Message from the President

Young-Hoo Kwon

“Since its conception, ISBS Annual Conferences have always been the place for information sharing, cultural experience, and friendship. The Auckland Conference was a perfect model for that.”

Dear ISBS members,

Kia Ora!

This past September, we had another great ISBS annual conference in Auckland, New Zealand which was hosted by Prof. Patria Hume and her team. Since its conception, the ISBS Annual Conferences have always been the place for information sharing, cultural experience, and friendship. The Auckland Conference was a perfect model for that. This year’s conference was truly the product of the team effort by AUT’s Sport Performance Research Institute NZ, AUT Millennium, and High Performance Sports NZ. On behalf of the membership of the Society and Board of Directors, I’d like to thank AUT’s Vice Chancellor Derek McCormick and Professors Patria Hume, Jacqueline Alderson, and Barry Wilson for their hard work in putting together a world-class conference. The memory from Auckland will last long for many.

During the opening ceremony, the first ISBS President’s Award was awarded to AUT Vice Chancellor Derek McCormick to acknowledge his leadership in developing a Research-Education-Service nexus for applied sport science. His leadership has motivated many people to act towards achieving the goals reflected in the objectives of the International Society of Biomechanics in Sports. Professor Hermann Schwameder received the Geoffrey Dyson Award, the society’s most prestigious achievement award, and delivered a lecture titled “Moving on slopes: Issues and challenges from a biomechanical perspective.” Dr. Steffen Willwacher was selected as this year’s Hans Gros Emerging Researcher Award winner and gave a keynote titled “Sports equipment: How the transformation from passive to digital systems opens new doors and puts
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### Editorial Board

- **Sarah Clarke**
  - ISBS Vice President (Publications), Northern Michigan University
- **Laura Judson**
  - Sheffield Hallam University
Message from the President (cont.)

Young-Hoo Kwon

new demands on sports biomechanists.” Congratulations!
I’d like to use this opportunity to recognize several individuals. Firstly, I’d like
to thank Dr. Juris Terauds for being with us at the Auckland Conference. The
ISBS was conceived some 35 years ago and Juris was one of the founding
members of the Society. It was such an honor for me to greet him at the Auckland Conference.
The next person I’d like to recognize is Professor Gareth Irwin. Gareth just finished serving as Past
President. Under his leadership as President in 2015-2017, several new initiatives were developed
for the good of the Society and he will be remembered as one of the most influential ISBS
presidents. At the AGM during the conference, Professor Duane Knudson joined the leadership
team as President-elect. He served as VP of Publications for a number of years so it is not new for
him to perform this leadership role. I look forward to working with Duane for next two years.

During the closing ceremony four new ISBS Fellows were recognized: Drs. Sarah Breen, Ian
Bezodis, Silvio Lorenzetti, and Tim Exell. As an ISBS Fellow myself, I encourage you all to apply for
the Fellow Award if you meet the criteria. I also had the privilege to welcome Dr. Liz Bradshaw as
a new ISBS Life Member. Liz has served for the Society for a number of years in various capacities:
Director, VP of Awards, Host of the Melbourne Conference, and Associate Editor of Sport
Biomechanics. She certainly deserves this recognition. Welcome, Liz!

Three directors stepped down at this year’s AGM: Drs. Floren Colloud, Joanna Scurr, and Patria
Hume. Patria reached her 10-year term limit and we will miss her dearly. I thank Floren, Joanna,
and Patria for their hard work and service for the Society. We also welcomed three new young
and energetic directors: Gillian Weir, Ina Janssen, and Steffen Wilwacher. For last two years Gill
served as the Student Rep to the Board and she is starting a new role. I look forward to working
with you, Gill, Ina, and Steffen! Our new enthusiastic Student Rep who will serve for next two
years is Johannes Funken. Welcome!

I am always so proud of my officers and VPs: Randy Jensen (Secretary General), Silvio Lorenzetti
(Treasurer), Neal Smith (Awards), Tim Exell (Projects & Research), Gerda Strutzenberger
(Conferences & Meetings), Laura-Anne Furlong (Public Relations), and Sarah Breen (Publications).
On behalf of the membership, I thank all officers and those individuals serving on various standing
committees for your consistent hard work. I also would like recognize Neil Bezodis’ hard work at
the Auckland Conference in running all the awards-related businesses on behalf of Neal Smith.

