



ISBS 2018

Auckland, New Zealand

10-14 September

COUNTDOWN — 67 days before the opening ceremony.

5 days before the author registration closes for paper presenters.

Key facts:

- 56 student travel grants awarded to attend the conference.
- Podium orals and posters have been judged in the preliminary round to select the semi-finalists.
- Samsung has become a DIAMOND Industry Partner, providing LED screens for the digital poster sessions, BOT interactions, directional signage, and industry partner displays.
- **276 papers in the proceedings (160 oral podiums, 116 oral posters)**
- **346 (79% international) delegates registered for the conference to date**

Key dates

9 July 2018

- Registration closes for conference presenters (**papers deleted if a presenting author is not registered**)

4 August 2018

- ISBS 2018 conference eMagazine #4 will be published.

31 August 2018

- Workshop registration closes (survey is being sent by ISBS secretary in July)
- Final conference registration closes (no other registrations taken due to event catering requirements).

10 –14th September 2018

- ISBS 2018 Auckland conference

Join us at Auckland University of Technology (AUT) for the ISBS 2018 conference:

isbs2018.com

isbs2018@aut.ac.nz

Facebook [ISBS2018](#)

Twitter [ISBS_2018](#)



ACADEMIC PROGRAMME



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 from Austria.



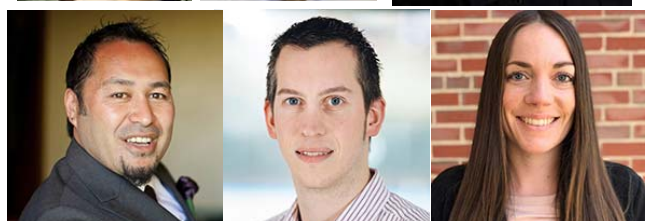
MOVING ON SLOPES: ISSUES AND CHALLENGES FROM A BIOMECHANICAL PERSPECTIVE

Department of Sport Science and Kinesiology, University of Salzburg, Austria

Moving on slopes is part of daily living locomotion, but also several sport disciplines are performed on inclined terrain. From a biomechanical perspective locomotion on slopes is a challenging task as additional work has to be done compared to locomotion on flat terrain. Moving downwards supports the locomotion due to gravity, however, steep slopes often lead to high speeds caused by the transfer of potential to kinetic energy. Then locomotion is accompanied with the challenge to control speed. Another issue is the aspect of joint loading when moving on slopes. An increase of potential or kinetic energy is associated with an enhancement of work done by the joint structures. The purpose of the presentation is to characterize the specificity and challenges when moving on slopes from a biomechanical perspective including performance, coordination, safety and joint loading in daily movement and sport related tasks.

Full details of the programme are available on the website.

IMPORTANT REMINDER: a paper author must be registered for the conference by 9th July, or the paper will be removed from the conference programme and proceedings.

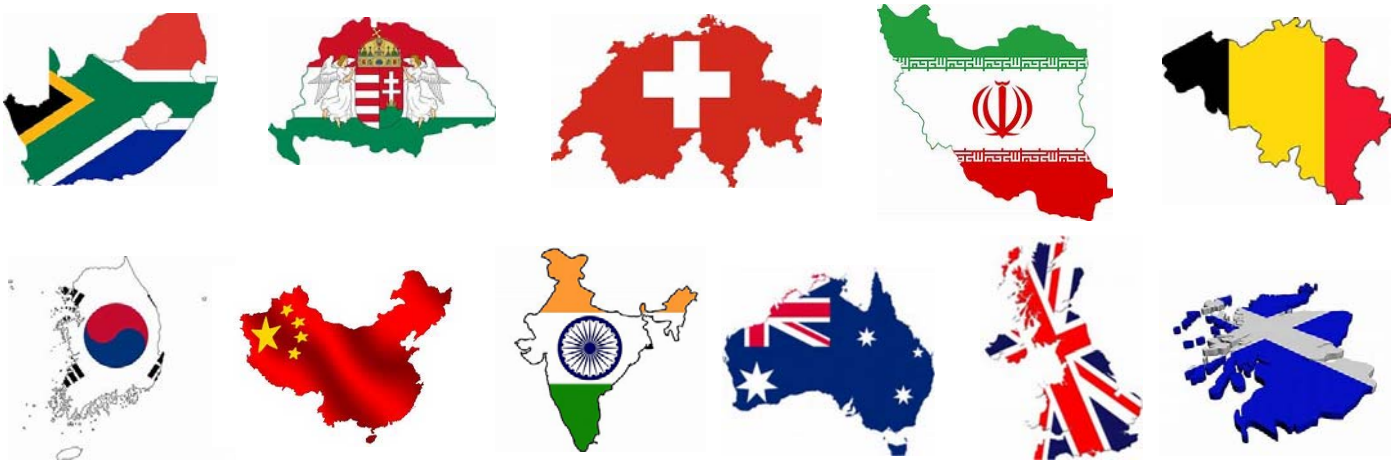


Do you know these important conference student programme coordinators who are helping the conference Chairs to provide these student incentives?

