



ISBS 2018

Auckland, New Zealand

10-14 September

COUNTDOWN — 97 days before the opening ceremony
7 days until registration closes!

Key facts:

At close of paper submission on 23rd April, 119 papers were submitted in the last 12 hours prior to the deadline! 291 papers in total were submitted and underwent peer review by two ISBS members. At the close of programme scheduling on 1st June we have 276 papers in the academic programme:

- 160 x 10-minute podium orals with panel questions in groups of four
- 116 x 1-minute poster-pitch orals in groups of 9-10, followed by interactive posters displays

Key dates

22 May 2018

Delegates advised of paper presentation format (10-mins podium or 1-min poster).

11 June 2018

- Standard registration NZ\$895 full, NZ\$665 student (after this date 20% increase in fee). **ISBS 2018 Puffer Jackets only provided to delegates who register by 11 June** (due to ordering and delivery schedule).

9 July 2018

- Workshop registration closes (first to register, first confirmed)

9 July 2018

- Late registration closes (**papers deleted if delegates are not registered**)

10–14th September 2018

- ISBS 2018 Auckland conference



YOUR CONFERENCE PARTNER HOSTS

Auckland University of Technology is proud to lead the hosting of the ISBS 2018 Auckland conference.

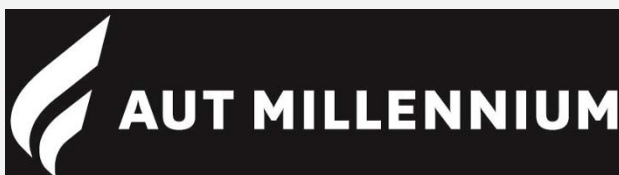
Four organisations are working in partnership to bring ISBS 2018 to Auckland, after successfully winning the bid to the ISBS Board during ISBS 2016 to host the conference.

Conference Partner Hosts

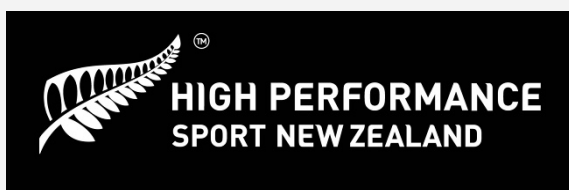
Derek McCormack	AUT & AUTM
Mike Stanley	NZOC & AUTM
Michael Scott	HPSNZ
Pam Ford	ATEED



AUT is excited to showcase why it is a University of technology, its sustainability initiatives, and how staff and students are supported to conduct world class research using biomechanics through its research institutes such as SPRINZ, HRRRI, NISAN, KEDRI, etc. Yes, all abbreviations will be explained at the conference!



AUTM will be showcasing the fabulous facilities and staff at the AUTM precinct. AUTM has accommodation on site, suitable for athlete and sport scientists' training. The working partnerships between AUT research and education staff with elite and community sports participants will be highlighted.



HPSNZ will showcase the importance of biomechanics and integrated sport science in supporting high performance athletes based at AUT Millennium and throughout the country. HPSNZ works in partnership with AUT, in particular through the PhD joint scholarship programme.



ATEED is proud to showcase Auckland and New Zealand to the ISBS 2018 delegates. Pre and post-conference tours have been developed by ATEED and their partners.



YOUR CONFERENCE LOCAL ORGANISING COMMITTEE

Local Organising Committee

Patria Hume	Chair
Jacqueline Alderson	Co-Chair
Barry Wilson	Co-Chair
Kelly Sheerin	Industry Partner Coordinator
Sarah Kate Millar	Teacher Engagement Coordinator
Valance Smith	Manaakitanga
Martin Dowson	AUTM Applied Programme Coordinator
Enora Le Flao	Secretary & French speaking delegates liaison
Joshua McGeown	Student Assistants Coordinator
Amber Taylor	Sports Technology Forum Coordinator
Kylie Robinson	Social Media Coordinator
Selina Nihalani	AUT Events Coordinator
Andrea Malcolm	Media Coordinator
Chris Tillack	Web Quality Advisor
Jack Mapobpan	Audio Visual & IT Coordinator
Tim Davison	Digital Technology Advisor
Len Gillman	Sustainability Coordinator
Thomas Neitzert	Sustainability Advisor
Bridget Davey	ATEED Coordinator
Dan Evans	ICT Advisor



Kylie Robinson is the Social Media Coordinator.

Join us at AUT for the ISBS 2018 conference:

isbs2018.com

isbs2018@aut.ac.nz

Facebook [ISBS2018](#)

Twitter [ISBS_2018](#)

The AUT Faculty of Health and Environmental Sciences Dean and Pro-Vice Chancellor welcomes delegates to attend the ISBS 2018 Auckland conference at AUT.



Professor Max Abbott CNZM is Professor of Psychology and Public Health, Dean of the Faculty of Health and Environmental Sciences, also Pro Vice-Chancellor (North Campus), and Co-director of the National Institute for Public Health and Mental Health Research. Max was the founding National Director of the Mental Health Foundation of New Zealand, a position held for ten years. During his presidency of the World Federation for Mental Health (1991 – 1993) he co-chaired the first World Mental Health Day with the WHO Director General.