Lastly, Dr. Mark Walsh and his team at Miami University, Oxford, Ohio, USA, are working hard
preparing for the 37th ISBS Conference which will be held in July 2019. I encourage you all to
submit your best studies to the ISBS 2019 Conference to have another world-class ISBS
Conference and continue the legacy of the Society set by the founding members.

I look forward to seeing y’all in Oxford, Ohio next year!

Kia Ora,
Young-Hoo Kwon, President of the ISBS
THANK YOU for attending the conference.

ISBS 2018 Auckland, held at the AUT City Campus in Auckland, New Zealand, was hosted in partnership between AUT, AUT Millennium, High Performance Sport New Zealand (HPSNZ) and Auckland Tourism Events and Economic Development (ATEED) with the ISBS.

The aims of the conference were:
1. To provide a forum for the exchange of ideas for sports biomechanics researchers, coaches and teachers.
2. To bridge the gap between researchers and practitioners.
3. To gather and disseminate information and materials on biomechanics in sports.

These aims were met via:
1. An academic programme containing 275 papers across keynote individuals and panels, 160 oral podium and 96 digital ‘poster and oral’ presentations organised in 17 conference themes with four parallel sessions accommodating the oral presentations, and digital posters displayed adjacent to industry partner exhibition areas; the social programme for networking involving opening Kiwiana, closing Middle Earth, VIP dinner, AUT Millennium wine and cheese, and the mentor/student breakfast; the Teachers day programme.
2. The AUT-HPSNZ-AUT Millennium half day applied programme with 22 academic presenters plus coaches, athletes and multidisciplinary scientists and medical personnel; The Sports Technology Showcase with 8 sports technology companies and 17 presenting personnel.

The ISBS 2018 Auckland Conference eProceedings contain 275 peer reviewed four page papers, plus the Appendix documents that outline each of the social events, the applied and teaching programmes, and the five pre-conference eMagazines; ISBS 2018 Auckland Website; Social media programme; the JELCKCA sport and exercise archive.

Academic quality was ensured via a scientific committee of 103 people peer reviewing the 275 papers. Each paper was peer reviewed by at least two reviewers, plus edited by at least one of the conference co-chairs as the editors of the proceedings to provide constructive feedback to facilitate and promote quality submissions.

Keynote presenters at the conference were Hermann Schwameder, Mounir Zok, Sophia Nimphius and Steffen Willwacher. There were 14 invited speakers who contributed to the ‘Wise Wizards’, ACC SportSmart Injury Prevention, and Sports Performance Innovation Forum panel discussions. Following each keynote panel there were lunch table sessions in the main atrium to encourage delegates to consider thematic questions.
AUT-HPSNZ-AUT Millennium half day applied programme

The interactive half day of sessions were delivered by High Performance Sport New Zealand (HPSNZ) and Auckland University of Technology (AUT) biomechanists, performance analysts and other biomechanics relevant sport facing practitioners. Coaches and athletes were an integral part of these sessions that enabled delegates to experience the interactive model where education, research and community service (developmental to elite to masters’ level athletes) occurs in the one facility.
Conference organisers aimed to have an eco-friendly sustainable conference. This aim was met by having an actioned eco-sustainability programme that included all documents and presentations being electronic only, and no single-use plastics.

Four Samsung Flip screens were in use during the conference. One screen was allocated to the social media booth and was used for live editing of photos and posting content to Instagram. Two screens were set up as interactive program guides, providing conference attendees the ability to view both the macro level of the program, as well as the detailed presenters for each session. The final Flip screen was set up to provide poster locations and times. The Samsung flip screens were a success in being interactive displays of the conference programme.

Twenty 55 inch Samsung TV’s were set up to digitally display all the submitted posters. This was an integral part of the eco-sustainability approach of the conference, minimising printing and paper waste. Poster submissions were encouraged to include multimedia content with approximately 60% of all submissions including one or more imbedded videos. The digital poster sessions were well received, providing a new level of engagement and information delivery.

