

The 1st International Workshop on Computer Vision for Physiological Measurement (CVPM)

Date: June 22, 2018 (full-day workshop)

Location: Calvin L. Rampton Salt Palace Convention Center in Salt Lake City, Utah, U.S.

Venue: 150A

8:30 – 8:50 AM

Poster Setup (all papers have poster panels for the whole day)

Local Group Invariance for Heart Rate Estimation from Face Videos in the Wild

Christian Pilz (CanControls GmbH), Sebastian Zauneder (TU Dresden), Jarek Krajewski (Universität Wuppertal), Vladimir Blazek (RWTH Aachen)

Advertisement effectiveness estimation based on crowdsourced multimodal affective responses

Genki Okada (Chiba University), Kenta Masui (Chiba University), Norimichi Tsumura (Chiba University)

SparsePPG: Towards Driver Monitoring Using Camera-Based Vital Signs Estimation in Near-Infrared

Ewa Nowara (Rice University), Tim Marks (Mitsubishi Electric Research Laboratories, USA), Hassan Mansour (Mitsubishi Electric Research Laboratories (MERL)), Ashok Veeraraghavan (Rice University)

Novel Algorithms to Monitor Continuous Cardiac Activity with a Video Camera

Gregory Lewis (Indiana University), Maria Davila (University of North Carolina at Chapel Hill), Stephen Porges (Indiana University)

Measurement of Capillary Refill Time (CRT) in Healthy Subjects using a Robotic Hand

Emmett Kerr (Ulster University), Sonya Coleman (School of Computing and Intelligent Systems, University of Ulster), Martin McGinnity (Nottingham Trent University), Andrea Shepherd (Ulster University)

Periodic Variance Maximization using Generalized Eigenvalue Decomposition applied to Remote Photoplethysmography estimation

Richard Macwan (Université de Bourgogne), Serge Bobbie (Université de Bourgogne), Yannick Benezeth (LE2I), Julien Dubois (University of Burgundy, France), Alamin Mansouri (Laboratoire LE2I, FRE CNRS 2005, Université de Bourgogne Franche-Comté, Auxerre, France)

Real-Time Temporal Superpixels for Unsupervised Remote Photoplethysmography

Serge Bobbia (Le2i universit  de bourgogne), Duncan Luguern (Le2i universit  de bourgogne), Yannick Benezeth (LE2I), Keisuke Nakamura (Honda Research Institute), Randy Gomez (Honda Research Institute), Julien Dubois (University of Burgundy, France)

A Novel Framework for Remote Photoplethysmography Pulse Extraction on Compressed Videos

*Changchen Zhao (Beihang University), Chun-Liang Lin (National Chung Hsing University), Weihai Chen (Beihang University), Zhengguo Li (A*STAR)*

Non-contact heart rate monitoring by combining convolutional neural network skin detection and remote photoplethysmography via a low-cost camera

Chuanxiang Tang (Hunan University), Jiwu Lu (Hunan University), Jie Liu (Hunan University)

Exploring the Feasibility of Face video based Instantaneous Heart-rate for Micro-expression Spotting

Puneet Gupta (TCS Research), Brojeshwar Bhowmick (Tata Consultancy Services), Arpan Pal (Tata Consultancy Services)

Video Based Measurement of Heart Rate and Heart Rate Variability Spectrogram from Estimated Hemoglobin Information

Munenori Fukunishi (Chiba University), Kouki Kurita (Chiba University), Shoji Yamamoto (Tokyo Metropolitan College of Industrial Technology), Norimichi Tsumura (Chiba University)

Impairing Factors in Remote-PPG Pulse Transit Time Measurements on the Face

Andreia Moco (Eindhoven University of Technology), Sander Stuijk (Eindhoven University of Technology), Mark van Gastel (Eindhoven University of Technology), Gerard de Haan (Philips Research)

Deep Super Resolution for Recovering Physiological Information from Videos

Daniel McDuff (Microsoft Research)

Direct-Global Separation for Improved Imaging Photoplethysmography

Jaehee Park (Rice University), Ashutosh Sabharwal (Rice University), Ashok Veeraraghavan (Rice University)

Fully-automatic camera-based pulse-oximetry during sleep

Tom Vogels (Eindhoven University of Technology), Mark van Gastel (Eindhoven University of Technology), Wenjin Wang (Philips Research), Gerard de Haan (Philips Research)

8:50 – 9:00 AM

Opening remarks of organizers

Wenjin Wang (Philips Research), Daniel McDuff (Microsoft Research)

9:00 – 10:00 AM

Invited keynote (45 min content + 15 min Q&A)

Prof. Steffen Leonhardt (RWTH Aachen University)

10:00 – 10:30 AM

Coffee break and poster session

All accepted posters and oral presentations discuss their posters with audiences.

10:30 – 11:45 AM

Oral session (20 min content + 5 min Q&A)

10:30 – 10:55 AM

Periodic Variance Maximization using Generalized Eigenvalue Decomposition applied to Remote Photoplethysmography estimation

Richard Macwan (Université de Bourgogne), Serge Bobbie (Université de Bourgogne), Yannick Benezeth (LE2I), Julien Dubois (University of Burgundy, France), Alamin Mansouri (Laboratoire LE2I, FRE CNRS 2005, Université de Bourgogne Franche-Comté, Auxerre, France)

10:55 – 11:20 AM

Real-Time Temporal Superpixels for Unsupervised Remote Photoplethysmography

Serge Bobbia (Le2i université de bourgogne), Duncan Luguern (Le2i université de bourgogne), Yannick Benezeth (LE2I), Keisuke Nakamura (Honda Research Institute), Randy Gomez (Honda Research Institute), Julien Dubois (University of Burgundy, France)

11:20 – 11:45 AM

Fully-automatic camera-based pulse-oximetry during sleep

Tom Vogels (Eindhoven University of Technology), Mark van Gastel (Eindhoven University of Technology), Wenjin Wang (Philips Research), Gerard de Haan (Philips Research)

11:45 AM – 14:00 PM

Lunch break

14:00 – 15:00 PM

Invited keynote (45 min content + 15 min Q&A)

Prof. William T. Freeman (Massachusetts Institute of Technology)

15:00 – 15:25 PM	Oral session (20 min content + 5 min Q&A)
15:00 – 15:25 PM	<p>Impairing Factors in Remote-PPG Pulse Transit Time Measurements on the Face</p> <p><i>Andreia Moco (Eindhoven University of Technology), Sander Stuijk (Eindhoven University of Technology), Mark van Gastel (Eindhoven University of Technology), Gerard de Haan (Philips Research)</i></p>
15:25 – 15:55 PM	Coffee break and poster session
All accepted posters and oral presentations discuss their posters with audiences.	
15:55 – 16:45 PM	Oral session (20 min content + 5 min Q&A)
15:55 – 16:20 PM	<p>Deep Super Resolution for Recovering Physiological Information from Videos</p> <p><i>Daniel McDuff (Microsoft Research)</i></p>
16:20 – 16:45 PM	<p>Direct-Global Separation for Improved Imaging Photoplethysmography</p> <p><i>Jaehee Park (Rice University), Ashutosh Sabharwal (Rice University), Ashok Veeraraghavan (Rice University)</i></p>
16:45 – 17:00 PM	Best paper announcement and close ceremony
Best paper prize!	