



## Full Programme

### Wednesday 25<sup>th</sup> September

<b>09:30 - 09:45</b>	<b>Welcome Address</b>
Location: Kelvin Lecture Theatre Peter V. Coveney	

<b>09:45 - 10:30</b>	<b>Keynote Address</b>
Location: Kelvin Lecture Theatre <b>Oliver Röhrle</b> <b>Continuum-mechanical Modelling of the Musculoskeletal System</b>	

<b>10:30 - 11:00</b>	<b>Refreshments</b> <b>Haslett and Marconi Rooms</b>
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<b>11:00 - 12:30</b>	<b>Organ Modelling and Simulation</b>
Location: Kelvin Lecture Theatre Chair: Giulia Luraghi	
11:00	<b>Use of 3D Atrial Models to Improve Signal Processing in Cardiac Electrophysiology</b> Alejandro Liberos, Universitat Politècnica de València
11:20	<b>An Automated Pipeline for Real Time Visualisation of Blood Flow During Treatment of Intracranial Aneurysms</b> Robin Richardson, University College London
11:35	<b>A Cerebral Circulation Model for <i>in silico</i> Clinical Trials of Ischaemic Stroke</b> Tamas Jozsa, Institute of Biomedical Engineering, University of Oxford
11:50	<b>Platelet Adhesion and Aggregation: Cell-resolved Simulations and <i>In vitro</i> Experiments</b> Britt Van Rooij, University of Amsterdam
12:05	<b>A Three-dimensional Mesoscopic Model of Thrombolysis</b> Remy Petkantchin, University of Geneva
12:20	<b>End of Session</b>

<b>11:00 - 12:30</b>		<b>Machine Learning, Big Data &amp; AI</b>
Location: Turing Lecture Theatre		
Chair: Rick Stevens		
11:00	<b>Machine Learning Models of Brain Ageing in Health and Disease</b> James Cole, Kings College London	
11:20	<b>Automated Parameter Tuning for Living Heart Human Model using Machine Learning and Multiscale Simulations</b> Clint Davis-Taylor, Dassault Systemes	
11:35	<b>Combining Molecular Simulation and Machine Learning to INSPIRE Improved Cancer Therapy</b> David Wright, University College London	
11:50	<b>Safety, Reproducibility, Performance: Accelerating Cancer Drug Discovery with ML and HPC Technologies</b> Amanda Minnich, Lawrence Livermore National Laboratory	
12:05	<b>Deep Medical Image Analysis with Representation Learning and Neuromorphic Computing</b> Fangfang Xia, Argonne National Laboratory	
12:20	<b>Deep Learning in Cancer Drug Response Prediction</b> Rick Stevens, Argonne National Laboratory	
12:35	<i>End of Session</i>	

<b>11:00 - 12:30</b>		<b>Uncertainty Quantification</b>
Location: Watson Watt Room		
Chair: Alfons Hoekstra		
11:00	<b>Sensitivity and Uncertainty Analysis of Cardiac Cell Models with Gaussian Process Emulators</b> Richard Clayton, University of Sheffield	
11:20	<b>Pathological Test for Cardio/Cerebrovascular Diseases: Platelets Dynamics and Approximate Bayesian Computation</b> Ritabrata Dutta, University of Warwick	
11:35	<b>Use of a Gaussian Process Emulator and 1D Circulation Model to Characterize Cardiovascular Pathologies and Guide Clinical Treatment</b> Alberto Marzo, University of Sheffield	
11:50	<b>Uncertainty Quantification and the Calibration of Numerical Models</b> Peter Challenor, University of Exeter	
12:10	<i>End of Session</i>	

<b>12:30 - 13:30</b>	<b>Lunch</b> <b>Haslett and Marconi Rooms</b>
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<b>13:30 - 15:30</b>		<b>Organ Modelling and Simulation</b>
Location: Kelvin Lecture Theatre		
Chair: Hector Martinez-Navarro		
13:30	<b>Multi-scale, Patient-specific Modelling Approaches to Predict Neointimal Hyperplasia Growth in Femoro-popliteal Bypass Grafts</b> Mirko Bonfanti, University College London	
13:50	<b><i>In vivo, in silico, in vitro</i> Patient-specific Analysis of the Haemodynamics of a Type-B Aortic Dissection</b> Gaia Franzetti, University College London	
14:05	<b>AngioSupport: an Interactive Tool to Support Coronary Intervention</b> Bettine Van Willigen, LifeTec Group	
14:20	<b>Developments for the Efficient Self-coupling of HemeLB</b> Jon McCullough, University College London	
14:35	<b>Interplay Between Thermal Transfers and Degradation of the Bronchial Epithelium During Exercise</b> Cyril Karamaoun, Université Côte d'Azur	
14:50	<b>Simulation of the Thrombectomy Procedure in a Realistic Intracranial Artery</b> Giulia Luraghi, Politecnico di Milano	
15:05	<b><i>End of Session</i></b>	