- Student mentor programme including breakfast on Tuesday 11th 7-8 am chaired by Gillian Weir and Dr Tim Exell
- Student marae and hangi experience evening coordinated by Dr Valance Smith and Joshua McGeeown
- New investigators awards coordinated by Neal Smith and Neal Bezodis
- Student travel grants coordinated by Dr Gerda Strutzenberger



346 delegates from 30 countries to date



Would you like the opportunity to Co-Chair a session?



Dustin Oranchuk is a PhD student with the Sports Performance Research Institute New Zealand (SPRINZ) with an academic and applied background in Strength and Conditioning.



Dustin's PhD focuses on the neuromuscular and mechanistic components of eccentric quasi-isometric (EQI) muscle contractions. While traditional isometric contractions involve imparting force against an immovable object, the goal of EQI contractions is to prevent an external force from causing joint movement. This distinct neural difference may hold more applicability to many sporting events and practical activities. EQIs may be a novel mode of imparting large quantities of mechanical tension, and due to potential blood occlusive effects, metabolic and hormonal factors on musculotendinous structures.

Dustin is an ISBS 2018 Conference Assistant, and will be chairing a session of the conference. An aim of the conference is to give students experience at co-chairing a session, to learn the skills of introducing speakers, keeping speakers to time, posing questions to speakers, and coordinating questions from delegates to the speaker.

If you would like to have the experience of co-chairing a conference session, please express your interest to Dustin via dustinatoranchuk@gmail.com stating the session you would like to co-chair, and why, in no more than 100 words. See the conference programme on the ISBS 2018 website for the session options.

Name: Dustin Oranchuk

Email: dustinatoranchuk@gmail.com

Twitter: <https://twitter.com/dustinatoranchuk>

Paper Name: HOOK-GRIP IMPROVES POWER CLEAN KINETICS AND KINEMATICS

Why and how did you choose your research area? What about it most interests you?

As a former competitive (Olympic style) weightlifter, I'd been exposed to the hook-grip for several years. However I noticed that very few non-weightlifting athletes and coaches were familiar with the hook-grip. After research, I realised there were currently zero published studies examining the hook-grip in any scenario. As a researcher and strength coach, I am always looking for ways to improve performance and disseminate the findings to the community.

What parts of your research do you enjoy most and why?

I greatly enjoy interacting with other researchers and participants and have an appreciation for teamwork. Working with participants and other researchers allows me to feel as if I am part of a team.

Could you briefly describe your career journey so far?

Like many in the field of sport and exercise sciences, I began my career as an athlete. As the end of my undergraduate degree approached, I began to gain experience as a strength and conditioning coach and was lucky enough to work for the Canadian Sport Institute in Calgary for a short time. Following this, I moved to the United States of America where I worked with NCAA volleyball, basketball and swimming athletes whilst I taught and earned my Master's degree. I returned to Calgary where I served as the head strength and conditioning coach for the University of Calgary Dino's (American) football team and volunteered in the Human Performance Laboratory. Most recently, I moved to Auckland where I have been working on my Doctoral degree.

What excites you about your paper?

I believe my paper has the potential to affect the practices of coaches, sports scientists and researchers alike. We demonstrate that altering grips can be beneficial to performance, and may alter specific biomechanical outputs that are of interest to several populations.

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 isbs2018.com

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

PAPER AUTHOR PROFILE



Name: **Steffi Colyer**

Email: s.colyer@bath.ac.uk

Twitter: <https://twitter.com/stefficolyer>

Paper Name: KINETIC FACTORS DIFFERENTIATING MID-TO-LATE SPRINT ACCELERATION PERFORMANCE IN SPRINTERS AND SOCCER PLAYERS



Why and how did you choose your research area? What about it most interests you?

I've always been fascinated by how (what seems like) superhuman sporting performances can be achieved, both from a biological and mechanical perspective. Therefore sports biomechanics was an obvious choice to pursue for my studies and career.

What parts of your research do you enjoy most and why?

I really enjoy working directly with athletes and coaches to try to answer real-world practical questions. It can be very rewarding, if it goes well!

Could you briefly describe your career journey so far?

I studied for my BSc in Sport and Exercise Science at the University of Bath, UK from 2007-2011. In my third year, I decided to take a placement opportunity at the New South Wales Institute of Sport, Sydney, Australia where I gained much practical sports science experience. Shortly after graduating from my BSc, an opportunity arose to undertake a PhD at the University of Bath working with British Skeleton and UK Sport to enhance the start performance of skeleton athletes in the lead up to the Sochi Winter Olympic Games.

This was an unusual and exciting opportunity I couldn't resist! Since graduating from my PhD in 2015, I have been working as a Research Associate within a new research centre at the University of Bath (the Centre for the Analysis of Motion, Entertainment Research and Applications, CAMERA). My current research primarily relates to sprinting from a performance perspective, but I am also very interested in injury prevention issues. A key goal for the CAMERA group is to develop a markerless motion analysis tool which enables human performance to be more easily studied in an unobtrusive manner.

