Call for Papers (CFP)

The 2nd International Workshop on Computer Vision for Physiological Measurement (CVPM)

In conjunction with IEEE-ICCV 2019

Workshop website: http://www.es.ele.tue.nl/cvpm19/

Main conference website: http://iccv2019.thecvf.com/

The 2nd International Workshop on Computer Vision for Physiological Measurement (CVPM) will be held in conjunction with the IEEE Internal Conference (ICCV 2019) in Seoul, Republic of Korea (Oct. 27 - Nov. 2, 2019).

CVPM 2019 aims to explore the devices, algorithms and applications of image and video-based physiological measurement. The CFP will highlight, but not be limited to, the following topics:

- Novel/improved apparatuses/imaging devices for contactless sensing of physiological signals from the human face and body, including multi-spectral, hyper-spectral, time sequential, time-of-flight, stereo vision, long-distance, portable, and low-cost cameras that are sensitive at visible, near-/far- infrared, or thermal wavelengths.
- Novel/improved methods/algorithms for extracting various physiological signals/variables from videos, including pulse rate, pulse rate variability, respiration rate, blood oxygen saturation, pulse transit time, blood pressure, atrial fibrillation, arterial stiffness, blood glucose, skin hydration, and core body temperature.
- Novel/improved methods/algorithms that assist camera based physiological monitoring systems, such as CNN-based face/skin detection, motion tracking, video segmentation, human activity recognition, quality metric learning, physiological pattern recognition and algorithmic optimization.
- Applications for video health monitoring in domains such as Intensive Care Units (ICU), Neonatal Intensive Care Units (NICU), general medical wards, triage in emergency department, respiratory gating for CT/MRI, elderly care at home. Applications such as sleep monitoring (apnea detection), bed exit detection, fall detection/prevention, fitness cardio-training and driver monitoring in automotive.
- Camera-based physiological measurement for detecting affective, emotional, or cognitive states.
- Camera-based physiological measurement to assist video surveillance in the wild.
- Camera-based physiological measurement to assist human computer interaction, entertainment, gaming, and marketing.

- Living skin detection and human liveness detection.
- Face anti-spoofing and biometric recognition.
- New public benchmarks and datasets for camera-based physiological measurement.
- Using video semantics to interpret patient/neonatal actigraphy (behavior recognition and analysis).
- Camera based clinical/hospital environment and workflow monitoring.
- Using AI to interpret physiological measurement in ICU and NICU.
- AI-assisted big data analysis for healthcare applications.

Program committee:

- Prof. Steffen Leonhardt, RWTH Aachen University
- Prof. Gerard de Haan, Eindhoven University of Technology
- Prof. Alexei A. Kamshilin, ITMO University
- Prof. Fernando De la Torre, Carnegie Mellon University
- Prof. Shiguang Shan, Chinese Academy of Sciences
- Prof. Yu Sun, Zhejiang University
- Prof. Lalit Mestha, The University of Texas at Arlington, KinetiCor Inc.
- Prof. Izumi Nishidate, Tokyo University of Agriculture and Technology
- Prof. Yuan-Hsiang Lin, National Taiwan University of Science and Technology
- Prof. Sebastian Zaunseder, University of Applied Sciences Dortmund
- Dr. Tingting Zhu, University of Oxford
- Dr. Robert Armelard, University of Waterloo
- Dr. Hubin Zhao, UCL/University of Cambridge
- Weixuan Chen, Massachusetts Institute of Technology
- Justin R. Estepp, US Air Force Research Laboratory
- Ethan Blackford, US Air Force Research Laboratory
- Dr. Andreia MoCo, ASML
- Dr. DangDang Shao, Qualcomm
- Dr. Jiong Zhang, University of Southern California
- Dr. Caifeng Shan, Philips Research
- Dr. Bert de Brinker, Philips Research
- Dr. Mark van Gastel, Philips Research
- Dr. Ihor Kirenko, Philips Research

Confirmed keynote speakers:

- Prof. Aleksei Aleksandrovich Kamshilin (ITMO University)
- Prof. Bart M. ter Haar Romeny (Eindhoven University of Technology)
- Dr. Mauricio Villarroel (University of Oxford)

Workshop Details:

1. Date & Time: October 28th, 2019 (Monday)
2. Location: Room 327C, COEX Convention Center, Seoul, Republic of Korea
3. Submission site: http://www.es.ele.tue.nl/cvpm19/
4. Author guidelines: The paper formatting should follow the ICCV 2019 main conference guidelines.

Important Dates:

1. Submission deadline: **August 1st, 2019**
2. Notification to authors: **August 20th, 2019**
3. Camera-ready deadline: **August 30th, 2019**

Workshop co-organizers:

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Daniel McDuff, Microsoft Research (damcduff@microsoft.com)

Sander Stuijk, Eindhoven University of Technology (s.stuijk@tue.nl)

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