

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 - Hafsah 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 Suntornnond, 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 Unversity - '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 Hanzae, 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'