What excites you about your paper?

The data itself (ground reaction force data from 54 force plates) has opened up some exciting opportunities (and some challenges at the same time!) for the analyses. We have used statistical parametric mapping (SPM) to analyse the entire force waveforms, which is relatively novel within the sprinting literature and so has potential to provide new insight to this area.

What do you hope people will take away from your ISBS presentation?

In both sprinters and soccer players, there was a shift in the phases of stance where force production differentiated performance from mid-propulsion towards the braking phase as athletes progressed through mid-to-late acceleration. Differences in accelerative capacity between the groups seemed to be attributable to differences in the magnitude of the force generated rather than how that force is applied to the ground.

Join us at AUT for the ISBS 2018 conference:

isbs2018.com

isbs2018@aut.ac.nz

Facebook **ISBS2018**

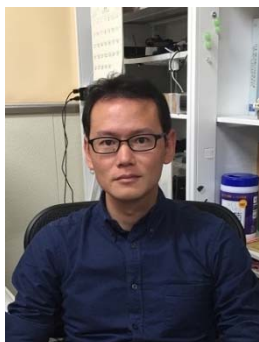
Twitter **ISBS_2018**

Thanks to our Social Media Coordinator Kylie Robinson for gaining these paper author profiles. If you would like your paper and research to be profiled, contact Kylie at

kylie.robinson@aut.ac.nz.



PAPER AUTHOR PROFILE & JAPAN COLLABORATION WORKSHOP



Name: Ryu Nagahara

Email: nagahara@nifs-k.ac.jp

Twitter: https://twitter.com/r_nagahara

Paper Name: KINETICS OF SINGLE SESSION INTRA-INDIVIDUAL DIFFERENCE IN SPRINT ACCELERATION: A CASE STUDY



Why and how did you choose your research area? What about it most interests you?

When I was an undergraduate student and sprinter, I wanted to know how I could run fast. Sports biomechanics was one of the solutions. I'm interested in digitizing running techniques and quantifying force production on the ground and at joints.

What parts of your research do you enjoy most and why?

I most enjoy planning research projects. This is because the plan is a start of research and planning new research projects makes me excited.

Could you briefly describe your career journey so far?

I graduated from the National Institute of Fitness and Sports in Kanoya (Japan) and moved to the University of Tsukuba (Japan). I spent eight years at University of Tsukuba to achieve my PhD. During my PhD student days, I visited some labs in Belgium, France and UK. After I worked at University of Tsukuba for a year, I came back to National Institute of Fitness and Sports in Kanoya and have been working at National Institute of Fitness and Sports in Kanoya for three years.

What excites you about your paper?

This is the first research investigating step-to-step changes in support leg joint kinetics during the acceleration phase. Previously, I investigated the intra-individual difference in sprinting performance and ground reaction force within a short term. In this study, I could partially reveal the source of the short-term intra-individual difference in sprinting performance and ground reaction force in terms of support leg joint kinetics.

What do you hope people will take away from your ISBS presentation?

I want people to know the leg joint moments do not simply increase as running speed increases during sprint acceleration. I hope people will understand the fact that the intra-individual fastest trial was not accompanied by greater knee extension moment, unlike the cases of hip and ankle moments, during the initial acceleration section.

JAPAN COLLABORATION WORKSHOP—Monday 10th September 10:30 to 11:40 (WG126 room).

Sayumi Iwamoto, Erika Ikeda, Ryu Nagahara, Aaron Uthoff

Do you want to share your experience with other researchers who are keen to conduct international research collaboration?

“The workshop will be mainly sharing experience and key tips to be successfully working together.”

Japan Research Collaboration Workshop / 国際共同研究ディスカッションセッション

Data/Time (日時) : 10 September, 10:30-11:40am (9月10日 午前10:30-11:40)

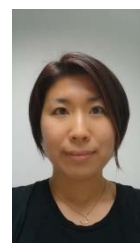
Venue (場所) : WG126

[English] If you are interested in this workshop, please answer the online survey below by 12 August:

[ISBS Japan Research Collaboration Workshop Survey](#)

[日本語] 講習会に参加ご希望の方は以下のアンケートを8月12日までにご回答お願いします。

[ISBS 国際共同研究ディスカッションセッションアンケート](#)



“There are many positives with working with Japanese researchers, but the one that stands out the most to me is their willingness to share knowledge and lend a helping hand.” (Aaron Uthoff)



ALL delegates are invited to participate in this workshop.

AUT MILLENNIUM APPLIED PROGRAMME WORKSHOP UPDATE

Robert Tang—High Performance Sport New Zealand



Robert's career in high performance sport began in 2009 with the design and development of a novel real-time biomechanics feedback device for Rowing NZ. He joined HPSNZ as an Electronics Engineer in 2011 and later became a Senior Electronics Engineer. From 2015, he has led the electronics and hardware design at Goldmine, HPSNZ's in-house engineering team. Robert has played a pivotal role in the design and development of advanced training equipment used by many New Zealand Olympic athletes, such as the data logging systems used by Cycling NZ, Canoe NZ and Rowing NZ. He holds a BEng and a MEng, both from the University of Canterbury.

