

2008 Asilomar Conference Session Schedule

Sunday Afternoon, October 26, 2008

2:00 - 7:00 PM Registration – Main Lodge
5:00 - 6:30 PM Student Paper Contest – Merrill Hall
7:00 - 9:00 PM Welcoming Reception – Merrill Hall

Monday Morning, October 27, 2008

7:30 - 9:00 AM Breakfast – Crocker Dining Hall
8:00 AM - 6:00 PM Registration

8:30 AM - 12:10 PM MORNING SESSIONS
MA1 Waveform Design Methods
MA2 Advances in Bioimaging and Analysis
MA3a Relaying and Cooperation I
MA3b Stochastic Control and Decision Theory for Cognitive Radio Networks
MA4 Multiuser MIMO Networks
MA5 Programmable and Reconfigurable Architectures
MA6 MIMO Radar and Sensor Fusion
MA7 Adaptive Filtering: Theory and Applications
MA8a1 Array Processing and Source Localization (Poster)
MA8a2 Multiuser MIMO (Poster)
MA8a3 Beamforming (Poster)
MA8b1 Topics in Communications (Poster)
MA8b2 Radar Signal Processing (Poster)
MA8b3 Multi-rate and Digital Signal Processing (Poster)

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

Monday Afternoon, October 27, 2008

1:30 - 5:10 PM AFTERNOON SESSIONS
MP1 MIMO Radar
MP2 Retinal Image Analysis
MP3 Information Theory
MP4 Feedback in MIMO Systems
MP5 Computer Arithmetic I
MP6 Blind System Identification, Multi-channel System Inversion, and Speech Dereverberation
MP7 Signal Processing and Learning for Sensor Signal Exploitation
MP8a1 Distributed Detection and Estimation (Poster)
MP8a2 Wireless Network Management (Poster)
MP8a3 OFDM/UWB (Poster)
MP8a4 MIMO OFDM and Cooperative Relaying (Poster)

Monday Evening, October 27, 2008

6:00 - 9:30 PM Conference Cocktail/Social – Merrill Hall
The Cocktail/Social takes the place of Monday's dinner. No charge for conference attendees or their guest.

2008 Asilomar Conference Session Schedule

(continued)

Tuesday Morning, October 28, 2008

7:30 - 9:00 AM Breakfast – Crocker Dining Hall
8:00 AM - 5:00 PM Registration
8:15 - 9:45 AM TA1a - Conference Welcome and Plenary Session
9:45 - 10:15 AM Coffee Social

10:15 AM - 12:20 PM MORNING SESSIONS
TA1b Compressive Sensing
TA2b Functional Imaging and Analysis
TA3b Secrecy Capacity and Interference Channels
TA4b Multiuser MIMO Broadcast
TA5b Communication Architectures
TA6b Wireless Sensor Networks
TA7b Adaptive Methods and Monte Carlo Signal Processing
TA8b1 Image/Video Processing, Quantization and Coding (Poster)
TA8b2 Speech Analysis and Recognition (Poster)
TA8b3 Quantization, Coding, and Encryption (Poster)
TA8b4 Limited Feedback and Precoding (Poster)

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

Tuesday Afternoon, October 28, 2008

1:30 - 5:35 PM AFTERNOON SESSIONS
TP1a Distributed Statistical Inference
TP1b Statistical Signal Processing for Forensics and Security
TP2 Analysis Methods for Functional and Structural Brain Imaging
TP3a Delay-Rate Tradeoffs
TP3b Relaying and Cooperation II
TP4 Cooperative MIMO
TP5a Integrated Algorithm and Architecture Implementation
TP5b Cognitive Systems and Spectrum Sharing
TP6 Interference Management and Cooperative Communication in Ad-hoc Networks
TP7a Detection, Processing and Fusion in Distributed Sensor Systems
TP7b Performance Prediction and Analysis for Signal and Image Processing Systems
TP8a1 Adaptive Systems and Processing (Poster)
TP8a2 Detection and Estimation (Poster)
TP8a3 Space-Time Coding and Decoding (Poster)
TP8b1 Computer Arithmetic II (Poster)
TP8b2 Architectures and Implementation (Poster)
TP8b3 Image Analysis for Biomedical Applications (Poster)

Tuesday Evening, October 28, 2008

8:00 - 10:00 PM Bonfire at the fire pit next to Crocker Hall

2008 Asilomar Conference Session Schedule

(continued)

