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PROGRAM

Data Compression Conference (DCC 2009)

Sponsored by Brandeis University.
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Snowbird, Utah
March 16-18, 2009

PROGRAM COMMITTEE

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Ram Zamir - Tel Aviv University

SCHEDULE OVERVIEW:

Sunday Evening, March 15:
Registration and Reception

Monday, March 16:
Morning: Technical Sessions 1, 2, 3
Mid-Day: Invited Presentation
Afternoon: Technical Sessions 4, 5

Tuesday, March 17:
Morning: Technical Sessions 6, 7
Mid-Day: Technical Session 8
Afternoon: Poster Session and Reception

Wednesday, March 18:
Morning: Technical Sessions 9, 10, 11

SUNDAY EVENING
Registration / Reception, 7:00-10:00pm (Golden Cliff Room)

MONDAY MORNING

SESSION 1

Break: 9:40am - 10:00am

SESSION 2

Break: 11:00am - 11:20am

SESSION 3

Lunch Break: 12:20pm - 2:30pm

MONDAY MID-DAY INVITED PRESENTATION
2:30pm - 3:30pm

Sparse Signal Recovery, Compression, and Communication

Vivek Goyal, MIT

Sparsity has become a pervasive theme in signal processing and has recently led to wholesale reexamination of data acquisition methods. Specifically, the central result in compressed sensing is that an approximately-sparse signal can be estimated well from a surprisingly small number of randomized measurements, through the use of a convex optimization procedure. This overturns conventional ideas about sample density and resolution. In addition to reviewing the development of compressed sensing, this talk will focus on the acquisition of (exactly) sparse signals and how this relates to compression and communication. Through recent results on recovering the sparsity pattern of a signal, we explain the performance of common convex optimization and greedy reconstruction techniques relative to both optimal and computationally-trivial methods. Applications and extensions of these ideas for random access communication are also discussed.

Break: 3:30 - 4:00pm

MONDAY AFTERNOON

SESSION 4

Break: 5:00 - 5:20pm

SESSION 5

TUESDAY MORNING

SESSION 6

Break: 9:40am - 10:20am

SESSION 7

Lunch Break: 12:00pm - 2:00pm

TUESDAY MID-DAY

SESSION 8

2:00pm: Bits in Asymptotically Optimal Lossy Source Codes Are Asymptotically Bernoulli 272
Robert M. Gray and Tamás Linder†
Stanford University, †Queens University

2:20pm: Communicating the Difference of Correlated Gaussian Sources over a MAC 282
Rajiv Soundararajan and Sriram Vishwanath
University of Texas at Austin

2:40pm: An Implementable Scheme for Universal Lossy Compression of Discrete Markov Sources 292
Shirin Jalali†, Andrea Montanari†, and Tsachy Weissman†, ‡
†Stanford University, ‡Technion

3:00pm: Low Bit Rate Vector Quantization of Outlier Contaminated Data Based on Shells of Golay Codes 302
Ioan Tabus and Adriana Vasilache†
Tampere University of Technology, †Nokia Research Center

3:20pm: Universal Refinable Trellis Coded Quantization 312
Sebastian Steger and Thomas Richter†
University of Technology, Berlin, †University of Stuttgart

Break: 3:40pm - 4:00pm

TUESDAY AFTERNOON
POSTER SESSION AND RECEPTION

4:00-7:00pm

In the Golden Cliff Room

(Titles are listed at the end this program;
abstracts of each presentation appear in the proceedings.)

WEDNESDAY MORNING

SESSION 9

Break: 9:00am - 9:20am

SESSION 10

Break: 10:40am - 11:00am

SESSION 11

Poster Session

(listed alphabetically by first author)