Cutting Edge Sports Technology at HPSNZ, AUT Millennium Applied Session

Robert Tang, Andre de Jong and Sean Zhou discuss select projects developed by Goldmine, and how these innovations have enabled unprecedented levels of biomechanics feedback. When deployed correctly innovation has a demonstrable impact in high performance sport (de Koning, 2010; Jones, 2010). Winning margins in sports are constantly decreasing, with often only fractions of a second discriminating between finishing places. Consequently, there has been a movement internationally for high performance sport practitioners and scientists to create novel technological solutions to provide them and their athletes with a competitive edge (Haake, 2009). With an increasing number of high performance athletes and a growing need for technological interventions (Elmer et al., 2012), how does an organisation such as High Performance Sport New Zealand, with finite budgets and resources, prioritise bespoke innovation projects? (Ringuet et al., 2014). This presentation will provide insight into High Performance Sport New Zealand's innovation systems and processes. We cover how innovation projects are created and the decision-making process leading to project selection. We also discuss how the innovation process itself is refined, to ensure that subsequent approved projects make a meaningful and measurable performance impact. Finally, this presentation will cover a range of successful projects that have resulted from the innovation process. Successful projects to be discussed include: an indoor markerless tracking system for shotput, an eccentric training cycling ergometer, and an automated video tracking system for swimmers.



Craig Harrison— Sports Performance Research Institute New Zealand



A Young Footballer's Journey: The Importance of Athletic Movement, AUT Millennium Applied Session

Anna joined Athlete Development (AD) aged 10, passionate about the game of Football and looking for new opportunities to develop her game. Six years later, and with her first national team cap under her belt, she transitioned into the high-performance system. This session is about that journey. Specifically, Craig Harrison will present the key principles of the AD programme, an evidence-informed, non-sport-specific development programme for youth athletes in New Zealand, and how they are applied to develop the foundations of athletic movement and prevent injury.



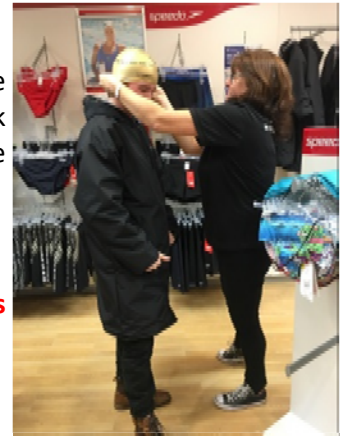
AUT MILLENNIUM STORE

During the AUT Millennium afternoon tour, you will have the opportunity to purchase AUT Millennium merchandise including deck coats, bags, bottles and swim caps. Deck coats: are \$169 for adults and \$164 for children. For sizing options and ordering please go to:

<https://shop.autmillennium.org.nz/collections/aut-millennium/merchandise#top>

Pre-ordering is essential to ensure there is enough stock in store in the correct sizes for the number of delegates. The deadline for Deck Coat orders is Friday 27th July.

Contact Jodie Rawle at shop@autmillennium.org.nz if you have any questions.



Our ISBS 2018 Conference Student Coordinator Joshua McGeown tried out the AUT Millennium products.



AUT Millennium Drawstring Bag - assorted colours
\$10.00



AUT Millennium Combo - Drink Bottle and Drawstring Bag - assorted colours
\$18.50



AUT Millennium Water Bottle
\$10.50



AUT DIGITAL TECHNOLOGY UPDATE

Jack Mapobpan, Dr Jono Neville, and Tim Davison, have received 20 new screens from ISBS 2018 Conference Diamond Industry Partner SAMSUNG to be used for the digital poster sessions.

POSTER presenters note: In a world first — All ISBS posters will be presented digitally, on large 55" Samsung screens. Use A0 poster size, 841 x 1189 mm, portrait format.

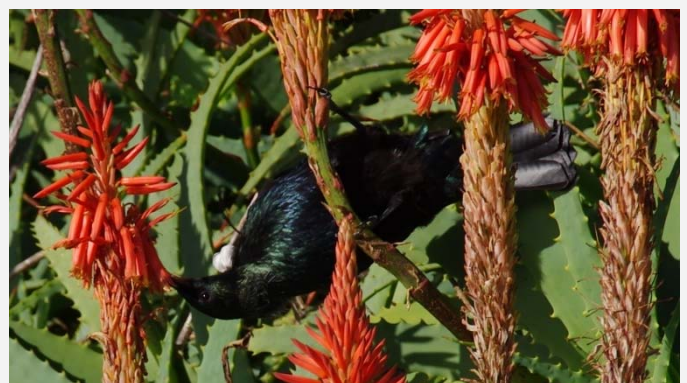


You can insert video into your posters to showcase your methods. A poster templates is available on the conference website. For advice on technical specifications contact Dr Jono Neville <jono.neville@aut.ac.nz>. Video formats: We recommend posters are submitted using embedded video files using formats supported by Microsoft PowerPoint: avi, mp4, mov, mpg, wmv. We can not guarantee video formats outside of these will operate as intended. Embedded videos should be set to play automatically and loop continuously to enable continued display throughout the day. Two Samsung flip screens (<https://displaysolutions.samsung.com/digital-signage/e-board/flip>) will be used for directional information and Tim's new Bot.