Wednesday Morning, October 29, 2008

- 7:30 - 9:00 AM Breakfast – Crocker Dining Hall
8:00 AM - 12:00 PM Registration – **Copyright Forms** must be turned in before the registration closes at 12:00 noon.
- 8:30 AM - 12:35 PM MORNING SESSIONS
- WA1 Sensor Networks
WA2 Biological Imaging: Acquisition, Analysis and Modeling
WA3a Ultra Wide Band
WA3b OFDMA and Multiple Access
WA4 New Directions in MIMO
WA5a Architectures for Positioning and Navigation
WA5b Low Power Methods
WA6a Network Information Theory and Security
WA6b Wireless Network Utility Maximization: Fundamental Limits and Protocols
WA7a Speech Recognition and Analysis
WA7b Adaptive Receivers for OFDM and UWB Systems
WA8a Network Coding
WA8b Video Coding
- 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

Merrill Hall - Sunday, October 26, 2008
Judging starts at 5:00 PM

(Listed in paper number order)

“Spectrum Allocation in Two-Tier Networks”

Vikram Chandrasekhar and Jeffrey Andrews, The University of Texas at Austin

“Signal-Domain Registration for Change Detection in Time-Reversal SAR”

Nicholas O’Donoghue, José Moura, and Yuanwei Jin, Carnegie Mellon University

“Parallel High-Radix Montgomery Multipliers”

Philip Amberg, Nathaniel Pinckney, and David Money Harris, Harvey Mudd College

“Refined Error Concealment for Multiple State Video Coding over Ad Hoc Networks”

Yiting Liao and Jerry D. Gibson, University of California, Santa Barbara

“Diffusion LMS Algorithms with Information Exchange”

Federico S. Cattivelli and Ali H. Sayed, University of California, Los Angeles

“Sparsity Adaptive Matching Pursuit Algorithm for Practical Compressed Sensing”

Thong Do, Johns Hopkins University, Lu Gan, Brunel University, Nam Nguyen, and Trac Tran, Johns Hopkins University

“Distortion-Rate Tradeoff of a Source Uniformly Distributed over Positive Semi-definite Matrices”

Rajesh Krishnamachari and Mahesh Varanasi, University of Colorado

“Delay-minimal Transmission for Average Power Constrained Multi-access Communications”

Jing Yang and Sennur Ulukus, University of Maryland

2008 Asilomar Conference Session Schedule

Coffee breaks will be at 10:10 AM and 3:10 PM, except on Tuesday morning when refreshments will be served outside Merrill Hall from 9:45-10:15 AM.

Tuesday, October 28, 2008

CONFERENCE WELCOME AND PLENARY SESSION 8:15 – 9:45 AM

1. Welcome from the General Chairperson:

Prof. Michael Schulte
University of Wisconsin

2. Student Paper Contest:

Prof. James Stine
Oklahoma State University

3. Session TA1a Distinguished Lecture for the 2008
Asilomar Conference

Wireless Sensing Systems: From Ecosystems to Human Systems

Prof. Deborah Estrin
University of California – Los Angeles

Abstract

Miniaturization and Moore's law has enabled us to combine sensing, computation and wireless communication in integrated, low-power devices, and to embed networks of these devices in the physical world. By placing sensing devices up close to the physical phenomena we are now able to study details in space and time that were previously unobservable. Looking back over the past few years we have made significant progress toward the vision of programmable, multi-modal, multi-scale observatories. We have made our greatest strides in these applications using: judicious application of server-side and in situ processing, mobility at multiple scales, and multi-scale data and models as context for in situ measurements. We are now applying these lessons learned and technical approaches to human as well as natural

systems, in particular by exploring use of the installed base of image, location, and acoustic sensors that we all carry around in our pockets or on our belts-mobile phones. In this talk I will draw upon experiences with pilots and prototypes at CENS.

Biography

Deborah Estrin (Ph.D. MIT, 1985; BSEE UCB, 1980) is a Professor of Computer Science, holds the Jon Postel Chair in Computer Networks, and is Founding Director of the National Science Foundation funded Center for Embedded Networked Sensing (CENS). CENS' mission is to explore and develop innovative, end-to-end, distributed sensing systems, from ecosystems to human systems. Since the late 90's Estrin's work has focused on multi-disciplinary, experimental-systems research as applied to a variety of environmental monitoring challenges. Most recently this work includes participatory-sensing systems, at the personal and community level, leveraging the location, acoustic, image, and attached-sensor data streams increasingly available from mobile phones. Previously, Estrin's research addressed Internet protocol design and scaling, in particular, inter-domain and multicast routing.

Estrin chaired a 1998 DARPA/ISAT study on sensor networks and a 2001 NRC study on Networked Embedded Computing which produced the report Embedded Everywhere. She served as a founding member of the National Ecological Observatory Network (NEON) Advisory board, and is currently a member of the NRC Computer Science and Telecommunications Board (CSTB), and TTI/Vanguard. Estrin was selected as the first ACM-W Athena Lecturer in 2006, was awarded the Anita Borg Institute's Women of Vision Award for Innovation in 2007, and was inducted as a member of the American Academy of Arts and Sciences in 2007.