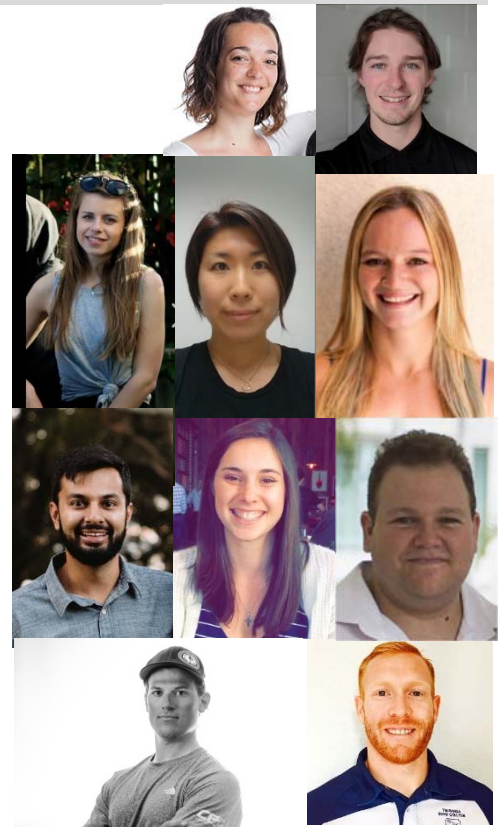
The first formal address of the conference opening will be given by kaihāpai Dr Valance Smith and commence with a Karakia (Blessing) and Mihi Whakatau welcoming dignitaries, guests and delegates to the ISBS 2018 Conference.

Valance lectures at AUT, teaching Te Reo Māori (the Māori language), Māori performing arts and composition, and provides cultural support to the University. Valance gained a Master of Arts in the Department of Māori Studies, University of Auckland (2003) and then completed a PhD in Māori Development at AUT (2014). His doctoral thesis focused on contemporary Māori music and its potential in promoting Te Reo Māori. Valance is actively engaged in Māori performance art, the composition and performance of contemporary Māori music and Māori language revitalisation. Valance is an investigator for a National Science Challenge project, investigating mobilisation of traditional Māori knowledge in ecology and cultural farming practices.

YOUR CONFERENCE ASSISTANTS

Student and Post-doc conference assistants

Erika Ikeda	Social Tours Assistant; Japanese delegates liaison
Casey Watkins	Registration Desk Assistant
Jessica Yeoman	Events Assistant; Round Table Discussion Assistant
Andrew Pichardo	Lecture theatre A WG403 Assistant
Dustin Oranchuk	Lecture theatre B WG126 Assistant
Eric Harbour	Lecture theatre C WG220 Assistant; Social Media Assistant; Spanish speaking delegates liaison
Farhan Tinwala	Lecture theatre D WG404 Assistant; Hindi speaking delegates liaison
Aaron Uthoff	Industry Playing Field Areas Assistant; German and Spanish speaking delegates liaison
Renata Bastos Gottgroy	Speaker Ready Room Assistant; Portuguese speaking delegates liaison
Jono Neville	Sports Technology Showcase Assistant; Social Media Assistant
Albert Chang	Chinese delegates liaison



See the website for contact emails.



Register for the 36th Conference of the International Society of Biomechanics in Sports and join us in Auckland in September for an exciting programme. Details about fees, deadlines and what the registration includes can be found on the website.

How to register? Become an ISBS Member if you are not already: <https://isbs.org/membership>.

Any questions, contact ISBS Secretary Enora Le Flao at isbs2018@aut.ac.nz



Being the best we can be

AUT Millennium (AUTM) has established a reputation for excellence and innovation in human performance and wellbeing. AUTM is a charitable trust established to help New Zealanders live longer and healthier lives and to enjoy and excel in sport through the provision of world-class facilities, services, services and education. What this looks like in reality is a vibrant mix of elite sport, research and community activity, with over 800,000 annual visits. Home to High Performance Sport New Zealand's (HPSNZ) National Training Centre, AUT Millennium is the base for many of the country's leading athletes and teams. With seven national sporting organisations based in the main building, it is common to see athletes training or meeting with coaches, medical professionals and mentors around the facility. Right next to them are the community members; a family on their way to swimming lessons, a group of ladies on their way to yoga class, an expectant mother waiting for a medical check-up, or a high school group finishing up their athletics day. AUTM offers the following community services:

- Gym
- Swim School
- Accommodation
- Conference
- Athlete Development
- Schools Programme – Education Outside the Classroom and School Holiday Programmes
- SPRINZ Sports Performance Clinics

The on-site AUTM accommodation immerses you in the high performance environment, with complimentary access to the gym, group fitness classes, pool and running track. The accommodation has housed local and international teams during training camps and tournaments, including a number of different nationalities before the recent Commonwealth Games in Brisbane.

