

## Program of events: Monday November 30

Duration	Time	G17 Theatre 3	G17 Theatre 4
90 min	08.30 – 09.00	<b>Welcome address</b>	
	09.00 – 10.00	<b>Keynote presentation. W Herzog.</b> Force enhancement/force depression and mechanisms of contraction in skeletal muscles.	
30 min	10.00 – 10.30	<b>Morning tea</b>	
90 min		<b>Clinical I.</b> Chairs: Graham Kerr & Wendy Gilleard	<b>Sport &amp; exercise I.</b> Chairs: Julie Steele & Nick Brown
	10.30 – 10.45	<b>D Thewlis, J Selfe, J Richards, S Hill &amp; J Whittaker.</b> A clinical study of the biomechanics of step descent using different treatment modalities for patellofemoral pain.	<b>P McAlpine, U Kersting, N Kurpiers, J Determan &amp; S Walt.</b> Kinetic analysis of snowboard jump landings: influence of landing style.
	10.45 – 11.00	<b>C Jones, S Sadani, A Seal, B Bhakta, R Hall &amp; M Levesley.</b> A user centred design approach to assessing the spine and seating for children with non-ambulant cerebral palsy.	<b>A Dempsey, B Elliott, B Munroe, J Steele &amp; D Lloyd.</b> Increasing knee flexion in landing tasks may not reduce the risk of non-contact anterior cruciate ligament injury.
	11.00 – 11.15	<b>M Arakilo, D Thewlis, G Paul &amp; J Rasmussen.</b> Simulation of ankle joint forces to optimise total ankle replacement design.	<b>I Janssen, W Spratford, J Sheppard, D Chapman &amp; A Dingley.</b> Knee joint dynamics during landing of assisted and resisted vertical jumps.
	11.15 – 11.30	<b>J Blennerhassett, N Lythgo, C Muir &amp; M Galea.</b> Dynamic 3-dimensional shoulder motion in people with stroke.	<b>M Galloway &amp; C Draper.</b> Gender differences between high and low stroke rate rowing.
	11.30 – 11.45	<b>E Clarke, S Cheng &amp; L Bilston.</b> Low stiffness of paediatric spinal cord: implications for injury severity/thresholds.	<b>J Selinger, J Stevenson, D Tack, G Chafe.</b> The effect of weapon weight and weight distribution on upper extremity muscle activity during static rifle aiming.
	11.45 – 12.00	<b>J Prinold, A Shaheen &amp; A Bull.</b> Measuring scapula kinematics with a new motion capture and digitisation technique.	<b>S Edwards, J Steele, J Cook, C Purdam, S Beattie &amp; D McGhee.</b> Fatigue does not change the lower limb landing strategies utilized by asymptomatic athletes with patellar tendon ultrasonographic abnormality.
90 min	12.00 – 13.30	<b>Lunch &amp; poster session</b>	
90 min		<b>Invited presentations.</b> Chairs: Paul Hodges & Glen Lichtwark	
	13.30 – 14.00	<b>C Barclay.</b> The molecular basis of the force-velocity and efficiency-velocity relationships.	
	14.00 – 14.30	<b>A Cresswell.</b> Motoneuron firing behaviour and reflex excitability during the performance of controlled isometric contractions and other more functional motor tasks.	
	14.30 – 15.00	<b>N Brown.</b> Cycling biomechanics: joint-specific powers and aerodynamic drag.	
30 min	15.00 – 15.30	<b>Afternoon tea</b>	
75 min		<b>Muscle.</b> Chairs: Chris Barclay & Robert Herbert	<b>Posture.</b> Chairs: Andrew Cresswell & Justin Kavanagh
	15.30 – 15.45	<b>R Herbert, P Hoang, L Kwah, J Diong, J Clarke, E Clarke, J Martin, L Harvey, L Bilston &amp; S Gandevia.</b> Measurement of passive length-tension properties of human gastrocnemius muscle fascicles and tendons in vivo: application to study of contracture.	<b>M Tucker, J Kavanagh, S Morrison &amp; R Barrett.</b> Voluntary sway and rapid orthogonal transitions of voluntary sway in young adults, and low and high falls-risk older adults.
	15.45 – 16.00	<b>G Lichtwark &amp; C Barclay.</b> Fibre recruitment during sub-maximal contractions influences both muscle mechanics and energetics.	<b>F Ulmer &amp; A Smith.</b> An investigation into the effect of body mass and physical activity on postural stability in children.
	16.00 – 16.15	<b>B Hoffman, T Oya, T Carroll &amp; A Cresswell.</b> Changes in cortical and spinal responsiveness during a fatiguing submaximal contraction.	<b>C Carty, P Mills &amp; R Barrett.</b> Recovery from forward loss of balance in young and older adults.
	16.15 – 16.30	<b>M-L Bird, S Dornauf, A Cornock &amp; D Visentin.</b> A comparative EMG study of trunk musculature using exercise equipment.	<b>G Kerr, M Cole, R Wilcox, F Sinclair, T Coyne &amp; P Silburn.</b> Long-term bilateral stimulation of the pedunculopontine nucleus improves balance and gait stability and alleviates falls in Parkinson's disease.
	16.30 – 16.45	<b>M Tian, P Hoang, S Gandevia, L Bilston &amp; R Herbert.</b> Stress relaxation in relaxed human ankles is nearly independent of knee and ankle angles.	<b>M Jaffrey &amp; R Best.</b> Improved estimation of centre of mass kinematics for posturographic analysis.
270 min	19.00 – 23.00	<b>Conference dinner</b>	



