

# ISBS 2018 AUCKLAND CONFERENCE AUT MILLENNIUM TEACHERS DAY

Monday 10<sup>th</sup> September 2018, AUT Millennium, 9:00 to 3:00

Dr Sarah Kate Millar is coordinating the New Zealand Biomechanics Teachers Day. Sarah-Kate Millar is a senior lecturer at AUT (AUT) in the area of sports coaching and in particular skill acquisition. Her primary research focus uses a dynamic systems perspective and a constraints-led approach to understanding and achieving movement change. Her mixed methods approach to answering questions is driven by her desire to complete applied research and she strives to have coaches (and athletes) knowledge included in her work, as well as having research that is representative of performance demands. Areas of research completed by Sarah-Kate are interpersonal and extra personal coordination in rowing, coaches' self-awareness, youth sport dropout, rugby psychosocial development, weight lifting, decision-making and early vs. late specialisation.



**Dr. Kim Hébert-Losier** is a Senior Lecturer in Applied Biomechanics and Injury Prevention at the University of Waikato. Kim is an experienced researcher in human movement, muscle function, 3D motion analysis, and injury prevention and screening in recreational to Olympic-level athletes. Current research projects include investigating long-term consequences of anterior cruciate ligament injuries, screening and preventing injuries in badminton and netball players, exploring the effect of kinesiology tape on elite cyclists, and understanding the individualization of running patterns.



<https://www.waikato.ac.nz/homeofcycling/about-us/our-people/kim-hebert-losier>

**Dr Laura-Anne M Furlong** is a Lecturer in Biomechanics, currently based in the School of Sport, Exercise and Health Sciences at Loughborough University, and the National Centre for Sports and Exercise Medicine. Her research focuses on understanding the links between muscle function, movement and control during walking and running activities, using a combination of non-invasive in vivo measures of muscle and tendon behaviour and structure with biomechanical analyses of movement, forces and coordination.



<http://www.lboro.ac.uk/departments/ssehs/staff/laura-anne-furlong/>

**Dr Philip Fink** is Senior Lecturer in motor control and biomechanics at the School of Sport, Exercise and Nutrition at Massey University. Phil's Current research topics include: 1) Studying the relationship of learning of finger sequence patterns and the symmetry properties of those patterns. 2) Using multifractal analyses to study static balance in children with obesity, with the goal of identifying the cause of balance dysfunction. 3) Studying the biomechanics of mountain biking, particularly the sources of resistance and the effects of vibrations. And 4) Examining how beat is perceived in music.

<http://www.massey.ac.nz/massey/expertise/profile.cfm?stref=413040>

**Dr Dwayne Knudson** is a Professor in the Department of Health & Human Performance at Texas State University. He does research in biomechanics of sport and exercise, learning biomechanics, application of biomechanics in qualitative diagnosis of movement technique, and research impact in biomechanics/kinesiology.



[https://www.researchgate.net/profile/Duane\\_Knudson](https://www.researchgate.net/profile/Duane_Knudson)

Suzie Belcher is currently working with Netball New Zealand as part of their national injury prevention team, NetballSmart. Suzie is originally from Lincolnshire in the UK; prior to moving out to New Zealand Suzie spent 5 years as a qualified physiotherapist. There she was able to work for the government run program TASS (Talented Athletic Scholarship Scheme), helping National Athlete's gain Olympic status whilst staying in education, based out of Sheffield Hallam University, UK. Alongside completing her MSc in Sport's Injury Management and Therapy. Since being in New Zealand Suzie now 9 years qualified as a physiotherapist has be able to continue her work with international athletes from the UK and NZ, in Winter and Summer sports up to Olympic/Paralympic level. Suzie has worked mainly in the Private Sector as a Clinic Manager and Sport team Specialist, as well as with National Sports groups. Suzie has been working with her clinics as an Educational and Professional Development lead, building up workshops in advanced sports taping, massage, acupuncture use in sport and biomechanical correction of gym exercises. Suzie is also a PhD candidate at SPRINZ.

36th Conference of the International Society of Biomechanics in Sports, Auckland, New Zealand, September 10-14, 2018



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## ISBS Teacher's Day 2018



Teachers will have the opportunity to work side-by-side with leading biomechanics instructors/researchers from across the world. There will be a focus on creating hands-on experiential learning opportunities to achieve science and physical education outcomes (TKI levels 5-8).

### Specific topics include:

- Balance and stability
- Projectile motion
- Force summations
- Levers
- Newton's Law's
- Momentum (angular, impulse and torque)



## ISBS Teacher's Day 2018 - Programme



The day will be a mixture of expert presenters talking on key biomechanical topics and inter-active small group work designing learning activities for High School age groups. The afternoon will be a chance to share ideas across topic areas and all delegates to have notes written up for them to take away from the conference.

### Programme:

- Registration: 7.45am – 8.15am
- Session 1: 8:15am – 9:45am
- Morning Tea: 9:45am – 10:15am
- Session 2: 10:15am – 11:45am
- Lunch: 11:45am – 12:30pm
- Session 3: 12:30pm – 2:30 pm

