

# Program of the International Workshop and Challenge on Computer Vision for Physiological Measurement (CVPM)

*In conjunction with IEEE-CVPR 2020*

**Date:** June 14, 2020 (full-day online workshop)

**Reference time:** PDT time zone

<b>Workshop Session 1</b>			
Session time	Type	ID	Title
7:50 AM - 8:00 AM	Live		Opening for The 3rd International Workshop on Computer Vision for Physiological Measurement (CVPM)
8:00 AM - 9:00 AM	Keynote	50	A glimpse at image-based sensing of physiological and motion parameters and their impact to human health By Prof. Lalit K. Mestha (UT Arlington, KinetiCor Inc.)
9:00 AM - 9:05 AM	Live/Oral	5	Predicting Brainwaves from Face Videos
9:05 AM - 9:10 AM	Live/Oral	4	Enhancing Remote-PPG Pulse Extraction in Disturbance Scenarios Utilizing Spectral Characteristics
9:10 AM - 9:15 AM	Live/Oral	20	An Assessment of Algorithms to Estimate Respiratory Rate from the Remote Photoplethysmogram
9:15 AM - 9:20 AM	Live/Oral	18	Predicting Fall Probability Based On A Validated Balance Scale
9:20 AM - 9:25 AM	Live/Oral	17	Convulsive Movement Detection using Low-Resolution Thermopile Sensor Array
9:25 AM - 9:30 AM	Live/Oral	8	HeartTrack: Convolutional neural network for remote video-based heart rate monitoring
9:30 AM - 9:35 AM	Live/Oral	21	Long Short-Term Memory Deep-Filter in Remote Photoplethysmography
9:35 AM - 9:40 AM	Live/Oral	7	Analysis of Pulse Transit Time Derived from Imaging Photoplethysmography and Microwave Sensor-based Ballistocardiography
9:40 AM - 10:00 AM	Live	Group Q&A	

<b>Workshop Session 2</b>			
Session time	Type	ID	Title
10:00 AM - 11:00 AM	Keynote	60	On RF based Vital Sign Monitoring By Prof. Shiwen Mao (Auburn University) and Dr. Xuyu Wang (California State University, Sacramento)

11:00 AM - 11:05 AM	Live/Oral	10	Continuous estimation of emotional change using multimodal affective responses
11:05 AM - 11:10 AM	Live/Oral	13	Automated Depth Video Monitoring For Fall Reduction: A Case Study
11:10 AM - 11:15 AM	Live/Oral	23	Detecting Deepfake Videos using Attribution-Based Confidence Metric
11:15 AM - 11:20 AM	Live/Oral	15	Remote Photoplethysmography: Rarely Considered Factors
11:20 AM - 11:25 AM	Live/Oral	2	Photoplethysmography based stratification of blood pressure using multi information fusion artificial neural network
11:25 AM - 11:30 AM	Live/Oral	3	Remote Estimation of Heart Rate Based on Multi-Scale Facial ROIs
11:30 AM - 11:35 AM	Live/Oral	16	In Search of Life: Learning from Synthetic Data to Detect Vital Signs in Videos
11:35 AM - 11:40 AM	Live/Oral	11	Stress Estimation Using Multimodal Biosignal Information from RGB Facial Video
11:40 AM - 11:45 AM	Live/Oral	6	A Meta-Analysis of the Impact of Skin Tone and Gender on Non-contact Photoplethysmography Measurements
11:45 AM - 12:00 PM	Live	Group Q&A	
12:00 AM - 12:10 PM	Live	CVPM ending	

### Challenge Session

Session time	Type	ID	Title
1:30 PM - 1:50 PM	Live	104	The 1st Challenge on Remote Physiological Signal Sensing (RePSS)
1:50 PM - 2:20 PM	Live/Keynote	101	RePSS invited talk by Prof. Pong C Yuen
2:20 PM - 2:30 PM	Live/Oral	103	Skin Segmentation using Active Contours and Gaussian Mixture Models for Heart rate detection in Videos
2:30 PM - 2:40 PM	Live/Oral	102	On indirect assessment of heart rate in video
2:40 PM - 2:50 PM	Live/Oral	105	Neurodata Lab's approach to the Challenge on Computer Vision for Physiological Measurement
2:50 PM - 3:10 PM	Live	Group Q&A	
3:10 PM - 3:15 PM	Live	RePSS ending	

### Panel Discussion on COVID-19

Session time	Type	ID	Title
3:30 PM - 4:30 PM	Live		Camera-based health monitoring in the fight against COVID-19