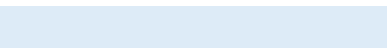







BioMedEng19 Summary Schedule: Day 1

08:30	Conference Registration				
09:30	Welcome Ceremony (Great Hall)				
09:45	Plenary Session 1 - Professor Lionel Tarassenko CBE FREng FMedSci - (Great Hall)				
10:35	Rapid Fire Presentations - (Great Hall)				
10:55	Poster Session + Tea & Coffee Break - (Queens Tower Rooms)				
11:15	Biosensors, Biomedical Signal Processing & Bioelectronics	Mechanics of Tissues & Organs (Huxley 308)	Wearable Sensors (Read)	BioMedEng19 Translation Workshop (Pippard)	OOAC Network - Sabbatical Projects Reports (EEE 509)
12:45	Lunch, Posters & Networking - (Queens Tower Rooms)				
13:45	Cardiovascular I & Lymphatic Bioengineering (Great Hall)	BioMedEng19 Early Career Researchers Funding Workshop (Huxley 308)	Digital Health Engineering, Medical Technology & Innovation (Read)	Biomaterials & Functional Bionanomaterials (Pippard)	OOAC Network - Special Interest Group sessions (EEE 509)
15:00	Poster Session + Tea & Coffee Break - (Queens Tower Rooms)				
15:30	Medical Devices & Diagnostics (Great Hall)	Synthetic Biology and Disease Treatment Workshop (Huxley 308)	Prosthetics & Trauma (Read)	Biomedical Imaging (Pippard)	Organ on a chip & Artificial Organs Network (EEE 509)
17:00	Plenary Session 2 - Dr David Hughes - (Great Hall)				
18.45	Dinner Arrival & Seating - (Queens Tower Rooms)				
19.00	BioMedEng19 Dinner with After Dinner Speaker - Prof John Tyrer				
22.00					

Colour Bands	Keys
	Conference Registration
	Opening/ Closing Ceremony
	Plenary Session
	Poster, Networking Breaks & Lunch
	Workshop
	Dinner / Drinks Reception

BioMedEng19 Summary Schedule: Day 2

08:30	Conference Registration			
09:00	Musculoskeletal Biomechanics, Gait Analysis & Human Movement (Great Hall)	Mechanobiology, Biofluids & Cardiovascular Bioengineering II (Huxley 308)	Computational Biology, Experimental Models of Disease and Injury (Read)	Cancer Engineering, Drug & Gene Delivery (Pippard)
10:30	Poster Session + Tea & Coffee Break - (Queens Tower Rooms)			
11:00	Plenary Session 3 - Dr Timothy Padera (Great Hall)			
12:00	Lunch, Posters & Networking - (Queens Tower Rooms)			
	General Assembly - Virtual Physiological Human Research (Great Hall)			
13:00	Virtual Physiological Human Research- VPHi-UK Chapter (Great Hall)	Biomedical Engineering Randomised Controlled Trials Workshop (Huxley 308)	Advancing Functional Electrical Stimulation Workshop (Read)	Biomedical Engineering Education Workshop (Pippard)
14:15	Poster Session + Tea & Coffee Break - (Queens Tower Rooms)			
14:35	Tissue Engineering & Regenerative Medicine (Great Hall)	Artificial Intelligence & Machine Learning (Huxley 308)	Neurotechnology, Rehabilitation Engineering & Robotics (Read)	Personalised Medicine & Modelling Biological Systems (Pippard)
15:50	Plenary Session 4 - Professor Ilse Jonkers - (Great Hall)			
16:35	Awards & Closing Ceremony - (Great Hall)			
17:00	Drinks Reception & Networking - (RSM 3.01 C, D & E)			
-18:00				

Colour Bands

Keys

	Conference Registration
	Opening/ Closing Ceremony
	Plenary Session
	Poster, Networking Breaks & Lunch
	Workshop
	Dinner / Drinks Reception

BioMedEng19 Conference Schedule: Day1

08:30	Conference Registration
09:30	Welcome Ceremony (Great Hall)
09:45	Plenary Session - Professor Lionel Tarassenko CBE FREng FMedSci - (Great Hall)
10:35	Rapid Fire Presentations - (Great Hall)
10:55	Poster Session + Tea & Coffee Break - (Queens Tower Rooms)
	Biosensors, Biomedical Signal Processing & Bioelectronics - (Great Hall) Chairs - Dr Michele Zagnoni (Strathclyde) & Dr Terence Leung (UCL)
11:15	Shao-Tuan Chen, University of Cambridge, - 'Design Optimization of Microfluidic Ion Pumps with Numerical Simulation'
11:28	Estelle A Cuttaz, Imperial College London, - 'Conductive elastomers for soft and flexible bioelectronics'
11:40	Meer H Farazmand, Univeristy of Warwick, - 'Design and Development of a Fluidic and Electrical Interface for a Disposable Lab-on-a-Chip '
11:52	Hsing-Yu Chen, University of Bristol, - 'Soft wireless power transfer system for implantable devices'
12:05	Henry T Lancashire, University College London - 'ECG reduction in thoracic EMG during coughing with the Teager-Kaiser Operator'
12:17	Zaibaa Patel, RCBE, City, University of London, - 'Can the human colorectum give adequate PPG signals for the assessment of bowel viability using an indwelling optical sensor?'
12:30	Conor Horgan, Imperial College London - 'Fluorescence-guided spatial Raman spectroscopic diagnostics for tumour identification and margin delineation'
	Mechanics of Tissues & Organs - (Huxley 308) Chairs - Dr Jan Herman Kuiper (Keele) & Dr Joseph Sherwood (Imperial)
11:15	Keynote: Professor Richard Aspden, University of Aberdeen, - 'Quantifying the organisation of collagen within soft and hard connective tissues using x-ray and neutron diffraction and polarized light microscopy'
11:28	Uwe Wolfram, Heriot-Watt University, - 'Extracellular matrix yield stress and failure envelopes of mineralised collagen fibrils'
11:40	Pallavi Deshpande, University of Liverpool, - 'Peptide hydrogels as antimicrobial bandage contact lenses'
11:52	Rikeen D Jobanputra, Imperial College London, - 'A Numerical Model for the Effect of Aging on Tactile Perception'
12:05	Ahmed Kazaili, University of Liverpool, - 'Micromechanical properties of the cornea under Physiological Pressure'
12:17	Lucy A Bosworth, University of Liverpool, - 'Conjunctival repair with electrospun scaffolds containing decellularised tissue matrix'
	Wearable Sensors - (Read) Chairs - Prof Claudia Mazzà (Sheffield) & Dr Elisabeth Williams (Swansea)
11:15	Keynote: Professor Malcolm Granat, University of Salford, - 'Measuring physical behaviour: Making sense of wearable sensors'
11:40	Yasin Cotur, Imperial College London, - 'Flexible Transducer for Continuous Wearable Health Monitoring'
11:52	Lorenza Angelini, INSIGNEO Institute for in silico medicine, - 'Assessment of gait alterations and balance in patients with Multiple Sclerosis'
12:05	Dimitra Blana, Aparito, - 'Mobile Health for Remote Monitoring of Epilepsy in South African Children'
12:17	Balasundaram Kadirvelu, Imperial College London, - 'Daily life digital biomarkers for longitudinal monitoring of Duchenne muscular dystrophy with wearable sensors'
12:30	Irene Mendez, Imperial College London, - 'Extracting neural control strategies from the wrist non-invasively'
	BioMedEng19 Translation Workshop (Pippard) Chair - Mr Robert Ferguson (Imperial)
11:15	Simon Hepworth, Imperial College, Ecosystem Design (University Infrastructure and Processes)
11:25	Firat Yazicioglu, Galvani, Enabling New Therapies through Novel Neural Interfaces
11:35	Jim Reed, Minnetronix, Virtual Product Development: Perils, Pitfalls and Opportunities
11:45	Matthew Barber, The IET, Supporting Translational Work
11:50	Francesco Ruospo, Presenting Academic Labs: The one-stop-shop to easily find all your collaboration partners & assets
12:00	Panel Discussion
	OOAC Network - Sabbatical Projects Reports - (EEE 509) Chairs - Prof Hazel Screen (QMUL) & Prof Martin Knight (QMUL)
11:15	Network Update: Hazel Screen, OOACT Network Director/QMUL
11:28	Alfredo Ongaro, Heriot-Watt University, - 'Next-Generation Material for high-volume production of Sustainable, Biocompatible Organ-On-Chip devices'
11:40	Ana Laly Aguedo, Queen Mary University of London, - 'Development of an immune-responsive 3D skin model'
11:52	Beata Wojciak Stothard, Imperial College London, - 'Microfluidic model of human pulmonary artery: vascular cell positioning under flow'
12:05	Philippa Hulley, University of Oxford, - 'Transcriptional development of human primary osteocytes in a 3D bone organ'
12:17	Julien Gautrot, Queen Mary University of London, - 'Development of a microvascularised cerebral organoid-on-a-chip'
12:30	Paul Holloway, University of Oxford, - 'Public engagement project update'
12:45	Lunch, Posters & Networking - (Queens Tower Rooms)
	Cardiovascular I & Lymphatic Bioengineering - (Great Hall) Chairs - Dr Chris Cantwell (Imperial) & Dr Ryo Torii (UCL)
13:45	Riaz Akhtar, University of Liverpool, - 'Unique patterns of matrix degradation in ascending aortic aneurysms in bicuspid aortic valve patients'
13:58	Limor Zwi-Dantsis, Imperial College London, - 'Remote dynamic patterning of cardiac constructs using magnetic fields'
14:10	Alessandro Giudici, Brunel University London, - 'Aortic Stiffness in Healthy Humans: Effect of Age'
14:22	Sumesh Sasidharan, Imperial College London, - 'Investigating the Effect of Peeling Rate on Medial Dissections of Porcine Aortas'
14:34	James Moore Jr., Imperial college London, - 'Multiscale Analysis of Lymphatic Muscle Components in Active Pumping'
14:46	Charles Houston, Imperial College London, - 'Validating a computer model of discretely coupled cardiac cells'