The new catch-box cubes have also been trialled at AUT by New Zealand Prime Minister Jacinda Ardern.

EXPERIENCE AUCKLAND: During his visit to Kawau Island, off the coast of Auckland, Dr Denny Wells from Platinum Industry Partner VICON, discovered the real silver fern, and photographed New Zealand birds including tui and oyster catchers.



AUT CONFERENCE HOST SUSTAINABILITY UPDATE

Conference Sustainability—ecological responsibility



Head of AUT School of Science's Len Gillman with his favourite NZ native Raukawa (aka Raukawa edgeway) Photo: Auckland University of Technology / L. Henry

Professor Len Gillman (School of Applied Sciences) and Professor Thomas Neitzert (School of Engineering) have worked out that the carbon footprint for international delegates flying to New Zealand for the conference is 186.5 tonnes of carbon! International air travel is an average of 114 g/km CO₂ equivalent emissions per person. Assuming an average flight is 10,000 km (approx. distance to Shanghai) the CO₂ emission, is an average distance: 20,000 x 114 = 2280000 g = 2.28 tonnes. This implies each person will emit 2.28 tonnes CO₂ equivalent for the conference. This is against a background of needing average CO₂ emissions to reduce to 2 tonnes/person/yr in order to not breach a 2^oC temperature rise. For 300 international delegates this will mean 684 tonnes CO₂ emission = 684 x 12/44 tonnes C = 186.5 tonnes C. Native forest can probably store about 100 tonnes C per hectare. Therefore 1.86 hectares (4.6 acres) will need to be planted to offset the conference travel. Strategies undertaken by the ISBS 2018 conference organising committee to help offset the carbon cost include the planting of native trees, promotion of recycling of bottles and composting of food during the conference, vegan meal options, use of low energy LED lights and solar lights, minimised use of plastic products with no single-use plastic, digital posters rather than printing posters, and puffer jackets as the “conference bag” as a useful reusable item. You can now identify New Zealand's native shrubs, ferns and trees on the go thanks to the free app [NZ Tree](#), developed at Auckland University of Technology by Professor Gillman. Once you've identified your tree, the app will tell you, amongst other things, its English, Māori and Latin names and whether or not it's poisonous.



ISBS 2018 Conference Secretary Enora Le Flao, ISBS 2018 Conference Student Coordinator Joshua McGeown, and VICON technical biomechanist Dr Denny Wells, in June started to plant native trees on Kawau Island to help off-set the ISBS 2018 Conference carbon footprint.



SPOTLIGHT ON TECHNOLOGY



Brian Russell will chair the **Sports Technology Forum**. Brian has 25 years experience in Global Commercialisation, Venture Financing and Innovation. CEO, Founder of Zephyr Technology Corp (Acquired by Covidien COV: NYSE in 2014), a global leader in wearable sensors, Brian has spent his career in product design and elite sports physiology and biomechanics designing solutions to gather data from the field and generate insight to improve performance. He spent 14 years assisting elite military and sports teams with remote physiological and biomechanical sensing and interpretation to improve training and decision making in the field. He holds patents in optics, wearable sensors and physio-mechanical algorithms. Brian enjoys long duration sports such as paragliding, hang gliding, hunting and off shore sailing. He is currently on the board of several medical start ups and undertaking a PhD in field based fatigue using AI and sensors at SPRINZ.



AUT start-up Avice has developed a wearable that measures changes in muscle density, to enhance and speed up muscular development. The technology motivates you with real-time feedback. Avice helps ensure every training session is effective. www.avicewearables.com. You will be able to learn more about Avice and other sports technology companies supported by AUT Ventures during the sports technology forum and showcase.



EVENTS UPDATE



Selina Nihalani-Sharma, our ISBS 2018 Auckland Conference & Event Co-ordinator, has been choosing the conference food to cover the delegates dietary requirements including vegan, seafood allergies, gluten free, diabetic and halal.

If you have any food requirements please contact the ISBS 2018 Secretary know via isbs2018@aut.ac.nz



ISBS 2018 AUT MILLENNIUM TEACHERS DAY—MONDAY 10TH



Our new ISBS President Elect, will be starring in the Teachers Day at AUT Millennium. Duane will be joining a team of excellent biomechanists to provide interactive workshops for New Zealand teachers.

Register now <https://bit.ly/2GCOG6r>

Contact Sarah Kate Millar <sarahkate.millar@aut.ac.nz> with any questions about the Teachers Day.



