Monday 10th September

0815 onwards  Registration and coffee
0900  Welcome to BORS 2018, Prof Mark Wilkinson, BORS President and Prof Sophie Williams for the local organising team

0915-1045  Session 1: Orthopaedic Biomechanics
Chairs Dr Richard van Akel and Amy Garner
0915  Keynote presentation – Prof Paul Rullkoetter, University of Denver
0945-1045  1. Hip capsular function after arthroplasty
Dr Richard van Arkel, Imperial College
2. Cortical Bone Spherical Indentation Modulus Correlates with the Elastic Modulus from Compression Testing and CT-measured Porosity
Mr Oliver Boughton, Imperial College
3. Decellularisation affects the strain rate dependent and dynamic mechanical properties of a xenogeneic anterior cruciate ligament graft
Dr Jennifer Edwards, University of Leeds
Dr James Warren, University of Leeds
5. Estimation of viscoelastic bushing parameters of a musculoskeletal cervical spine model in impact scenarios
Dr Sabina Gheduzzi, University of Bath
6. Physiological mechanical loading from voluntary wheel running promotes increased plasma membrane disruptions in osteocytes
Dr Meghan McGee-Lawrence Medical College of Georgia, Augusta University

1045-1200  Session 2: Poster teaser presentations ~30 presentations (2 minute pitch + transition time)
Chairs / Organisers Dr Claire Brockett / Prof Sophie Williams

1200-1315  Lunch and BORS AGM, Poster viewing

1315-1445  Session 3: Translation of Orthopaedic Research into Clinic
Chairs Mr Tom Kurien and Jake Bowd
1315-1335  Keynote presentation – Dr Chaozong Liu, UCL
1335-1355  Keynote presentation – Dr John Wilkinson, MHRA
1355-1445
1. A Collagen-Based Soft Tissue Barrier Membrane with Periosteal Mesenchymal Stem Cell Homing Capability for Bone Defect Repair
Ms Heather Owston, University of Leeds
2. Introducing the Z-track method for cells-delivery injection in a model of atrophic non-union to prevent backflow leakage
Dr Murthadah Jalal, University of Edinburgh
3. Comparison of Different Tissue Processing Methods for Maximization of Bacterial Recovery
Mr Mohamed Askar, University of Nottingham
4. Genome-wide Expression Analysis of Human Osteoblasts on Prosthesis Surfaces following Clinically Relevant Cobalt and Chromium Exposure
Dr Karan Shah, University of Sheffield
5. Nanotubes improve Human Dermal Fibroblasts and Keratinocytes attachment on Intraosseous Transcutaneous Amputation prosthesis
Ms Elena Giusto, UCL

1445-1520
Session 4: Orthopaedic Research Outreach
Chair Dr Susan Clarke
1445 Keynote presentation – Prof Julia Shelton, QMUL
1505 Keynote presentation – Patient involvement Speaker TBC

1520-1550 Coffee, Mini science-fair

1550-1640
Session 5: Manufacturing in Orthopaedics
Chairs Dr Tony Herbert and Lekha Koria
1550 Combined Keynote – Prof Eileen Ingham and Prof Ruth Wilcox, Leeds
1620 -1640 1. The effect of pore size on bone marrow mesenchymal stem cell morphology, proliferation and mineralisation of bone in vitro.
Dr Anita Sanghani Kerai, UCL
2. Nanotechnology based antimicrobial drug delivery system for orthopaedic application
Dr Polina Prokopovich, Cardiff
3. A biomimetic peptide/glycosaminoglycan hybrid hydrogel for nucleus pulposus augmentation therapy utilising minimally invasive methods
Dr James Warren, University of Leeds

1645-1715
Presidential Prize Lecture – Professor Paul Gregg
Chair Prof Mark Wilkinson

1720-1750
Public Engagement Lecture – Prof Kate Robson-Brown, Bristol
Chair Dr Claire Brockett

1845 Coach pick up for dinner
1900 Conference dinner, Thackray Medical Museum
Tuesday 11th September

0900-1030 **Session 6: Trauma**
Chairs Dr Jerry Tsang and Alex Seghal
0900 Keynote presentation: Trauma Research - current scope and future horizons. Prof Ian Pallister, Swansea
0930-1030 1. Mechanical Characterisation of the Lateral Collateral Ankle Ligaments Under Sprain-like Conditions
Dr Anthony Herbert, University of Leeds
2. The treatment method and results of percutaneous pinning and dynamic external fixator application for unstable distal radius fractures
Dr Burak Sena, Uskuda University, Turkey
3. Stratification of decellularised porcine super flexor tendon for replacement of the anterior cruciate ligament
Mr Samuel Whitaker, Leeds General Infirmary
4. Development of a method for proper X-ray viewing of the leg in a clinically-relevant model of atrophic non-union
Dr Murtadah Jalal, University of Edinburgh
5. Comparison of vertebral body displacements obtained by DIC and motion capture in a cervical spine impact experiment
Mr Stuart Boyd, University of Bath
6. Computational modelling of tendons and ligaments, a pathway to understand damage mechanisms
Dr Marlene Mengoni, University of Leeds

1030-1100 Coffee break, Poster viewing

1100-1250 **Session 7: OATech Network**
Chair Prof Cathy Holt and Prof Philip Rowe
1100-1200 OATech Research Presentations (details TBC)
1200-1250 1. The Biomechanical Characterisation of Subjects with Medial and Lateral Knee Focal Cartilage Defects
Mr Nidal Khatib, University of Cardiff
2. Epigenetic drugs as potent modulators in osteoarthritis
Dr Maria de Andres, University of Southampton
3. The in vivo compatibility, integration and regeneration of a decellularised porcine bone scaffold in an ovine model
Dr Hazel Fermor, University of Leeds
4. Universal drug delivery platform into cartilage
Dr Polina Prokopovich, University of Cardiff

1250 **BORS/BJR Travelling Fellowships**
Chair Prof Hamish Simpson

1300-1410 Lunch, Poster viewing
Session 8: Orthopaedic Outcomes

Chairs Mr Oliver Broughton and Ruben Doyle

1410
Keynote presentation – Prof Ashley Blom, University of Bristol

1440-1540

1. Bone Ageing Atlas Development: The UK Biobank Study
   Mr Moshen Farzi, University of Sheffield

2. Combining inertial sensors and principle component analysis to distinguish between knee rehabilitation exercises
   Dr Philippa Jones, University of Cardiff

3. Patellofemoral-arthroplasty improves gait in isolated patellofemoral-arthritis, a prospective cohort gait analysis study
   Dr Aliya Choudury, St Georges

4. An evaluation of survival modelling approaches for personalised risk prediction after hip replacement for osteoarthritis
   Prof Mark Wilkinson, University of Sheffield

5. Stratifying the immune response to biomaterials: can cobalt-mediated inflammation be prevented?
   Ms Amy Mawdsley, University of Nottingham

6. Relationship Between Differing Measures of Function Following Total Knee Arthroplasty
   Mr Maurice Griffin, University of Edinburgh

1540 -1600 Awards, Presidential Handover & thank yous - pass on to BORS2019
Chair Prof Mark Wilkinson

1600 CLOSE