Friday:

09:00-09:10 Welcome and Introductions

09:10 – 11:05 Footwear session 1
Sharon Dixon (University of Exeter) - Using biomechanical analysis to support military and elite sporting populations
Trade presentations
Paul O Malley (Profeet) - The performance enhancing effect of running footwear: Evolution or Revolution?
Jeong-Ro Lee et al. (Loughborough University) - Optimisation of a football boot bottom plate
Questions/Discussion

11:05-11:15 Break

11:15-13:10 Tissue Mechanics
Professor Hazel Screen (Queen Mary University of London) - Achilles tendon - Engineering approaches to exploring injury
Break
Professor Costis Maganaris (Liverpool John Moores University) - Joint & Muscle-Tendon Mechanics in Children with Cerebral Palsy
Questions/Discussion

13:10-13:40 Lunch break with trade presentations

13:40-13:45 Welcome and Introductions

13:45-15:10 Footwear session 2
Dr Anita Williams (University of Salford) - Perceptions of the role of footwear – identity versus foot health?
Christopher G. Tompkins et al. (University of Nottingham; Adidas America) - Dual optical force plate for time resolved measurement of forces and pressure distributions beneath shoes and feet
Matt Hill et al. (Staffordshire University) - A systematic review of the effectiveness of therapeutic footwear for children with mobility impairment
Adri Hartveld et al. (Healus Ltd.; Staffordshire University) - RESILIC sole construction – the evolution of the revolution
Questions/Discussion

15:10-15:20 Break

15:20-16:50 Clinical populations
Nina Davies (Leeds Community Healthcare NHS Trust) - Gait deviations in young children - what raises concern?
Abdullah Alzahrani et al. (University of Dundee; Shaqra University) - Gait analysis in conjunction with neural network for prediction and diagnosis of patients with stroke
Renan Monteiro et al. (University of Sao Paulo) - Foot muscle strength can be improved in people with diabetic polyneuropathy: preliminary RCT results
Gayathri (Victoria) Balasubramanian et al. (Staffordshire University) - The effect of controlling plantar skin temperature on the measures of post-occlusive reactive hyperaemia
Questions/Discussion

16:50 Close

18:15 – 18:30 Staffordshire University Biomechanics Alumni gathering via Zoom (link to join included in joining instructions email)

18:30 – 19:30 Virtual drinks via Zoom (link to join included in joining instructions email)
Saturday:
09:00-09:10 Welcome and Introductions
09:10-10:10 Prosthetics and Orthotics 1
  Michael Rexing (Human Study AV.) - Efficient walking in neuromuscular lower limb orthotics through kinetic energy conversion
  Natalie Vanicek et al. (University of Hull; University of York; Nottingham Trent University; University of Salford; Lancashire Teaching Hospitals NHS Foundation Trust; Hull University Teaching Hospitals NHS Trust; Public Involvement Member) - A randomised feasibility study of self-aligning prosthetic device for older patients with vascular-related amputations: The STEP FORWARD study
  Questions/Discussion
10:10-10:20 Break
10:20-12:00 Sport
  Dr Andy Franklyn-Miller (SSC Sports Medicine) - Controversies in biomechanically driven gait re-education for lower limb injury
  Trade presentations
  Tom Kepple (C-Motion, Inc.) and Steven Cadavid (Kinatrax, Inc.) - Markerless Motion Capture for in Game Baseball Biomechanics Analysis
  Questions/Discussion
12:00-12:10 Break
12:10-13:30 Lunch break with trade presentations
13:10-13:40 Clinical Applications of Technology
13:40-14:35 Prosthetics and Orthotics 2
  Nicola Eddison et al. (The Royal Wolverhampton NHS Trust; Staffordshire University) - The effect of tuning ankle foot orthoses-footwear combinations on the gait kinematics of children with cerebral palsy and the effect of user perception on adherence: a case series
  Jessica Hargreaves et al. (Opcare) - The effect of a thoracolumbar brace under different conditions on spinal kinematics in a group of healthy adults during level walking: A pilot study
  Questions/Discussion
14:35-16:30 Clinical Applications of Technology
  Dr Alfred Gatt (University of Malta) - Pressure and temperature mapping in diabetic foot disease
  Andrei L. Perez Olivera et al. (London South Bank University) - Neuromuscular electrical stimulation training of an intrinsic foot muscle: what stimulus intensity should be used?
  David Allan et al. (Staffordshire University) - Skin Microcirculation: A comparison between imaging Photoplethysmography and Laser Speckle Contrast Analysis
  Questions/Discussion
  Christopher Aitkins et al. (South Tees Hospitals NHS Foundation Trust) - Sensor placement for assessing muscle activity of the foot
  Elsayed, A. et al. (University of Dundee) - Relationship between operating table height and lumbar spine kinematics.
  Questions/Discussion
16:30 Closing Remarks