BioMedEng19 Early Career Researchers Funding Workshop - (Huxley 308)
Chairs - Dr Gifty Tetteh (Imperial) & Dr Karen Hinxman (Imperial)

- 13:45 Karen Hinxman, Imperial College London, - 'Fellowship Applications: What you need to consider to be successful'
13:55 Katherine Freeman, EPSRC, - 'EPSRC Funding Opportunities for Biomedical Engineering'
14:05 Candy Hassall, Wellcome Trust, - 'Top tips for applying to Wellcome'
14:20 Agnes Leong, Medical Research Council, - 'Translational research at the MRC'
14:30 Matina Giannarou – Royal Society University Research Fellow, - 'My journey in academia: From PhD to Royal Society URF'
14:40 Panel Discussion

Digital Health Engineering, Medical Technology & Innovation - (Read)
Chairs - Prof Jimmy Moore (Imperial) & Dr Leandro Pecchia (Warwick)

- 13:45 Matthew Bell, University of Warwick, - 'Design and Fabrication of a Low-Cost Modular Laboratory Platform for Microfluidics'
13:58 Caitlin F Stewart, University of Strathclyde, - 'Preliminary Investigation of the Compatibility of Violet-Blue light for Decontamination of Human Blood Plasma'
14:10 Balasundaram Kadirvelu, Imperial College London, - 'Full-body behaviour analytics reveals DMD disease state within the first few steps of the 6-minute-walk test'
14:22 Iek Man Lei, University of Cambridge, - 'Embedded Bioprinting an In Vitro Cochlea Model for Cochlear Implant Studies'
14:34 Tulsi N Patel, King's College London, - 'Development and Evaluation of a physical Chest Wall Simulator for minimally invasive surgery'
14:46 Vanessa Mancini, University of Leeds, - 'Design of a safe microfluidic environment for in vitro culture of murine embryos'

Biomaterials & Functional Bionanomaterials - (Pippard)
Chairs - Prof Alicia El Haj (Birmingham) & Prof Felicity Rose (Nottingham)

- 13:45 Antonios Keirouz, The University of Edinburgh, - 'Nylon-6/Chitosan core/shell nanofibers with spatially controlled release of antimicrobials for the prevention of surgical site infection on hernia meshes'
13:58 Axel C Moore, Imperial College London - 'Cartilage-like Performance of a Fibre Reinforced Hydrated Network'
14:10 Betul Aldemir Dikici, University of Sheffield, - 'Can the biological performance of 3D printed synthetic polymeric scaffolds be boosted by in vitro generated extracellular matrix decoration?'
14:22 Anna M Majkowska, Queen Mary University of London, - 'Peptide-protein co-assembly to organise graphene oxide hierarchically into hybrid bioactive scaffold materials'
14:34 Thomas E Paterson, University of Sheffield - 'Making it softer: Employing plasticisers to reduce the stiffness of microfabricated electrospun corneal membranes'
14:46 Michael J Potter, Imperial College London, - 'An Antibacterial Nanoreactor: Using Compartmentalized Enzymes to Turn Glucose into Hypochlorite'

Organ-on-a-Chip Technologies Special Interest Groups sessions - (EEE 509)
Chairs - Prof Hazel Screen (QMUL) & Prof Martin Knight (QMUL)

13:45 Review Presentations

- Malcolm Haddrick, Medicines Discovery Catapult, - 'Commercially available OOAC platforms'
Blerina Ahmetaj, Imperial College London, - 'Newly Emerging Technology for OOAC'
Paul Holloway, University of Oxford, - 'Neurovascular disease on a chip'

13:55 Special Interest Groups: 5 - 8 min presentations

- Malcolm Haddrick, Medicines Discovery Catapult, - 'Commercially available OOAC platforms'
Paul Holloway, University of Oxford, - 'Brain on a chip'
Pierre Bagnaninchi, University of Edinburgh - 'Label free real-time monitoring – translation to OOAC model'
Blerina Ahmetaj, Imperial College London, - 'Patient involvement in OOACT'

14:45 Round Table Discussion

15:00

Poster Session + Tea & Coffee Break - (Queens Tower Rooms)