A Samsung phone and DeX station were presented as a prize for the best use of video or interactive technology in any of the digital posters. This prize was highly contested with many entries developing new methods to present data and engage conference attendees.

VUTA, the Digital Conference Bot, designed by Tim Davison, was on display on the large conference digital wall throughout the conference. VUTA was implemented as both an information delivery system as well as the official conference time keeper. The digital content was used by conference attendees to track the conference schedule and track social events.

The website and five emagazines contained information on the conference including the conference programme, schedule and the pdfs of each paper for download.

The Sports Technology Forum and Showcase involved 8 sports technology companies and 17 presenting personnel. The showcase was gazetted with the Commissioner of Patents and Designs to officially record the event as an industrial exhibition. The event was advertised in the Intellectual Property Office of New Zealand (IPONZ) Journal. The event gave delegates interactive experiences with new industry technology companies.
There were many incentives for students to attend the conference reviewed and in many cases organised by the student representatives. To subsidize the cost of attending the conference, 60 students received travel grants to help cover accommodation and transportation. These grants were provided by ISBS (NZ$10,000) and AUT (NZ$10,000). A workshop was offered on the first day of the conference to provide student delegates with the opportunity to receive constructive feedback for their poster or oral presentation from AUT PhD students and experienced biomechanists. A student mentor breakfast was organised to connect students with established academics to provide networking opportunities. The student night provided the opportunity to attend a Maori cultural experience organised and led by Dr. Valance Smith and the AUT kapa haka group at the AUT Marae. An initiative of the conference included providing co-chair opportunities for students and academics.

ISBS new Investigator Oral and Poster Awards were presented to Daniel Cottam and Natsuki Sado. Medals were given to the awardees as well as framed certificates during a podium award ceremony during the closing ceremony. The ISBS 2018 conference specific awards for the Vice Chancellor Derek McCormack (ISBS Presidents award), and for Sir Graeme Avery (ISBS 2018 Co-host Award) were received with many thanks from the recipients.

A great deal of effort was put into engaging Industry Partners by Kelly Sheerin, so that they were truly part of the conference. This included aligning partners with different elements of the conference, such as keynote presentations, workshops, applied sessions, functions and social media. The industry partners: 1 PLATINUM (Vicon), 2 DIAMOND (Samsung, Sileni), 5 GOLD (ACC, AMTI, Kistler, Noraxon, Qualysis), 3 SILVER (Asics, Dick Frizzell, ForceDecks) and 6 BRONZE (Aerobe, Chanui, N-to-Z Shop, Simi, STT Systems, Tekscan).

The “From N to Z” kiwiana based pop-up-shop, was a popular attraction that enabled delegates to buy items of kiwiana as reminders of the conference and New Zealand. The fruit and chocolate tables supported by the industry partners had high engagement.
The Māori cultural programme was a highlight for the majority of conference delegates. It was important to the organising committee to include tikanga Māori into the planning for the conference from its inception. This began with framing the ISBS Conference in a way that uniquely reflected New Zealand and our cultural heritage. As such Dr Valance Smith named the New Zealand iteration of the ISBS Conference ‘Te Hōkai Tapuwae’ – the breadth of stride – a Māori term accounting the physical feat of Tāne ascending to the heavens to retrieve the three baskets of knowledge. This anchored our proposal to host the conference and as such won the bid to host the conference here in New Zealand in 2018. To give credence to using the name Te Hōkai Tapuwae the organising committee knew it was integral to incorporate tikanga Māori throughout the duration of the programme. Planning centred around one key theme – how might we bring our visitors to an empowering experience of Māori culture? This was achieved through three initiatives; Pōwhiri at the opening ceremony, Marae visit, Karakia, haka and waiata at the closing ceremony. These initiatives and the explanation of Māori terms were greatly appreciated by delegates.