The organisers of National Biomechanics Day and the 36th International Society of Biomechanics in Sport Conference are hosting the day-long workshop exploring ways to teach biomechanics in the classroom.

Who should attend? Anyone who wants to learn new teaching strategies for incorporating biomechanics into their curriculum.

What will be achieved? 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 projectile motion, force summations, levers, Newton's Law's, momentum (angular, impulse and torque), balance and stability – links with skill learning.

When and where will it take place? The workshop will run from 8am to 3pm on Monday, 10 September 2018. All activities will be conducted in the cutting edge research facilities at AUT Millennium.

How much does it cost? The workshop will cost \$85 per attendee if you register before Tuesday 10th July. After 10th July, it will cost \$110. The cost includes morning tea and lunch, plus summary details from the presenters and designed activities from the interactive workshop.

MIDDLE EARTH CLOSING BANQUET AND LIVE BAND "OFF THE WALL"

The ISBS 2018 Auckland Conference Organising Committee are pleased to announce that "Off the Wall" <https://www.offthewallnz.com/> will be the four piece band for the closing banquet party. With the Middle Earth themed dinner and surrounds, the closing banquet is going to be a highlight of the conference for networking and relaxing after the quality academic presentations.



Meet our Wise Wizard—Professor Juris Turaud

Meet Professor Juris Turaud - did you recognise he was the missing “wise wizard “ from ISBS Conference emagazine #2? Juris will be providing additional wise words during the VIP evening that Professor Peter McNair will be the master of ceremonies. Peter is an internationally respected biomechanist for his work in musculoskeletal bio-



mechanics, injury rehabilitation and sports biomechanics. Peter was the inaugural Director of the AUT Health and Rehabilitation Research Institute and is an active researcher and educator at AUT. The VIP event is to acknowledge the work of the industry partners for their active engagement in the conference, and for being willing to take on a new format. The event will also acknowledge two special guests (yes it is a surprise!), and the reviewers for the ISBS 2018 Conference papers, the invited speakers and the ISBS Fellows and Life members and Board members. Meanwhile, the ISBS students evening will be occurring at the AUT marae.

Talking of Magic! Tim’s Bots are magical.



Digital Technology Coordinator Tim Davison is working on new technology for you to interact with at the ISBS 2018 conference.

“Samsung has provided us with a couple of its amazing new interactive Flip displays, and we thought they’d be the perfect platform to interact with AUT’s new Bot. The displays running AUT’s Bot will be at the conference for you to try out, and they’ll be able to assist with answering questions, providing directions, and surfacing a bunch of interactive content and posters.”



SAMSUNG

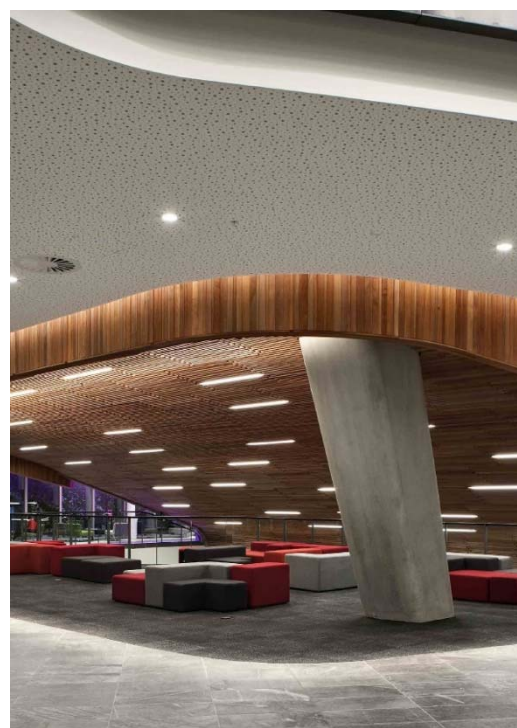


Many thanks to Richard Burton from SAMSUNG. We could not be providing such amazing conference experiences to ISBS delegates without your help!



Sports Technology Forum

Dr Jono Neville and Farhan Tinwala from AUT Engineering and SPRINZ, are keen to show you their force transducer and strength and conditioning technology during the Sports Technology Forum. The picture to the right shows part of the showcase foyer area.



ISBS 2018 INDUSTRY PARTNER UPDATE



Ryan Archibald is the Senior Account Director at ATEED. Ryan is also an elite field hockey player for New Zealand, who earned his first cap for the national team, *The Black Sticks*, in 1997 against Malaysia. Ryan competed at the 2008 and 2012 Olympic Games. ATEED is a host for the conference and are pleased to be able to host Mounir at a networking event open to the wider sport performance community to attend on the evening of Wednesday 12 September.



Auckland
Tourism, Events and
Economic Development
An Auckland Council Organisation



AMTI—GOLD Industry Partner

AMTI (www.amti.biz) will be participating in the industry playing field with athletic performance tests for the delegates in the form of jump tests, using their AccuPower software.