Medical Devices & Diagnostics - (Great Hall)
Chairs - Prof Stephen O'Connor (IPEM) & Dr Xize Niu (Southampton)

- 15:30 Richard N Gibson, University of Strathclyde, - 'Nanokicking Device for use in Osteoporosis Treatment'
15:43 Jenny Venton, King's College London, - 'Early detection of cardiac deterioration: Attractor reconstruction of a blood pressure waveform'
15:55 Aiden J Hannah, University of Strathclyde - 'Rapid Detection of Proteus mirabilis Using Disposable Electrochemical Sensors'
16:08 Richard Caulfield, UCL, - 'Free-standing parylene membranes for optical pressure sensing'
16:20 Ruaridh Winstanley, University of Strathclyde - 'A Multimodal Neural Modulation System'
16:32 Sean Donnelly, University of Strathclyde, - 'Cystic Fibrosis Patient Monitor'
16:44 Francesca Farrell, University of Strathclyde, - 'Wearable μ LED-based device for phototherapy applications'

Synthetic Biology and Disease Treatment Workshop - (Huxley 308)
Chairs - Dr Vishwesh Kulkarni (Warwick) & Dr Antonia Sagona (Warwick)

- 15:30 **Keynote:** Dr Tamas Feher, MTA Szeged Research Centre for Biology, - 'CRISPR-interference based modulation of mobile genetic elements in bacteria'
16:00 Rodrigo Ledesma Amaro, Imperial College London, - 'Synthetic biology tools for engineering Yarrowia lipolytica'
16:15 Richard Amaee, Lucidix LLC, - 'Rapid detection of bacteria'
16:30 Dr Jongmin Kim, POSTECH Pohang, Korea, - "Programmable CRISPR-Cas Repression, Activation, and Computation with Sequence-Independent Targets and Triggers"
16:45 Javier Cabello-Garcia, Imperial College London, - "Introducing "Handhold-mediated strand displacement": Sequence-Catalysed strand binding for DNA nanotechnology'

Prosthetics & Trauma - (Read)
Chairs - Dr Angela Kedgley (Imperial) & Prof Malcolm Granat (Salford)

- 15:30 Taiwo Kelani, Imperial College London, - 'Neck pain and vertebral angulation of the cervical spine with a rigid cervical collar'
15:43 Emily S Kelly, University of Southampton, - 'Predicting Pressure and Shear Strain Gradients in Ankle Foot Orthosis Use: a Preliminary FEA study'
15:55 Michael Sutcliffe, University of Cambridge, - 'Surgical microdrilling for arthritis treatment'
16:08 Sean S Cullen, Brunel University, - 'The Lower Limb Prosthetic/Human Interface; A New Approach'
16:20 Claire Baker, Imperial College London - 'Traumatic Brain Injury in Great Britain Road Traffic Collisions'
16:32 Ponnusamy Pandithevan, Indian Institute of Information Technology - 'Temperature analysis in surgical drilling of bone using probability distribution'

16:44 Alexander K Clarke, Imperial College London - 'Deep Learning for Supervised Decomposition of High-Density Surface EMG Signals'

Biomedical Imaging - (Read)
Chairs - Dr Bryan Williams (Liverpool) & Dr Claire Conway (Aston)

15:30 Liam H Collins-Jones, University College London, - 'Construction and Validation of a Database of Neonatal Structural Priors for Use in Diffuse Optical Tomography'

15:43 Sara Oliviero, University of Sheffield, - 'Effect of repeated in vivo micro-ct imaging on the morphometric, densitometric and mechanical properties of the mouse tibia'

15:55 Matin Mohseni, UCL, - 'Magnetic targeting and imaging of super -paramagnetic iron-oxide nanoparticles to subcutaneous tumour models'

16:08 Natalie Holroyd, UCL, - 'Developing Multi-Colour Fluorescence High Resolution Episcopic Microscopy for Large Volume Imaging'

16:20 Bryant C Roberts, University of Sheffield, - 'Longitudinal effects of combined treatment with PTH(1-34) and mechanical loading on densitometric properties of bone in ovariectomized mice'

16:32 Adam Doherty, University College London, - 'Optimal and automated mask alignment for use in X-ray dark-field imaging techniques'

16:44 Felix Outlaw, UCL, - 'Smartphone screening for neonatal jaundice in Ghana'

Organ on a chip & Artificial Organs - (EEE 509)
Chairs - Dr Julien Gautrot (QMUL) & Dr Paul Holloway (Oxford)

15:30 **Keynote:** Professor Frances Balkwill OBE, QMUL, - 'Deconstruction and reconstruction of a human tumour microenvironment'

15:55 Roisin M Owens, University of Cambridge, - 'A 3D bioelectronics model of the gut-brain axis'

16:08 Dharaminder Singh, CN-Bio, - 'Microfluidic enabled in vitro analysis of the PK/PD/efficacy relationship of PI3K inhibitors'

16:20 Alexander J Ainscough, Imperial College London, - 'Modelling Pulmonary Arterial Hypertension using the pulmonary artery-on-a-chip'

16:32 Nuria Roldan, AlveoliX, - 'Mirroring the alveolus in vitro: applications of a human breathing alveolus-on-chip'

16:44 Vivek Thacker, EPFL, - 'Lung-on-a-chip microtechnologies for studies of host-pathogen interactions in Tuberculosis'

**17:00-
18:00**

Plenary Session 2 (Organ on a Chip) - Dr David Hughes - (Great Hall)

18:45

Arrival & Seating - BioMedEng19 Dinner - (Queens Tower Rooms)

**19:00-
22:00**

BioMedEng19 Dinner with After Dinner Speaker - Prof John Tyrer
'Bras to Bridges – Using Lasers to Reverse Engineer People'

BioMedEng19 Conference Schedule: Day 2

08:30

Conference Registration

Musculoskeletal Biomechanics, Gait Analysis & Human Movement - (Great Hall) Chairs - Dr Aliah Shaheen (Brunel) & Dr Alex Dickinson (Southampton)

- 09:00 Edward K Chadwick, Keele University, - 'Tenodesis surgery for enhancing grasp and release following stroke: a simulation study'
- 09:13 Asaph DR Nardi, Ariel University, - 'Numerical Aspects of Hypertrophic Cardiomyopathy Treatment'
- 09:25 Runbei Cheng, University of Oxford, - 'An Opensource Framework to Analyse Marker-based and Inertial-Sensor-based Measurements: Motion Capture Analysis & Plotting Assistant (MCAPA) 2.0'
- 09:38 Marina Strocchi, King's College London, - 'A Virtual Cohort of Heart Failure Patients Four-chamber Heart Meshes for Cardiac Electro-mechanics Simulations'
- 09:50 Claude F Hayford, University of Sheffield, - 'Evaluation of a scaled generic musculoskeletal model for estimating joint reactions during normal gait in children'
- 10:02 Daniel Nolte, Imperial College London, - '3D shape prediction from planar X-ray for orthopaedic reconstruction using statistical shape and appearance models'
- 10:15 Jeff N Clark, Imperial College London, - 'Three-dimensional imaging of articular cartilage down to the cellular level using laboratory micro-computed tomography'

