, Jeffrey O.	MA4b.4
Calderero, Felipe	TP8a1.5	Correll, Bill	TP4.8
Cao, Qianling	TA4.6	Cotofana, Sorin	MP8a1.17
Carbonelli, Cecilia	TP6.1	Coutts, Scott	MP4b.2
Cassidy, Ryan J.	WA8a.30	Cowan, Colin	TA6.5
Cassidy, Ryan J.	TP8a2.1	Cox, Henry	WA8b2.6
Castleman, Kenneth	MA3b.1	Cox, Richard	MP7.1
Chakraborty, Ajanta	WA2.1	Cranor, Lorrie	MP6.4
Chan, Douglas	WA3.5	Crisu, Dan	MP8a1.17
Chan, Wai-Yip	WA8b1.11	Crockett, John	TA8a.31
Chan, Wai-Yip	MP8b.20	Cronin, Eric	MP6.4
Chang, Cheng	TA8b.23	Cruz, J. R.	TA8b.25
Chang, Yu	TP1.2	Cui, Tao	TA8b.16
Chao, Yi-Ling	MP8b.13	Cui, Tao	TA8a.10
Chao, Yi-Ling	MP8b.12	Cuomo, Kevin	MP4b.2
Chau, Paul	MP4a.1	Dahl, Mattias	WA8b1.10
Chauhan, Ojas	TA8a.31	Dai, Huaiyu	TA5.3
Chen, Biao	TP3.6	Daly, Mike	TA7.4
Chen, Biao	WA8a.26	Dane, Gokce	TP8b1.6
Chen, Chiang-yu	MP8b.29	Daniel, Edward J.	MP7.3
Chen, Ching-Han	WA8b1.14	Dao, Dung Ngoc	MP8b.24
Chen, Haifeng	MP8b.17	Das, Sibasish	MP8b.14
Chen, Huimin	WA8a.1	Dasgupta, Soura	TA3b.1
Chen, Jiansong	TP8b2.3	Datta, Suprakash	MA3b.2
Chen, Mo	TA8b.29	Dattaprasad, Sandeep	WA8a.5
Chen, Wei	MP5.7	Daut, David	MP8b.27
Chen, Wen	TA8b.16	Daut, David	WA8b1.6
Chen, Xian-ning	TP8a4.3	Dayal, Pranav	WA3.1
Chen, Yao	MP5.8	de Almeida, Sergio J. M.	MP3.4
Chen, Yao	TP3.5	De Cock, Katrien	TP8a3.2

NAME	SESSION	NAME	SESSION	NAME	SESSION	NAME	SESSION
DeBrunner, Linda	MP8a1.11	Fargues, Monique	MP8a2.1	Goubran, Rafik	WA8b1.7	Hndel, Peter	WA7.4
DeBrunner, Victor	TP8a4.2	Farjam, Reza	TP8a2.8	Govdy, John	TP8b3.8	Hoar, Timothy	TP8a4.10
DeBrunner, Victor	MA1b.4	Feistel, Angela	MP8b.9	Grad, Johannes	TP2.8	Hodjat, Alireza	MP8a1.9
Deleuze, Anne-Laure	MP8b.6	Felix, Steve	TA2b.2	Gran, Fredrik	MP1.4	Holdt Jensen, Soeren	WA8b1.8
Demirkan, Murat	TA8a.2	Feng, Jie	TP4.4	Grant, Alex	WA7.3	Hombs, Brandon	MP8b.25
Demiroglu, Cenk	WA8b1.19	Fertig, Louis	MP4a.4	Grant, Steven	TA6.3	Hong, Yao-Win	TP1.1
Demiroglu, Cenk	TP8b3.5	Fetzer, Eric	TP8a4.11	Griesbach, Jacob	WA8b2.7	Horak, P.	MA5b.2
Demirsoy, Suleyman Sirri	MP8a1.4	Fimoff, Mark	WA8a.25	Griffin, Karen A.	TA1.5	Howard, Stephen	WA8a.20
Dempster, Andrew G.	MA4b.3	Fishler, Eran	MP4b.3	Gritsch, Gerhard	TA8b.26	Hu, Bin	MP8b.7
Dempster, Andrew G.	MA4b.4	Fitz, Michael	TA2a.4	Grosky, William	TP8b1.8	Hu, Jeremiah	TA8a.18
Dempster, Andrew G.	MP8a1.4	Fitz, Michael	TA8a.12	Guan, Raymond	TP8a3.1	Hu, Rongqiang	MP7.8
den Brinker, Albertus	WA8b1.3	Fitz, Michael	MP8b.22	Guenther, Drake	MP1.3	Hua, Yingbo	MA7b.3
Desai, Mukund	WA8b2.8	Fleury, Bernard	MP8b.7	Guess, Tommy	MP2.1	Hua, Yingbo	TP1.2
Dick, Chris	TA2a.3	Flores, Aaron	MA6b.4	Gugel, Karl	MP8a1.23	Huang, Dong-Yan	WA8b1.16
Dietl, Hubert	TP8a1.1	Flynn, John	TP4.3	Guidry, Anthony	MP8a2.2	Huang, Hesu	MP3.6
Dikeman, R. David	MP8a1.10	Forenza, Antonio	MP8b.30	Guillaud, Maxime	TA8b.6	Huang, Hesu	WA8b1.5
Dimakis, Alexandros G.	TP3.4	Forsythe, Keith	TA4.5	Gunnarsson, Joakim	TA7.7	Huang, Howard	TA4.2
Ding, Ming	WA6.7	Forsythe, Keith	MP4b.4	Gunther, Jacob	TP7.5	Huang, Ke	WA7.8
Ding, Zhi	TA7.2	Franco, Joseph	TA8a.16	Gunther, Jacob	TP7.6	Huang, Yan	WA6.3