Our accommodation is also available to conference guests, providing easy access to the AUTM conference facilities (*Note the ISBS conference is based in downtown Auckland, which is 10 minutes drive from AUTM therefore a car is needed, or you have a 20 minute walk to the bus station to take you to the city*). A special offer has been arranged for ISBS Conference delegates. Email accommodation@autmillennium.org.nz and quote "ISBS2018" to book your stay in September.

Casual weekly gym memberships are available for people attending the conference, giving access to our gym, group fitness classes, pool and running track. Deep Water Running, Adult Swim Squad and Running Group are open for casual attendance also. More details about what you can be part of at AUTM during the ISBS 2018 Conference can be found at www.autmillennium.org.nz or you can contact communications@autmillennium.org.nz. We look forward to seeing you in September!



Sports Performance Clinics

In partnership with AUT, AUTM has become a hub for research in sports performance, health and human potential.

AUT's researchers work in both the high performance and general public spheres. The Sport Performance Research Institute of New Zealand (SPRINZ) is home to academics and postgraduate students investigating all facets of sport science, sport management, physical activity and health.

The Human Potential Centre is dedicated to applying leading research to the health and wellbeing of everyday New Zealand communities. This keeps with the unique nature of AUT Millennium as a place for everyone to be the best they can be.

Other AUT research institutes, such as the Health and Rehabilitation Research Institute, led by founding Director and biomechanist, Professor Peter McNair, collaborate on sport and health related research, education and community service projects.



STRENGTH & CONDITIONING CLINIC



ENDURANCE PERFORMANCE CLINIC



JE LINDSAY CARTER KINANTHROPOMETRY CLINIC



RUNNING & CYCLING MECHANICS CLINIC



Traditional gifts for dignitaries

Master wood carver Jarrod Hume was commissioned to create hand carved pouhutakawa (native NZ tree) items for dignitaries. Jarrod has reclaimed the wood from a fallen tree at Kawau Island in Auckland's Hauraki Gulf. He dried the wood for two years, hand carved the items, then added Pasifika art work of his own creation. The ISBS 2018 kaikōrero Dr Valance Smith will perform the traditional Māori blessing of gifts for dignitaries at the opening ceremony.



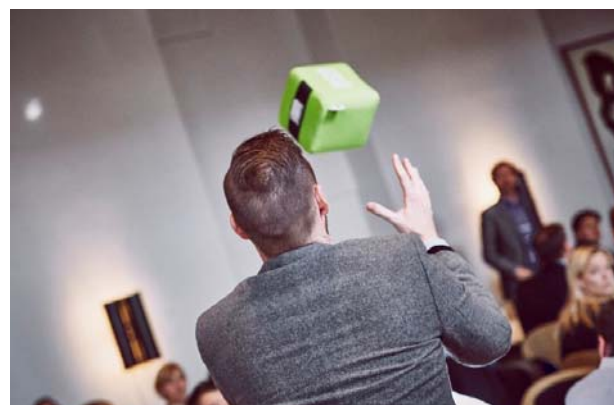
AUT Audio Visual Team



Auckland University of Technology's in-house events audio-visual team, provides world class services for AUT's academic and corporate events and conferences. The team consist of full time audio, visual, lighting technicians and crew utilising industry standard pro AV equipment to ensure seamless delivery of every event. The team work closely with various department and schools providing technical support to students and various projects university wide. The audio-visual team, led by Jack Mapobpan, is proud and excited to be involved with the ISBS 2018 conference.

Catchbox Throwable Microphone - The Fun Way to Engage in the ISBS 2018 Conference!

The ISBS 2018 conference is a great way for people from different backgrounds to come together to share ideas and come up with new solutions. With the Catchbox throwable microphones, delegates to ISBS 2018 will have a tool that will liven up the conference enabling more participation and discussion. The device makes asking questions in packed rooms faster and more feasible, and the simple act of getting audiences to throw a soft cube breaks the ice and gets people to talk. <https://getcatchbox.com/what-is-catchbox/>. So bring your applied biomechanics skills with you ready to catch and throw the cube!



ISBS 2018 website



Chris Tillack is the ISBS 2018 Conference Web Quality Advisor. If there is information you would like to see on the conference website to help you plan your conference experience, please contact Chris on chris.tillack@aut.ac.nz.

ISBS 2018 Digital Technology

Tim Davison is the ISBS 2018 Conference Digital Technology Advisor. More information in the next magazine on how you will use interactive bots at the conference.



Meet some of our ISBS 2018 Auckland Scientific Review Panel members



Professor Duane Knudson is Professor of Biomechanics in the Department of Health & Human Performance at Texas State University, USA. He received his PhD in biomechanics from the University of Wisconsin and has been an active member of ISBS. He has served several terms as VP of Publications, Director, and was elected Fellow and Life Member. He has presented 28 times at 19 ISBS conferences and published over 100 peer reviewed journal articles, 4 books, and 21 chapters on sport and exercise biomechanics. His research focuses on biomechanics of tennis, qualitative diagnosis, stretching, learning biomechanical concepts, and research quality.