The social programme included the Kiwiana opening, Middle Earth closing, AUT Millennium wine and cheese, VIP night, student social evening, and social tours. The Kiwiana Opening Reception comprised of individually themed stations of a farm, seaside bach and modern Kiwiana. At the Middle Earth Closing banquet there were stations inspired by the Shire, the City of Lothlorein, the Caves of Moria and the Elevenses breakfast. Delegates had the option to attend a Māori cultural experience or Sky tower walking tour as their social tour for the conference. The Māori cultural experience showcased the AUT kapa haka group at the AUT Marae. Delegates experienced Māori traditions, learned a haka, and enjoyed a delicious Hangi meal. Conference volunteers led delegates through landmarks in Auckland’s CBD on the way to the Sky Tower. Delegates experienced the beautiful 360° panoramic view of Auckland and the surrounding areas from the Sky Tower’s observation decks. After the Sky Tower, delegates were able to explore the city on their own or follow conference volunteers down Queen Street to the Viaduct district in Auckland Harbour for further networking.

The social media platform launched in April 2018 on Facebook and Twitter with a series of conference presenter feature articles. Reaching out to ~50 conference presenters, 30 interviews were conducted with Q and A feature articles developed and published on Twitter and Facebook. Pre-conference material focusing on conference logistics, things to do in Auckland, sponsor highlights, and conference competitions were highlighted. Instagram was launched on 10th August with a focus on content during the conference. The conference social engagement strategy developed a following of 622 on Twitter and 223 of Facebook. The social media booth resulted in ~155 individual photo booth uses with participation coming from the full spectrum of conference attendees. The Kiwiana aspect, including the dress-ups, props and general setup were extremely well received. Daily prizes were given and were always a challenge to judge due to the high quality, quantity and positive nature of all participants. Summaries of each day in the form of Instagram stories were produced consisting of a collection of photos, videos, flip screen content and photo booth photos.

THANK YOU to those who completed the survey.
The Awards Committee announced the following awards for 2018 in Auckland, New Zealand:

**Geoffrey Dyson Award**

The Geoffrey Dyson Award is the most prestigious award of ISBS. It recognizes sport scientists who, throughout their professional careers, have bridged the gap between biomechanics research and practice in sport.

The award is named after one of the founding fathers of Sports Biomechanics, Geoffrey Dyson OBE. (1915-1981). Geoffrey Dyson had a long and strong academic and coaching career. He was the coach of the British Olympic Team in 1952, 1956, and 1960. In 1962, he first published his book on the Mechanics of Athletics. He was a speaker for the International Olympic Academy and conducted athletic courses in 14 countries. According to John Disley, one of Geoffrey Dyson’s favourite pupils, “he devoted his life to making coaching a science and to exposing the charlatan whose only effective advice was Do it again, but harder”.

This year’s recipient was **Professor Hermann Schwameder – University of Salzburg**, Professor Schwameder gave a very engaging talk entitled ‘Moving on slopes: Issues and challenges from a biomechanical perspective’. Professor Schwameder’s paper can be accessed [here](#).
The prestigious Geoffrey Dyson Award for ISBS 2019, will be awarded to Dr. Michiyoshi Ae – University of Tsukuba.

**Life Member**

A special membership category that is reserved for members who have made outstanding contributions to ISBS. The work of the member should have enabled ISBS to further develop and thrive. This work is typically not academic (research-related) and is therefore not covered by other ISBS awards. A Life member has all of the privileges of membership but does not pay annual membership fees.

This year’s worthy recipients, who have done so much for the Society between them were:

Dr Elizabeth Bradshaw  
Deakin University, Australia

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**Fellow**

The Fellow of ISBS award recognises substantial scholarly and service contributions to ISBS and Sports Biomechanics.

This year a Fellowship was awarded to:

- **Ian Bezodis,**  
  Cardiff Metropolitan University, UK

- **Silvio Lorenzetti,**  
  Swiss Federal Institute of Sport Magglingen

- **Sarah Breen,**  
  Northern Michigan University, USA

- **Tim Exell,**  
  University of Portsmouth, UK
Hans Gros Emerging Researcher

The Hans Gros Emerging Researcher Award recognizes excellence in early career research. This prestigious award is given annually to an individual who has excelled in their early research career (2-5 years post PhD) and has embodied the ISBS philosophy of applied science and ‘bridging the gap’ between research and application in practice.

The award was named to commemorate Hans Gros for his contribution to ISBS. Han Gros was a founding member of ISBS and was President in 1998-1999. Hans established the first ISBS website and was awarded Life membership in 2001 in San Francisco. He was a faculty member at the University of Stuttgart in Germany and taught biomechanics, skiing, and track and field. His research interests focused on sports equipment design for gymnastics, archery, and the biomechanics of track and field.