Ding, Zhi	MP8b.15	Franz, Stefan	TP6.1	Gunther, Jacob	TA8b.4	Hueper, Knut	MA7b.2
Djapic, Relja	TP6.4	Fricks, Chad	WA8a.5	Gunther, Jacob	TA8a.31	Hughes, Brian	TA5.3
Djuric, Petar	TP8a3.2	Friedlander, Benjamin	TA8a.16	Guo, Yuanbin	TA2a.1	Hughes, Brian	TA8b.20
Dogandzic, Aleksandar	WA8a.15	Friedlander, Benjamin	TA8b.17	Gupta, Malay	WA8a.14	Hutchins, Gary	TP3.7
Dong, Gang	WA1.5	Friedlander, Benjamin	TA8b.15	Gupta, Sumana	TP8b1.4	Hviid, Asger	MP8b.7
Dorairaj, Ramprasath	MP6.6	Friedlander, Benjamin	TA8a.14	Gustafsson, Oscar	MA4b.3	Hwang, Suk-seung	WA8b1.22
Dorairaj, Ramprasath	TP8a2.4	Frossard, Pascal	TP8b1.13	Gustafsson, Oscar	MA4b.4	Ibars, Christian	TA8a.22
Doroslovacki, Milos	WA8a.32	Fuhrmann, Daniel R.	MP4b.1	Gustafsson, Oscar	MA4b.1	Ibrahim, Nicolas	MP8b.5
Doser, Adele	TA1.7	Gansawat, Duangrat	MP8b.10	Hacioglu, Rifat	TA1.6	Ibrahim, Nicolas	MP2.8
Douglas, Scott	TA6.1	Gao, Zhigang	TP8b1.2	Hager, William	TA8b.2	Ibsen, M.	MA5b.2
Du, Huini	MP1.2	Garcia, Raymond C.	TP5.1	Haimovich, Alex	MP4b.3	linatti, Jari	TA8a.17
Du, Yingzi	MP8a2.6	Garcia-Luna-Aceves, J. J.	TP5.7	Hamzeh, Belal	TP5.8	Ikuma, Takeshi	MA6b.3
Duca, Karen	WA1.7	Gaudiot, Jean-Luc	MP8a1.13	Hanlen, Leif	WA7.3	Iliev, Alexander	TP8b3.2
Duffy, Chris	TA3a.3	Gay, Steven	TA6.3	Hansen, Mat	TP8b3.6	Ilitis, Ronald A.	TA8b.11
Duhamel, Pierre	WA8a.16	Ge, Hongya	TA8b.27	Hansen, Jan	MP2.6	Ilitis, Ronald A.	TA8b.31
Dzieciuch, Matthew	TP4.1	Gelfand, Saul	TA8a.5	Harris, David	TP2.5	Imamura, Hiroto	WA6.4
Ebergen, Jo	WA2.1	Geng, Jifeng	TP1.4	harris, fred	TA2a.3	Ing, Garrick	TP3.2
El Gamal, Hesham	TA4.1	Georgiades, Costas	MP2.4	Harteneck, Moritz	TA2b.3	Insana, Michael	MP1.7
El-Kishky, Hassan	WA8a.5	Georgiades, Costas	TA8a.26	Hasler, Paul	WA8a.28	Insana, Michael	MP1.2
El-Kishky, Hassan	WA8a.6	Gerrits, Andy	WA8b1.3	Hasler, Paul	WA8a.27	Isaacson, David	TP8a1.6
Elliott, Robert	TP3.7	Gershman, Alex	TP8b2.2	Hasler, Paul	TA3a.3	Ives, Robert	MP8a2.2
Elliott, Robert	WA8a.10	Ghassemi, Farhad	WA7.5	Hatke, Gary	WA8b2.2	Ives, Robert	MP8a2.6
El-Mahassni, Edwin	WA8a.20	Ghodrati, Alireza	TP8a1.5	Hauske, Gert	TA1.8	Iyer, Radhika	MP5.8
Emami, Majid	MP2.6	Giannakis, Georgios B.	MP8b.11	Hawkins III., Coy	TP8a4.1	Jackson, Joel	TP8b1.3
Engdahl, Christer	WA4.3	Giannakis, Georgios B.	TP3.8	Heath, Jr., Robert W.	MP8b.30	Jackson, Robert	TP2.3
Ercegovac, Milos D.	WA2.8	Giannakis, Georgios B.	TA8b.28	Heath, Jr., Robert W.	TA4.7	Jacobsen, Noah	MP2.2
Ercegovac, Milos D.	MP8a1.7	Giannakis, Georgios B.	TP6.5	Hedayat, Ahmadreza	MP8b.23	Jafar, Syed	TA8b.8
Ertan, Ali Erdem	MP7.4	Gibson, Jerry	MP7.7	Hedayat, Ahmadreza	WA6.2	Jamali, Mohsin M.	TA8b.22
Ertin, Emre	MA1b.3	Gidlund, Mikael	TA8a.20	Helmke, Brian P.	WA1.4	Janes, Kevin	TA1.4
Eshraghian, Kamran	MA2b.4	Gifford, Wesley	TP6.8	Hemami, Sheila	TP8b1.1	Janiczek, Rob	TP8a2.2
Etter, Delores	MP8a2.2	Gillies, Duncan	TP8a1.2	Heneghan, Conor	MP8b.29	Janiczek, Rob	WA1.6
Etter, Delores	MP8a2.6	Girod, Bernd	WA7.6	Hennings, Pablo	MP8a2.3	Jansson, Magnus	WA7.4
Evans, Brian L.	MP8b.30	Goddard, Paul	TP8a2.3	Hernandez-Cordero, Jaime	TP8b3.1	Javidi, Tara	MP5.4