“Stop by AMTI’s booth during the industry playing field to test how you measure up against your fellow delegates. We’ll be using a multi-axis force plate combined with the AccuPower 3.0 software to measure performance from a jump test. Each delegate will instantly be provided with a score based on common outcome measures for athletic performance. Test out our system while testing your abilities. We look forward to seeing you in Auckland.” Cynthia Samaan, AMTI Biomechanical Engineer. For Research Grants and Travel Awards see: www.forceandmotion.org. AMTI are also supporting the Chocolate box stations, and the student evening at the marae.



NORAXON—GOLD Industry Partner

Noraxon USA (www.noraxon.com) will be hosting a Monday workshop on electromyography (EMG) use in sports performance settings.

NORAXON
MOVEMENT • DATA • PEOPLE

“You will be able to develop a better understanding of how EMG fits into an athlete monitoring program or research investigation by learning what can, and cannot, be determined with EMG data and reporting. Participants will see hands-on use of precision EMG systems and biomechanics analysis software with practical, sport-specific examples.” Erin Feser <erin.feser@noraxon.com>, Director of Education for Noraxon USA.



Can't attend on Monday? Join Noraxon's **High Performance Noraxon User Group Meeting** on September 15th at AUT Millennium to learn from other experts working in high performance settings about how they leverage technology for their athlete training. This meeting will be a time for Noraxon users to collaborate on an international scale to share best practices on technology implementation, data interpretation, and decision making for performance and sports medicine environments. For more information and to register visit <https://www.noraxon.com/usermtgisbs2018/>



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

ISBS 2018 INDUSTRY PARTNER UPDATE



QUALISYS—GOLD Industry Partner

Qualisys (www.qualisys.com) are supporting a session for the AUT Millennium Applied Programme.

Using and integrating biomechanics into the performance setting: Shot put and discus.
Presented by Mike Schofield and Dr Kim Hébert-Losier.

QUALISYS
Motion Capture Systems

AIMEDICAL
INTERNATIONAL

Motion Capture for improved Performance and Research

Qualisys has provided the industry with state-of-the-art motion capture technology for more than 20 years. Our technology is used worldwide to accurately and objectively record motion of any kind. Our solutions are used by athletes, athletic trainers, clinicians and researchers alike, to advance in the fields of sports performance enhancement, injury prevention and rehabilitation.



"The role of biomechanics within high performance sport is paramount! At this workshop, we will demonstrate how we use state-of-the-art technology to inform coaching practices in athletic track and field throwing events. Join us for a live demonstration of Qualisys 3D motion capture and in-depth analysis of athletic throws biomechanics."

Mat van Heerden, Sales & Marketing Director, AIMedical Int. sales@aimedical.com.au



Andrew Pearce
Managing Director
AIMedical International Pty Ltd



Kelly Sheerin is the coordinator of the ISBS 2018 Conference Industry Partnership engagement. We have fun activities in the "Industry Playing Field" interactive events, and prizes for delegates.

For the last three places available for industry partners, contact Kelly at Kelly.sheerin@aut.ac.nz.

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

STUDENT TRAVEL GRANT PROGRAMME



Congratulations to the students who will be presented with their NZ\$ cash travel awards by the ISBS President Young-Hoo Kwon, and the AUT Vice Chancellor Derek McCormack, during the opening ceremony of the conference.

ISBS VP of Conferences **Gerda Strutzenberger** coordinated the panel that selected the recipients. Travel grants were awarded based on the cost to travel to the conference, and the country from which the student is coming from to provide more funding to those from developing countries (as listed by the World Bank). There are 56 awardees from 11 countries with grants totalling NZ\$20,000. We look forward to meeting these students at the conference.

Claire	Kenneally-Dabrowski	Australian National University	Australia	
Josephine	Grigg	Bond University	Australia	
Paige Elizabeth	Rice	Edith Cowan University	Australia	
Jodie	Wills	Macquarie University	Australia	
Daniel John	Glassbrook	Macquarie University	Australia	
Angelo	Macaro	The University of Queensland	Australia	
Rhiannon	Campbell	University of Canberra	Australia	
Daniel	Cottam	University of Western Australia	Australia	
Jonathan	Staynor	University of Western Australia	Australia	
Stephanie	Blair	Victoria University	Australia	
Julian	Fritz	University of Salzburg	Austria	
Joshua	Goreham	Dalhousie University	Canada	
Zachariah	Henderson	Lakehead University	Canada	
Katelyn Danielle	Varga	Lakehead University	Canada	
Dominique	Cava	Lakehead University	Canada	
Patrick	Siedlecki	Western University	Canada	
Zhang	Cui	Shandong Sport University	China	
Shen	Peixin	Shandong Sport University	China	
Sun	Wei	Shandong Sport University	China	
Jan-Frieder	Harmsen	German Sport University	Germany	
Sina	David	German Sport University	Germany	
Thomas	Dupré	German Sport University Cologne	Germany	
Johannes	Funken	German Sport University Cologne	Germany	
Josef	Viellehner	German Sport University Cologne	Germany	
Marion	Mundt	German Sport University Cologne	Germany	
Kevin	Stein	Heidelberg University	Germany	
Sydney	Dreves	Abertay University	Scotland	
Man Kit	Lei	National Cheng Kung University	Taiwan	
Mu-Lin	Tai	National Taiwan Sport University	Taiwan	
Tsung-yu	Huang	National Taiwan Sport University	Taiwan	
Nihat	Özgören	Hacettepe University	Turkey	
Shusei	Sugi	Fukuoka University	Japan	
Takahisa	Oguchi	Nippon Sport Science University	Japan	
Naoya	Iida	Sapporo Medical University	Japan	
Kei	Maeda	University of Tsukuba	Japan	
Koudayu	Zushi	University of Tsukuba	Japan	
Takafumi	Kageyuki	University of Tsukuba	Japan	
Naoki	Numazu	University of Tsukuba	Japan	
Kazutaka	Takahashi	University of Tsukuba	Japan	