This year’s recipient was Dr Steffen Willwacher – German Sport University, Cologne. Dr Willwacher’s presentation was entitled ‘Sports equipment: How the transformation from passive to digital systems opens new doors and puts new demands on sports biomechanists. And can be be accessed here.

Dr Steffen Willwacher
German Sport University, Cologne

PHOTO BY @ISBS2018

Proceedings

Read the papers for all our awardees on the ISBS open access proceedings archives.

Papers from 1983-2016 are available here. Papers from 2017 onwards are available at our new archive here.
This year’s recipients for the oral competition were:

1. Daniel Cottam | University of Western Australia
   *Can inertial measurement units be used to validly measure pelvis and thorax motion during cricket bowling?*

2. Marion Mundt | RWTH Aachen University
   *Prediction of joint kinetics based on joint kinematics using artificial neural networks*

3. Dhruv Gupta | University of Texas at Austin
   *Use of musculoskeletal modeling to find the balance between performance and injury prevention in sports – a proof of concept*

This year’s recipients for the poster competition (first to joint second place) were:

1. **Natsuki Sado** | The University of Tokyo
   *Effects of segmental rotations on vertical and horizontal energies during take-off of a long jump?*

2. **Kensaku Kimura** | University of Tsukuba
   *Relationship between deformation of medial longitudinal arch and kinetics of lower limbs during long-distance running?*

2. **Sang Yup Lee** | Korea National Sport University
   *The possibility of classifying v1 and v2 subtechniques of a single IMU sensor through comparison of motion-specific data (pitch, yaw and roll angle values, orientation angle value) in XC ski*
In 2018, the 7th Student Mentor Programme was held at the ISBS conference in Auckland. The programme has continued to be very popular with students attending the conference. In Auckland, the programme involving 46 pairs of students and mentors representing 18 different countries from around the world. Students had the opportunity to meet with their mentors during a breakfast session on the first morning of the conference and then again during the week. Having spoken to both mentors and mentees, this format offers a valuable opportunity for thinking and reflection after the early session allowing opportunities for networking and introduction with other students and mentors as the week progressed. Students typically have the opportunity to discuss research, potential career paths and many other prominent topics in academic research, but the experience also provides students with opportunities to discuss their work with established and world-leading experts from our society in a relaxed environment.

Claire Kenneally-Dabrowski (Australian Institute of Sport / Australian National University) was part of the mentor programme for the first time in Auckland and had the following to say about her experiences:

“This year I attended my first ISBS conference, and was eager to attend the student mentor session after hearing great reviews of the program from previous years. The student mentor breakfast was a really enjoyable experience, and provided a friendly and casual atmosphere in which to engage with your mentor. I was well-matched with a mentor working in a similar area of research which helped facilitate great discussion and feedback around my research. My mentor was also very willing to share their research, career highlights and challenges. Further, this session provided a great opportunity to not only connect with my mentor, but to tap into their network and connect with other students and researchers. My mentor was able to put me in contact with other students working in a similar area of research, and therefore this provided a valuable opportunity to widen my professional network and connect with other students and researchers from around the world.

As I am approaching the end of my PhD, I also found the mentor session an ideal opportunity to discuss career progression after a PhD. In particular, it was great to be able to talk with someone who is from another country and therefore working within a different university and sporting system. This allowed me to gain a different perspective of working in applied sports biomechanics and academia. Overall, the student mentor session was an experience that I found very beneficial, and I would definitely recommend it to any student attending ISBS. If you are able to use this session to its full potential it can certainly open many opportunities for widening your professional network and even setting up future collaborations.”

On behalf of all of the students that took part in this year’s programme, I would like to thank the mentors for giving their time and sharing their valuable knowledge and experiences with the students. I would also like to thank all students that took part for engaging in the programme so enthusiastically. Details will be available in the Spring 2019 newsletter regarding the student mentor programme at ISBS 2019 in Ohio and I look forward to seeing many of you there!