<b>13:30 - 15:30</b>		<b>From Quantum AI to the Virtual Human</b>
Location: Turing Lecture Theatre		
Chair: Peter Love		
13:30	<b>Introduction</b> Peter Love, Tufts University	
13:45	<b>Excited-State Dynamics: Linking Classical and Quantum Approaches</b> Prineha Narang, Harvard University (Remote Presentation)	
14:15	<b>Quantum computing using continuous-time evolution</b> Vivien Kendon, Durham University	
14:45	<b>Quantum Inspired Optimisation: Transforming Healthcare Imaging using Quantum-accelerated Algorithms</b> Anita Ramanan & Frances Tibble, Microsoft	
15:05	<b>Atos Quantum Learning Machine: Heading Towards a Quantum-accelerated Life Science</b> Andy Grant, Atos	
15:20	<b>Quantum AI to the Virtual Human: Where's the Virtual Human?</b> Peter V. Coveney, University College London	
15:35	<b><i>End of Session</i></b>	

<b>13:30 - 15:30</b>		<b>Genomics</b>	
Location: Watson Watt Room			
Chair: Nikolas Maniatis			
13:30	<b>Reconstructing Mutational Histories of Oesophageal Cancer</b>	Maria Secrier, University College London	
13:50	<b>CDK11 Binds Chromatin and mRNAs of Replication Dependent Histones Regulating Their Expression.</b>	Igor Ruiz de Los Mozos, Francis Crick Institute	
14:10	<b>The Power of High-resolution Population-specific Genetic Maps to Dissect the Genetic Architecture of Complex Diseases: Type 2 Diabetes as an Example</b>	Nikolas Maniatis, University College London	
14:30	<b>Genetic Fine-mapping and Targeted Sequencing to Investigate Allelic Heterogeneity and Molecular Function at Genomic Disease Susceptibility Loci for Type 2 Diabetes</b>	Toby Andrew, Imperial College London	
14:50	<b>Pathway Analysis Reveals Genetic Regulation of Mitochondrial Function and Branched-chain Amino Acid Catabolism in Type 2 Diabetes</b>	Hannah Maude, Imperial College London	
15:00	<b>Trans-ethnic Colocalization: A Novel Approach to Assess the Transferability of Trait Loci Across Populations</b>	Karoline Kuchenbaecker, University College London	
15:10	<b>The Genetic Architecture of T-wave Morphology Restitution</b>	Julia Ramírez, Queen Mary University of London	
15:20	<b>Genetic Architecture of QT Dynamics and Resting QT in the General Population</b>	Stefan van Duijvenboden, University College London	
15:30	<b><i>End of Session</i></b>		

<b>15:30 - 17:00</b>	<b>Refreshments</b>		
	<b>Haslett and Marconi Rooms</b>		
	<b>Poster Presentations</b>		
	<b>Haslett Room</b>		



## Poster Presentations

### Genomics

Julie Cigrang, Hannah Maude, Winston Lau, Nikolas Maniatis, Filippo Tamanini and Toby Andrew  
**Functional and in Silico Analysis of the Novel Identified Type 2 Diabetes Susceptibility Locus FGF14 and the Associated Dysregulation of Propionyl-coA Carboxylase (PCCA) Gene Expression.**

Kate Mackie, Hannah Maude, Winston Lau, Nikolas Maniatis, Filippo Tamanini and Toby Andrew  
**An Investigation into the Role of the ACAD11 Disease Susceptibility Locus in Conferring Risk of Type 2 Diabetes**

Dhryata Kamdar, Winston Lau, Nikolas Maniatis and Toby Andrew  
**eQTL Co-Localisation Using Transcriptome Datasets from Different Tissues on a Type 2 Diabetes Susceptibility Locus, MAPK8-IP3**

Shirin Saverimuttu, Barbara Kramarz and Ruth Lovering  
**Describing the Role of microRNAs in Alzheimer's Disease Using a Bioinformatics Approach**

