2017 Joint Symposium

BHF Centre of Research Excellence and

EPSRC Centre for Mathematics of Precision Healthcare

The Heart – Models, Measurements, Medicine

5th June 2017

LT G16, Sir Alexander Fleming Building, South Kensington
Imperial College London, Prince Consort Rd, London SW7 2BB

Organisers: Prof Mauricio Barahona, Dr Declan P O'Regan and Prof Peter Weinberg

TIME	TITLE	Speaker/Organisation
09:00	Welcoming remarks	Prof Michael Schneider
SESSION 1: *Cellular markers of heart development and disease* Chair: Prof Michael Schneider		
09:05	Single-cell characterisation of heart development	TBC
09:35	Computational Epigenetics	Dr Guido Sanguinetti (University of Edinburgh)
10:00	Single cell genomics	Dr Thierry Voet (Wellcome Trust Sanger Institute) & Dr Michela Noseda (Imperial College London)
10:30	Computational methods for the analysis of single-cell 'omics datasets	Dr Martin Hemberg (Wellcome Trust Sanger Institute)
10:50		TBC
11:05	**BREAK**	
SESSION 2: *Cardiac tissue – maths, models and measurements for the clinic* Chair: Prof Darrel Francis		
11:30	The ElectroCardioMaths (ECM) approach to cardiac arrhythmias	Prof Nicholas Peters (ECM, Imperial College London)
11:50	Clinical translation of heart models	Dr Steven Niederer (King's College London)
12:10	Modelling cardiac electrophysiology	Dr Chris Cantwell (ECM, Imperial College London)
12:30	The fractal heart	Dr Gaby Captur (University College London)

12:50	Cardiac ripple mapping	Dr Nick Linton (ECM, Imperial College NHS Trust)
13:10	Understanding the origins of the electrogram using machine learning	Konstantinos Tzortzis – BHF CRE Student (ECM, Imperial College London)
13:30	**LUNCH AND POSTER SESSION**	

SESSION 3: *Populations - Application of Mathematics to Medicine*
Chair:

14:30	Machine learning in cardiovascular medicine	Prof Daniel Rueckert (Imperial College London)
14:50	Quantitative modelling in pulmonary hypertension	Dr Andrew Swift (University of Sheffield)
15:10	Identifying actionable variants in cardiomyopathy	Dr James Ware (Imperial College London)
15:30	Three-dimensional imaging-genetics	Carlo Biffi – BHF CRE Student (Imperial College London)
15:45	Guiding therapy using computational cardiac models	Pablo Lamata de la Orden (King's College London)
16:05	**BREAK**	

SESSION 4: *Keynote Lecture*
Chair:

16:30	Keynote lecture **Will personalised genomic data lead to improved healthcare?**	Prof Ewan Birney (European Bioinformatics Institute)
17:30	Announcement of Poster Prize Winners and Close of meeting	
17:45	**DRINKS RECEPTION**	