Silvio Lorenzetti earned degrees in physics and mathematics before founding and leading the Sports Biomechanics group at ETH Zurich Switzerland. With a strong background teaching biomechanics and sports biomechanics at ETH Zurich, he is also frequently engaged as a guest lecturer elsewhere. Recently, he became the head of Performance Sport at the Swiss Federal Institute of Sport Magglingen, a department including eight different disciplines of sport science, dedicated to research, teaching and federation support in elite sport.



Ian Bezodis is a Senior Lecturer in Sports Biomechanics at Cardiff Metropolitan University in the UK. As a member of ISBS for over ten years, he has regularly attended the Annual Conferences since 2007. He previously served on the Board of Directors from 2009-2013.



Neil Bezodis is a Senior Lecturer at Swansea University, UK. He has been an ISBS member since 2005 and received the New Investigator Award in Limerick (2009) and the Hans Gros Emerging Researcher Award in Johnson City (2014). His research primarily focusses on sprinting and rugby union and he works closely with international coaches to provide biomechanical support and conduct applied research projects. He has served on the ISBS Board of Directors and been part of several sub-committees since 2014.



Gillian completed her PhD research with Hockey Australia at the University of Western Australia and has since been working on her postdoc at the University of Massachusetts with Brooks Runing Inc. She has consulted for professional Australian Rules football teams (AFL) for both performance and injury prevention and has worked as a strength and conditioning coach at a semi-professional level. She has been the ISBS student representative for the term 2016-2018.



Hiroiyuki (Hiro) Nunome is currently Professor in Sports Biomechanics at Fukuoka University, ex- President of the Japanese Society of Science & Football (2012-2016), International Steering member of Science & Football and Associate editor of "Sports Biomechanics". Hiro gained his BEd at Kanazawa University, MEd at University of Tokyo and PhD at Nagoya University. Hiro is well-known as a pioneer of Biomechanics in soccer kicking with many advanced publications in leading journals. Hiro's mother tongue is Japanese but he is also very fluent in English and practical in Chinese (mandarin). Hiro frequently helps conference participants from non-English spoken countries using his special ability.



Great New Zealand food

Selina Nihalani, AUT Events, is coordinating the conference venue and events, and will ensure that everything runs smoothly. Selina has discussed the menu choices with the AUT chefs to ensure that delegates will experience great New Zealand seasonal food, that works well with the Selini wines, local beer and juices. Selina is looking forward to the themed Lord of the Rings closing banquet and the Kiwiana opening event.



Conference Sustainability—ecological responsibility

Professor Lex Gillman (School of Applied Sciences) and Professor Thomas Neitzert (School of Engineering) are the Sustainability Coordinators for the conference. They have worked out the carbon footprint, and have developed strategies to help offset the carbon cost. More on this important AUT conference initiative in the next ISBS magazine.

Geoffrey Dyson Award—Hermann Schwameder



The prestigious Geoffrey Dyson Lecture is an invited presentation given by scientists who have made an outstanding contribution to the Society, and to our field. This year, the lecture will be given by Professor Hermann Schwameder. Hermann has held professorships at Karlsruhe Institute of Technology and currently the University of Salzburg. His research scope is impressive and includes, for example, Sport Performance and Injury, Sports Medicine, Technology, and Clinical biomechanics. He has worked Olympic Sports (Ski Jumping, Amputee Athletics), manufacturers (Adidas) and contributed significantly to clinical and health related research (Obesity, ACL research). In 2004 Professor Schwameder became President Elect, followed by the Presidency between 2005- 2007 and Past Presidency 2007-2008. His term of office was productive, characterised by a supportive, outgoing and transparent structure and included the hosting of the 24th ISBS conference in Salzburg in 2006. He has developed a highly-regarded research group at the University of Salzburg and this can be evidence by the quality of the students and researchers that emerge under his leadership.

Hans Gros Emerging Researcher - Steffen Willwacher



Steffen is from the Institute of Biomechanics and Orthopaedics, German Sport University Cologne. As a former athlete and coach Steffen was hooked by the mission and the spirit of ISBS when attending his first conference in Porto (2011). His research covers elite and recreational sports, focusing on the interaction between human and technology. Steffen's presentation is titled:

'Sports equipment: How the transformation from passive to digital systems opens new doors and puts new demands on sports biomechanists'

The digital transformation of almost every aspect of our lives is probably the most radical change observed in human history. As part of this revolution, almost every piece of sport equipment can be instrumented with sensor technology now or in the future. The massive amount of data that can be generated by these systems can be utilized to help athletes to optimize their movement technique and load management and also offers great opportunities to perform research studies on a much larger scale, with a much better temporal resolution. Nonetheless, the widespread rise of digital feedback and measurement systems needs careful consideration of comparability, reliability and validity issues and puts new demands on the skills of sports biomechanists. During my talk I would like to highlight these challenges in a systematic way using examples coming from my own scientific work. This includes examples from instrumented starting blocks and reaction detection systems, sensor equipped running shoe insoles that monitor load and performance variables of their users and finally load monitoring systems used in team sports. I will discuss issues arising from the use of different sensor technologies and technical constructions, issues of comparing the results of novel systems with the existing body of knowledge in our field and challenges arising in data reduction and reporting. From this, I will briefly derive requirements for the education of sports biomechanists to allow for keeping up with and making ideal use of the opportunities involved in the transformation of sports equipment into digital systems.