### Machine Learning, Big Data and AI

Adrià Pérez Culubret, Pablo Herrera Nieto, Stefan Doerr and Gianni De Fabritiis  
**A Multi-Armed Bandit Framework for Adaptive Sampling in Molecular Simulations**

Peter Zinterhof and Yu Wang  
**Getting More for Less: Semi-Supervised Learning Approach for Medical Image Segmentation**

### Molecular Medicine

David Chisholm, Valerie Affleck, Josh Hughes, Dan Callaghan, Andy Whiting and Carrie Ambler  
**Small Molecule Photosensitisers for Light-Activated Cell Death**

Mabel Wong, Xiaofeng Liu, Richard Taylor, Terry Baker and Jonathan Essex  
**A Loopy Study of the Antibody-Antigen Interface**

Giulio Mattedi, Francesca Deflorian, Jonathan Mason, Chris de Graaf and Francesco Gervasio  
**Understanding Ligand Binding Selectivity in a Prototypical GPCR Family**

Grigor Arakelov, Peter Coveney and Karen Nazaryan  
**In silico Study of the Pyrin Inflammasome Macromolecular Complex Formation.**

### Organ Modelling and Simulation

Tim van den Boom, Bettine van Willigen, Marco Stijnen and Frans van de Vosse  
**Pulse Wave Propagation Modelling with Reduced Complexity**

Sathyavani Malyala, Richard Clayton and Alberto Marzo

**Modelling of Electrophysiology of the Heart and Treatment of Ventricular Fibrillation**

Mattia d'Alessi and Marco Stijnen

**The Addition of Compliance and Deformation of Vessel Walls in 3D CFD Simulations**

Alexandra Buess

**The Influence of Asymmetry in Health and Disease on Gaseous Transport and Exchange in the Human Lungs: A Model Approach**

## **The Role of Theory in Modelling and Simulation**

Rukmankesh Mehra and Kasper Planeta Kepp

**Molecular Dynamics of A $\beta$  Peptide: Hydrophobic Exposure Is a Significant Event at Low Water Potential**

Antonija Kuzmanic and Francesco Gervasio

**Exploring Cryptic Pockets Formation in Targets of Pharmaceutical Interest**

Ella van de Pol and Marco Stijnen

**Possibilities of 3D-1D Coupled Models in Hemodynamic Simulations**

Chiara Fais, Elizabeth M. Grimsey, Robert L. Marshall, Vito Ricci, Maria Laura Ciusa, Al Ivens, Giuliano Mallocci, Paolo Ruggerone, Attilio V. Vargiu and Laura J.V. Piddock

**Chlorpromazine and Amitriptyline Are Substrates and Inhibitors of the AcrB Multidrug Efflux Pump**

Alessandro Crnjar and Carla Molteni

**Environment Effects on a Potential Trans-Cis Molecular Switch for Opening the Ion Channel of the Serotonin-Activated 5-HT<sub>3</sub> Receptor**

Alireza Meghdadi, Marcus Caine, Stephen Jones, Venisha Patel, Lorenzo Capretto, Andrew Lewis and Dario Carugo

**A Parametric in Silico Investigation for Characterisation of Drug-Eluting Bead (DEB) Trajectory Distributions**

## **Education, Training and Public Engagement**

Xan Wesolowski, UCL

**Cigarettes vs E-Cigarettes: The Effect on the Oral Microbiome**

Julio Revilla Navarro

**Microbiome Diversity of Tattooed and Non-Tattooed Skin**

Dan Smaje

**A Comparison of the Microbial Diversity in Mass-Produced and Artisan Cheeses**



## Full Programme

**Thursday 26<sup>th</sup> September**

<b>09:00 - 09:45</b>	<b>Keynote Address</b>
	Location: Kelvin Lecture Theatre <b>Andrew Hopkins</b> <b>How Machines can Design Drugs</b>

