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PROCEEDINGS

Mobile Devices and Multimedia: Enabling Technologies, Algorithms, and Applications 2017

Editors: **David Akopian,** The Univ. of Texas at San Antonio (United States),
Reiner Creutzburg, Fachhochschule Brandenburg (Germany)

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Mobile Devices and Multimedia: Enabling Technologies, Algorithms, and Applications 2017

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Mobile Devices and Multimedia: Enabling Technologies, Algorithms, and Applications 2017

Wednesday, February 1, 2017

Mobile Sensors, Localization, and Applications

Session Chair: David Akopian, The University of Texas at San Antonio (United States)

8:50 – 10:10 am
Grand Peninsula Ballroom B

8:50   5
Introduction to WLAN-based indoor positioning of mobile devices (Invited), *David Akopian, Ali Khalajmehrabadi, and Nikolaos Gatsis, The University of Texas at San Antonio (United States)* [MOBMU-292]

9:10   15
Android door/window image-based measurements application, *Khader Mohammad, Ahmad Alsadeh, Amer Qarabsa, Shatha Khalil, and Mona Dirieh, Birzeit University (Palestine)* [MOBMU-299]

9:30
Usability of smart mobile micro photonic sensor systems for industrial and non-industrial quality assurance, *Paul-Gerald Dittrich[1,2] and Dietrich Hofmann[1]; [1]Technologie- und Innovationspark Jena GmbH and [2]Technische Universität Ilmenau (Germany)* [MOBMU-293]

9:50   22
Blackmagic production camera raw color investigation by spectral analysis of Macbeth color charts, *Eberhard Hasche, Thomas Schrader, and Reiner Creutzburg, Technische Hochschule Brandenburg - Brandenburg University of Applied Science (Germany)* [MOBMU-294]

10:10   34
Liquid crystal lens characterization for integrated depth sensing and all in focus imaging application, *Simon Emberger[1], Laurent Alacoque[1], Antoine Dupret[1], Capucine Lecat-Mathieu de Boissac[1], Jean Louis de Bougrenet de la Tocnaye[2], and Nicolas Fraval[3]; [1]CEA Leti, [2]Telecom Bretagne, and [3]Evosens (France)* [MOBMU-295]

10:00 am – 4:00 pm   Industry Exhibition

10:30 – 11:00 am   Coffee Break

Emerging Applications and Methods

Session Chair: Reiner Creutzburg, Brandenburg University of Applied Sciences (Germany)

11:00 am – 12:20 pm
Grand Peninsula Ballroom B

11:00   40
A billion words to remember, *George Nagy, Rensselaer Polytechnic Institute (United States)* [MOBMU-297]

11:20   44
Demographic prediction based on mobile user data, *Lyubov Podoynitsina, Alexander Romanenko, Konstantin Kryzhanovskiy, and Andrey Moiseenko, Samsung R&D Institute (Russian Federation)* [MOBMU-298]

11:40   48
Optimizing video transmission for mobile devices, *Chulhee Lee, Sangwook Baek, Guiwon Seo, Jaein Ryu, and Kyung-Won Kang, Yonsei University (Republic of Korea)* [MOBMU-300]

12:00   54
Comparative visualization of the geometry of a hollow box girder using 3D-LiDAR – Part 2: Reconstruction of a 3D geometric model, *Stefan Maack[1], Jenny Knackmuss[2], and Reiner Creutzburg[2]; [1]Bundesanstalt für Materialprüfung and [2]Technische Hochschule Brandenburg (Germany)* [MOBMU-308]

12:20 – 2:00 pm   Lunch Break

EI 2017 Wednesday Plenary and Symposium Awards
Session Chairs: Joyce E. Farrell, Stanford University, and Nitin Sampat, Rochester Institute of Technology (United States)
2:00 – 3:00 pm
Grand Peninsula Ballroom D

Designing VR video camera systems, *Brian Cabral, Facebook, Inc. (United States)*

Brian Cabral is Director of Engineering at Facebook, leading the Surround 360 VR camera team, specializing in computational photography, computer vision, and computer graphics. He has published a number of papers in the area of computer graphics and imaging including the pioneering Line Integral Convolution algorithm. Cabral discusses developing Facebook Surround 360, an open, high-quality 3D-360 video capture system. VR video capture systems are composed of multiple optical and digital components – all of which must operate as if they are one seamless optical system. The design of VR video cameras, optical choices, SNR, etc., require a new set of technologies and engineering approaches, with tight coupling to the computational system components.

3:00 – 3:30 pm   Coffee Break

Mobile Security, Safety, Privacy, Forensics

Session Chair: David Akopian, The University of Texas at San Antonio (United States)

3:30 – 4:50 am
Grand Peninsula Ballroom B

Mobile Computing and Data Processing

Session Chair: Reiner Creutzburg, Brandenburg University of Applied Sciences (Germany)

4:50 – 5:30 pm
Grand Peninsula Ballroom B

Mobile Devices and Multimedia: Enabling Technologies, Algorithms, and Applications 2017 Interactive Papers Session

5:30 – 7:00 pm
Atrium
The following works will be presented at the EI 2017 Symposium Interactive Papers Session.