Luncheon round table discussions

After getting your lunch you will be encouraged to discuss questions of importance with keynote panel members and invited speakers. Questions include:

- What can biomechanists do to use technology more effectively to help improve sport performance?
- What can biomechanists do to more effectively help reduce sports injuries?
- What opportunities are there for student biomechanists in laboratories, industries, universities, sports clubs around the world?
- What opportunities are there for biomechanists to engage with technology companies?

Accident Compensation Corporation Injury Prevention Manager, and SPRINZ PhD student, Natalie Hardaker, will chair the keynote panel ACC SPORTSMART: Injury prevention from head to toe using a biomechanics perspective. This panel will be followed by the round table discussion focused on sports injury prevention.



Meet our Wise Wizards

Do you know these esteemed biomechanists by sight?

Who's picture is missing?



Professor Walter Herzog is a Professor at the University of Calgary. Professor Joe Hamill is currently President of the International Society of Biomechanics. Professor Patria Hume was the inaugural SPRINZ Director at the Auckland University of Technology. Professor Juris Turaud is looking forward to debating issues of importance at the conference. Professor Bruce Elliott's philosophy has always been:

“a good question leads to beneficial research”

Come prepared to ask these wise biomechanists all the things you have ever wanted to know about biomechanics. Questions will be posed via the session Chairs Associate Professor Jacqueline Alderson (Australia) and Professor Gareth Irwin (Wales) via social media feed from our ISBS Social Media Coordinator Kylie Robinson such as:

- What does it take to have a successful academic career as a biomechanist?
- Where are some of the best experiences that can be gained in applied biomechanics?
- What is your crystal ball prediction of what biomechanics specialists will focus on in 10 and 30 years time?

THE IMPACT 2002-2017

- 200+** ATHLETES AND **25+** COACHES HAVE COMPETED ON THE WORLD STAGE
- 45,000** ACCOMODATION BEDS
- 4,000** CONFERENCE BOOKINGS
- 155** CURRENT AUT MILLENNIUM STAFF
- \$85M** FACILITY FOR ALL
- 1,400,000** SWIMMING LESSONS
- 6,500,000+** USER VISITS
- 68** PHD STUDENTS AND **23** MASTERS
- \$10M+** IN SUBSIDIES TO FACILITY HIRE, EQUIPMENT AND OFFICE SPACE
- 800,000+** USER VISITS ANNUALLY
- 5** FOUNDATION ORGANISATIONS: NORTH SHORE SWIMMING, NORTHSPORT (olympic water polo), HAMILTON COLLEGE, bays athletic
- 9** COMMUNITY SERVICE UNITS
- 1,476,379** HEALTH AND FITNESS GYM WORKOUTS
- 124,897** CHILDREN HAVE PARTICIPATED IN OUR SCHOOLS PROGRAMMES
- 60,700** CHILDREN HAVE COMPLETED A WATERSAFETY LESSON
- 100,509** CHILDREN HAVE LEARNT TO SWIM
- 10,000+** COMMUNITY OF ACTIVE MEMBERS
- 900** ATHLETE DEVELOPMENT ATHLETES

ISBS 2018 AUT MILLENNIUM APPLIED PROGRAMME

For information see: isbs2018.com isbs2018@aut.ac.nz

Mr Simon Briscoe from High Performance Sport New Zealand (HPSNZ) is leading the coordination of the HPSNZ contributions to the applied programme held at the AUT Millennium precinct in Albany, north of Auckland, on Wednesday 12th September with the support of AUT Millennium and HPSNZ.



Simon Briscoe

Simon and his wife Dani immigrated to NZ in 2013 in order to commence his role as a Senior Performance and Technique analyst with sailing. Since then he has become the head of the PTA discipline within HPSNZ. After graduating from Southampton University with an MEng in Mechanical Engineering, Simon worked briefly for the Jordan Formula 1 team as a vehicle dynamicist before joining the engine development team at Ford Motor Company for 5 years. Simon then returned to his passion of sailing, working with the British Sailing team for 2 Olympic cycles including the highly



successful 2012 Olympic Games. The New Zealand sailing team have benefited from this experience with Simon and Ben Day analysing race data on international events, enhancing boat and sail technology, as well as introducing new technology for coaches to provide real time feedback to their athletes.