Raihana	Sharir	Liverpool John Moores University	UK
Zoe	Bamber	Loughborough University	UK
Louise	Burnie	Sheffield Hallam University	UK
Sydni	Wilhoite	Georgia Southern University	USA
Kevin	Moore	Marshall University	USA
Andrew	Ebert	Marshall University	USA
Stephanie	Moore	Northern Michigan University	USA
Ine	Mylle	Northern Michigan University	USA
Brian Randall	Budd II	Northern Michigan University	USA
Olivia	Perrin	Northern Michigan University	USA
Alyssa	Rebensburg	Northern Michigan University	USA
Ashley	VanSumeren	Northern Michigan University	USA
Ashlyn	Jendro	Northern Michigan University	USA
Ian	McQuate	Nova Southeastern University	USA
Victor	Lopez Jr	USA & Auckland University of Technology	USA



ISBS 2018 Auckland Conference Sir Graeme Avery Honour Award Ceremony

During the Sir Graeme Avery Event at AUT Millennium there will be a special award ceremony to honour Sir Graeme for his support of sport scientists working to help improve athlete development and elite performance in New Zealand.



"It is fantastic to see support of biomechanists to conduct applied research and work with athletes at all levels in New Zealand. AUT Millennium is an exemplary model for the world in the application of sport science research, education and service. It is a privilege that we can honor Sir Graeme Avery with this special ISBS 2018 Conference Award for his contributions to sport science in New Zealand". Professor Young-Hoo Kwon, ISBS President.

So who is Sir Graeme—and why is he being honoured?

Sir Graeme Avery's 2014 knighthood was for services to business and sport. He was admitted to the New Zealand Business Hall of Fame in 2014. Sir Graeme was a 400m runner and played first grade rugby in Sydney. He has more than 45 years involvement in athletics at club, regional, national and international level. Sir Graeme founded Adis International, the medical publishing company he developed from scratch in 1963. This company is well known to sports biomechanists as it publishes the high impact factor journal *Sports Medicine*. A strong supporter of sport, especially athletics, Sir Graeme led the fundraising campaign to create the \$85 million AUT Millennium, which is the site of AUT's Sport Performance Research Institute New Zealand (SPRINZ) and the national training centre for high-performance sport and site of High Performance Sport New Zealand (HPSNZ). Since 2009, Sir Graeme has served as chairman of the AUT Millennium Ownership Trust, a position now held by AUT Vice Chancellor, Derek McCormack. He remains on the Trust as President. 300 elite athletes regularly train at AUT Millennium, and there are over 600,000 user-visits annually. Auckland University of Technology conferred Sir Graeme with an honorary doctorate in 2006 for his contribution to health publishing and contributions to elite and developmental sport in New Zealand. Sir Graeme is now leading the development of a scaled down version of the AUT Millennium in Hawke's Bay to help support local sports talent and promote healthy lifestyles and enhanced mental wellbeing in the community.



ISBS 2018 CONFERENCE INDUSTRY PARTNERS AND HOSTS



VICON are providing the blue ISBS 2018 conference puffer jackets to those who registered by the standard registration date. The jackets are currently being made, and we look forward to showing you pictures of them in emag #4 on 4th August.



SAMSUNG



SILENI are providing amazing wines for all the conference events. We have a large selection from the Sileni range including Marlborough Sauvignon blanc, pinot gris, pinot noir, sparkling cuvee brut, merlot etc.

SAMSUNG are providing new FLIP technology screens and 55" screens for the digital poster sessions.



KISTLER are supporting two round table luncheons, and Olympic athletes at the AUT Millennium event. QUALISYS and NORAXON are providing workshops and AUT Millennium applied sessions. AMTI are providing chocolate box stations and support of the student evening at the marae. ACC is supporting the ACC Keynote panel speakers and a round table luncheon. Force Decks are supporting the Commercialisation and funding Monday workshop.



CHANUI are providing tea and biscuits. AEROBE are supporting the Sky Tower tour programme. TEKSCAN are supporting the sports technology round table luncheon.

HOSTS:

