

Monday, December 5	
09:00 -09:20	<u>Welcome Notes</u> André Kaup & University Official
09:20-10:20	<u>Overview Talk 1</u> Bernd Girod
10:20-10:40	Coffee Break
10:40-13:00	Special Session I: Challenges in Perceptual Compression of Video
<b>10:40</b>	<u>Retina-inspired Video Codec</u> Effrosyni Doutsis (University of Nice, Sophia-Antipolis (UNS), i3s, CNRS & SGME, France); Marc Antonini and Lionel Fillatre (Université de Nice Sophia Antipolis, France); Julien Gaulmin (SGME, France)
<b>11:00</b>	<u>End-to-end optimization of nonlinear transform codes for perceptual quality</u> Johannes Ballé (New York University & Howard Hughes Medical Institute, USA); Valero Laparra (Universidad de Valencia, Spain); Eero P Simoncelli (New York University & Howard Hughes Medical Institute, USA)
<b>11:20</b>	<u>A Foveated Short Term Distortion Model For Perceptually Optimized Dynamic Textures Compression In HEVC</u> Karam Naser (University of Nantes & IRCCyN Lab - IVC team, France); Vincent Ricordel (IRCCyN & University of Nantes, France); Patrick Le Callet (Polytechnique Nantes, France)
<b>11:40</b>	<u>Video Texture Analysis based on HEVC Encoding Statistics</u> Mariana Afonso, Angeliki Katsenou, Fan Zhang, Dimitris Agrafiotis and David Bull (University of Bristol, United Kingdom)
<b>12:00</b>	<u>Predicting Video Rate-Distortion Curves using Textural Features</u> Angeliki Katsenou, Mariana Afonso, Dimitris Agrafiotis and David Bull (University of Bristol, United Kingdom)
<b>12:20</b>	<u>Motion-Based Analysis and Synthesis of Dynamic Textures</u> Olena Chubach (RWTH Aachen University & Institut für Nachrichtentechnik, Germany); Patrick Garus and Mathias Wien (RWTH Aachen University, Germany)
<b>12:40</b>	<u>Dynamic Texture Synthesis using Linear Phase Shift Interpolation</u> Uday Thakur (RWTH Aachen University, Germany); Karam Naser (University of Nantes & IRCCyN Lab - IVC team, France); Mathias Wien (RWTH Aachen University, Germany)
13:00-14:00	Lunch Break
14:00-15:00	Image Coding
<b>14:00</b>	<u>Unbiasedness of Regression Wavelet Analysis for Progressive Lossy-to-Lossless Coding</u> Naoufal Amrani and Joan Serra-Sagrista (Universitat Autònoma de Barcelona, Spain); Michael W Marcellin (University of Arizona, USA)
<b>14:15</b>	<u>Adaptive intra prediction algorithm based on extended LARS</u> Yuichi Sayama (NTT Corporation & NTT Media Intelligence Laboratories, Japan); Yukihiro Bandou Seishi Takamura and Atsushi Shimizu (NTT, Japan)
<b>14:30</b>	<u>Enhancement of Intra-Coded Pictures for Greater Coding Efficiency</u> Brett Hosking, Dimitris Agrafiotis and David Bull (University of Bristol, United Kingdom); Nick Easton (BAE Systems, United Kingdom)

<b>14:45</b>	<u>Contour-based Multidirectional Intra Coding for HEVC</u> Thorsten Laude and Jörn Ostermann (Leibniz Universität Hannover, Germany)
15:00-17:00	Poster Session I & Coffee
17:00-18:00	Video Coding
<b>17:00</b>	<u>Homogeneous motion discovery oriented reference frame for high efficiency video coding</u> Ashek Ahmmed (RUET, Bangladesh); David Taubman and Aous T. Naman (University of New South Wales, Australia); Mark R Pickering (UNSW Canberra, Australia)
<b>17:15</b>	<u>Motion Vector Prediction Methods Considering Prediction Continuity in HEVC</u> Shinobu Kudo and Masaki Kitahara (NTT Corporation, Japan); Atsushi Shimizu (NTT, Japan)
<b>17:30</b>	<u>Segmentation-based Partitioning for Motion Compensated Prediction in Video Coding</u> Max Blaeser, Cordula Heithausen and Mathias Wien (RWTH Aachen University, Germany)
<b>17:45</b>	<u>Higher-Order Motion Models for Temporal Frame Interpolation with Applications to Video Coding</u> Dominic Rufenacht, Reji Mathew and David Taubman (University of New South Wales, Australia)

Poster Session	No.	Poster	Author
I	1		
I	2	<u>Two-stage Picture Padding for High Efficient Video Coding</u>	Fangdong Chen (University of Science and Technology of China, P.R. China)
I	3	<u>Coding Efficiency Comparison of AOM/AV1, H.265/MPEG-HEVC, and H.264/MPEG-AVC Encoders</u>	Dan Grois (Fraunhofer Institute for Telecommunications - Heinrich Hertz Institute, Germany); Tung Nguyen (Fraunhofer HHI, Germany); Detlev Marpe (Fraunhofer Institute for Telecommunications - Heinrich Hertz Institute, Germany)
I	4	<u>Two-Pass Rate Control for UHDTV Delivery with HEVC</u>	Ivan Zupancic (Queen Mary University of London, United Kingdom); Ebroul Izquierdo (Queen Mary, University of London, United Kingdom); Matteo Naccari (British Broadcasting Corporation - Research and Development, United Kingdom); Marta Mrak (BBC, United Kingdom)
I	5	<u>A Rate Control Algorithm for Video Coding in Augmented Reality Applications</u>	Simone Milani, Gianluca Agresti and Giancarlo Calvagno (University of Padova, Italy)
I	6	<u>An Application of Unified Reference Picture List for Motion-Compensated Video Compression</u>	Sebastian Schwarz (Nokia Technologies, Finland); Marta Mrak (BBC, United Kingdom)
I	7	<u>Recursive Frequency Selective Reconstruction of Non-Regularly Sampled Video Data</u>	Markus Jonscher and Karina Jaskolka (Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany); Jürgen Seiler and Andre Kaup (University of Erlangen-Nuremberg, Germany)
I	8	<u>DashCam Video Compression using Historical Data</u>	Biao Ma and Amy Reibman (Purdue University, USA)
I	9	<u>Multi-Objective Design Space Exploration for the Optimization of the HEVC Mode Decision Process</u>	Christian Herglotz and Rafael Rosales (Friedrich-Alexander University Erlangen-Nürnberg (FAU), Germany); Michael Glaß (Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany); Jürgen Teich and Andre Kaup (University of Erlangen-Nuremberg, Germany)
I	10	<u>VPx VIDEO CODING FOR LOSSY TRANSMISSION CHANNELS USING ERROR RESILIENCE PACKETS</u>	Di Chen, Neeraj Gadgil and Ed Delp (Purdue University, USA)
I	11	<u>Optimized Processing Order for 3D Hole Filling in Video Sequences Using Frequency Selective Extrapolation</u>	Jürgen Seiler (University of Erlangen-Nuremberg, Germany); Susanne Schöll (Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany); Wolfgang Schnurrer and Andre Kaup (University of Erlangen-Nuremberg, Germany)

I	12	<u>Real-time 8K/4K Video Coding System with Super-resolution Inter-layer Prediction</u>	Toshie Misu and Shunsuke Iwamura (NHK, Japan); Yasutaka Matsuo (Japan Broadcasting Corporation (NHK), Japan); Kikufumi Kanda and Shinichi Sakaida (NHK, Japan)
I	13	<u>Low Complexity Video Encoding For UAV Inspection</u>	Jacob Søggaard (Technical University of Denmark (DTU), Denmark); Ruo Zhang, Soren Forchhammer and Kabir Hossain (Technical University of Denmark, Denmark)
I	14	<u>HDR Video Quality Evaluation of HEVC and VP9 Codecs</u>	Glenn Herrou (b-com); Wassim Hamidouche (IETR-INSA Rennes, France); Xavier Ducloux (b-com)
I	15	<u>Moving Object Tracking for Aerial Video Coding using Linear Motion Prediction and Block Matching</u>	Holger Meuel (Leibniz Universität Hannover, Germany); Luis Angerstein (Leibniz Universitaet Hannover, Germany); Roberto Henschel, BodoRosenhahn and Jörn Ostermann (Leibniz Universität Hannover, Germany)
I	16	<u>Pre-Encoding based Statistical-Multiplexing for Hybrid Delivery of UHD Services using SHVC</u>	Thibaud Biatek (BCom & IETR/INSA Rennes, France); Wassim Hamidouche (IETR-INSA Rennes, France); Jean-Francois Travers (TDF, France); Olivier Deforges (IETR, Rennes, France)