Technology and Biomedicine: A Cambridge Showcase

A half-day collaborative online symposium and networking event
Monday 27 September 2021 (morning)

Co-chairs: Professor Sir Stephen O’Rahilly, Wellcome-MRC Institute of Metabolic Science and Professor Roisin Owens, Department of Chemical Engineering and Biotechnology, Cambridge

09.00 – 09.30  Welcome and Introduction
Professor Sir Stephen O’Rahilly and Professor Roisin Owens

SESSION ONE

09.30 – 09.50  A 3D bioelectronic model of the human intestine - Professor Roisin Owens

09.50 – 10.10  Computer vision: real-time estimation of 3D body shape and glucose monitor transcription - Professor Roberto Cipolla, Department of Information Engineering.

10.10 – 10.30  Challenges of deep learning in biomedicine - Professor Pietro Lio, Department of Computer Science and Technology.

10.30 – 10.50  Panel Discussion

10.50 – 11.00  Break

SESSION TWO

11.00 – 11.20  Diabetes tech: the case of the artificial pancreas - Professor Roman Hovorka, Wellcome-MRC Institute of Metabolic Science and Department of Paediatrics.

11.20 – 11.40  Wearable devices for monitoring physical activity and health - Dr Soren Brage, Physical Activity Epidemiology group, MRC Epidemiology Unit.

11.40 – 12.00  Lipidomics - technological developments in data collection and analysis– Dr Albert Kouiman, NIHR BRC Metabolomics and Lipidomics Facility, Wellcome-MRC Institute of Metabolic Science

12.00 – 12.20  Enhancing clinical outcomes in human adrenal and pituitary tumours through the use of molecular imaging - Professor Mark Gurnell, Wellcome-MRC Institute of Metabolic Science and Department of Medicine.

12.20 – 12.40  Panel Discussion

12.40 – 12.50  Break
SESSION THREE

12.50 – 13.00  Segmentation and quantitative characterisation of endoplasmic reticulum structures in super-resolved sequential images by deep neural network-ERnet
Dr Meng Lu, Department of Chemical Engineering and Biotechnology, University of Cambridge

13.00 – 13.10  Biofabrication: from bioelectronic fibres to 3D printing and Machine Learning
Co-Modelling - Dr Shery Huang, Department of Engineering, University of Cambridge


13.20 – 13.40  Panel Discussion

13.40 – 13.45  General discussion and close