Paul McAlpine



Between 2000 and 2009 Paul completed his MSc and PhD at Auckland University with a focus on injury mechanics in snowboarding through on-snow force measurement and motion analysis. Paul also developed and tested footwear as a contractor with private companies. He provided 3D motion capture and analysis for the NZ Cricket fast bowler screening assessments before moving to Adelaide in 2010. Paul was the Biomechanist for the South Australian Institute of Sport supporting a range of sports including Rowing, Kayak, Swimming, Water polo, Hockey and Cycling. In 2013 Paul and his wife Laura moved back to NZ to support athletes over 3 Olympic cycles in both summer and winter Games. Paul is a Senior Biomechanist for HPSNZ and is the primary service provider for Kayak Sprint and Snow Sports New Zealand whilst supervising PhD candidate Cameron Ross.



Justin Evans

After completing a BSc in Physics followed by a MSc in Sports Science, Justin commenced work with Cycling New Zealand for the Rio Olympic cycle as a performance scientist. In 2017 Justin was employed by High Performance Sport NZ to support Rowing NZ in both biomechanics and physiology. This work includes monitoring each training session for all athletes through the use of heart rate and boat/stroke measurements. Justin's work with the rowers has involved collaboration with the Goldmine team to enhance real time feedback tools for both the coaches and athletes.

ISBS 2018 AUT Millennium Applied Programme Sessions

For information see: isbs2018.com isbs2018@aut.ac.nz



Bruce Hamilton

Bruce has been the Director of the Performance Health team based at the National Training Centre in Auckland since 2013. He is also the Head of Sports Medicine for the NZ Olympic Committee and the Medical Director of Canoe Racing NZ and is a practicing Sports Physician who recently completed his Doctorate in Sports Medicine. Past roles include Sports Physician for the Australian Institute of Sport, Medical Coordinator for Athletics Australia, Team Doctor for Triathlon Australia, Regional Lead Physician for the English Institute of Sport and Chief Medical Officer for UK Athletics. Before moving back to his country of birth, Bruce worked for three years at the purpose built facility of Aspetar, Qatar Orthopaedic and Sports Medicine Hospital as the Chief of Sports Medicine.



Kim Simperingham

Kim has nearly 20 years of experience as a Strength and Conditioning coach supporting a wide range of sports. He is currently the National Training Centre (Auckland) S&C Manager for High Performance Sport New Zealand, Yachting New Zealand S&C Lead, the All Blacks sport scientist and also works with shot putter Valerie Adams. Kim was formerly head of S&C for Auckland Rugby, NZ Blacks Ferns and Kintetsu Rugby (Japan). Kim is a PhD candidate at AUT University and his research interests include enhancing sprint performance in team sport athletes; the effect of wearable resistance on sport training and performance; and acute enhancement of power performance.



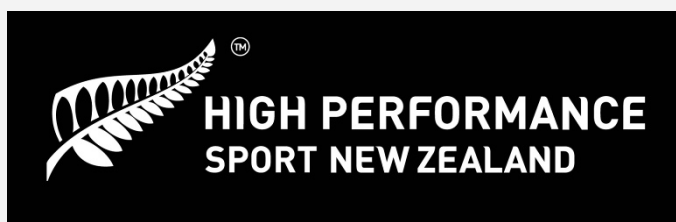
Jodi Cossor

Jodi started her career under the guidance of Dr. Bruce Mason at the Australian Institute of Sport where she worked for five years predominantly with the Swimming and Water polo teams. In 2002 she moved to England to be the first biomechanist to be employed by British Swimming. During this time, she introduced competition analysis to determine race strategies that could then be practiced within the daily training environment. Whilst working for British Swimming Jodi completed her PhD on the use of technology to improve the performance of starts and turns in swimming. After 3 Olympic cycles Jodi moved

to New Zealand in 2013 where she is currently a Senior Biomechanist for the Swimming and Paralympic Swimming teams.



Working with Paralympic athletes provides the opportunity to be more creative when providing biomechanical support within the daily training environment (DTE). Two swimmers may be in the same classification at a competition but present completely different physical attributes. An athlete missing part of an arm will need to have a stronger kick than an athlete missing part of a leg, while fatigue in brain injured athletes impacts their performance towards the end of a race. These unique differences were identified by Fulton et al. (2009) when examining performance improvements at competitions between 2004 and 2006. It is therefore important to enhance the strengths and minimise the weaknesses of the individuals to a greater extent when compared with able bodied swimmers. Dingley et. al (2014) highlighted the significance of these differences when examining the start phases of Paralympic swimmers. This demonstration will display the current technology used when working with our Paralympic swimmers as well as changes that can be made through the utilisation of immediate feedback within the session (Burkett, 2010). Support within the DTE involves the integration of the biomechanist, physiotherapist and strength coach for optimal performance gains. Recent innovation projects have included the automatic tracking of the swimmer along the length of the pool to produce real time stroke and velocity parameters, as well as the development of training aids for hand and leg amputees.



