

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
	<p style="text-align: center;">Musculoskeletal Biomechanics, Gait Analysis & Human Movement - (Great Hall) Chairs - Dr Aliah Shaheen (Brunel) & Dr Alex Dickinson (Southampton)</p>
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'
	<p style="text-align: center;">Mechanobiology, Biofluids & Cardiovascular Bioengineering II - (Huxley 308) Chairs - Dr Stephen Thorpe (QMUL) & Dr Yi Sui (QMUL)</p>
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'
	<p style="text-align: center;">Computational Biology, Experimental Models of Disease and Injury - (Read) Chairs - Dr Xinshan Li (Sheffield) & Dr Zhongzhao Teng (Cambridge)</p>
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'
	<p style="text-align: center;">Cancer Engineering, Drug & Gene Delivery - (Pippard) Chairs - Dr Ciro Chiappini(KCL) & Prof Darryl Overby (Imperial)</p>
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
	<p style="text-align: center;">Virtual Physiological Human Research- VPHi-UK Chapter - (Great Hall) Chairs - Dr Enrico Dall'Ara (Sheffield) & Dr Mehran Moazen (UCL)</p>
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)