Mechanobiology, Biofluids & Cardiovascular Bioengineering II - (Huxley 308) Chairs - Dr Stephen Thorpe (QMUL) & Dr Yi Sui (QMUL)

- 09:00 Gaia Franzetti, University College London, - 'PIV Haemodynamic Study of a Patient Specific Case of Type-B Aortic Dissection'
- 09:13 Jorge Mariscal Harana, King's College London, - 'Algorithms for estimating central blood pressure from aortic blood flow'
- 09:25 Joseph M Sherwood, Imperial College London, - 'Modelling the effect of RBC concentration distributions on microhaemodynamics'
- 09:38 Christina M Warboys, Royal Veterinary College, - ' β -catenin promotes endothelial dysfunction in response to atheroprone 'disturbed' flow via a Frizzled-4 dependent pathway'
- 09:50 Simran K Longani, Imperial College London, - 'Development and Implementation of a Magnetic Tweezer Protocol and Analysis System to Measure the Mechanical Properties of Protein Nanosheets'
- 10:02 Boon C Low, National University of Singapore, - 'BCH Domain as a Versatile Scaffold Module in Mechanobiology'
- 10:15 George Hyde-Linaker, University of Strathclyde, - 'Fluid-structure interaction simulation of flow-mediated dilation of a straight arterial conduit'

Computational Biology, Experimental Models of Disease and Injury - (Read) Chairs - Dr Xinshan Li (Sheffield) & Dr Zhongzhao Teng (Cambridge)

- 09:00 Shima Abdullateef, Brunel University London, - 'On the Impact of Arterial Tapering on Blood Pressure: A Computational Study'
- 09:13 David A Howells, Swansea University, - 'A Coupled Eulerian Lagrangian Model for Injury Risk Prediction of Primary Blast Effects in Complex Environments'
- 09:25 Simao Laranjeira, UCL, - 'In silico framework to optimise the design of EngNT embedded with rods to promote neurite growth post nerve injury.'
- 09:38 Mehwish Arshad, Imperial College London, - 'Validation of CFD Method Used to Model Flow in Cell Culture Dishes on an Orbital Shaker'
- 09:50 Carlos A Morales-Garduno, The University of Sheffield, 'An Agent-Based Model of cell-level interactions during the mammalian fertilization process using FlameGPU'
- 10:02 Constandinos Carserides, Liverpool University, - 'Development of an ex vivo organ culture model of the cornea to determine the efficacy of a bioengineered graft.'
- 10:15 Samuel Vennin, King's College London, - 'Ventricular dynamics is a major determinant of the augmentation index: An in vivo and in silico study'

Cancer Engineering, Drug & Gene Delivery - (Pippard) Chairs - Dr Ciro Chiappini(KCL) & Prof Darryl Overby (Imperial)

- 09:00 **Keynote:** Professor Alan Melcher, Institute of Cancer Research, - 'The Challenges of Drug Delivery for the Immunotherapy of Cancer – How Can Engineers Help?'
- 09:25 Priyanka Gupta, University of Surrey, - 'Towards the development of a multicellular scaffold based model of Pancreatic Ductal Adenocarcinoma – A step closer to Animal Free Research'
- 09:38 Paul W Sweeney, University College London, - 'Investigating the effects of vascular normalization on interstitial fluid dynamics using whole, realistic tumour vasculatures'
- 09:50 Olga Piskareva, Royal College of Surgeons In Ireland, - '3D tissue-engineered model of neuroblastoma for evaluating cytotoxic and miRNA-targeted therapeutics'
- 10:02 Christopher C Phillips, Imperial College London, - 'Mid-IR Chemical Nanoimaging (MICHNI) for Intra-cellular Drug Localisation and Cancer Pathology.'
- 10:15 Fatih Yanar, University of Southampton, - 'Dual encapsulation of silver nanoparticles and model drugs in liposomes: a microfluidic-based approach'

10:30

Poster Session + Tea & Coffee Break - (Queens Tower Rooms)

11:00

Plenary Session 3 - Dr Timothy Padera (Great Hall)

Lunch, Posters & Networking - (Queens Tower Rooms)

12:00

General Assembly - Virtual Physiological Human Research (Great Hall) from 12:30

Virtual Physiological Human Research- VPHi-UK Chapter - (Great Hall) Chairs - Dr Enrico Dall'Ara (Sheffield) & Dr Mehran Moazen (UCL)

- 13:00 Enrico Dall'Ara, University of Sheffield - 'A Finite Element approach to evaluate the mechanical stability of human vertebrae with metastatic lytic lesions'
- 13:12 Emilie Sauvage, UCL, - 'In-silico modelling of surgical aorta remodelling in babies born with hypoplastic left heart syndrome'
- 13:25 Anna Santagostino Barbone, University of Sheffield, - 'Finite Element Analysis of the Arabin® Cerclage Pessary for Treatment of Pregnant Patients at Risk of Spontaneous Preterm Birth'
- 13:38 Qiao Li, University of Sheffield, - 'Towards a virtual population of femur strength'
- 13:50 Rosti Readioff, Keele University, - 'A Novel Imaging and Modelling Technique to Characterise Ligament Mechanics'

14:03 Giulia Pederzani, University of Sheffield, - 'Application of Theories of Arterial Growth, Remodelling and Damage to Understand Cerebral Vasospasm and its Response to Treatment'

Biomedical Engineering Randomised Controlled Trials Workshop - (Huxley 308)
Chairs - Dr Matt Williams (Imperial) & Dr Victoria Cornelius (Imperial)

13:00 Matt Williams: Why do we need randomised controlled trials?

13:12 Daniel Green: Interventions requiring robust evaluation

Small group workshop challenge

13:20 Discovering the advantages and disadvantages of RCTs for the evaluation of Biomedical devices
Discovering the advantages and disadvantages of alternative non-randomised study designs

13:45 Victoria Cornelius: Its all about PICO

Small group workshop design challenge

13:50 Turn the research question design into PICO and choose a study design

14:10 Feedback and Summary

Advancing Functional Electrical Stimulation Workshop - (Read)
Chairs - Dr Ed Chadwick (Keele) & Ms Agraja Dimunge (Salisbury NHS Trust)

13:00 **Keynote:** Professor David Howard, Salford University, - 'Developing innovative solutions for upper limb restoration using functional electrical stimulation'

13:30 Fraser Philp, Keele University, - 'Principles of FES in movement science and neurorehabilitation'

13:45 Neil Postans, The Robert Jones and Agnes Hunt Orthopaedic Hospital, - 'Insights into current practice and the clinical use of FES'

14:00 Dimitra Blana, Keele University, - 'Future perspectives: adding intelligence to advanced FES'

Biomedical Engineering Education Workshop - (Pippard)
Chair - Dr Samuel Vennin (KCL)

13:00 Introduction to Public Engagement- Samuel Vennin, KCL

13:10 Public Engagement Experience: Jonathan Jackson-KCL, Lucy Foss-ICL, Christos Bergeles-KCL

Panel Discussion -

• Initial motivation for becoming involved in PE

13:25 • Benefits of PE to careers and research

• Process of creating a PE project (practical, creative and skill based)

• Challenges faced during engagement projects and success stories

13:55 Audience Interaction

14:05 Questions from the Audience

14:15

Poster Session + Tea & Coffee Break - (Queens Tower Rooms)

Tissue Engineering & Regenerative Medicine - (Great Hall)
Chairs - Dr Eirini Velliou (Surrey) & Prof John Haycock (Sheffield)

14:35 **Keynote:** Professor Ipsita Roy, University of Sheffield, - 'Natural Polymers of Bacterial Origin and their Biomedical Applications'

15:00 Norbert Radacsi, University of Edinburgh, - '3D/4D electrospinning for tissue engineering'

15:12 Serkan Dikici, University of Sheffield, - 'A novel 3D in vitro angiogenesis model for investigating endothelial cell migration in response to different stimulants'

15:25 Lu Luo, University of Birmingham, - 'A novel online monitoring tool for assessing mechanical properties of tissue engineered grafts'

15:37 Valentina Barrera, NHS Blood and Transplant, - 'Decellularisation of Human Femoral Nerves in a Closed System: Towards Introducing a New Nerve Allograft in Healthcare in the UK'

Artificial Intelligence & Machine Learning - (Huxley 308)
Chairs - Prof Anil Bharath (Imperial) & Prof Payam Barnaghi (Surrey)

14:35 Bryan M. Williams, University of Liverpool, - 'Automated Assessment of Corneal Limbus and Foveal Blood Vessels with Fully Convolutional Networks'

14:47 Ryan C Timms, University of Oxford, - 'Electrophysiological Source Reconstruction with Stochastic Bayesian Machine Learning'

15:00 Ardra Radhalakshmi, King's College London, - 'Automated Standard View Classification for Trans-oesophageal Echocardiography'

15:12 Madalina Fiterau, University of Massachusetts Amherst, - 'Alzheimer's Disease Forecasting using Generative Representation Prediction'

15:25 Jason M Carson, Swansea University - 'A Machine Learning and Physics-Based Hybrid Modelling Approach for Non-invasive Fractional Flow Reserve'

15:37 Karthika Sivakumar, Northeastern University, - 'Forecasting Pharmacoresistant Epileptic Seizure from Intracranial EEG Recordings'

Neurotechnology, Rehabilitation Engineering & Robotics - (Read)
Chairs - Dr Anne Vanhoostenberghe (UCL) & Dr Rui Loureiro (UCL)

14:35 **Keynote:** Dr Aleksandra Vuckovic, University of Glasgow, - 'Is Brain Computer Interface technology ready for home based patients' self-managed treatments?'

15:00 Ross Collins, University of Strathclyde - 'Feasibility of an Upper Limb Weight Support Device for Stroke Rehabilitation'

15:12 Filip Paszkiewicz, Imperial College London - 'Verification and Analysis of Condenser Microphones for Mechanomyography Prosthetic Control'

15:25 Bill C Tan, King's College London, - 'Evaluating patient experience and image quality in early development of robotic fetal ultrasound'

15:37 Shreya Chawla, King's College London - 'Task-Driven Evaluation of Automated Control of a TOE Robot During Trans-Septal Puncture'

Personalised Medicine & Modelling Biological Systems - (Pippard)
Chairs - Prof Mike Chappell (Warwick) & Dr Pinaki Bhattacharya (Sheffield)

14:35 Benigno Marco Fanni, Fondazione Toscana Gabriele Monasterio, - 'A modified formulation of the QA method for inferring materials properties for enhanced patient-specific computational models'

14:47 Xin Zhou, University of Oxford, - 'Human in-silico investigations into therapeutic strategies in acute myocardial ischemia'

15:00 Caroline Mendonca Costa, King's College London, - 'Pacing in Proximity to Scar During Cardiac Resynchronization Therapy Increases Local Dispersion of Repolarization and Susceptibility to Ventricular Arrhythmogenesis'

15:12 Selim Bozkurt, UCL Institute of Cardiovascular Science, - 'Numerical Modelling of Lambdoid Craniosynostosis Correction'

15:25 Peiying Sun, University of Sussex, - 'Computational Evaluation of Aortic Blood Flow Velocities Under Pulsatile CF-LVAD Support'

15:37 Francesco Gianoli, Imperial College London, - 'The GATE-spring theory: a new model of mechanotransduction in auditory hair cells'

15:50	Plenary Session 4 - Professor Ilse Jonkers - (Great Hall)
16:35	BioMedEng19 Awards & Closing Ceremony - (Great Hall)
17:00- 18:00	Drinks Reception & Networking - (RSM 3.01 C, D & E)

BioMedEng19 Poster Presentation - Thursday 5th September 2019**Biosensors, Biomedical Signal Processing & Bioelectronics**

1 - Matthew J Sargent, Imperial College London – 'Monitoring of Breathing Rate in Anaesthetised Mice by Piezoelectric-Transduction-based Pressure Sensing'

2 - Negar Riazifar, University of Warwick - 'Event-Based Signal Processing'

3 - Chiara Cicatiello, Imperial College London, - 'A multi-ion platform for real-time detection of secondary insults in traumatic brain injury.'

4 - Wesleigh Dawsmith, Queen Mary University of London - 'Microwave dielectric measurements of bovine blood for the creation of a predictive computational model'

5 - Yunus A Abdulhameed, Lancaster University - 'The effects of malaria episodes on human skin microcirculation evaluated by wavelet phase coherence'

6 - Pavel Kutsenko, Imperial College London - 'Development of lactate sensors for continuous monitoring in sepsis'

7 - Urwah Arif, University of Edinburgh - 'Modelling of Electrical Impedance Tomography (EIT) of Nerve Bundles for Applications in Peripheral Nerve Stimulation'

8 - Kylie de Jager, University College London - 'Simultaneous power transfer and bidirectional serial communication for implantable electronics'

9 - Irving Caplan, University College London - 'Stimulation induced biopotential amplifier saturation due to common mode voltage'

10 - Radovan Gallo, Aston University, - 'Optimisation of SMARTChip capillary fluidic system'

Mechanics of Tissues & Organs

11 - Angelina Avgeri, University Paris-Diderot - 'Mechanical properties of scar tissues of the hip capsule ligament for different implant materials'

12 - Michael Crichton, Heriot-Watt University - 'Understanding skin and mucosal tissue micromechanics to aid the development of wearable technologies'

13 - Marc Masen, Imperial College London - 'Relating moisture content and sebum composition to the in vivo shear response of human skin'

14 - Sara Medina-Lombardero, Heriot-Watt - 'Wounds in skin: characterising and visualising the changes to load bearing capacity on a microscale'

Wearable Sensors

15 - Balasundaram Kadirvelu, Imperial College London - 'Towards high-resolution clinical digital biomarkers for Duchenne muscular dystrophy'

Cardiovascular I & Lymphatic Bioengineering

16 - Mirko Bonfanti, University College London - 'Personalised blood flow simulations of complex aortic dissections informed by commonly available clinical datasets'

17 - Mairi E Sandison, University of Strathclyde - 'Tracking Phenotypic Heterogeneity at the Single Cell Level in Populations of Vascular Cells Through the Development of Microwell Arrays'

