PROGRAM

Data Compression Conference (DCC 2012)

Sponsored by Brandeis University
Proceedings published by IEEE Conference Publishing Services (CPS)

Snowbird, Utah
April 10 - 12, 2012

PROGRAM COMMITTEE

James A. Storer, *Brandeis University* **(DCC Chair)**
Michael W. Marcellin, *University of Arizona* **(Committee Chair)**
Henrique Malvar, *Microsoft Research* **(Submissions Chair)**
James E. Fowler, *Mississippi State University* **(Publicity Chair)**
Alberto Apostolico, *Georgia Institute of Technology / Università di Padova*
Ali Bilgin, *University of Arizona*
Charles D. Creusere, *New Mexico State University*
Vivek Goyal, *Massachusetts Institute of Technology*
Hamid Jafarkhani, *University of California Irvine*
Tamas Linder, *Queen's University*
Giovanni Motta, *Google, Inc.*
Gonzalo Navarro, *University of Chile*
Jan Ostergaard, *Aalborg University*
Majid Rabbani, *Eastman Kodak Co.*
Yuriy Reznik, *InterDigital, Inc.*
Thomas Richter, *University of Stuttgart*
Serap Savari, *Texas A&M University*
Khalid Sayood, *University of Nebraska*
Joan Serra-Sagrista, *Universitat Autonoma de Barcelona*
Dana Shapira, *Ashkelon Academic College*
Dafna Sheinwald, *IBM Haifa Lab*
Marcelo Weinberger, *HP Laboratories*
Jiangtao Wen, *Tsinghua University*
Gregory W. Wornell, *Massachusetts Institute of Technology*
Feng Wu, *Microsoft Research Asia*

SCHEDULE OVERVIEW:

Monday Evening, April 9:
Registration and Reception

Tuesday, April 10:
Morning: Technical Sessions 1, 2, 3
Mid-Day: Invited Presentation
Afternoon: Technical Session 4

Wednesday, April 11:
Morning: Technical Sessions 5, 6
Mid-Day: Technical Session 7
Afternoon: Poster Session and Reception

Thursday, April 12:
Morning: Technical Sessions 8, 9, 10

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

TUESDAY MORNING

SESSION 1

Break: 9:20am - 9:40am

SESSION 2

Break: 10:40am - 11:00am

SESSION 3

Lunch Break: 12:00noon - 2:30pm

TUESDAY MID-DAY INVITED PRESENTATION
2:30pm - 4:00pm

Compressive Sensing for Magnetic Resonance Imaging
Ali Bilgin
University Of Arizona

Magnetic Resonance Imaging (MRI) is a non-invasive medical imaging technique which provides valuable insight into disease development and tissue physiology without the use of ionizing radiation. Besides delivering exquisite anatomical information, MRI can provide images sensitive to multiple parameters that allow assessment of a variety of pathologies. However, despite recent technological advances, one of the problems associated with the use of MRI in a clinical or preclinical setting is the lengthy examinations. Long data acquisition times currently make MRI exams less practical, particularly for parametric imaging. The recent Compressive Sensing (CS) framework promises significant acceleration of data acquisition and MRI represents an ideal application area for CS theory: First, MR images are often very compressible. Additionally, imaging in MR is performed using linear measurements of the object and the measurements are obtained sequentially. Thus, imaging time is roughly proportional to the number of measurements and the imaging process can be accelerated if the number of measurements can be reduced. This talk describes the use of CS for MRI. After a brief introduction to MRI and CS, we will describe the current status of compressive MRI, introduce several applications, discuss their unique challenges, and present some potential future directions.

Break: 4:00 - 4:30pm

TUESDAY AFTERNOON

SESSION 4

WEDNESDAY MORNING

SESSION 5

Break: 10:00am - 10:20am

SESSION 6

Lunch Break: 12:00pm - 2:30pm

WEDNESDAY MID-DAY

SESSION 7

Break: 3:50pm - 4:30pm

WEDNESDAY AFTERNOON
POSTER SESSION AND RECEPTION

4:30-7:30pm

In the Golden Cliff Room

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

THURSDAY MORNING

SESSION 8

Break: 9:00am - 9:20am

SESSION 9

Break: 10:20am - 10:40am

SESSION 10

Poster Session

(listed alphabetically by first author)

Poster Session Continued

Poster Session Continued