

# Program

## SUNDAY 30 NOVEMBER 2014

4.00 pm	REGISTRATION (At Innovation Campus)
<b>5.00 pm - 5.30 pm</b>	<b>CONFERENCE OPENING CEREMONY (At Innovation Campus)</b>
5.30 pm - 6.15 pm	WELCOME KEYNOTE: Chair: Julie Steele
5.30 pm	Monitoring and enhancing human performance using 3D printing <i>Prof Gordon Wallace, University of Wollongong</i>
<b>6.15 pm - 8.00 pm</b>	<b>WELCOME RECEPTION (Sponsored by ACES)</b>
<b>7.30 pm - late</b>	<b>Student Networking Session / ECR Networking Session / Free Night</b>

## MONDAY 1 DECEMBER 2014

<b>6.00 am</b>	<b>Run the 'Gong (Social running experience; meet at North Beach Surf Club)</b>
8.00 am	REGISTRATION (At University of Wollongong)
9.00 am - 9.55 am	KEYNOTE: Chair: Julie Steele
9.00 am	Origins and migration of Homo Sapiens within and out of Africa <i>Dr Zenobia Jacobs, University of Wollongong</i>
10.00 am - 11.00 am	FREE PAPERS 1: Chairs: Melanie Bussey & Aaron Fox
10.00 am	A simple, noninvasive, 3D, dynamic method for measuring muscle moment arms using ultra-fast MRI <i>Elizabeth Clarke, University of Sydney</i>
10.10 am	Abnormal knee kinematics during step and turn following multiple-ligament knee reconstruction <i>Corey Scholes, Sydney Orthopaedic Research Institute</i>
10.20 am	Effects of neuromuscular exercise on knee joint moments following arthroscopic partial meniscectomy: A randomised controlled trial <i>Michelle Hall, University of Melbourne</i>
10.30 am	Characterisation of a novel, biomechanically relevant model for anterior cruciate ligament injury and joint pathology <i>Carina Blaker, University of Sydney</i>
10.40 am	Hop landing biomechanics associated with knee function after anterior cruciate ligament reconstruction <i>Luke Perraton, University of Melbourne</i>
10.50 am	Innominate rotation trends of symptomatic sacroiliac joints during incremental hip abduction and external rotation <i>Divya Adhia, University of Otago</i>
<b>11.00 am - 11.30 am</b>	<b>MORNING TEA</b>

## PROGRAM CONTINUED

### MONDAY 1 DECEMBER 2014

11.35 am - 1.00 pm	FREE PAPERS 2: Chairs: Elizabeth Clarke & Nick Brown
11.35 am	Elderly triceps surae exhibits dampened contractile augmentation and force frequency response when activated with double pulse stimulation <i>Dean Mayfield, University of Queensland</i>
11.45 am	Matrix protein localisation and collagen fibril assembly in chondrocytes after mechanical loading <i>Judith Bleuel, German Sport University of Cologne</i>
11.55 am	Exploration of the biomechanical load bearing mechanism of articular cartilages under dynamic loading <i>Namal Thibbotuwaw, Queensland University of Technology</i>
12.05 pm	Volumetric properties of articular cartilage vary during the progression of osteoarthritis <i>Dale Robinson, University of Melbourne</i>
12.15 pm	The mechanical role of the tibialis posterior muscle and tendon <i>Jayishni Maharaj, University of Queensland</i>
12.25 pm	Tendon injury: Biomechanical properties and a role for proteoglycans <i>Rachel Choi, University of Sydney</i>
12.35 pm	Protection from exercise-induced muscle damage in the absence of changes in medial gastrocnemius fascicle behaviour in humans in vivo <i>Ben Hoffman, University of Queensland</i>
12.45 pm	Three-dimensional ultrasound measurement of human gastrocnemius muscle architecture during passive lengthening <i>Rob Herbert, Neuroscience Research Australia</i>
<b>1.00 pm - 2.00 pm</b>	<b>LUNCH + ANZSB AGM</b>
2.00 pm - 3.00 pm	FREE PAPERS 3: Chairs: Paul Stapley & Adrienne Hunt
2.00 pm	The role of the axial musculature during a standing goaloriented reaching task <i>Alexander Stamenkovic, University of Wollongong</i>
2.10 pm	The effect of a feedforward deficit in postural control on movement coordination in pelvic girdle pain <i>Melanie Bussey, University of Otago</i>
2.20 pm	Effect of functional electrical stimulation on dynamic foot pressure in hemiplegic cerebral palsy <i>Anita Mudge, Sydney Children's Hospitals Network</i>
2.30 pm	Variability of walking motions in healthy elderly as a function of walking speed <i>Haruki Toda, Kobe University</i>
2.40 pm	In-vivo behaviour of the soleus muscle in human walking and running <i>Adrian Lai, University of Melbourne</i>
2.50 pm	Recovery strategies utilised in response to forward surface translations <i>James Day, University of Queensland</i>
<b>3.00 pm - 3.30 pm</b>	<b>AFTERNOON TEA</b>
3.30 pm	ANZSB PRESIDENT'S LECTURE: Chair: Andy Creswell
3.30 pm	From mechanobiology to intelligent training for musculoskeletal tissues <i>Rod Barrett, Griffith University</i>
<b>4.30 pm - 6.00 pm</b>	<b>FREE TIME &amp; Travel to Poster &amp; Conference Dinner Venue</b>