18 - Daniel J Watson, Imperial College London - 'Modelling Chemokine Transport within the Lymphatic System: Toward an Integration of Cellular and Transport Phenomena'

19 - Phakakorn Panpho, University of Liverpool - 'Mechanical properties of the ovine aorta: macro- to micro- scale correlation with regional variations in collagen, elastin and glycosaminoglycan levels'

20 - Lydia Marinou, University of Strathclyde - 'Investigating the role of haematocrit in foetal circulation: a multi-compartment lumped parameter model'

21 - Jennifer Frattolin, Imperial College London - 'Customizable self-assembling peptide hydrogels for testing dendritic cell responses to chemokine gradients'

Digital Health Engineering, Medical Technology & Innovation

22 - Sebastian Pattinson, University of Cambridge - 'Additive Manufacturing of Mechanically Tailored Mesh for Compliant Wearable and Implantable Devices'

23 - Neeraj Kavan Chakshu, Swansea University - 'Inverse Analysis of Cardiovascular State using Artificial Intelligence – A Step Closer to Realization of Active Digital Human Twin'

24 - Sarah Massey, UCL - 'Development of a mobile application to assess the use of neuromodulation for the self-management of spasticity'

25 - Zubia A Khan, King's College London - 'To what extent is using the newly clinically approved Kuka LBR iiwa 7 R800 robotic arm to conduct trans-thoracic echocardiography feasible and plausible?'

26 - Zanib K Panni, University of Strathclyde, - 'Using ART-FTIR for investigating Cardiovascular diseases and Cognitive Impairments'

27 - Tejas Kotwal, GKT School of Medical Education - 'Assessment of the HTC Vive for Surgical Planning in Cardiology'

28 - Anvarjon Mukhammadaminov, King's College London - 'Chest wall motion assessment post-thoracic surgery'

29 - Jeremie E De Guzman, Keele University - 'Medical Software: a literature review and commentary on the importance of regulations and standards for its development towards market entry'

30 - Syed Ghufuran Khalid, Anglia Ruskin University - 'Cuffless BP Estimation Using Single Channel PPG: Evaluation of Machine Learning Approaches on MIMIC II database'

Synthetic Biology and Engineering Biology

31 - Vishwesh Kulkarni, Warwick University - 'ART: Automatic Representation Translator for Idealised Nucleic Acid Circuits'

Biomaterials & Functional Bionanomaterials

32 - Jacob Schneider-Martin, Imperial College, Medtronic - 'Residual Strain Measurement in Superelastic Nitinol using FIB-DIC'

33 - Hafsa Akhtar, University of Sheffield - 'Tunable Nanobioceramics for Bioactive Scaffolds for Restoration of Craniofacial Fractures'

34 - Gregor Miklosic, Imperial College London - 'Fabrication and Optimisation of a Zonally Organised Scaffold for Osteochondral Repair'

35 - Tugba Cebe, University of Sheffield - 'Electrospun Fiber Fabrication As Synthetic Extracellular Matrix to Elucidate Collagen Fiber Structure in Osteogenesis Imperfecta'

36 - Baltatu M Simona, "Gheorghe Asachi" Technical University of Iasi - 'In vitro evaluation of some new biomaterials'

37 - Alaa Ayyed Al-Taie, University of Leicester - '3-D Printed Polyvinyl Alcohol Matrix for the Entrapment of Exhaled Microorganisms'

38 - Atiya Sarmin, Blizzard Institute, QMUL - 'Development of ECM-based bioinks for 3D Bioprinting of human skin equivalents'
39 - Martina Genta, Imperial College London - 'Engineering Biosynthetic Hydrogel Systems for Living Bionics'
40 - Ratima Suntornond, Blizzard institute, Queen Mary University of London - 'Development of vascularised 3D hydrogels via indirect bioprinting'
41 - Olivia A.R. Cauvi, Imperial College London - Growth Analysis of Ventral Mesencephalic Neural Population in a Polyvinyl Alcohol - Sericin Gelatin (PVA-SG) Hydrogel System
42 - Ragnhild E. Aune, Norwegian University of Sciences and Technology - 'In-Vitro Prediction of Material Performance of Central Venous Catheters (CVC) Exposed In-Vivo'
43 - Biswajoy Bagchi, University College London - 'Copper nanowire-cellulose based antibacterial films for wound dressing applications '
44 - Bernard O Asimeng, University of Ghana - 'Hydroxyapatite Antiproliferation Effects on HeLa Cells: Electrochemical Studies'
Medical Devices & Diagnostics
45 - Jose M Portillo, Instituto de Microelectrónica de Sevilla - 'Lumen Evaluation in Implanted Stents based on Bioimpedance Simulations'
46 - Jack Logan, University of Strathclyde - '3D Bioprinting for Fibrous Tissue Repair'
47 - Yingkai Lyu, University of Glasgow - 'A 3D flow-focusing microfluidic system for single particle separation'
48 - Ioanna Marina Syntouka, University of Strathclyde - 'Numerical Analysis of Collagen Injection to the Striatum'
49 - Keren Yue, University of Bristol - 'CoughAid – an Assistive Device for Cough Insufficiency'
50 - Muhammad Zubair, Imperial College London - 'A Dual Mode Multi-element Random Phased Array for Image guidance and HIFU treatment of the liver'
51 - Bukola Attoye, University of Strathclyde - 'Development of an electrochemical sensor for detecting circulating tumour DNA'
52 - Ross H McWilliam, University of Strathclyde - '3D Bioprinting of resorbable scaffolds for bone tissue engineering in maxillofacial surgery'
53 - Karla A F Paterson, University of Strathclyde - 'Microfluidic Primary Spheroid Co-culture for studying CAF-Mediated Tumour Progression'
54 - Bhagwan S Batule, Gwangju institute of Science and Technology - 'A paper-based DNA extraction device for simple, rapid, and sensitive identification of meat species from processed meat products'
55 - Youngung Seok, Gwangju Institute of Science and Technology - 'A handheld lateral flow strip for rapid DNA extraction in various samples'
56 - Benedetta Sabiu, University of Strathclyde - 'Spread Spectrum Based Detection using a Sound Card'
57 - Guillermo Vivas, University of Strathclyde - 'Photometric Compliance of Standard and Digital Infant Acuity Tests'
58 - Vincent J Veza, University of Strathclyde - 'Electrochemical detection of sepsis causing bacteria'
59 - Caitlin McLean, University of Strathclyde - 'Characterising the response of novel 3D printed CNT electrodes to the virulence factor pyocyanin'
60 - Gemma Egan, University of Strathclyde - 'Production and Characterisation of Silk Fibroin Hydrogels through Sonication and Electro-gelation'
61 - Christopher Rinaldi, University of Strathclyde - 'Development of a spectroscopic and electrochemical point-of-care device for accurate and sensitive clinical measurements'
62 - Duncan E Finlayson, Strathclyde University - 'Development of a High-Throughput ATR-FTIR System for Serum Diagnostics'
63 - Flynn Lachendro, University of Strathclyde - 'Development of Imaging and Histology Protocols for Evaluating the Coupling of Angiogenesis and Osteogenesis in Disuse Osteoporosis'
64 - Ian Coghill, University of Strathclyde - 'Phantom Eye Optic Nerve Head 3D Reconstruction from Stereo Images Acquired using a Novel Simultaneous Stereo Fundus Imaging Technique'
65 - Jamie R Dow, University of Strathclyde - 'Preliminary evaluation of a rapid fabrication method for synthetic vascular grafts'
66 - Jake Bagwell, University of Strathclyde, - 'Lower Limb Prosthetic Socket Stability Control with Hall Effect Feedback'
67 - Daniel Megarity, University of Strathclyde - 'Developing a modular neurotechnology'
Prosthetics & Trauma
68 - Thuy-Tien N Nguyen, Imperial College London - 'The Fracture Risk of Fragment Penetrating Injury To the Tibia'
69 - Alex Collingwoos, Keele University - 'RUST and Modified RUST: A Verification Using Calibrated Radiographs of Healed Tibial Fractures'
70 - Morenike Magbagbeola, University College London - 'Tracking the Dissipation of Vibration using Electromyography Artefacts'
71 - Michael C Ward, University of Liverpool - 'Assessing the Suitability of 3D Printable Polymers, for Use in Maxillofacial Prosthetics'
72 - Leen Jabban, University of Bath - 'Low-cost Pressure Sensitive Artificial Skin for Prosthetic Hands'
Biomedical Imaging
73 - Oriol Roche i Morgo, University College London - 'Exploring the effect of different scanning trajectories on spatial resolution in x-ray micro-computed tomography with structured illumination'
74 - Warren Macdonald, Imperial College, London - 'Gamifying the MRI Experience'
75 - Pingfan Song, Imperial College London - 'Robust centre detection and calibration for a microlens array with application in light field microscopy'
76 - Claire L Walsh, UCL - 'Realistic digital tissue geometries for non-invasive MRI biopsy'
77 - Hubin Zhao, University College London - 'The ANIMATE System: An Infant-Specific Scalable, Wearable, High-Density Diffuse Optical Tomography Technology'
78 - Musa Sani Musa, Near East University - 'GATE Simulation and Performance Evaluation of Scintillator-based Positron Emission Mammography (PEM) Scanners'
79 - Miranda Nixon, University College London - 'Accurate Device-independent Colorimetric Measurements Using Smartphones'
Organ on a chip
80 - Angel K Naveenathayalan, Brunel University - 'Conceptual Design and Development of an Organ-on-Chip Research tool to Investigate the Initiation, Progression and Treatment of Bacterial Vaginosis'
81 - Alysha Bray, CN-Bio innovations - 'Multi-organ in vitro Organ-On-Chip models to predict intestinal drug absorption and metabolism'
82 - Elisa R Budyn, ENS Cachan - 'Stem cell derived osteocytes reforming an Haversian network in vitro'

