



Multimedia Systems 2010

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Technical Program

The technical program includes the following four invited papers and 25 papers selected by the program committee.

Introduction - Monday, Feb. 22, 8:30-8:45am

Coding and Processing - Monday, Feb. 22, 8:45am-10:25am

- **8:45am - Exploring NVIDIA-CUDA for video coding**
Aleksandar Colic; Hari Kalva; Borko Furth
- **9:10am - Exploiting Multi-level Parallelism for Low-latency Activity Recognition in Streaming Video**
Mingyu Chen; Lily Mummert; Padmanabhan Pillai; Alexander Hauptmann; Rahul Sukthankar
- **9:35am - Semi-automatic Registration of Videos for Improved Watermark Detection**
Philipp Schaber; Stephan Kopf; Niels Thorwirth; Wolfgang Effelsberg
- **10:00am - Low Overhead Container Format for Adaptive Streaming**
Haakon Riiser; Pål Halvorsen; Carsten Griwodz; Dag Johansen

System Performance - Monday, Feb. 22, 10:45am-12:00pm

- **10:45am - Empirical Evaluation of Latency-sensitive Application Performance in the Cloud**
Sean K Barker; Prashant Shenoy
- **11:10am - Online Layered Learning for Cross-layer Optimization of Dynamic Multimedia Systems**
Nicholas Mastronarde; Mihaela van der Schaar
- **11:35am - Storage Optimization for a Peer-to-Peer Video-on-Demand Network**
Jagadeesh M Dyaberi; Vijay S Pai

Wireless and Mobile - Monday, Feb. 22, 1:30pm-3:10pm

- **1:30pm - A Credit-based Home Access Point (CHAP) to Improve Application Performance on IEEE 802.11 Networks**
Choong-Soo Lee; Mark Claypool; Robert Kinicki
- **1:55pm - Multicast Scheduling for Scalable Video Streaming in Wireless Networks**
Vladimir Vukadinovic; Gyorgy Dan
- **2:20pm - Modeling and Generation of AVC and SVC-TS Mobile Video Traces for Broadband Access Networks**
Abdel Karim Al Tamimi; Raj Jain; Chakchai So-In
- **2:45pm - Video Streaming over Cooperative Wireless Networks**
Yi Liu; Mohamed Hefeeda

Scalability - Monday, Feb. 22, 3:30pm-5:10pm

- **3:30pm - Achieving Viewing Time Scalability in Mobile Video Streaming Using Scalable Video Coding**
Cheng-Hsin Hsu; Mohamed Hefeeda
- **3:55pm - Live Peer-to-Peer Streaming with Scalable Video Coding and Networking Coding**
Shabnam Mirshokraie; Mohamed Hefeeda
- **4:20pm - Analysis of Peer-assisted Video-on-Demand Systems with Scalable Video Streams**

- Kianoosh Mokhtarian; Mohamed Hefeeda
 - **4:45pm - Multi-Application Inter-Tile Synchronization on Ultra-High-Resolution Display Walls**
Sungwon Nam; Sachin Deshpande; Venkatram Vishwanath; Byungil Jeong; Luc Renambot; Jason Leigh
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Streaming- Tuesday, Feb. 23, 8:30am-9:45am

- **8:30am - An Evaluation of TCP-based Rate-Control Algorithms for Adaptive Internet Streaming of H.264/SVC**
Robert Kuschnig; Ingo Kofler; Hermann Hellwagner
- **8:55am - Quality-Aware Segment Transmission Scheduling in Peer-to-Peer Streaming Systems**
Cheng-Hsin Hsu; Mohamed Hefeeda
- **9:20am - Paceline: Latency Management through Adaptive Output**
Aiman M Erbad; Mahdi Tayarani Najaran; Charles Krasic

Invited Papers - Tuesday, Feb. 23, 10:00am-12:00pm

- **10:00am - Latency Can Kill: Precision and Deadline in Online Games**
Mark Claypool, Worcester Polytechnic Institute
- **10:30am - Extending Models of Conflict and Intent Dynamics in Narrative-Based Virtual Worlds**
R. Michael Young, North Carolina State University
- **11:00am - Blending Games, Multimedia and Reality**
Chris Gauthier Dickey, University of Denver
- **11:30am - Reconfigurable Video Coding - a Stream Programming Approach to the Specification of New Video Coding Standards**
Marco Mattavelli, EPFL

Search and Navigation - Tuesday, Feb. 23, 1:30pm-2:45pm

- **1:30pm - Vector Model in Support of Versatile Georeferenced Video Search**
Seon Ho Kim; Sakire Arslan Ay; Byunggu Yu; Roger Zimmermann
- **1:55pm - The Video Explorer: A Tool for Navigation and Searching within a Single Video based on Fast Content Analysis**
Klaus Schöffmann; Mario Taschwer; Laszlo Böszörmenyi
- **2:20pm Supporting Zoomable Video Streams with Dynamic Region-of-Interest Cropping**
Khiem Ngo; Guntur Ravindra; Axel Carlier; Wei Tsang Ooi

Tele-immersion and Virtual Environments - Tuesday, Feb. 23, 3:00pm-4:40pm

- **3:00pm - Adaptive Mixed Reality Stroke Rehabilitation: System Architecture and Evaluation Metrics**
Yinpeng Chen; Nicole Lehrer; Hari Sundaram; Thanassis Rikakis
 - **3:25pm - A Methodology for Remote Virtual Interaction in Teleimmersive Environments**
Ramanarayan Vasudevan; Edgar Lobaton; Gregorij Kurillo; Ruzena Bajcsy; Tony Bernardin; Bernd Hamann; Klara Nahrstedt
 - **3:50pm - UbiREMOTE: Framework for Remotely Controlling Networked Appliances through Interaction with 3D Virtual Space**
Kohta Kiyokawa; Shinya Yamamoto; Naoki Shibata; Keiichi Yasumoto; Minoru Ito
 - **4:15pm - Virtual Worlds Real Traffic: Interaction and Adaptation**
Alan Miller; Iain Oliver; Colin Allison
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