PROGRAM

Data Compression Conference (DCC 2013)

Sponsored by U. Arizona, Brandeis U., Microsoft Research, IEEE Signal Processing Society
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Snowbird, Utah
March 20 - 22, 2013

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SCHEDULE OVERVIEW:

Tuesday Evening, March 19:
Registration and Reception (7pm - 10pm)

Wednesday, March 20:

Morning:	Technical Sessions 1, 2, 3	(8:00am - 12:20pm)
Mid-Day:	Keynote Presentation	(2:30pm - 3:30pm)
Afternoon:	Technical Sessions 4, 5	(4:00pm - 7:00pm)

Thursday, March 21:

Morning:	Technical Sessions 6, 7	(8:00am - noon)
Mid-Day:	Technical Session 8	(2:30pm - 3:50pm)
Afternoon:	Poster Session and Reception	(4:00pm - 7:00pm)

Friday, March 22:

Morning:	Technical Sessions 9, 10, 11	(8:00am - 1:00pm)

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

WEDNESDAY MORNING

SESSION 1 (Special Sessions on HEVC, Part 1)

Break: 9:20am - 9:40am

SESSION 2 (Special Sessions on HEVC, Part 2)

Break: 11:00am - 11:20am

SESSION 3

Lunch Break: 12:20 - 2:30pm

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

The Arrival of the High Efficiency Video Coding Standard (HEVC)

Gary Sullivan

Microsoft

With the first edition of the High Efficiency Video Coding Standard (HEVC) being completed just weeks before the conference, DCC 2013 will be the first major technical conference to feature a presentation of its final design. HEVC marks the next major milestone in the history of digital video compression. For the first time since the development of H.264/MPEG-4 AVC, the standardization community has developed and corralled recent advances in compression technology to form a coherent and fully-documented design that will enable broad use. About two decades ago, the MPEG-2 video standard created digital video television as we now know it. One decade ago, the H.264 / MPEG-4 AVC standard provided a major leap forward in compression capability and addressed the full range of video applications with a single interoperable standard. Now HEVC will provide the next major advance. HEVC can be implemented readily in practical products and can provide approximately twice the compression performance of prior standard technologies - roughly cutting in half the bit rate necessary to achieve a given level of video quality. Even for the coding of still images, the HEVC technology represents a substantial advance in compression capability. In addition to compression advances, HEVC has been designed for practical implementation and particularly with a special emphasis on the use of parallel-processing architectures. Like MPEG-2 and H.264 / MPEG-4 AVC before it, HEVC has been developed jointly by the two major standardization organizations for video coding - the ITU-T Video Coding Experts Group (VCEG) and the ISO/IEC Moving Picture Experts Group (MPEG). The partnership is known as the Joint Collaborative Team on Video Coding (JCT-VC). The new HEVC standard will thus be formally referenced both as ITU-T H.265 and ISO/IEC 23008-2 (MPEG-H Part 2). In addition to completing the first edition of the HEVC standard, these organizations are now hard at work on developing substantial extension technologies to enhance the design with profiles for application range extensions (such as enhanced chroma formats), Scalable Video Coding (SVC), and substantial new 3D capabilities.

Gary J. Sullivan has been a longstanding chairman or co-chairman of various video and image coding standardization activities in ITU-T VCEG and ISO/IEC MPEG, including the "Advanced Video Coding" (AVC) standard ITU-T H.264 | ISO/IEC 14496-10 and the new "High Efficiency Video Coding" (HEVC) standard ITU-T H.265 | ISO/IEC 23008-2. He is a Video and Image Technology Architect in the Windows division of Microsoft Corporation, where he has been the originator and lead designer of the DirectX Video Acceleration (DXVA) video decoding feature of Microsoft Windows. He has received the IEEE Masaru Ibuka Consumer Electronics Award, the IEEE Consumer Electronics Engineering Excellence Award, the INCITS Technical Excellence Award, the IMTC Leadership Award, and the University of Louisville J. B. Speed Professional Award in Engineering. The team efforts that he has led have been recognized by an ATAS Primetime Emmy Engineering Award and a pair of NATAS Technology & Engineering Emmy Awards. He is a Fellow of the IEEE and SPIE.

Break: 3:30pm - 4:00pm

WEDNESDAY AFTERNOON

SESSION 4

Break: 5:20pm - 5:40pm

SESSION 5

THURSDAY MORNING

SESSION 6 (Special Sessions on HEVC, Part 3)

Break: 10:00am - 10:20am

SESSION 7

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

THURSDAY MID-DAY

SESSION 8

2:30pm: Linear and Geometric Mixtures – Analysis 301
Christopher Mattern
Technische Universität Ilmenau

2:50pm: Multiple Description Coding for Closed Loop Systems over Erasure Channels 311
Jan Østergaard and Daniel E. Quevedo†
Aalborg University, †The University of Newcastle

3:10pm: Partition Tree Weighting 321
Joel Veness, Martha White, Michael Bowling, and András György
University of Alberta

3:30pm: Structural Group Sparse Representation for Image Compressive Sensing Recovery 331
Jian Zhang†, Debin Zhao†, Feng Jiang†, and Wen Gao†, ‡
†Harbin Institute of Technology, ‡Peking University

THURSDAY 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.)

FRIDAY MORNING

SESSION 9

Break: 9:40am - 10:00am

SESSION 10

Break: 11:40am - 12:00pm

SESSION 11

Poster Session

(listed alphabetically by first author)