SOCIAL HALF DAY TOURS Thursday 13th September as part of your delegate registration

For your registration you will be asked to choose one of two tours that are provided as part of your delegate registration. NOTE the Sky Tower and city harbour walking tour is for ALL student delegates as part of the Wednesday half day social tours, as the Marae and Hangi tour is provided on the Tuesday evening for student delegates. Full delegates can choose either the Sky Tower tour or the Marae tour.

A. Sky Tower and city harbour walking tour

Approximately 1 hour up the Sky Tower and 1 hour walking through the city and along the harbour side.

Please wear good walking shoes and your ISBS2018 exclusive puffer jacket, for this tour. You will be guided through the walk and the Sky Tower tour. Delegates may choose to pay an additional fee and jump off the sky tower!

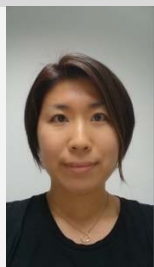


B. Marae, Māori culture, and hangi experience

DURATION: approximately 2 hours. Experience the Marae, traditional Māori culture and food. Please wear shoes you can remove easily, and females a long skirt, and males a shirt and trousers. For further details see the student night information on the website.



Additional tours organised for delegates—see the website to book



Erika Ikeda has worked with Orbit Travel and other tour operators to organise a variety of tour options, short and longer, for delegates, to ensure you can maximise your time in New Zealand. See the website for details.

SkyWalk—Monday 10th September 2018.

Imagine you are walking along a narrow walkway around the outside of the Sky Tower, high above Auckland. There are no handrails, nothing but thin air and the city 192 metres below you! You've got spectacular 360° panoramic views of Auckland, its hills, the harbour and the islands beyond. If you look down, you have a perfect bird's eye view of the city far below. You will make your own way to the Sky Tower. General criteria: Minimum 30 kg to maximum 127 kg. Minimum 1.3 m. Minimum age 10 years old (Oldest walker is 101). Price: NZ\$144.00 incl. GST per person. Includes Sky Tower pass, SkyWalk cap, personalized certificate for each person.



Auckland Jet Boat—Tuesday 11th September 2018

Auckland Adventure Jet is an adventure tourism activity for thrill seekers to see Auckland City by jet boat. The jet boat tours on the Auckland Harbour take passengers for spins and tricks out on the water, while telling them about Auckland City and its surroundings. These jet boat tours are tailored to weather conditions and passenger safety and comfort is of paramount importance to us. This Auckland jet boat goes in excess of 50 knots and is powered by twin V8 500hp engines, turbo charged and super charged! Please make your own way to the Ferry Terminal Building on Quay Street. Price: NZ\$90.00 incl. GST per person. Activity level: moderate exertion, high adrenaline! Waterproof jacket and pants are recommended. Capacity limited to 46 people, first come, first served rule applies.



Contact ORBIT TRAVEL on aklevents@orbit.co.nz

SkyJump—Monday 10th September 2018

SkyJump off Auckland's Sky Tower! SkyJump is New Zealand's highest jump and only Base Jump by wire. You'll plummet 192 metres off the Sky Tower at 85 km an hour! Our highly trained jump masters will rope you up and talk you safely up to the edge, until suddenly you'll find yourself balancing on your tiptoes, leaning out over the streets of Auckland far below. After that there's nothing to do, but let go and fly! SkyJump can be described as Base Jumping while attached to a wire. It's just like being a movie stuntman, or a super hero, or a very big bird! It's different to bungee jumping. You'll fall very fast (approximately 85 kph) for around 11 seconds, and then come to a smooth landing in Sky City plaza below. If it's a fine day you might get a round of applause from the crowds enjoying the sun in the plaza. Please make your own way to the Sky Tower. No minimum weight but we do need to be able to fit into our harness correctly. Maximum 122 kg, Minimum Age 10 years old. Price: NZ\$188.00 incl. GST per person. Includes Sky Tower pass, SkyJump T-Shirt, personalized certificate for each person.



How to book additional tours

Delegates and their partners and family members who wish to purchase these tours, with the special prices for ISBS 2018 delegates, please contact Richie Wiyono from Orbit World Travel Auckland – Groups & Events:

Email address: aklevents@orbit.co.nz

Phone number: 0800 1 ORBIT / 0800 1 67248 if calling within New Zealand

Phone number: +64 9 355 7500 if calling from outside New Zealand



Social functions during the conference

An important part of ISBS is networking and meeting new people. So please come prepared to actively participate in the social functions:

- Monday 10 September - Opening ceremony and kapa haka performance
- Monday 10 September - “Kiwiana” opening reception and industry partners “Playing Fields” exhibition launch
- Tuesday 11 September - Students night at the Marae then Vesper Bar
- Tuesday 11 September - VIP night for industry partners, ISBS 2018 Scientific Committee, dignitaries (special invitation only)
- Wednesday 12 September – Wine tasting – AUT Millennium
- Thursday 13 September – ½ day social tours
- Friday 14 September - Closing ceremony
- Friday 14 September - “Lord of the Rings” closing banquet



Accommodation suggestions for student delegates from Josh McGeown



The ISBS 2018 organising committee has put together suggestions to consider when booking conference accommodation. The conference will be held at AUT City campus located in the central business district (CBD) of Auckland. Within the CBD we have identified YHA Auckland City and The Attic Backpackers as two popular, highly rated, and affordable international hostels to consider for accommodation. Both hostels are within a 10 minute walk to AUT City campus. Prices at these hostels range from \$33 NZD/ night (shared room) to \$90 NZD/night (private room). Both hostels provide free Wi-Fi, secure lockers to store your belongings, and a fully equipped kitchen to prepare meals if you wish.

