

The Effect of Skin Pigmentation on Pulse Oximeter Accuracy

Wednesday 22nd May 2024 - London

09:55	10:00	Welcome and Introductions
		Peter Charlton, University of Cambridge
10:00	10:25	The History of Pulse Oximetry
		Panicos Kyriacou, City University of London
10:25	11:00	<i>Pulse oximeter accuracy: The clinical perspective</i>
		Dan Martin, Professor of Intensive Care Medicine, University of Plymouth
11:00	11:20	<i>Does skin tone affect the accuracy of machine learning classification applied to photoplethysmography signals?</i>
		Philip Aston
11:20	11:50	Coffee Break
11:50	12:10	<i>Monte Carlo Simulation of the Effect of Melanin Concentration on Light-Tissue Interactions for Transmittance Pulse Oximetry Measurement</i>
		Raghda Al-Halawani; City, University of London
12:10	12:30	<i>Understanding the effect of tissue optical properties on pulse oximetry through Monte Carlo simulations.</i>
		Suvvi Kuppur Narayana Swamy; University of Nottingham
12:30	12:50	<i>Is the ear-canal the optimum site for racially equitable oximetry?: Discussion of EarMetrics</i>
		Nick Gompertz EarSwitch Ltd
12:50	13:50	Lunch

13:50	14:10	<i>Opto-physiological monitoring sensor to directly detect all types of skin tones for physiological monitoring in real time</i>
		Sijung Hu, Carelight
14:10	14:30	Panel Discussion and Q&A Speakers
		Chair - Panicos Kyriacou, City University of London
14:30	14:45	Racial bias in pulse oximetry: next steps
		Peter Charlton, University of Cambridge
14:45	15:10	Breakout groups - discussion
		All
15:10	15:25	Coffee break
15:25	16:10	Group Feedback and wider discussion
		Chairs: Peter Charlton, University of Cambridge & Panicos Kyriacou, City University of London
16:10	16:20	Final Thoughts & next steps
		Peter Charlton, University of Cambridge & Panicos Kyriacou, City University of London