<b>09:45 - 10:15</b>	<b>Refreshments</b> <b>Haslett and Marconi Rooms</b>
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<b>10:15 - 12:00</b>	<b>Molecular Medicine</b>
	Location: Kelvin Lecture Theatre Chair: Herman Van Vlijmen
10:15	<b>On the Faithfulness of Molecular Mechanics Representations in Multi-scale Free Energy Simulations</b> Gerhard König, ETH Zurich
10:35	<b>Entropy Estimation Methods in Ensemble End-point Binding Free Energy Simulations</b> David Wright, University College London
10:50	<b>Rapid, Qualitative Prediction of Antimicrobial Resistance by Alchemical Free Energy Methods</b> Philip Fowler, University of Oxford
11:05	<b>Opportunities and Challenges for Free Energy Calculations in Drug Design</b> Christina Schindler, Merck Healthcare KGaA
11:25	<b>Accurate and Precise Predictions of the Influence of Salt Concentration on the Conformational Stability and Membrane-Binding Modes of Multifunctional DNA Nanopores using Ensemble-Based Coarse-Grained Molecular Dynamics</b> Katya Ahmad, University College London
11:40	<b>The Role of Water in Mediating Biomolecular Binding: From Water Locations to Their Impact on Binding Affinity</b> Jonathan Essex, University of Southampton
12:00	<i>End of Session</i>

<b>10:15 - 12:10</b>		<b>Machine Learning, Big Data &amp; AI</b>	
Location: Turing Lecture Theatre			
Chair: Fangfang Xia			
10:15	<b>AI for Big Science</b>	Tony Hey, Science Technology Facilities Council (STFC)	
10:35	<b>Applying Artificial Intelligence in Drug Design</b>	Ola Engkvist, AstraZeneca	
10:50	<b>The Convergence of HPC and AI for Healthcare on Intel® Based Supercomputers</b>	Valeriu Codreanu, SURFsara	
11:05	<b>Accelerating Deep Learning Adoption in Biomedicine with the CANDLE Framework</b>	Justin Wozniak, Argonne National Laboratory	
11:20	<b>The Influence of DNA Sequence-Derived Features Across the 'omics Scales</b>	Gregory Parkes, University of Southampton	
11:35	<b>Predicting ICU Readmission with Context-Enriched Deep Learning</b>	Rafael Zamora-Resendiz, Lawrence Berkeley National Laboratory	
11:50	<b>GuacaMol: Benchmarking Models for De Novo Molecular Design</b>	Marwin Segler, BenevolentAI	
12:10	<b>End of Session</b>		

<b>10:15 - 12:00</b>		<b>Regulatory Science and <i>in silico</i> Trials</b>	
Location: Watson Watt Room			
Chair: Alfons Hoekstra and Marco Viceconti			
10:15	<b><i>In silico</i> Trials and Drug Approval Process: Where are we?</b>	Flora Musuamba Tshinanu, Federal Agency for Medicines and Health Products	
10:35	<b>InSilc: an <i>in silico</i> Clinical Trials Platform for Advancing BVS Design and Development</b>	Georgia Karanasiou, FORTH	
10:50	<b>Credibility of UISS-TB Modelling and Simulation Framework</b>	Francesco Pappalardo, University of Catania	
11:05	<b>Modelling Bone at the Tissue Scale: the Missing Link Between Drug Design and Clinical Outcome</b>	Marco Viceconti, University of Bologna	
11:20	<b><i>In silico</i> Trials for Drug Tracing the Effects of Sarcomeric Protein Mutations Leading to Familial Cardiomyopathy- SILICOFCM Project</b>	Nenad Filipovic, Bioengineering Research and Development Center BioIRC	
11:35	<b>INSIST: <i>In silico</i> Trials for Acute Ischemic Stroke.</b>	Alfons Hoekstra, University of Amsterdam	
11:50	<b>End of Session</b>		

<b>12:00 – 13:00</b>	<b>Lunch</b> <b>Haslett and Marconi Rooms</b>
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<b>13:00 - 15:00</b>		<b>Molecular Medicine</b>
Location: Kelvin Lecture Theatre		
Chair: Peter V Coveney		
13:00	<b>Computational Molecular Design in Pharmaceutical Drug Discovery</b> Katharina Meier, Bayer AG	
13:20	<b>Accurate, Precise and Reliable Binding Affinity Predictions for G Protein Coupled Receptors</b> Shunzhou Wan, University College London	
13:35	<b>An Ensemble-Based Steered Molecular Dynamics (SMD) Workflow that Predicts the Residence Time of A2A Receptor Ligands</b> Andrew Potterton, University College London	
13:50	<b>Understanding Induced Conformational Plasticity in G-Protein Coupled Receptors Selective Pathway Activation</b> Silvia Acosta Gutierrez, University College London	
14:05	<b>Clustering Analysis of Synthetic Retinoid Docking</b> Jason Clark, Durham University	
14:20	<b>Analysis of Mechanotransduction Dynamics During Combined Mechanical Stimulation and Modulation of Mechanotransduction Cascade Uncover Hidden Information Within the Signalling Noise</b> Aban Shuaib, NSIGNEO Institute for <i>in silico</i> Medicine, University of Sheffield	
14:35	<b>Adaptive Sampling for Alchemical Free Energy Calculations and Applications for Drug Design</b> Hannah Bruce Macdonald, Memorial Sloan Kettering Cancer Center	
14:50	<b><i>End of Session</i></b>	