83 - Megan Rutherford, B-Secur – 'Gelatine Methacryloyl – Bioceramic Scaffolds for Dentine-Pulp Complex Regeneration'
84 - Jetsada Arnin, University of Strathclyde - 'Multi-Channel Real-Time Feature Extraction using Discrete Wavelet Transform for BCI Applications: An OpenCL Approach'
85 - Santhosh K Veeramalla, NIT Warangal - 'Resampling methods in a particle filter for localization of brain '
86 - Ali Salehi-Reyhani, King's College London - 'A Miniaturised Platform for Field-Based Chromatography'
87 - Tamzin Bond, Imperial College London - 'Imaging and Sensing in Living Cells using Dual Modality Fluorescent-PET Imaging Agents'
88 - Maleha AL-Hamadani, King's College London - 'Upper GI phantom for testing novel nasogastric tubes'

BioMedEng19 Poster Presentation - Friday 6th September 2019**Musculoskeletal Biomechanics, Gait Analysis & Human Movement**

- 1 - Fraye Watson, University College London - 'Does malalignment of the trunk in the frontal plane effect the Dynamic Stability Margin during varied gait?'
- 2 - Sander R Holthof, University of Warwick - 'Development of In-Vivo, Quantitative Bone Fracture Cohesion Measurement'
- 3 - Haipeng Liu, Anglia Ruskin University - 'Geometric Effects on the Stress of Atherosclerotic Plaques: a Computational Study'
- 4 - Tijana Jevtic Vojinovic, University College London - 'Measurement of tendon forces during vibratory robotic-assisted therapy'
- 5 - Maryamolsadat Mirhadizadeh, University of Surrey - 'Continuous relative phase method as a measure of upper extremity coordination in activities of daily living'
- 6 - Angela Kedgley, Imperial College London - 'Delayed onset muscle soreness to induce pain for musculoskeletal modeling'

Mechanobiology, Biofluids & Cardiovascular Bioengineering II

- 7 - Willy Bonneuil, Imperial College London - 'Microfluidic device for quantifying lymphatic-derived chemokine gradients'
- 8 - Lauren Johnston, University of Strathclyde - 'Blood Flow Simulations in the Aortic Arch in relation to Haemodynamic Wall Shear Stress and Obesity-induced Vascular Changes'
- 9 - Ryan Reavette, Imperial College London - 'A Comparison Between Invasive and Non-invasive Wave Intensity Analysis Using 1D Computational Modelling of Arterial Haemodynamics'
- 10 - Ryan Reavette, Imperial College London - 'A Mathematical Formulation for 1D Computational Modelling of Arterial Haemodynamics Using a Pressure-Area Relation That Correctly Predicts Wave Speed Behaviour and Incorporates Strain-Stiffening'
- 11 - Alireza Meghdadi, University of Southampton - 'Characterisation of Sclerosing Foam Rheology in a Clinically Applicable Setting'
- 12 - Josefin Jansson-Edqvist, Imperial College London - 'Developing a Microfluidic Device for Mimicking the Endothelial Microenvironment'

Computational Biology, Experimental Models of Disease and Injury

- 13 - Angela Knepper, Swansea University - 'Multi-scale and Lumped Parameter Modelling of Potts Shunt as a Potential Treatment for Idiopathic Pulmonary Artery Hypertension'
- 14 - Sean A Perry, University of Warwick - 'The Influence of Breathing Variability on Cardio-Respiratory Synchronization'
- 15 - Giulia Gaggioni, University of Surrey, - 'Does the complexity of the cortical response recorded in electroencephalograms under sleep deprivation change with age?'
- 16 - Georgina Al-Badri, UCL - 'Towards a mathematical model to predict the impact of oxygen concentration on the culture of endothelial cells for in vitro vascularisation'
- 17 - Benjamin Partridge, Imperial College London - 'The Physics of Stem Cell Dynamics in the Irradiated Bone Marrow Cavity'
- 18 - Zhiguang Mu, Imperial College London - 'Asymmetries between ON and OFF dominated neural ensemble codes in the mouse dorsal LGN'

Non-Invasive and Minimally Invasive Therapies

- 19 - Zhengchu Tan, Imperial College London - 'Neurosurgical Convection Enhanced Drug Delivery: Experiments and Modelling'
- 20 - Rebecca R Baker, UCL Centre for Advanced Biomedical Imaging - 'Targeting magnetic seeds using an MRI system'