If you prefer to have more private accommodation, we recommend searching Auckland's extensive number of AirBNB rentals. Traffic in the CBD can get very congested during the work week resulting in delays in public transport. When booking, make sure the AirBNB is located in Auckland's CBD to be within walking distance of AUT City Campus. To ensure you will be within walking distance, we recommend reserving an AirBNB near one of the many notable landmarks within the CBD, including: AUT City Campus, Auckland University, Aotea Square, Sky Tower, Auckland Town Hall, or Queen Street. Be sure to read the comments and reviews of previous travellers who have stayed at the AirBNB before booking. **Be sure to make accommodation arrangements early.** Auckland is a popular destination for travellers from all over the world, meaning high quality and affordable hostels/ AirBNBs will often be unavailable for booking if left until the last minute.

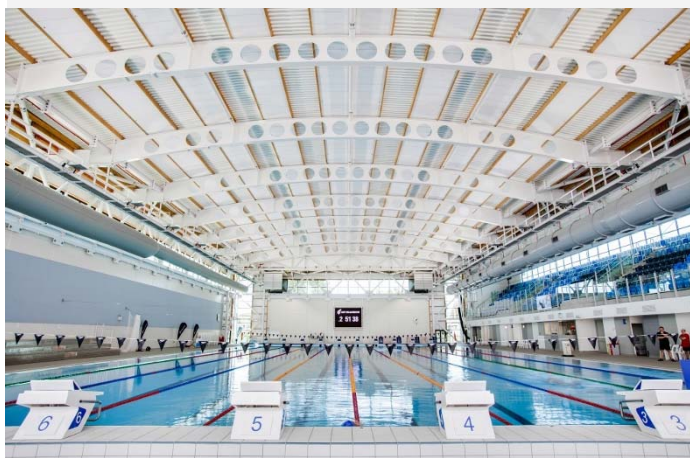


- AirBNB - <https://www.airbnb.co.nz/>
- The Attic Backpackers Hostel - <https://www.atticbackpackers.co.nz/auckland-backpackers-hostel-book-now/>
- YHA Auckland City Backpackers Hostel - <https://www.yha.co.nz/hostels/north-island-hostels/yha-auckland-city/#FrameActivities=2632>

ISBS 2018 Industry Partner opportunities



Kelly Sheerin is the coordinator of the ISBS 2018 Conference Industry Partnership engagement. Kelly is a physiotherapist and biomechanist who holds a lecturing position at Auckland University of Technology, while also managing the AUT Millennium Sports Performance Clinics. As part of a consortium of New Zealand biomechanists, he has spearheaded the introduction of the National Biomechanics Day initiative in NZ, attracting support funding from the government in consecutive years. If you would like to be part of our engaged industry partner team, please contact Kelly <kelly.sheerin@aut.ac.nz>, as we are now in the final stage of organising the opening evening "Industry Playing Field" interactive events and prizes for delegates.





INTERNATIONAL SOCIETY OF BIOMECHANICS IN SPORTS CONFERENCE

TE HOKAI TAPUWAE
THE BREADTH OF STRIDE

ISBS 2018
Auckland, New Zealand
10-14 September

For information:
isbs2018.com or isbs2018@aut.ac.nz

YOUR HOSTS

INTERNATIONAL SOCIETY OF BIOMECHANICS IN SPORTS
Auckland Tourism, Events and Economic Development
AUCKLAND
AUT
AUT MILLENNIUM
HIGH PERFORMANCE SPORT NEW ZEALAND

Welcome to the 36th International Conference on Biomechanics in Sports 2018, to be held in Auckland, New Zealand, 10-14 September 2018.

The conference aims to promote knowledge and practice in sports biomechanics by providing an interactive educational forum. The programme has a mix of keynote lectures, keynote panels, podium and poster presentations, a half day applied session at the AUT Millennium Precinct, a half day social tour networking opportunity, and opening, closing and VIP events.

Some of our key events:



Mounir Zok's plenary lecture (Director of Technology and Innovation for the US Olympic Committee)

Applied sessions at AUT Millennium: the impact of innovation of Biomechanics, Wearable technology in snow sports, *and a lot more...*

Sports Performance Innovation Forum and interactive showcase.

Our Platinum Industry Partners