<b>13:00 - 15:00</b>		<b>Innovation in Modern Biotechnology</b>
Location: Turing Lecture Theatre		
Chair: Herman Van Vlijmen		
13:00	<b>ELEM Biotech – The Virtual Humans Factory</b> Mariano Vazquez, ELEM Biotech	
13:20	<b>Balancing Research and Production: Alces Flight’s Take on Building up Commercial Compute</b> Cristin Merritt, Alces Flight	
13:40	<b>The Rise of PlayMolecule</b> Raimondas Galvelis, Acellera	
14:00	<b>InSilicoTrials.Com: A Cloud-Based Platform to Drive Technology Transfer of Modeling and Simulation Tools across Healthcare</b> Luca Emili, InSilicoTrials	
14:20	<b>Panel Discussion</b>	
15:00	<b><i>End of Session</i></b>	

<b>13:00 - 15:00</b>		<b>Education, Training and Public Engagement</b>
Location: Watson Watt Room Chair: Andrea Townsend-Nicholson		
13:00	<b>Reflections on Educating and Engaging New Communities of Practice with High Performance Computing Through the Integration of Teaching and Research</b> Andrew Townsend-Nicholson, University College London	
13:20	<b>Computational Biomedicine –Interdisciplinary Training for the Clinician Scientists of the Future</b> Benny Chain, University College London	
13:40	<b>Promoting a Research-Based Education through Undergraduate Research Experience for Students</b> Othmane Bouhali, Texas A&M University	
13:55	<b>AI for Science</b> Rick Stevens, Argonne National Laboratory	
14:15	<b>Integrating Computational Biology and Soil Metagenomics: an Undergraduate study</b> Mariana Pereira da Costa, University College London	
14:30	<b>Panel Discussion</b>	
15:00	<b>End of Session</b>	

<b>15:00 - 15:30</b>		<b>Refreshments</b> <b>Haslett and Marconi Rooms</b>
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<b>15:30 - 17:00</b>		<b>Molecular Medicine</b>
Location: Kelvin Lecture Theatre Chair: Christina Schindler		
15:30	<b><i>In Silico</i> Search for Endogenous Inhibitors of Protein Misfolding</b> Donald Weaver, Krembil Research Institute	
15:50	<b>The Influence of Base Pair Tautomerism on Single Point Mutations in Aqueous DNA</b> Alexander Gheorghiu, University College London	
16:05	<b>Monte Carlo Modelling of a VARIAN 2300C/D Photon Accelerator</b> Othmane Bouhali, Texas A&M University	
16:20	<b>Molecular Organization of Tight Junction Protein Strands: Molecular Dynamics Simulation of the Self-Assembly of Extracellular Domain Particles of Claudin 1</b> Eleni Fitsiou, Lancaster University	
16:35	<b>End of Session</b>	

<b>15:30 - 17:00</b>		<b>Multiscale Modelling</b>	
Location: Turing Lecture Theatre			
Chair: Derek Groen			
15:30	<b>Dynamics of Nonequilibrium Self-Assembly Through Reaction-Diffusion Simulations</b>	Margaret Johnson, Johns Hopkins University	
15:50	<b>Predictions of Age-specific Hip Fracture Incidence in Elderly British Women based on a Virtual Population Model</b>	Pinaki Battacharya, University of Sheffield	
16:05	<b>Suitability of Scaled Generic Musculoskeletal models in Predicting Longitudinal Changes in Joint Contact Forces in Children with Juvenile Idiopathic Arthritis</b>	Claude Hayford, University of Sheffield	
16:20	<b>Refining Low-Resolution Cryo-EM Structures with Bayesian Inference Driven Integration of Multiscale Simulations</b>	Arvind Ramanathan, Argonne National Laboratory	
16:35	<b><i>End of Session</i></b>		