Tim Exell
ISBS Vice President (Research and Projects)
University of Portsmouth, UK
Awardees of Research Grants 2018

As in recent years, the quality of applications for both student and full-member research grants was very high this year. Following the review process the following grant awardees were announced at the conference in Auckland. I wish all of those that applied for the grants or that were successful all the best with their research and look forward to hearing how it progresses. The successful applicants will present their work in the coming years at ISBS:

**Student Mini Research Grant (2 recipients):**

**Ashley VanSumeren**  
Northern Michigan University, USA  
“The Effects of Shoe Type on Kinetic, Kinematic, and Physiological Variables During Step-Up and Step-Down Motions”

**Jordan Andersen**  
The University of Sydney, Australia  
“The Demands of The Torso Muscles in Controlling and Facilitating Longitudinal Torso Rotation in Sprint and 400m Pace Front Crawl.”

**Internship Grant (1 recipient):**

**Boyi Dai**  
University of Wyoming, USA  
“The Effect of External Perturbation on Landing Biomechanics”

**Mobility Grant (2 recipients):**

**Gerda Strutzenberger**  
University of Salzburg, Austria  
“Developing a new Assessment of Posture, Mobility, and Balance in a Complex Environment Based on 3D Markerless Video-based Motion Capture”

**Sina David**  
German Sport University of Cologne, Germany  
“Establishing a new paradigm for investigating unanticipated sidestepping manoeuvres”
CALL FOR GRANTS FOR STUDENT AND FULL MEMBERS!

Following the addition in recent years of grants to support student members of ISBS and the success of the Student Mini Research Grant, last year I was delighted to announce two new grants for full ISBS members: Both the Internship Grant and the Researcher Mobility Grant, will be available again in 2019. These grants have been developed to support the research activities of full ISBS members, in particular those that are in the early stages of their career or are returning from a career break. Brief information relating to all three grants are provided over the next two pages. Full details of the grants and application processes are available under the ‘Grants’ tab of the website: www.isbs.org/grants. Please note that the deadline for applications will be earlier (April) in 2019 than in previous years.

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The Student Mini Research Grant is open to final year undergraduate students and postgraduate students and is available to fund biomechanics research projects in an environment that provides strong mentorship from an established researcher. The grant is designed to assist the student in the early stages of their professional development to encourage the pursuit of biomechanics research.

Funds Available

ISBS funds up to two awards per year, each award may be up to €1000 and is available to fund research for up to one year in duration.

Applications in one or more of the following areas are encouraged:

- Sports / Exercise biomechanics
-Paediatric/ gerontology exercise biomechanics
- Development of biomechanical methods/ instrumentation
- Fundamental movement biomechanics
- Sports engineering
- Biomechanics of injury prevention and rehabilitation in sport / exercise

Eligibility

The applicant must be supervised by an established researcher who is a current ISBS member. The student’s supervisor is expected to administer the funding.

Students must be enrolled as a final year undergraduate or a graduate student at the time of application.
The Internship Grant will provide funds to pay an intern student to assist with the research of a full ISBS member. The purposes of the internship are to: 1) support full ISBS members (particularly early career researchers in their research activities by providing student internship support and 2) foster the intern student’s interest in biomechanics research and provide them with an opportunity to become familiar with research techniques and collect data under the guidance of an established researcher.

Funds Available / Allowable Costs

Up to two grants are available. The amount paid will be €250 per week for students living away from home or €150 per week for students living at home for 4-8 weeks and is administered by the Host Institution. Other research expenses are not payable.

Duration / Eligibility

Projects should be achievable in 4-8 weeks – students should be working on a specific project and details of what is intended to be achieved within the time frame is required at application. Students should currently be enrolled as an undergraduate or taught masters student (PhD students are not eligible as intern students).

The Researcher Mobility Grant will provide funds to support full ISBS members (1 ECR and 1 developing researcher) to travel to an established ISBS member’s or applied organisation’s lab. The purpose is to allow the applicant to learn new techniques, collect data, develop research skills, bridge the gap between research and practice and build collaborative sports biomechanics networks. Visits may be to a research lab or applied organisation that utilises sports biomechanics (e.g. National Governing Body or footwear/ equipment manufacturer).

Funds Available / Allowable Costs

Up to €2000 each to support travel costs and accommodation/ subsistence. Full anticipated costings and details of other current financial support to be provided with application.