**MONDAY 1 DECEMBER 2014**

6.00 pm – 7.30 pm POSTER SESSION, City Beach Function Centre

POSTER	TITLE	PRESENTER
1	Cortical bone's adaptative response to mechanical loading is regulated locally by a unique adaptation law – insights from biomechanics	Peter Pivonka, University of Melbourne
2	Reliability of detecting medial gastrocnemius muscle activity during single-leg-hopping	Peter Clothier, University of Western Sydney
3	Variability of spatiotemporal and leg mechanical characteristics during continuous single-leg hopping to exhaustion	Peter Clothier, University of Western Sydney
4	An anisotropic, viscoelastic model of in vivo facial skin	Cormac Flynn, Wintec, New Zealand
5	A comparison of upper limb movement profiles when reaching to virtual and real targets during stance	Mitchell Just, University of Wollongong
6	Association between breast volume and bra size in a cohort of women with large breasts	Celeste Coltman, University of Wollongong
7	Selecting asymmetric arm actions for tilt production	Joanne Mikl, University of Sydney
8	From the ground up – a novel way of assessing the neuropathic foot	Peter Milburn, Griffith University
9	CEINMS: An OpenSim neuromusculoskeletal toolbox to examine how different neural solutions affect muscle forces and joint moment estimates	Claudio Pizzolato, Griffith University
10	Knee kinematics during treadmill locomotion are associated with T2 relaxation times of articular cartilage single-bundle ACL reconstruction with hamstring autograft	Corey Scholes, Sydney Orthopaedic Research Institute
11	Thorax-pelvis separation angle and speed development in the hammer throw	Sara Brice, James Cook University
12	Electromyographic analysis of the upper extremity in water polo players during water polo shots	Mostafa Yaghoubi, Massey University
13	What is normal? Female lower limb kinematic profiles during athletic tasks used to examine ACL injury risk: A systematic review	Aaron Fox, Deakin University
14	The effect of vertical stiffness on peak kicking velocity in taekwondo	Laura Hung, University of New South Wales
15	The relationship between shoulder and elbow kinematics in cricket fast bowling	Kane Middleton, University of Wollongong
16	The influence of trunk lateral flexion angle manipulation on wrist speed in cricket fast bowlers	Kane Middleton, University of Wollongong
17	Monitoring track cycling start performance using bike acceleration	Damien O'Meara, NSW Institute of Sport