<b>15:30 - 17:00</b>		<b>Cloud &amp; High Performance Computing</b>	
Location: Watson Watt Room			
Chair: Marco Verdicchio			
15:30	<b>Advancing Personalized Healthcare with High-Performance Cloud Computing for the Living Heart Project</b>	Wolfgang Gentsch, UberCloud	
15:50	<b>Large Scale Binding Affinity Calculations on Commodity Compute Clouds</b>	Stefan Zasada, EnsembleMD Ltd	
16:05	<b>Processing Complex Medical Workflows in the EurValve Environment</b>	Piotr Nowakowski, ACC Cyfronet AGH, Kraków, Poland	
16:20	<b>The HemeLB Offloader</b>	Terry Sloan, EPCC	
16:35	<b>Structural Biology in the Clouds: Past, Present and Future</b>	Alexandre Bonvin, Utrecht University	
16:55	<b><i>End of Session</i></b>		



## Full Programme

### Friday 27<sup>th</sup> September

<b>09:00 - 09:45</b>	<b>Keynote Address</b>
Location: Kelvin Lecture Theatre	
<b>Anne Robertson</b>	
<b>Identifying Physical Causes of Failure in the Cerebral Aneurysm Wall</b>	

<b>09:45 - 10:15</b>	<b>Refreshments</b> <b>Haslett and Marconi Rooms</b>
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<b>10:15 - 12:00</b>	<b>Organ Modelling and Simulation</b>
Location: Kelvin Lecture Theatre	
Chair: Claudia Mazza	
10:15	<b>The Role of Haemodynamics and Peripheral Vasculature in Vessel Constriction After Aneurysm Treatment with Flow-Diverter Stents</b> Alberto Marzo, University of Sheffield
10:35	<b>The Effect of Gender and Endocardial Detail on Anatomically Normal Human Heart Electrophysiology</b> Jazmin Aguado-Sierra, Barcelona Supercomputing Center
10:50	<b>Connecting Arterial Blood Flow to Tissue Perfusion for In Silico Trials of Acute Ischaemic Stroke</b> Raymond Padmos, Institute for Informatics, University of Amsterdam
11:05	<b>A Novel Multi-Scale, Multi-Compartment Model of Oxygen Transport – Towards In-Silico Clinical Trials in the Entire Human Brain</b> Yun Bing, University of Oxford
11:20	<b>Delivering the CT2S Computational Workflow Directly to the Clinic</b> Andrew Narracott, University of Sheffield
11:35	<b>A Finite Element Investigation of the Positioning of Arabin® Cerclage Pessary in the Prevention of Spontaneous Preterm Birth</b> Xinshan Li, University of Sheffield
11:55	<b>End of Session</b>

<b>10:15 - 12:00</b>		<b>Multiscale Modelling</b>	
Location: Turing Lecture Theatre			
Chair: Derek Groen			
10:15	<b>Coupling Scheme for a High-Performance Multiscale Blood Flow Simulation Workflow</b>	Gábor Zavodszky, University of Amsterdam	
10:35	<b>In Silico Assessment of Cardio-protection by Therapeutic Hypothermia</b>	Sanjay Kharche, Lawson Health Research Institute, University of Western Ontario	
10:50	<b>HPC Simulations for in Silico Drug Testing in Humans: Therapeutic Strategies in Acute Myocardial Ischemia</b>	Hector Martinez-Navarro, University of Oxford	
11:05	<b>Is Insulating Border Necessary for Human Sinoatrial Node Spontaneous Activity?</b>	Sanjay Kharche, Lawson Health Research Institute, University of Western Ontario	
11:20	<b>Multiscale Modeling of RAS on Cellular Membranes</b>	Dwight Nissley, Frederick National Laboratory for Cancer Research and Frederick Streitz, Lawrence Livermore National Laboratory	
11:40	<b><i>End of Session</i></b>		