Duration / Eligibility

Visits are for a duration of 4-8 weeks.

ECRs should be less than 3 years post-PhD graduation (not including verified absence due to sickness, maternity, paternity). Developing Researcher, >3 years post-completion of PhD.

Applicants must be current members of ISBS in good standing and with a minimum of one year’s membership.
Marion Mundt, Germany

In 2017, I have visited the ISBS conference for the first time. Due to the very good experience, I was very grateful to get the opportunity to travel all the way to New Zealand to join 2018th conference as well. I feel that the friendly and supporting atmosphere of the society is very helpful and motivating, especially for young researchers. I am pretty sure that the fruitful discussions during the conference will further improve my research.

Julian Fritz, Austria

The organization of the conference was great (very interesting presentations, helpful and kind staff, great cultural experience...). It was nice to see how knowledge from research can be transferred into (coaching) practice during the applied sessions.

Shusei Sugi, Japan

I have participated in ISBS 2018 from Japan. It was a precious time for me to interact with many excellent researchers. It is one of the great pleasures for me to experience the cultures of the host countries. This time, I experienced the Maori tradition and culture. I ate "HANGI", sang a Maori song and danced passionate "HAKA" with my Maori colleagues.

I bought the world's strongest All Blacks jersey. I will dance HAKA with this in Japan. This wonderful and passionate Maori culture greatly inspires me. At that time, I feel like I am the strongest in the world. Perhaps I already have become a Maori soldier. . .

Catherine Shin, UK

My main take home from the conference was that we’re in the middle of a technology revolution as ‘traditional’ lab-based motion capture meets in-field data collections, machine learning and artificial intelligence. Understanding the limits of each of these and developing their combined use opens the door to limitless questions but it will take collaboration with both computer scientists and sports coaches to make sure the best questions are answered in the best way!
1st call for hosting the 40th Conferences (2022) of the International Society of Biomechanics in Sports

The annual ISBS conference is a key-event for the international scientific exchange and networking within the field of sports biomechanics. At this time of the year, we are seeking for ISBS members interested in hosting this attractive event in the year 2022.

This first call is open to:
...interested ISBS members in the preferred region Austral-Asia, with the deadline 31st of March, 2019.

If no proposals are received from the preferred region, a 2nd call for hosting will be made on the 1st of April 2019, opening the invitation to all global regions. The deadline for submission will then be 1st of June 2019.

Preparation of bid:
In case of your interest in hosting the 40th ISBS conference 2022, please prepare your bid according to the ‘Policy Manual for Planning and Preparation of the ISBS Annual Conference to be found at the ISBS homepage (https://isbs.org/images/files/VPConferences_PolicyManual_June2017.pdf). This document contains all relevant information to prepare and organize the ISBS Conference.

Submission of bid:
Submit the electronic file of the application to the VP of Conferences (gerda.strutzenberger@sbg.ac.at) by the 31st of March, 2019.

Please don’t hesitate to contact me in case of your interest or if any further information is needed.
I am looking forward to receiving your bid.

Gerda Strutzenberger
ISBS Vice President (Conferences and Meetings)
Kistler presents a new analysis system for athletics

Run a personal best thanks to explosive force development

The new KiSprint provides coaches and athletes with an efficient means of biomechanically optimizing sprint starts under competitive conditions. The robust and mobile solution has comprehensive software assessment options and can be individually adapted and expanded.

“On your marks – get set – go!” Especially for short distances, a good start is crucial to achieving fast times and winning races. However, performance during a sprint start depends on many different factors, such as the starting position, reaction time, and force vector. In order to analyze this complex network of influencing variables efficiently and strategically, the Kistler Group has developed a new measuring system that makes comprehensive biomechanical optimization of an athlete’s starting process possible.

Performance diagnostics made easy

The sprint starting blocks conform to the Olympic standard and can be individually adjusted (foot distance, footplate angle) as athletes are used to from training and competition. The piezoelectric three-component force sensors are integrated in the structure along with the charge amplifier. Thus, the force components can be recorded separately for each leg, which makes it possible to determine the resulting force vector and speed.