Cancer Engineering, Drug & Gene Delivery

- 21 - Fatih Yanar, University of Southampton - 'Imaging of liposomes encapsulating silver nanoparticles'
- 22 - Fungisai Matemadombo, University of Kent - 'Gene delivery by electroporation in a microfluidic device'
- 23 - Nathan Sjoquist, University of Cambridge - 'An Automatic Method of Visualising the Progression of Metastatic Bone Disease'
- 24 - Christopher C Phillips, Imperial College London - '"Digistain" mid-IR based Chemical Imaging for Breast Cancer Diagnosis'

Neurotechnology, Rehabilitation Engineering & Robotics

- 25 - Riya T Shah, King's College London - 'Exploring the Range of Movement of a 2-Probed Fetal Ultrasound Robot Simulation Along a Range of Different Body Shapes'
- 26 - Julius Lipskas, University of Strathclyde - 'Robotic-Assisted 3D Bio-printing for Repairing Bone and Cartilage Defects through a Minimally Invasive Approach'
- 27 - Jia Han Benjamin Koh, King's College London - 'Shape Sensing Modality for Flexible Manipulators Utilising Optoelectronic Sensors'
- 28 - Pierre H Guillemot, Imperial College London - 'Engineering Tactile Signals to Aid Hearing in Noisy Background'
- 29 - Grace Ang, Imperial College London - 'Evaluating the Functional Implications of Sequentially-Neuromodulated Synaptic Plasticity in Reward-based Learning'
- 30 - Oscar Bates, Imperial College London - 'Ultrasound computed tomography of the human brain using full waveform inversion '
- 31 - Isabell Whiteley, Imperial College London - 'Holographic system design for neurophotonic excitation'
- 32 - Patrycja Dzialecka, Imperial College London - 'Pulsed Temporal Interference electrical brain stimulation'
- 33 - Farnaz Fahimi Hanzaee, Imperial College London - 'Comparative Assessment of High-Performance Analogue Front-End for Closed-Loop Neural Systems'
- 34 - Rufus Mitchell-Heggs, Imperial College London - 'Neural Population Analysis of how Decision Making uses Working Memory | Medial Prefrontal Cortex'
- 35 - Thomas Tiennot, Imperial College London - 'Ultrasound Super-Resolution for 3D Brain Imaging'
- 36 - Damola I Akano, University of Strathclyde - 'Remanufacturing of Neonatal Incubators: A sustainable option to providing affordable incubators'

Artificial Intelligence & Machine Learning

- 37 - Gareth R Jones, Swansea University - 'A proof of concept for machine learning application to stenosis detection'
- 38 - Venky Dubey, Bournemouth University - 'Comprehensive risk assessment of diabetic neuropathy using patient data'
- 39 - Justino R Rodrigues, Imperial College London - 'Automated Identification of Endothelial Permeability Hotspots in Image Assays'
- 40 - Xu Chen, University of Liverpool - 'AI-based Segmentation Method in Cardiac Magnetic Resonance Images'
- 41 - Esfandiar Khaleghi, Kingston University London - 'Identifying Cardiac Arrhythmia and Congestive Heart Failure using Two-Lead ECG Signals and CNN'
- 42 - Madalina Fiterau, University of Massachusetts Amherst - 'Personalized Student Stress Prediction with Deep Multitask Networks'
- 43 - William R Trender, Imperial College London, - 'Differentiating Cognitive States using the Intradimensional Extradimensional Set'
- 44 - Mark D Olchanyi, Schultz Laboratory - 'An Image Processing Pipeline for Multiphoton Tomographic Connectivity Mapping'

Tissue Engineering & Regenerative Medicine

45 - Betul Aldemir Dikici, University of Sheffield - 'Bifunctional guided bone regeneration membrane: combining electrospinning and emulsion templating'

46 - Melanie S Flury, Imperial College London - 'Investigation of peptide bound anisotropic osteochondral scaffolds for biomineralization'

47 - Fahad Alhamoudi, University of Sheffield - 'Nano-Bioactive Composites Improving Angiogenesis in Bone Bioengineering'

48 - Camille Marijon, Imperial College London - 'Microgel-based extracellular vesicle delivery platform for the treatment of myocardial infarction'

49 - Yasser Almoshawah, University of Sheffield - 'Structural and Chemical Analysis of Plexiform Bone using Vibrational Spectroscopy'

50 - Serkan Dikici, The University of Sheffield - 'Promoting neovascularisation in tissue engineering constructs: 2-deoxy-D-ribose (2dDR) and 17 β -Estradiol (E2) as alternatives to VEGF'

Personalised Medicine & Modelling Biological Systems

51 - Manuel Eichenlaub, University of Warwick - 'Modelling Postprandial Glucose Responses from Glucose Sensor Data in Diabetes Mellitus'

52 - Andrea F Cairoli, Imperial College London - 'Model of inverse bleb growth explains giant vacuole dynamics during cell mechanoadaptation'

53 - Ege Ozkaya, University of Edinburgh - 'Real-time monitoring of blue-light induced decline of the Retina pigmented epithelium barrier function with Electrical Cell-substrate Impedance Sensing'

54 - James E Campbell, University of Leicester - 'Modelling Capillary Pressure in the Human Lung to Simulate Surface-Tension-Driven Volume-Pressure Hysteresis'

55 - Thomas Peach, University College London - 'In-silico Comparison of the eCLIPs Device and Conventional Flow-Diverters as Treatment for Cerebral Bifurcation Aneurysms'

56 - Diana Marta Cruz de Oliveira, University of Birmingham - 'Computational Modelling of Variability in Mitral Valve Morphometry'

57 - Wenbo Zhan, Imperial College London - 'Effect of Enhanced Cerebrospinal Fluid Flow on Drug Penetration in Convection Enhanced Delivery'

58 - Hannah West, UCL - 'Computational modelling of nanoparticle drug delivery on realistic vascular networks'

59 - Vishwesh Kulkarni, Warwick University - 'Caffeine Levels and Bronchopulmonary Dysplasia in Low Birth Weight Newborns'

60 - Mehran Moazen, University College London - 'Predicting Calvarial Growth in a Child with Sagittal Craniosynostosis'

61 - Stephen Taylor, University College London - 'A buckle transducer for measurement of wrist tendon force in vivo'

62 - Maria Boumpouli, University of Strathclyde - 'Hemodynamics in the pulmonary bifurcation: Effect of geometry and boundary conditions'

63 - Chris Payne, UCL - 'Minimally invasive, image-guided ablation using MRI - MINIMA'

64 - Frederick Greatrex, INSIGNEO Institute for in silico Medicine - '3D ultrasound methods for image-based personalisation of musculoskeletal models'

65 - Zhong Jin, Nanjing University of Science and Technology - 'Stripe Noise Removal of OCTA Image'

66 - Curtis Palasiuk, University of Sheffield - 'An Agent-Based Model of Bone Remodelling and its Disruption by Multiple Myeloma'

67 - Dasen Xu, Northwestern Polytechnical University - 'Study on the Mechanism of Fluid Percussion Injuries on Immune Cells'