PROGRAM CONTINUED

## MONDAY 1 DECEMBER 2014

6.00 pm - 7.30 pm POSTER SESSION, City Beach Function Centre

POSTER	TITLE	PRESENTER
18	Activation patterns of leg muscles in trained triathletes are variable in the early period of running after cycling	Joel Walsh, University of Wollongong
19	"Square hips" – fact or fiction? Three-dimensional kinematic analysis of battements devant and derriere in classical ballet technique	Rachel Ward, University of New South Wales
20	Footwear effects during a barbell back squat	Wendy Gilliard, Southern Cross University
21	Vibration exercise warm-up for overground sprinting	Noel Lythgo, RMIT University
22	A novel casting technique for transtibial prosthetic socket fit in developing countries	Noel Lythgo, RMIT University
23	Effect of an innovative arch support device on foot structure and comfort: A pilot investigation	Lynn Teoh, University of Wollongong
24	Additive fabrication platform for biomedical applications typified by foot orthosis	Siobhan O'Brien, University of Wollongong
25	The effect of low back pain on hip range of motion and gluteus medius function in field hockey players	James Kennedy, University of Otago
26	Repeatability of static load bearing exercises during rehabilitation of individuals with transfemoral amputation fitted with osseointegrated implant	Laurent Frossard, Queensland University of Technology
27	Are lesser toe deformities associated with decreased balance in older adults?	Christopher Munn, University of Wollongong
28	Age-related changes in paediatric temporal-spatial, kinematic and kinetic data	Elizabeth Wojciechowski, Sydney Children's Hospitals Network
29	The effect of age on muscle forces during walking: Implication for sarcopenia	Peter Pivonka, University of Melbourne

7.30 pm - 11.30 pm CONFERENCE DINNER, City Beach Function Centre

## TUESDAY 2 DECEMBER 2014

8.00 am	REGISTRATION (At University of Wollongong)
9.00 am - 9.55 am	KEYNOTE: Chair: Peter Milburn
9.00 am	Achilles tendon anatomy and biomechanics: What does it do? <i>Prof Toni Arndt, Swedish School of Sport &amp; Health Sciences</i>

## PROGRAM CONTINUED

### TUESDAY 2 DECEMBER 2014

10.00 am - 11.00 am	FREE PAPERS 4: Chairs: Suzi Edwards & Damien O'Meara
10.00 am	The role of the core in athletic performance of an unanticipated agility task <i>Aaron Austin, Charles Sturt University</i>
10.10 am	Comparative electromyography analysis of the upper extremity between novice and elite water polo players during an overhead shot <i>Mostafa Yaghoubi, Massey University</i>
10.20 am	Lack of change in bowling technique throughout a prolonged bowling spell in junior fast bowlers <i>Andrew Schaefer, Charles Sturt University</i>
10.30 am	Mechanical efficiency of a running-specific energy storage and return prosthesis <i>Stacey Rigney, University of New South Wales</i>
10.40 am	Mechanics and energetics of cycling at constant power and variable cadence <i>Scott Brennan, University of Queensland</i>
10.50 am	New assessment tool for aerial surfing athletes <i>Lina Lundgren, Edith Cowan University</i>
<b>11.00 am - 11.30 am</b>	<b>MORNING TEA</b>
11.35 am - 1.00 pm	WORK IN PROGRESS: Chairs: Karen Mickle & Glen Lichtwark
11.30 am	The effect of visual targeting on neuromechanical characteristics during sporting tasks <i>Daniel Brown, Deakin University</i>
11.35 am	Feasibility and reliability of three-dimensional ultrasound for determining human tibialis anterior muscle and aponeurosis strains over varying contraction intensities <i>Brent Raiteri, University of Queensland</i>
11.40 am	The influence of walking speed and heel height on knee joint loading <i>Mitchell Craze, RMIT University</i>
11.45 am	The influence of ankle range of motion on lower limb muscle activity when landing an aerial manoeuvre in surfing <i>James Forsyth, University of Wollongong</i>
11.50 am	WORK IN PROGRESS DISCUSSION
12.10 pm	The validity and reliability of a portable optical motion capture device to measure hand tremor <i>Kent Delbridge, RMIT University</i>
12.15 pm	Design of a test methodology to measure rugby headgear effectiveness <i>Joseph Karren, University of Sydney</i>
12.20 pm	Validity and reliability of the Microsoft Kinect for Windows V2 for motion analysis <i>Alessandro Timmi, University of Melbourne</i>
12.25 pm	Anatomy of the Breast <i>Kathryn Gaskin, University of Wollongong</i>
12.35 pm	WORK IN PROGRESS DISCUSSION
<b>1.00 pm - 2.00 pm</b>	<b>LUNCH</b>
2.00 pm - 3.00 pm	PANEL: FUNDING YOUR RESEARCH: Chair: Rob Herbert
<b>3.00 pm - 3.30 pm</b>	<b>AFTERNOON TEA</b>
3.30 pm - 4.30 pm	AWARDS & CLOSING CEREMONY
<b>Travel from Wollongong or Free Night for Workshop Participants</b>	