## Program of events: Tuesday December 1

Duration	Time	G17 Theatre 3	G17 Theatre 4
90 min		<b>Invited presentations.</b> Chairs: Rod Barrett & Belinda Beck	
	08.30 – 09.00	<b>M Forwood.</b> Bone is tough: but is it Tonka tough? Skeletal fragility from bone mass to bone quality.	
	09.00 – 09.30	<b>R Hall.</b> Biomechanics of vertebral augmentation.	
	09.30 – 10.00	<b>P Hodges.</b> To be announced.	
30 min	10.00 – 10.30	<b>Morning tea</b>	
90 min		<b>Sport &amp; exercise II.</b> Chairs: Peter Milburn & Tim Doyle	<b>Innovative methods.</b> Chairs: Mark Pearcy & Lynne Bilston
	10:30 – 10.45	<b>J Baker, B Elliott, D Farrow &amp; J Alderson.</b> Combining biomechanics and skill acquisition: the hockey drag flick.	<b>A Peters, M Sangeux, M Morris &amp; R Baker.</b> Establishing the accuracy of 3-D ultrasound determined HJC with MRI.
	10.45 – 11.00	<b>S Horan, K Evans, N Morris &amp; J Kavanagh.</b> 3-dimensional kinematic analysis of thorax and pelvis motion during the downswing of male and female skilled golfers.	<b>M Sartori, D Lloyd, M Reggiani, G Chemello &amp; E Pagello.</b> Scaling tendons preserving the consistency of EMG-to-activation relationship.
	11.00 – 11.15	<b>J Seater, N Saunders &amp; L Otago.</b> An investigation into the effect of visual targeting in a run up and land task on lower limb muscle activation.	<b>A Campbell, J Alderson, D Lloyd &amp; B Elliott.</b> MRI verification of the accuracy and reliability of functional methods of glenohumeral joint centre of rotation identification.
	11.15 – 11.30	<b>K Doma &amp; G Deakin.</b> EMG, force and kinematics between concentric and eccentric contractions of a chin up exercise.	<b>S Cheng, E Clarke &amp; L Bilston.</b> Preconditioning strain and strain rate affect measured tissue properties.
	11.30 – 11.45	<b>D Walker, P Clothier, C Strachan, B Ridge, J McLaren &amp; R Robergs.</b> The effect of a lower-body graded compression garment on thigh and calf width changes during ergometer cycling.	<b>C Donnelly, K Middleton, J Alderson, D Lloyd &amp; B Elliott.</b> The use of a Dunnett pairwise comparison statistical method to estimate ball release during cricket bowling.
	11.45 – 12.00	<b>C Joseph &amp; T Furness.</b> Concurrent validity of an accelerometer to quantify vibration platform frequency.	<b>P Davidson, S Wilson, M Taylor &amp; J Kieser.</b> A rheological model of blunt force trauma.
60 min	12.00 – 13.30	<b>Lunch &amp; ANZSB AGM</b>	
75 min		<b>Gait.</b> Chairs: Andrew Smith & Robyn Grote	<b>Cricket.</b> Chairs: David Lloyd & Rene Ferdinands
	13.30 – 13.45	<b>M Cole, J Wood, P Silburn &amp; G Kerr.</b> Three-dimensional gait characteristics of Parkinson's disease patients who fall.	<b>R Ferdinands.</b> Kinematic segmental sequencing of bowling in cricket.
	13.45 – 14.00	<b>N Lythgo, B Marmaras &amp; H Connor.</b> Physical function of above knee amputees with the 3R90 and 3R92 knee device.	<b>N Thomlinson, K Ness &amp; S Belward.</b> Response of elite male cricket batsmen facing deliveries of various lengths.
	14.00 – 14.15	<b>Ilich, D Sturnieks, P Mills, A Dempsey &amp; D Lloyd.</b> Knee abduction moments in gait predict radiological and functional change.	<b>K Middleton, A Campbell, J Alderson, A Chin &amp; B Elliott.</b> The effect of altering the helical endpoint technical reference frame on elbow angle in cricket bowling.
	14.15 – 14.30	<b>D McKenzie, N Lythgo &amp; R Baker.</b> Knee flexion precedes initial contact in human gait and is speed dependent.	<b>J Weissensteiner, B Abernethy &amp; D Farrow.</b> Examining the development of technical skill in cricket batting.
	14.30 – 14.45	<b>Vacant</b>	<b>E Phillips, M Portus, K Davids, N Brown &amp; I Renshaw.</b> Coordination profiling: implications for fast bowling research.
30 min	14.45 – 15.15	<b>Afternoon tea</b>	
120 min		<b>Invited presentation and panel.</b> Chair: Peter Milburn	
	15.15 – 15.45	<b>A Seth, J Reinbolt &amp; S Delp.</b> Musculoskeletal modelling: how it began, what it offers, and where it is heading.	
	15.45 – 16.45	<b>Invited panel.</b> Where will biomechanics be in 2029?	
	16.45 – 17.15	<b>Awards ceremony</b>	