MONDAY, Sept. 22

MORNING

Time: 8:50-9:00
WELCOME REMARKS
Chairs: Susanto Rahardja, National University of Singapore, Singapore and Zhengyou Zhang, Microsoft Research, USA

Time: 9:00-10:00
KEYNOTE TALK
Title: Multimedia Security: Technology and Society by Ton Kalker, DTS, Inc., USA
Chair: Zhengyou Zhang, Microsoft Research, USA

Time: 10.00-11.00
ORAL SESSION 1: 3D VIDEO ANALYSIS
Chair: TBD

Estimating Spatial Layout of Rooms from RGB-D Videos
Anran Wang, Nanyang Technological University, Singapore; Jiwen Lu, Advanced Digital Sciences Center, Singapore; Jianfei Cai, Nanyang Technological University, Singapore; Gang Wang, Nanyang Technological University, Singapore; Tat-Jen Cham, Nanyang Technological University, Singapore

Efficient Automatic Detection of 3D Video Artifacts
Mohan Liu, Fraunhofer HHI, Germany; Patrick Ndjiki-Nya, Fraunhofer HHI Image Processing, Germany; Ioannis Mademlis, AUTH, Greece; Nikos Nikolaidis, AUTH, Greece; Ioannis Pitas, University of Thessaloniki, Greece; Jean-Charles Le Quintrec, ARTE, Tufalu

Shot type characterization in 2D and 3D video content
Ioannis Tsingalis, Aristotle University, Greece; Anastasios Tefas, Aristotle University of Thessaloniki, Greece; Nikos Nikolaidis, AUTH, Greece; Ioannis Pitas, University of Thessaloniki, Greece
Note: All oral presentations are also part of the Poster session of the day and thus oral session authors should also prepare a poster.

**Time: 11:00-11:30**

**Morning Break**

Time: 11:30-12:30

**Poster Session 1: Multimedia Processing Systems, and Applications**

Chair: TBD

A hybrid approach to animating the murals with Dunhuang style
Bingwen Jin, Zhejiang University, China; Linglong Feng, Zhejiang University, China; Gang LIU, Dunhuang Academy, China; Huaqing Luo, Dunhuang Academy, China; Weidong Geng, Zhejiang University, China

Vision-based Tracking in Large Image Database for Real-Time Mobile Augmented Reality
Madjid Maidi, Telecom SudParis, France; Marius Preda, Telecom SudParis, France; Yassine Lehiani, Telecom SudParis, France; Traian Lavric, Telecom SudParis, France

A fusion-based enhancing approach for single sandstorm image
Xueyang Fu, Xiamen University, China; Yue Huang, Xiamen University, China; Delu Zeng, China; Xiao-Ping Zhang, Ryerson University, Canada; Xinghao Ding, Xiamen University, China

Robust Mixed Noise Removal with Non-parametric Bayesian Sparse Outlier Model
Peixian Zhuang, Xiamen University, China; Wei Wang, School of Information Science and Engineering, Xiamen University, China; Delu Zeng, China; Xinghao Ding, Xiamen University, China

Stable Pose Tracking from a Planar Target with an Analytical Motion Model in Real-time Applications
Po-Chen Wu, National Taiwan University, Taiwan; Yao-Hung Tsai, National Taiwan University, Taiwan; Shao-Yi Chien, National Taiwan University, Taiwan

Design of Extrafine Complex Directional Wavelet Transform and Application to Image Denoising
Shrishail Gajbhar, DA-IICT, Gandhinagar, India; Manjunath Joshi, DA-IICT, Gandhinagar, India

Video Super-Resolution via Dynamic Texture Synthesis
Chih-Chung Hsu, National Tsing Hua University, Taiwan; Li-Wei Kang, National Yunlin University of Science and Technology, Taiwan; Chia-Wen Lin, , Taiwan
Cost Effective Video Streaming Using Server Push over HTTP 2.0
Sheng Wei, Adobe Systems Inc., USA; Viswanathan Swaminathan, Adobe Systems Inc., USA

Within- and Cross- Database Evaluations for Gender Classification via BeFIT Protocols
Nesli Erdogmus, Idiap Research Institute, Switzerland; Matthias Vanoni, Idiap Research Institute, Switzerland; Sebastien Marcel, Idiap Research Institute, Switzerland