<b>10:15 - 12:00</b>		<b>Cloud &amp; High Performance Computing</b>	
Location: Watson Watt Room			
Chair: Marco Verdicchio			
10:15	<b>Integrating HPC and Deep Learning in Converged Workflows</b>	Andy Grant, Atos	
10:30	<b>Supporting advanced HPC/HTC scientific workloads with QCG services</b>	Tomasz Piontek, PSNC	
10:45	<b>Digital Blood in Massively Parallel CPU/GPU Systems for the Study of Platelets Deposition</b>	Christos Kotsalos, University of Geneva	
11:00	<b>Parallelising Image Registration and the HPC Porting Journey</b>	Phil Tooley, The Numerical Algorithms Group, University of Sheffield	
11:15	<b>Secure Processing of Sensitive Data on Shared HPC Systems</b>	Narges Zarrabi, SURFsara	
11:30	<b>Zettascale Computing on an Exascale Platform</b>	Shantenu Jha, Rutgers University	
11:45	<b>The POP Centre of Excellence – Improving Parallel Codes</b>	Craig Lucas, The Numerical Algorithms Group, University of Sheffield	
12:00	<b><i>End of Session</i></b>		

<b>12:00 – 13:00</b>	<b>Lunch</b> <b>Haslett and Marconi Rooms</b>
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<b>13:00 - 15:00</b>		<b>Role of Theory in Modelling and Simulation</b>
Location: Kelvin Lecture Theatre		
Chair: Erik Lindahl		
13:00	<b>An Agent-Based Model for Investigation of Immunological Synapse Patterns</b>	Michael Dustin, University of Oxford
13:20	<b>Simulation and Experimental Evidence for the Decrease of Platelet Margination with an Increase in Volume Fraction of Stiffened Red Blood Cells in Flow</b>	Benjamin Czaja, University of Amsterdam
13:40	<b>From Genome to Personalised Medicine: Cancer Treatment and Discovery of Novel Variants in Qatar</b>	Shunzhou Wan, University College London
13:55	<b>The Noisy Physics of Protein Signalling: Global Low Frequency Protein Motions in Allosteric Binding</b>	Tom McLeish, University of York
14:15	<b>Panel Discussion</b>	
15:00	<b>End of Session</b>	

<b>13:00 - 15:00</b>		<b>Machine Learning applications in Oncology</b> followed by <b>Immunology</b>
Location: Turing Lecture Theatre		
Chair: Eric Stahlberg and Tim Elliott		
13:00	<b>Artificial Intelligence Solutions to Modernize Cancer Surveillance and Optimize Population-Level Cancer Outcomes</b>	Georgia Tourassi, Oak Ridge National Laboratory
13:30	<b>Towards Personalised Cancer Prevention: The Digital Cancer Precision Prevention Initiative</b>	Mari Nygård, Cancer Registry of Norway
14:00	<b>Immune Cell Dynamics &amp; Control of Persistent Virus Infection</b>	Becca Asquith, Imperial College London
14:20	<b>Control of T Cell Responses by Accessory Receptors Revealed by Phenotypic Modelling</b>	Omer Dushek, University of Oxford
14:40	<b>Application of Artificial Neural Networks to Infer Pharmacological Molecular-Level Mechanisms of Drug Evoked Clinical Responses</b>	Jonathan Wagg, Roche
15:00	<b>End of Session</b>	

<b>13:00 - 15:00</b>		<b>Imaging &amp; Visualisation</b>
Location: Watson Watt Room		
Chair: Peter V Coveney		
13:00	<b>Accelerating Medical Imaging on Multi-core Platforms</b> Abbes Amira, Qatar University	
13:20	<b>Improved Data Analysis with Virtual and Augmented Reality</b> Thomas Odaker, Leibniz Supercomputing Centre of the Bavarian Academy of Sciences and Humanities	
13:40	<b>Automatic Cerebral Aneurysm Segmentation Using Contourlet Transform and Hidden Random Field Model Template</b> Abbes Amira, Qatar University	
13:55	<b>Animating the Virtual Human: Applying Movie-industry Tools and Techniques to Data Visualization</b> Guillermo Marin, Barcelona Supercomputing Center	
14:15	<b>Panel Discussion</b>	
15:00	<i>End of Session</i>	

<b>15:00 - 15:30</b>		<b>Refreshments</b> <b>Haslett and Marconi Rooms</b>
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<b>15:30 - 16:15</b>		<b>Keynote Address</b>
Location: Kelvin Lecture Theatre		
<b>William L. Jorgensen</b>		
<b>Computer-Guided Efficient Discovery of Potent Enzyme Inhibitors</b>		

<b>16:15 - 16:30</b>		<b>Sano Project</b>
Location: Kelvin Lecture Theatre		
Marian Bubak		

<b>16:30 - 17:00</b>		<b>Closing Remarks and Poster Prize</b>
Location: Kelvin Lecture Theatre		
Peter V. Coveney		