Particular attention has been paid to ease of use and convenient operation. The KiSprint system is quick to set up, easy to adjust with quick-release fasteners, and provides synchronous measurement data without the need for additional installations or tracking. With the integrated electronic starting pistol, all measurement processes are synchronized simultaneously with the start signal for the runner.

Immediately after completing a run, the associated Kistler Sprint software provides accurate analyses based on the data obtained. Comparisons between different athletes at different times are just as possible as the visualization of the starting process by high-speed camera. The speed of the athlete in the acceleration phase is continuously recorded and can be optimized accordingly – the system thus supports the most effective training possible as well as targeted performance diagnostics.

Robust, mobile, and expandable

The robust, splash-proof Sprint system from Kistler can be used both indoors as well as outdoors. It can be attached to the bottom of the plastic track via spikes or screwed down permanently. The two wheeled cases included make it easy for a single person to transport the system.

For use in research, the five-component design allows the sprint starting blocks to be combined with COP (center of pressure) measurements in order to determine the ideal center of gravity. Furthermore, the system can also be expanded individually (for example, to measure hand strength). The solution, developed worldwide in cooperation with trainers and training centers, will be launched on the market in early 2018.

For more information, visit www.kistler.com/sprint or contact our local expert team.

Kistler is not only present in track and field, but also in swimming with its KiSwim system, and even in the worlds of soccer, ice hockey, American football, and many other sports through the MARS® system.
The new KiSprint consists of a sprint starting block, an electronic starting pistol and the Kistler Sprint software.

The new KiSprint helps coaches and athletes to biomechanically optimize sprint starts under competitive conditions.

The sprint starting blocks conform to the Olympic standard and can be individually adjusted (foot distance, footplate angle).

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About the Kistler Group

Kistler, the originator of piezoelectric measuring technology, is the global leader in dynamic pressure, force, torque and acceleration measurement. Cutting-edge technologies provide the basis for Kistler's modular systems and services.

Customers in industry, research and development benefit from Kistler's experience as a development partner, enabling them to optimize their products and processes so as to secure sustainable competitive edge. This owner-managed Swiss corporation plays a key part in the evolution of automobile production and industrial automation, and its innovative sensor technology also helps foster the development of many newly emerging sectors. Drawing on our extensive application expertise, and always with an absolute commitment to quality, Kistler drives innovations ahead in lightweight construction, vehicle safety, emission reduction and Industry 4.0.

Over 1,850 employees at 61 facilities across the globe are dedicated to the development of new measurement solutions, and they offer individual application-specific support at the local level. Ever since it was founded in 1959, the Kistler Group has grown hand-in-hand with its customers and in 2016, it posted sales of CHF 364 million. About 10% of this figure is reinvested in innovation and research – with the aim of delivering better results for every customer.
Laura-Anne Furlong
ISBS Vice President (Public Relations)

The society would like to thank the corporate sponsors of ISBS: Kistler & Vicon. These sponsors provide important support to the mission of ISBS thorough their quality products and financial support to the society. Remember to consider these fine vendors of sports biomechanics research equipment and software when updating your lab. Contact Laura-Anne Furlong, Vice President (Public Relations) for more information about ISBS sponsorship.
ISBS Proceedings Archive

ISBS proceedings from the ISBS 2018 conference are available on the new ISBS archive hosted at Northern Michigan University. [http://commons.nmu.edu/isbs/]. Papers presented prior to 2017 are still available at the previous archive [https://ojs.ub.uni-konstanz.de/cpa]

National Biomechanics Day 2019

Biomechanics Day 2019 will be held on April 10th 2019, and we look forward to seeing lots of pictures from around the globe from ISBS members. This year ISBS members around the globe ran successful events showcasing their sports biomechanics research to the public. Next spring ISBS will be running our second annual Two Minute Tweet competition in conjunction with NBD, which was won this year by Cat Shin (English Institute of Sport/Lincoln University, UK), Stephanie Blair (Victoria University, Australia) and Bjorn Bruhin (Swiss Ski). Make sure to check out http://nationalbiomechanicsday.asbweb.org/2018-two-minute-tweet/ for inspiration for next year’s competition, and keep an eye on ISBS emails and social media for announcement of our competition opening.

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