Extrinsic Calibration for Wide-Baseline RGB-D Camera Network
Ju Shen, University of Kentucky, USA; Wanxin Xu, University of Kentucky, USA; Ying Luo, University of Kentucky, USA; Po-chang Su, University of Kentucky, USA; Samson Cheung, University of Kentucky, USA

Time: 12:30-14:00
Lunch Break

AFTERNOON

Time: 14:00-15:00
OVERVIEW TALK
Title: Autonomous Virtual Humans and Social Robots in Telepresence by Nadia Thalman, Institute for Media Innovation, Nanyang Technological University, Singapore
Chair: TBD

Time: 15.00-16.00
Oral Session 2: Classification and Recommendation
Chair: TBD

A Pilot Study on Affective Classification of Facial Images for Emerging News Topics
Ligang Zhang, Xi’an University of Technology, China; Andy Cher Han Lau, Queensland University of Technology, Australia; Dian Tjondronegoro, Queensland University of Technology, Australia; Vinod Chandran, Queensland University of Technology, Australia

SVM Is Not Always Confident: Telling Whether the Output from Multiclass SVM Is True or False by Analysing Its Confidence Values
Toshihiko Yamasaki, University of Tokyo, Japan; Takaki Maeda, Japan; Kiyoharu Aizawa, Japan

Music Recommendation Based on Artist Novelty and Similarity
Ning Lin, National Taiwan University, Taiwan; Ping-Chia Tsai, National Taiwan University, Taiwan; Yu-An Chen, National Taiwan University, Taiwan; Homer H. Chen, National Taiwan University, Taiwan

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Time: 16:00-16:30
Afternoon Break

Time: 16:30-17:30
PANEL SESSION
Title: Multimedia Security: Technology and Society
Chair: Ton Kalker, DTS, Inc., USA

Time: 19:00
WELCOME RECEPTION
TUESDAY, Sept. 23

MORNING

Time: 9:00-10:00
KEYNOTE TALK
Title: Person-Centered Multimedia Computing: A New Paradigm Inspired by Assistive and Rehabilitative Application by Sethuraman Panchanathan, Arizona State University, USA
Chair: Susanto Rahardja, National University of Singapore, Singapore

Time: 10.00-11.00
Oral Session 3: Event Detection and Recognition
Chair: TBD

Graph-based Depth Video Denoising and Event Detection for Sleep Monitoring
Cheng Yang, University of Strathclyde, England; Yu Mao, National Institute of Informatics, Japan; Gene Cheung, National Institute of Informatics, Japan; Vladimir Stankovic, University of Strathclyde, England; Kevin Chan, USA

Gaze Direction Estimation From Static Images
Krystian Radlak, Silesian University of Technol, Poland; Michal Kawulok, Poland; Bogdan Smolka, Poland; Natalia Radlak, Poland

Soccer Video Summarization based on Cinematography and Motion Analysis
Ngoc Nguyen, JAIST, Japan; Atsuo Yoshitaka, Jaist, Japan

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Time: 11:00-11:30
Morning Break

Time: 11.30-12.30
Poster Session 2: Multimedia Analysis & Retrieval
Chair: TBD

Skeleton-Guided Vectorization of Chinese Calligraphy Images
GrabCut-Based Abandoned Object Detection
Kahlil Muchtar, National Sun Yat-sen University, Taiwan; Chih-Yang Lin, Asia University, Taiwan; Chia-Hung Yeh, National Sun Yat-sen University, Taiwan

View-invariant Feature Discovering for Multi-camera Human Action Recognition
Hong Lin, Tianjin University, China; Lekha Chaisorn, NUS, Singapore; Yongkang Wong, China; An-An Liu, Tianjin University China; Yu-Ting Su, Tianjin University, China; Mohan Kankanhalli, National University of Singapore, Singapore

NMF-based Multiple Pitch Estimation Using Sparseness and Inter-frame Continuity Constraints
Takanori Fujisawa, Keio University, Japan; Ikuo Degawa, Keio University, Japan; Masaaki Ikehara, Keio University, Japan

Social Image Search exploiting Joint Visual-Textual information within a Fuzzy Hypergraph Framework
Konstantinos Pliakos, Aristotle University of Thessaloniki, Greece; Constantine Kotropoulos, Aristotle University of Thessaloniki, Greece

Optimal Detector for Camera Model Identification Based on an Accurate Model of DCT Coefficients
Thanh Hai Thai, Troyes University of Technology, France; Remi Cogranne, Troyes University of Technology, France; Florent Retraint, Troyes University of Technology, France

Multi-View Action Recognition by Cross-domain Learning
Weizhi Nie, Tianjin University, China; An-An Liu, Tianjin University, China; Jing Yu, Tianjin University, China; Yu-Ting Su, Tianjin University, China; Lekha Chaisorn, NUS, Singapore; Yongkang Wong, China

Local Stereo Matching Algorithm using Rotation-Skeleton-Based Region
Xing Li, Beijing Jiaotong University, China; Yao Zhao, China; Chun Yu Lin, China; Chao Yao, China

Classifying Harmful Children’s Content Using Affective Analysis
Joseph Santarcangelo, Ryerson University, Canada; Xiao-Ping Zhang, Ryerson University, Canada

Background Subtraction Under Sudden Illumination Change
Hasan Sajid, University of Kentucky, USA; Samson Cheung, University of Kentucky, USA

Time: 11.30-12.30
Sketch & Demo Session
Chair: TBD

Adaptive Intra Refresh Algorithm for HEVC Video Transmission
Htoo Maung, Chulalongkorn University, Thailand; Supavadee Aramvith, Chulalongkorn University, Thailand

Parametrization of 3D point clouds using Superquadrics
Marco Niehaus, Technical University of Ilmenau, Germany; Gerald Schuller, Technical University of Ilmenau, Germany

Free-viewpoint Video Synthesis for Sport Scenes Captured with a Single RGB-D Camera
Hiroshi Sankoh, KDDI R&D Laboratories Inc., Japan; Sei Naito, KDDI R&D Laboratories Inc., Japan

Note: Demo and sketch presentations will follow a poster format presentation (naturally the demo presentations with the corresponding demo).

Time: 12:30-14:00
Lunch Break

AFTERNOON

Time: 14:00-15:00
OVERVIEW TALK
Title: Towards Smart Social Systems by Ramesh Jain, University of California, Irvine, USA
Chair: TBD

Time: 15.00-16.00
Oral Session 4: Scalable Coding
Chair: TBD

A New Error-Mapping Scheme for Scalable Audio Coding
Haibin Huang, Institute for Infocomm Research, Singapore; Susanto Rahardja, National University of Singapore, Singapore

Bidirectional Hierarchical Anchoring of Motion Fields for Scalable Video Coding
Dominic Ruefenacht, UNSW, Australia; Reji Mathew, UNSW, Australia; David Taubman, UNSW, Australia

Embedded Coding of Optical Flow Fields for Scalable Video Compression
Sean Young, UNSW, Australia; Reji Mathew, UNSW, Australia; David Taubman, UNSW, Australia

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Time: 16:00-16:30
Afternoon Break

Time: 16:30-17:30
PANEL SESSION
Title: Wearable multimedia computing
Chair: Homer Chen, National Taiwan University, Taiwan

Time: 19:00
BANQUET
WEDNESDAY, Sept. 24

MORNING

Time: 9:00-10:00
KEYNOTE TALK
Title: A New Domain-oriented Video Coding by Wen Gao, Peking University, China
Chair: Fernando Pereira, IST-IT, Portugal

Time: 10.00-11.00
Oral Session 5: HEVC
Chair: TBD

Towards Efficient Wavefront Parallel Encoding of HEVC: Parallelism Analysis and Improvement
Keji Chen, Peking University, China; Yizhou Duan, China; Jun Sun, China; Zongming Guo, China

Highly Optimized Implementation of HEVC Decoder for General Processors
Shengbin Meng, Peking University, China; Yizhou Duan, China; Jun Sun, China; Zongming Guo, China

Adaptive Low Complexity Colour Transform for Video Coding
Rajitha Weerakkody, BBC R&D, UK, England; Marta Mrak, BBC R&D, UK, England

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Time: 11:00-11:30
Morning Break

Time: 11.30-12.30
Poster Session 3: Visual Coding
Chair: TBD

An Improved Rate Control Algorithm for SVC with Optimised MAD Prediction
Xin Lu, Warwick, England; Graham Martin, University of Warwick, England
Iterative Hierarchical True Motion Estimation for Temporal Frame Interpolation
Anton Veselov, SUAI, Russia; Marat Gilmudtinov, SUAI, Russia

A Novel Video Coding Scheme using a Scene Adaptive Non-Parametric Background Model
Subrata Chakraborty, School of Management & Enterprise, University of Southern Queensland, QLD 4300, Australia; Manoranjan Paul, Charles Sturt University, Australia; Manzur Murshed, Federation University, Australia; Mortuza Ali, Federation University, Australia

Fast Mode Decision for Error Resilient Video Coding
Yunong Wei, Communication Uni. of China, China; Yuan Zhang, China; Jinyao Yan, China

Compression of HD Videos by a Contrast-Based Human Attention Algorithm
Sylvia N’guessan, SCU, USA; Nam Ling, SCU, USA; Zhouye Gu, SCU, USA

Block-based Compressive Sensing of Video using Local Sparsifying Transform
Byeungwoo Jeon, Sungkyunkwan University, South Korea; Chien Van Trinh, Sungkyunkwan University, South Korea; Viet Anh Nguyen, Sungkyunkwan University, South Korea

A Fast Intermode Decision Algorithm Based on Analysis of Inter Prediction Residual
Luheng Jia, HKUST, Hong Kong; Oscar C. Au, HKUST, Hong Kong; Chi-ying Tsui, HKUST, Hong Kong

AUTOMATIC HIGH DYNAMIC RANGE HALLUCINATION IN INVERSE TONE MAPPING
Pin-Hung Kuo, National Taiwan University, Taiwan; Huai Jen Liang, National Taiwan University, Taiwan; Chi-Sun Tang, National Taiwan University, Taiwan; Shao-Yi Chien, National Taiwan University, Taiwan

H.264/AVC Backward Compatible Bit-Depth Scalable Video Coding
Vasco Nascimento, IST-IT, Portugal; João Ascenso, IST-IT, Portugal; Fernando Pereira, IST-IT, Portugal

Correlation Modeling for a Distributed Scalable Video Codec based on the HEVC Standard
Xiem Hoang Van IST-IT, Portugal; João Ascenso, IST-IT, Portugal; Fernando Pereira, IST-IT, Portugal

Time: 12:30-14:00
Lunch Break
AFTERNOON

Time: 14:00-15:00

OVERVIEW TALK
Title: 2D/3D AudioVisual Content Analysis & Description by Ioannis Pitas, Aristotle University of Thessaloniki, Greece
Chair: TBD

Time: 15.00-16.00

Special Session: Quality Assessment
Chair: António Pinheiro, UBI, Portugal

Survey of Web-based Crowdsourcing Frameworks for Subjective Quality Assessment
Tobias Hossfeld, University of Würzburg, Germany; Matthias Hirth, University of Würzburg, Germany; Pavel Korshunov, EPFL, Switzerland; Philippe Hanhart, EPFL, Switzerland; Bruno Gardlo, FTW, Austria; Christian Keimel, TU Munich, Germany; Christian Timmerer, Multimedia Communication, Alpen-Adria-Universität Klagenfurt, Austria

Free-viewpoint video sequences: a new challenge for objective quality metrics
Philippe Hanhart, EPFL, Switzerland; Emilie Bosc, Université de Nantes, France; Patrick Le Callet, Université de Nantes, France; Touradj Ebrahimi, EPFL, Switzerland

Subjective and objective quality assessment of HDR images compressed with JPEG-XT
Claire Mantel, Technical University of Denmark, Denmark; Stefan Catalin Ferchiu, Technical University of Denmark, Denmark; Søren Forchhammer, Technical University of Denmark, Denmark

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Time: 16:00-16:30

Afternoon Break

Time: 16.30-17.10

Special Session: Quality Assessment (Cont)
Chair: António Pinheiro, UBI, Portugal

Performance evaluation of the emerging JPEG XT image compression standard
Antonio Pinheiro, UBI, Portugal; Karel Fliegel, CTU in Prague, Czech Republic; Pavel Korshunov, EPFL, Switzerland; Lukas Krasula, CTU in Prague, Czech Republic; Marco Bernardo, UBI, Portugal; Manuela Pereira, UBI, Portugal; Touradj Ebrahimi, EPFL, Switzerland
QoE-Driven Performance Analysis of Cloud Gaming Services
Zi-Yi Wen, National ChiaoTung University, Taiwan; Hsu-Feng Hsiao, National Chiao Tung University, Taiwan

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Time: 17.10-17.30
Closing Remarks
Chairs: Susanto Rahardja, National University of Singapore, Singapore and Zhengyou Zhang, Microsoft Research, USA