Evans, Brian L.	WA6.7	Goldberg, Ilya	WA1.3	Hessabi, Shaahein	WA8a.7	Javidi, Tara	TA8a.8
Falcone, Amanda	TP8a4.9	Goldstein, J. Scott	TP8a4.5	Heute, Ulrich	WA8b1.12	Jayaweera, Sudharman	TA8b.1
Falk, Johan	WA7.4	Gong, Yu	TA6.5	Hilewitz, Yedidya	WA2.2	Jenkins, W. Kenneth	MP3.3
Falk, Tiago	WA8b1.11	Gooch, Richard	TA5.7	Himed, Braham	TP8a4.6	Jensen, Jorgen Arendt	MP1.4
Falk, Tiago	MP8b.20	Gordy, James	WA8b1.7	Hinds, Chris	WA2.6	Jeong, Wun-Cheol	TP5.3
Fan, Howard	MP8b.4	Gorinevsky, Dimitry	TP8b1.19	Hippenstiel, Ralph	WA8a.5	Jiang, Qin	MA3b.4
Fan, Zhifei	MP2.7	Gorokhov, Alexei	TP8b2.6	Hippenstiel, Ralph	WA8a.6	Jiang, Yi	TA4.3

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Jiang, Yi	TA8b.2	Krolik, Jeffrey L.	TP4.6	Li, Rui	TA8b.15	Malalur, Sanjeev	MP8a2.4
Jin, Wen	TP8b3.3	Krusienski, D. J.	MP3.3	Li, Tiffany	TA8a.13	Malcolm, William	WA8a.10
Jin, Yuan-Wei	TA8b.17	Kuehn, Volker	WA8a.22	Li, Tongtong	TA5.8	Malone, John	TP8a2.3
Jo, Sung Eun	TA6.6	Kumar, Praveen	TA4.1	Li, Tongtong	TA8a.23	Mandayam, Narayan	WA3.4
Johnson, Louis	WA8a.18	Kumar, Sanjeev	TP8b1.5	Li, Tongtong	MP6.5	Mandyam, Giridhar	TA8a.3
Johnson, Jr., C. Richard	WA6.8	Kundur, Deepa	MP6.2	Li, X. Rong	WA8a.12	Mangoubi, Rami	WA8b2.8
Joho, Marcel	TA7.3	Kuo, C.-C. Jay	TA5.5	Li, Xiaohua	TA8b.29	Manry, Michael	MP8a2.4
Jongren, George	TA8b.24	Kurtas, Erozan	WA5.7	Li, Yabo	TA4.8	Mansour, Mohammad	MP8a1.19
Jullien, Graham A.	MA2b.2	Kuzminskiy, Alexandr	TP8b2.6	Li, Yan	TP5.5	Manton, Jonathan	TA7.4
Jullien, Graham A.	TP2.4	Kyriakakis, Chris	MP3.6	Li, Zhiyun	WA8a.29	Manton, Jonathan	MA7b.3
Jung, Hyejung	MP8b.21	Kyriakakis, Chris	WA8b1.5	Li, Zongwang	WA5.2	Mantzel, William	TP3.3
Jungnickel, Volker	MP8b.17	Kyriakakis, Chris	MP3.7	Liang, Yingbin	WA3.2	Margetts, Adam	TP6.2
Juntti, Markku	WA8a.19	Laamari, Hedi	MP2.8	Lienhart, Rainer	TP1.7	Maric, Ivana	WA3.3
Kadambe, Shubha	MA3b.4	Labeau, Fabrice	TA8a.25	Lim, Chai Soon	MP8a1.1	Marino, Claudio	MP4a.1
Kahai, Pallavi	TP8a2.5	Lai, Bo-Cheng Charles	WA2.4	Lin, Rui	WA3.6	Marple,, Jr., S. Lawrence	TA8a.6
Kale, Izzet	MP8a1.4	Lai, Hung	WA8b2.6	Lin, Xiaofan	TP8b3.4	Martin, Richard K.	WA6.8
Kamath, Sanmati	TP8b1.3	Lam, Siew Kei	MP8a1.2	Ling, Qi	TA8a.23	Martinez, Andrew	WA8b1.4
Kamath, Sunil	WA8b1.19	Lam, Siew Kei	WA2.7	Liu, Bin	TP3.6	Maruf, Mohammad	TA8b.14
Kamenetsky, Max	MA6b.5	Lam, Vy	WA1.7	Liu, Daniel	TA2a.4	Marvasti, Salman	TP8a1.2
Kammeyer, Karl-Dirk	WA8a.22	Laneman, J. Nicholas	TP1.3	Liu, Hong	MP8b.16	Marzetta, Thomas	MA1b.2
Kang, Jung-Yup	MP8a1.13	Lanvin, Patrick	TP8b1.9	Liu, Hui	TP1.5	Masajedian, S. M. Saeed	TA8a.21
Kankiewicz, Adam	TP8a4.9	Lashkari, Khosrow	MP7.6	Liu, Hui	TA8b.13	Mastrangelo, C. H.	MA2b.5
Kapilow, David	MP7.1	Lauffenburger, Douglas	TA1.4	Liu, Hui	MP5.2	Mathlouthi, Walid	MA5b.3
Karagiannis, Emmanouil D.	TA1.3	Lazzi, Gianluca	TA8b.20	Liu, Jie	MP1.7	Matsumoto, Tadashi	TA8b.9
Karunasiri, Gamani	MP8a2.1	Le Martret, Christophe	MP8b.6	Liu, Jie	MP1.2	Mayampurath, Anoop	TP7.1
Kavehrad, Mohsen	TP5.8	Lechner, Gottfried	MP8a1.24	Liu, Lichuan	TA8b.27	Mc Coy, A. D.	MA5b.2
Kecicioglu, Balkan	WA4.7	Lee, Colin	MP8a2.1	Liu, Wei	WA4.6	McAllister, M. J.	MP1.3
Keller, Catherine	WA8b2.2	Lee, Heechoon	TA2a.4	Liu, Weiliang	WA8b1.6	McCain, Dennis	TA2a.1
Khojastepour, Mohammad Ali	WA5.4	Lee, Pei Yean	MA7b.1	Liu, Wenyu	TA8b.29	McCloud, Michael	MP5.3
Khojastepour, Mohammad Ali	TA8a.19	Lee, Ruby	WA2.5	Liu, Zhipeng	MP8a1.23	McCulloch, Andrew	TA1.1
Khong, Andy	TA6.4	Lee, Ruby	WA2.2	Liuha, Petri	MP8a1.17	McDaniel, Patrick	MP6.4
Khosla, Pradeep	MP8a2.7	Lee, Sarah	TP8a4.8	Lizhong, Zheng	TP6.6	McHarg, Jeff	MP4b.2
Kim, Kyeong Jin	TA8b.11	Lee, Seong-Min	MP8a1.14	Lookabaugh, Tom	MP6.3	McIlhenny, Robert	MP8a1.7
Kim, Sang-Woo	TA6.6	Lee, Teahyung	TP8b1.7	Lorentz, Mathieu	TA1.5	McKelvey, Tomas	TA7.7
Kim, Thanh Tung	TA8b.24	Lee, Thomas	TP8a4.10	Loskot, Pavel	TA8a.30	McWhorter, Todd	WA8b2.4
Kirsteins, Ivars	TP4.5	Lehmann, Stefan	WA7.7	Loskot, Pavel	WA5.1	Mecklenbrucker, Christoph	TA8b.26
Kittipiyakul, Somsak	MP5.4	Lehnert, James	MP8b.25	Low, Han Sim (Eugene)	MP8a1.2	Mengali, Umberto	TP6.1
Kleijn, Bastiaan	WA8b1.8	Lehnert, James	TA8a.11	Lundberg, Magnus	WA8a.13	Merched, Ricardo	TP8b2.4
Kluter, T. J. H.	TP2.7	Lehnert, James	MA5b.5	Lundberg, Magnus	WA8b2.1	Mersereau, Russell	TP8b1.18
Ko, Youngwook	TA8b.19	Lehnert, James	TP1.8	Luo, Huiyu	TA8b.30	Metzner, John	TP5.2
Koc, Ali Taha	TA5.6	Lehtomaki, Janne	WA8a.19	Luo, Xiliang	MP8b.11	Mikhael, Wasfy	TP7.3
Koc, Cetin	MP8a1.8	Lemieux, Pascal	MA5b.3	Luschi, Carlo	TA2b.2	Milanfar, Peyman	MA7b.4
Kochman, Fred	TA7.6	Leus, Geert	TP6.4	Lutz, David	WA2.6	Mir, Hasan	WA8b2.2
Kocian, Alexander	MP8b.7	Leutelt, Lutz	WA8b1.12	Ma, Qian	MP5.6	Mishra, Shridhar Mubaraq	TA2a.2
Koetter, Ralf	WA5.3	Lever, Ken	WA8b1.21	Mabey, Glen W.	WA8a.8	Mitra, Urbashi	TA5.5
Koivunen, Visa	MP8b.3	Levinbook, Yoav	TA7.8	Mac Gabhann, Feilim	TA1.3	Mitra, Urbashi	TP1.4
Koivunen, Visa	TP8b2.5	Lewis, Terry	TP6.7	Macleod, Malcolm D.	MA4b.3	Mitra, Urbashi	TP6.1
Koivunen, Visa	WA4.5	Li, Chunjian	WA8b1.13	Macleod, Malcolm D.	MA4b.4	Mondal, Bishwarup	TA4.7
Konanur, Anand	TA8b.20	Li, Dalong	TP8b1.18	MacLeod, Rob	TP8a1.5	Moon, Todd	TA7.6
Kong, Jun Jin	TA8a.29	Li, Guoqing	TP1.5	Madhow, Upamanyu	TA5.4	Moon, Todd	TA8a.31
Kootsookos, Peter	WA7.7	Li, Guoqing	TA8b.13	Madhow, Upamanyu	MP2.2	Moon, Todd	WA8a.8
Koren, Israel	TP2.6	Li, Guoqing	MP5.2	Magar, Minoda	MP8a1.11	Moore, Carleton	MP8a1.10
Kormann, Dave	MP6.4	Li, Hongbin	TA5.2	Magarini, Maurizio	TA2b.4	Moore, John	MA7b.1
Koyama, Fumio	MA5b.4	Li, Hongbin	TA8b.12	Magotra, Neeraj	WA8b1.20	Moraes, Renato	TP5.7
Kozintsev, Igor	TP1.7	Li, Jian	TA4.3	Mahadevappa, Ravi	TA2b.1	Moran, W.	TA3a.1
Kramer, Gerhard	WA3.4	Li, Jian	TA8b.2	Mahata, Kaushik	WA8a.4	Morrell, Darryl	TA3a.4
Krishnamurthy, Vikram	WA7.5	Li, Jian	MA1b.2	Mahurin, Eric	TP2.3	Morrell, Darryl	WA8a.2
Krishnamurthy, Sandeep	TA8b.20	Li, Jing	WA5.7	Makkapati, Vishnu	TP8b1.11	Morrell, Darryl	WA8a.3
Krishnan, Venkatesh	TA3a.3	Li, Ke Yong	TP8a4.6	Malah, David	MP7.1	Morrison, Scott	MP8a1.23

NAME	SESSION	NAME	SESSION	NAME	SESSION	NAME	SESSION
Moses, Randolph	MA1b.3	Pandya, Ameesh	TA8b.30	Rader, Charles	WA8b2.7	Sahr, John	WA8b2.2
Mott, Rosalind E.	WA1.4	Papadimitriou, Panayiotis	TA8a.26	Radev, Penio (Pepe)	WA8a.6	Salazar, Jaime	TP7.2
Mouhouche, Belkacem	MP8b.5	Papandreou-Suppappola, Antonia	TA3a.4	Ragothaman, Pradeep	TP7.3	Sällberg, Benny	WA8b1.10
Mudumbai, Raghuraman	TA5.4	Papandreou-Suppappola, Antonia	WA8a.2	Raich, Raviv	MP8b.26	San Antonio, Geoffrey	MP4b.1
Mughal, Bobby	WA8a.21	Parhi, Keshab K.	MP8a1.22	Rajaguru, Harikumar	TP8a1.3	Sanayei, Shahab	TP8b2.1
Mujtaba, Syed Aon	TP5.5	Parhi, Keshab K.	TA8a.29	Raju, Karthikesh	TA8a.14	Sandgren, Niclas	TP8a1.8
Mujtaba, Syed Aon	TA8b.7	Parhi, Keshab K.	MP8a1.5	Ramachandran, Parameswaran	TP8a3.4	Sandgren, Niclas	MP8b.18
Muller, Jean-Michel	TP2.1	Parhi, Keshab K.	MP8a1.6	Ramchandran, Kannan	TP3.4	Sane, H. S.	MA2b.5
Muller, Jean-Michel	MP8a1.20	Park, Hyeong Sook	MP8a1.21	Ramos, Antonio	TA6.8	Sankaran, Sundar G.	MP3.5
Muriel, Medard	TP6.6	Park, Seong-Hun	MP8a1.14	Rane, Shantanu	WA7.6	Sankaranarayanan, Lalitha	WA3.4
Murphy, Robert	MA3b.3	Park, Song	MP8a1.8	Ranganathan, Karthik	MP1.3	Santhanam, Balu	WA8a.14
Mustafa, Hussam	WA8a.32	Parks, Jeremy	MP8a1.23	Rankov, Boris	WA3.8	Sarela, Jaakko	TA8a.24
Nabavi, Abdolreza	WA8a.7	Paruchuru, Ravi Kishore	TP8b1.4	Rao, Bhaskar D.	WA4.8	Sathyanarayana, Suchitra	MP8a1.1
Nadooshan, Mehrdad	MP6.5	Patel, Nilesh	TP8b1.8	Rasmussen, Lars	MP8b.7	Sathyanarayana, Suchitra	WA2.7
Nallanathan, Arumugam	WA8b1.16	Paulraj, Arogyaswami	TA4.4	Ratnarajah, Tharmalingam	TA8b.10	Savage, C. O.	TA3a.1
Namuduri, Kamesh	MP6.6	Paulraj, Arogyaswami	TA8b.3	Ray, Nilanjan	WA1.5	Savage, John E.	MA2b.1
Namuduri, Kamesh	TP8a2.5	Paulraj, Arogyaswami	MP2.6	Ray, Pinaki	TA7.1	Savvides, Marios	MP8a2.7
Namuduri, Kamesh	TP8a2.4	Peirce, Shayn	TA1.2	Raymond, Josh	WA8b1.1	Savvides, Marios	MP8a2.8
Nasersharif, Babak	WA8b1.17	Peizl, Jan	MP8a1.18	Rebollo-Monedero, David	WA7.6	Sayana, Krishnakamal	TA8a.5
Naylor, Patrick	TA6.4	Peng, Ying-ning	TP8a4.3	Reid, Tony	TA8b.11	Sayed, Ali H.	MP3.1
Nemethova, Olivia	WA8a.24	Penrod, Ryan	TA8a.12	Reilly, Jim	TA7.4	Sayed, Ali H.	WA6.1
Nerayanuru, S. M.	WA8a.25	Perez-Neira, Ana I.	TA8a.4	Reilly, Jim	MA7b.3	Sayeed, Akbar	TP3.1
Newton, Steven R.	TP8a4.4	Petropulu, Athina	WA3.6	Reinke, Donald	TP8a4.9	Sayir, Jossy	MP8a1.24
Nguyen, Truong	WA8a.11	Petropulu, Athina	MP5.1	Ren, Jian	TA8a.23	Scaglione, Anna	TP1.1
Nguyen, Truong	TP8b1.5	Petropulu, Athina	WA3.7	Ren, Jian	MP6.5	Schafer, Ronald	TP8b3.6
Nguyen, Truong	TP8b1.6	Pezeshki, Ali	TA7.5	Renfors, Markku	MP8b.3	Scharf, Louis L.	MP2.7
Nguyen, Truong	TA8b.5	Pezeshki, Ali	WA8b2.1	Ribeiro, Alejandro	TP3.8	Scharf, Louis L.	TA7.5
Nguyen, Truong	TA3b.4	Pickard, John	TP8a2.2	Ribeiro, Cassio	TP8b2.5	Scharf, Louis L.	WA8b2.1
Ni, Bin	MA5b.5	Pillai, Unnikrishna	TP8a4.6	Richardson, David	MA5b.2	Schaumont, Patrick	WA2.4
Niemier, Michael	MA2b.3	Pillutla, Laxminarayana	TA8b.1	Rieken, David	WA8b2.9	Scherb, Ansgar	WA8a.22
Norden, Fredrik	WA8b1.8	Piton, Romain	MP8b.7	Riera-Palou, Felip	WA8b1.3	Schill, Kerstin	TA1.8
Nosratinia, Aria	MP8b.23	Pladdy, Christopher	WA8a.25	Rigby, K. W.	MP1.3	Schmitt, H. A.	TA3a.2
Nosratinia, Aria	TP8b2.1	Pohl, Volker	MP8b.17	Rigling, Brian	MA1b.1	Schmitt, H. A.	TA3a.1
Nosratinia, Aria	WA6.2	Pointurier, Yvan	MA5b.1	Ritcey, James	TP4.3	Schniter, Philip	MP8b.14
Nowak, Robert	TP3.1	Polyzois, Christos	MP6.1	Roberson, Jeremy	MP8b.15	Schniter, Philip	MP8b.16
Noyer, Jean-Charles	TP8b1.9	Ponnaluri, Satya	MP2.1	Robey, Frank	MP4b.2	Schniter, Philip	TP6.2
Nuding, Ulrich	TA1.8	Popel, Aleksander S.	TA1.3	Robinson, Dirk	MA7b.4	Schnitzer, Mark J.	WA1.8
Nyathi, Jabulani	MP8a1.16	Potkonjak, Miodrag	MA4b.2	Roh, June Chul	WA4.8	Scholtz, Robert A	TP6.7
Nychka, Douglas	TP8a4.10	Potter, Lee	MA1b.3	Rose, Christopher	MP2.3	Scholtz, Robert A	MP8b.28
Obeidat, Baha	WA4.2	Pottie, Greg	TA8a.15	Rosen, Gail	WA8a.28	Scholtz, Robert A	MP8b.13
Obeidat, Baha	TA8b.21	Pottie, Greg	TA8b.30	Rossiter, Jonathan	TP8a2.3	Scholz, Kirstin	WA8b1.12
Ochi, Hiroshi	WA6.4	Prabhakaran, Vinod	TP3.4	Rout, Satyabrata	TP8b1.17	Schroeder, Jim	TP7.4
Odde, David	WA1.1	Prabhu, Sanjay	TP8a2.3	Rout, Satyabrata	WA1.7	Schulte, Michael	WA2.5
Oechtering, Tobias J.	TA8b.32	Prasad, Narayan	MP2.5	Roy, Mathieu	MA5b.3	Scordilis, Michael	TP8b3.2
Ogura, Nobuhiko	TA6.7	Premus, Vincent	TP4.2	Ruan, Yanhua	WA8a.1	Scott, Karen E. L.	WA6.6
Ohlsson, Henrik	MA4b.1	Prendergast, Ryan	WA8a.11	Rupp, Markus	WA8a.24	Seidel, Peter-Michael	TP8a2.7
Oklobdzija, Vojin G.	TP2.7	Price, Jennifer	TA8a.8	Rupp, Markus	TA8b.26	Seidel, Peter-Michael	MP8a1.12
Ollila, Esa	TP8b2.5	Price, Richard	TP7.4	Rupp, Markus	MP8a1.24	Seidel, Peter-Michael	WA8b1.18
Oteng-Amoako, Kingsley	TA8a.28	Proakis, John	MA6b.3	Rupp, Markus	WA8a.23	Selen, Yngve	TP8a1.8
Oteri, Oghenekome	TA4.4	Pun, Ka Shun Carson	TA8b.5	Rusch, Leslie	MA5b.3	Selen, Yngve	MP8b.18
Owrang, Maryam	TA8a.14	Pun, Ka Shun Carson	TA3b.4	Ryan, William	WA5.5	Serbetli, Semih	TA8b.18
Owsley, Norman	WA8b2.5	Puska, Henri	MP4a.2	Saarnisaari, Harri	MP4a.2	Sermadevi, Yegnaswamy	TP8b1.1
Owsley, Norman	WA4.4	Puska, Henri	TA8a.17	Saarnisaari, Harri	TA8a.17	Serpedin, Erchin	MP5.5
Ozdemir, Ozgur	TA5.6	Puzio, Matthew	TA8a.13	Saarnisaari, Harri	WA8a.19	Serpedin, Erchin	TA8a.1
Ozen, Serdar	WA8a.25	Qi, Jinyi	MP1.1	Sadek, Mirette	WA6.1	Seskar, Ivan	MP8b.8
Ozonat, Kivanc	TP8b1.20	Qian, Hua	MP8b.26	Sadiki, Tayeb	TA6.2	Sezgin, Aydin	TA8b.32
Paar, Christof	MP8a1.18	Qiang, Lin	MP8a1.3	Sadjadpour, Hamid	TA8a.13	Shanbhag, Naresh R.	WA5.3
Pandharipande, Ashish	TA3b.1	Quinn, Barry	WA7.2	Sadjadpour, Hamid	TP5.7	Sharma, Anjali	TP8b3.8
Pandya, Ameesh	TA8a.15	Quirk, Maureen	TA7.6	Sahai, Anant	TA8b.23	Sharma, Gaurav	MA3b.5

NAME	SESSION	NAME	SESSION	NAME	SESSION	NAME	SESSION
Shen, Cong	MP8b.2	Sun, Jian	TA8a.27	Valkama, Mikko	MP8b.3	Weng, Wen-Yen	WA5.6
Shen, Zukang	WA6.7	Sunar, Berk	MP8a1.18	Vallabha, Deepika	TP8a2.4	Wesel, Richard D.	WA5.6
Shi, Kai	TA8a.1	Sunnergren, Per	WA4.3	van de Par, Steven	WA8b1.9	Westerlund, Nils	WA8b1.10
Shi, Tao	TP8a4.12	Sutherland, Ivan	WA2.1	van der Veen, Alle-Jan	TP6.4	Whitcher, Brandon	TP8a4.10
Shi, Zhijie	WA2.2	Svensson, Lennart	WA8a.13	Van Trees, Harry	MP8a1.10	White, Christopher M.	MP7.3
Shimamura, Tetsuya	WA8b1.15	Swartzlander, Earl	TP2.2	Vandergheynst, Pierre	TP8b1.13	White, Christopher M.	WA8b1.1
Shynk, John	MP3.2	Swedlow, Jason	WA1.3	Vanderschaar, Mihaela	TA7.2	White, Langford	TA7.1
Shynk, John	TA5.7	Sworder, Dave	TP3.7	Vang Andersen, Soeren	WA8b1.8	Widrow, Bernard	MA6b.5
Shynk, John	WA8b1.22	Tadmor, Gilead	TP8a1.5	Varadarajan, Vijay	TP4.6	Widrow, Bernard	MA6b.4
Shynk, John	MA6b.2	Tague, John	WA8b2.5	Varanasi, Mahesh	MP2.5	Widrow, Bernard	MA6b.1
Siddharth, Ray	TP6.6	Takeshita, Oscar	TA8a.12	Varanasi, Mahesh	WA3.1	Wijaya, Surya	MP8a2.8
Silverstein, Seth	TP8a1.7	Talwar, Sunil	TP2.3	Varshney, Pramod	WA8a.26	Wilde, Mark	WA8b1.4
Silverstein, Seth	TP8a4.1	Tang, Jinshan	WA1.6	Vasiloglou, Nikolaos	TP8b3.6	Williamson, Geoffrey A.	TA1.6
Simske, Steven	TP8b3.4	Tanner, Rudolf	TA2b.3	Vassiliadis, Stamatīs	MP8a1.17	Williamson, Geoffrey A.	TA1.5
Simske, Steven	TP8b1.18	Tapio, Mikael	TA8a.9	Veeravalli, Venugopal	WA3.2	Wilson, Stephen	TA4.6
Sinkus, Ralph	MP1.8	Tarighat, Alireza	WA6.1	Velarde-Torres, Gabriel	WA6.5	Win, Moe	TP6.8
Siqueira, Marcio	TA6.8	Tawalbeh, Lo'ai	MP8a1.8	Venkataraman, Vishwanath	TA7.7	Wittneben, Armin	WA3.8
Sira, Sandeep	TA3a.4	Teague, Keith A.	MP7.3	Venkataraman, Vishwanath	MA6b.2	Witzgall, Hanna E.	TP8a4.5
Sivanesan, Kathiravetpillai	MP8b.1	Teague, Keith A.	WA8b1.1	Venkatesan, Sivarama	TA4.2	Wollinger, Thomas	MP8a1.18
Skoglund, Mikael	TA8b.24	Tellambura, Chintha	MP8b.24	Venkateswaren, Sunder	TA2a.4	Wong, Ian	MP8b.30
Slavakis, Konstantinos	TA6.7	Tellambura, Chintha	TA8b.16	Verbauwhede, Ingrid	MP8a1.9	Wong, Jennifer L.	MA4b.2
Slock, Dirk	TA5.1	Tellambura, Chintha	TA8a.10	Verbauwhede, Ingrid	MP8a2.5	Wong, Kai-Kit	TA8b.3
Slock, Dirk	TA6.2	ten Brink, Stephan	TA2b.1	Verbauwhede, Ingrid	WA2.4	Wong, ShingWa	TA2a.4
Slock, Dirk	TA8b.6	Tenca, Alexandre	MP8a1.8	Veselinovic, Nenad	TA8b.9	Wong, Tan	TA7.8
Smith III, Julius O.	WA8a.30	Tepedelenlioglu, Cihan	MP5.6	Vetterli, Martin	TP1.7	Wright, Gregory	MP2.3
Soderstrand, Michael	WA8a.18	Tepedelenlioglu, Cihan	TA8b.19	Vijayakumar, B.V.K.	WA5.2	Wu, Di	MP8b.8
Solinsky, James	TP7.1	Thambipillai, Srikanthan	MP8a1.2	Vijayakumar, B.V.K.	MP8a2.3	Wu, Junwen	TP7.7
Soltanian-Zadeh, Hamid	TP8a2.8	Thambipillai, Srikanthan	MP8a1.1	Vijayakumar, B.V.K.	MP8a2.7	Wu, Lin	TP6.3
Soltanian-Zadeh, Hamid	TP8a2.6	Thambipillai, Srikanthan	WA2.7	Vijayakumar, B.V.K.	MP8a2.8	Wu, Sau-Hsuan	TA5.5
Song, Woo-Jin	MP3.1	Thompson, Hilary	TP8a2.5	Viola, Francesco	MP1.5	Wu, Xianren	TP6.3
Sorger, Peter	WA1.3	Thompson, Hilary	TP8a2.4	Visvanathan, Ravi	TP8a1.4	Wu, Yik-Chung	MP5.5
Sorooshyari, Siamak	MP8b.27	Thomsen, Ben	MA5b.2	von Helmolt, Clemens	MP8b.17	Wunder, Gerhard	TA8a.7
Soudine, Wided	WA8a.31	Tian, Zhi	TP6.3	Vu, Mai	MP2.6	Xi, Fengjun	WA8a.3
Spalvieri, Arnaldo	TA2b.4	Tian, Zhi	TA8b.28	Waagen, D. E.	TA3a.1	Xia, Haitao	TA8b.25
Spasojevic, Predrag	MP8b.8	Tibenderana, Charles	MP8b.19	Waagen, D. E.	TA3a.2	Xia, Xiang-Gen	TA3b.2
Spencer, Richard	TA8a.2	Tisserand, Arnaud	MP8a1.20	Wage, Kathleen	TP4.7	Xia, Xiang-Gen	TA4.8
Srikanthan, Thambipillai	WA2.3	Tobagi, Fouad A.	MP7.2	Walker, William F.	MP1.5	Xie, Yongzhe	MP2.4
Srinivasan, SaravanaKumar	TP7.2	Torlak, Murat	TA5.6	Walker, William F.	MP1.3	Xin, Yan	TA8b.7
Srinivasan, Venkatesh	WA8a.28	Torlak, Murat	WA4.7	Walus, Konrad	MA2b.2	Yamada, Isao	TA6.7
Stanczak, Slawomir	MP8b.9	Triki, Mahdi	TA6.2	Walus, Konrad	TP2.4	Yang, Liuqing	TP6.5
Stathaki, Tania	MP8b.10	Trivedi, Mohan	TP7.7	Wan, Qun	TP8a4.3	Yang, Shenglin	MP8a2.5
Stathaki, Tania	TP8a4.8	Trumpf, Jochen	MA7b.2	Wang, Guoping	MP8a1.15	Yang, Wan-lin	TP8a4.3
Steinmair, Mathias	WA8a.23	Tsakalides, Panagiotis	MP6.8	Wang, Huahui	TA5.8	Yang, Xiao	WA2.5
Stephen, Graham	WA8a.17	Tuqan, Jamal	WA6.3	Wang, Jinsong	TP8b1.8	Yardim, Anush	WA8a.21
Stevens, Troy	TP4.8	Tuqan, Jamal	TP8a3.1	Wang, Nanyan	WA8b2.3	Yatawatta, Sarod	MP5.1
Stewart, Robert W.	WA6.6	Tureli, Uf	MP5.8	Wang, Rensheng	TA5.2	Yates, Roy	WA3.3
Stewart, Robert W.	WA8a.17	Tureli, Uf	TP3.5	Wang, Wei	MA2b.2	Yazdi, N.	MA2b.5
Stine, James	TP2.8	Tzagkarakis, George	MP6.8	Wang, Wei	TP2.4	Yeary, Mark	TP8a4.2
Stoica, Peter	MP8b.18	Udupa Sripathi, Prashant	TP1.8	Wang, Xiaowen	TP5.5	Yener, Aylin	TA8b.18
Stoica, Petre	TP8a1.8	Uenohara, Hiroyuki	MA5b.4	Wang, Yanwei	MA1b.2	Yoon, Byung-Jun	TP8a3.3
Stoica, Petre	MA1b.2	Ukil, Abhisek	TP8b3.7	Wang, Yu-Ping	MA3b.1	Yoon, Sangho	TP8a4.7
Storlie, Curtis	TP8a4.10	Vaccaro, Richard	WA4.4	Wang, Zhongfeng	MP8a1.22	Yousef, Nabil	TP8b2.4
Streinu, I.	TA3a.2	Vaidyanathan, P. P.	TP8a3.4	Wanhammar, Lars	MA4b.1	Yu, Bin	TP8a4.12
Su, Borching	TA3b.3	Vaidyanathan, P. P.	TA3b.3	Ward, James	TP4.2	Yu, Jie	WA3.7
Su, Xinrong	WA8b1.16	Vaidyanathan, P. P.	TP8a3.3	Weikle, Dennis	MP4b.2	Yu, Xiaoli	TP8b2.3
Subramanian, Shyam	WA8a.27	Valenti, Matthew	WA5.8	Weiss, Jeffrey	TP8a4.10	Yue, Xiaodong	MP8b.4
Sukanesh, R.	TP8a1.3	Valenti, Matthew	TA8a.27	Weiss, Stephan	WA4.6	Zaidi, Abdellatif	WA8a.16
Sun, Chao	TP4.4	Valenzuela, Reinaldo	MP4b.3	Weiss, Stephan	TP8a1.1	Zeidler, James	MA6b.3
Sun, Haitong	TA7.2	Valia, Shamik	WA2.5	Weiss, Stephan	MP8b.19	Zelniker, Emanuel	WA7.1

NAME	SESSION	NAME	SESSION	Notes
Zemp, Roger	MP1.7			
Zetzsche, Christoph	TA1.8			
Zeydabadi-Nejad, Mahmood	TP8a2.6			
Zhang, Hong	TA3b.2			
Zhang, Jin	TA8a.11			
Zhang, Ruifeng	MP5.7			
Zhang, Rumi	MA2b.2			
Zhang, Rumi	TP2.4			
Zhang, Xinmiao	MP8a1.5			
Zhang, Xueying	TP8a3.2			
Zhang, Yiheng	TP8b1.16			
Zhang, Yimin	WA4.2			
Zhang, Yimin	TA8b.21			
Zhang, Yuping	MP8a1.22			
Zhang, Zhongkai	TP7.5			
Zhang, Zhongkai	TP7.6			
Zhao, Qiang	TA8b.12			
Zhao, Z. L.	WA8a.12			
Zheng, Yibin	TP8a1.7			
Zheng, Yibin	MP1.6			
Zheng, Yuan	TP8b1.2			
Zhong, Cheng	TA8b.25			
Zhou, Chan	TA8a.7			
Zhou, Guotong	MP8b.26			
Zhou, Yugang	MP8b.20			
Zhu, Weihua	MP8b.4			
Zhu, Weijun	TA2a.4			
Zhu, Weijun	TA8a.12			
Zhu, Weijun	MP8b.22			
Zhu, Zhenyu	TA8a.13			
Zhuo, Jie	TP4.4			
Zoltowski, Michael	WA8a.25			
Zoltowski, Michael	MP8b.21			
Zourmtos, Takis	MP6.2			
Zrnic, Dusan	TP8a4.2			
Zyga, Kathleen	TP7.4			

Notes

