Message from the President

Duane Knudson

Greetings ISBS Colleagues,

As we journey together through these extraordinary times of a world pandemic new electronic and internet-based forms of communication have become critical. Thank you to the ISBS board, conference organizers, and members who have made our 2020 ISBS online conference activities and other online outreach activities so successful. Please carefully read this newsletter for details on these activities and future opportunities for ISBS members. Space will not allow me to mention all the ISBS initiatives or who contributed to them but let me preview a few to illustrate what makes ISBS such a special scientific organization.

Thank you for Stuart McErlain-Naylor for organizing the online ISBS Sports Biomechanics Lecture Series. This along with our online conference activities and 2020 proceedings provide important, cutting-edge sports biomechanics knowledge for free to the world. The ISBS board is looking to organize an online Virtual Mid-Year Symposium after the new year. Please look for details of this event on our website and, of course, our 2021 conference in Canberra, Australia.

Sports Biomechanics editor-in-chief Dr. Daniel Fong recently announced the expansion of journal associate editors. The search committee screened a large and outstanding pool of candidates. The status of our journal continues to rise with the addition of greater diversity of sports biomechanics research expertise and geography in our editorial team. Please consider submitting your best research to our journal and serve as a reviewer when asked.

(Continued on page 3)
Message from the President

Duane Knudson

Numerous new initiatives for ISBS members continue in their development. Issues are being finalized for a joint ISB-ISBS award sponsored by World Athletics. An ad hoc group continues their work on validation of wearable sensors. The Women in Sports Biomechanics group has a group looking at an ISBS code of conduct that would help ensure safety and respect for all members.

Remember to step-up for ISBS by inviting others, sharing your passion for the society, encouraging members to remain engaged, and contributing to our initiatives, conference, and journal. Be sure to vote for the constitutional amendments that include voting rights for student representatives on the ISBS Board. Support from your continuous ISBS membership dues and from sponsors like Vicon helps ISBS achieve its mission. Best wishes for personal safety, good health, and I hope to see you in-person soon at the ISBS conference in Canberra in 2021.

Duane Knudson

President of the ISBS
With the cancellation of the ISBS 2020 in person conference the ISBS executive provided a series of online events and resources for the International Sports Biomechanics Community and ISBS Members. These events and resources are summarized as follows:

**Research Dissemination**

ISBS 2020 Scientific Committee; Mark Robinson, Bill Baltzopoulos, Mark Lake & Jos Vanrenterghem along with ISBS VP for Awards and VP for Publications, edited Volume 38 of the ISBS Proceedings ahead of this year’s conference. 244 papers were peer reviewed and published in the societies proceedings archive available [here](https://commons.nmu.edu/isbs/).

Video presentations were distributed via the [ISBS YouTube channel](https://www.youtube.com) to accompany 66 of the papers published in Vol 38 of the ISBS Proceedings Archive. A searchable and hyperlinked pdf program of these presentations is available [here](https://bit.ly/ISBS2020_PROG).

The ISBS 2020 Online People’s Choice Award provided a complimentary year of ISBS membership for the top presentations in each conference theme. Further details on this award and the award winners is available in the [VP of Awards Report (p.13)](https://bit.ly/ISBS2020_PROG).

Our Annual Dyson and Hans Gros Award Lectures were both live streamed on the ISBS YouTube Channel. For more details on these lectures please see our [VP of Awards Report](https://bit.ly/ISBS2020_PROG).

---

**Most Viewed ISBS 2020 Papers**

---

**ISBS Online Conference Report 2020**

**Dr Sarah Breen**

---
Networking & Mentoring Events

Two inaugural events were held to support women and mothers in the field of sport biomechanics. For more details on these events see the Women in Sports Biomechanics Event Report from our VP of Research & Projects (##) and Mother’s Café Event Report from ISBS Member Diana Soares (p.9).

The ISBS Student Mentor Program was held virtually this year in the absence of a physical conference. For further details on the program including reviews from mentors and mentees our see the Student Mentor Program Report from our VP of Research & Projects (p.6-7).

Society Administration

The Societies Pre and Post Conference Board Meetings and Annual General meeting were held virtually this year. Minutes and reports for these meetings are available in the Society Administration tab of the ISBS website for ISBS Members.
Despite its virtual format, the ISBS Student Mentor Program was held for the 9th time. 24 (undergraduate, masters, PhD) students from 9 different countries were matched with 24 mentors from around the world. Mentees were matched with mentors based on interest and experience and met online at a time suitable to both. There was the opportunity to discuss research and career paths. There was a 1-1 ratio between mentors and mentees which enabled students to receive lots of individualized advice. As the virtual format seemed to be successful in connecting students and mentors, a virtual Student Mentor Program to support students unable to make the annual conference is being considered for future conferences.

Ryan Alcantara (University of Colorado Boulder—Applied Biomechanics Lab) participated in the Student Mentor Programme for the first time and shared these experiences:

This year was my first ISBS conference and despite the virtual format, I walked away from the conference informed, better connected to the greater biomechanics community, and excited to participate in the next ISBS conference!

A personal highlight of ISBS was the student mentor program, where I had the opportunity to virtually meet with Dr. Sandy Willmott (University of Lincoln). We talked about our research interests, career paths, and he shared his experience as a professor at university in the UK. As I enter the final year of my PhD, I found his international perspective valuable in helping form my own idea of what I’d like to do after I complete my program.

Another benefit of participating in the student mentor program is that it expands your professional network. For example, Sandy and I follow each other on twitter now and he connected me with one of his prior mentees. I’ve learned that networking, although sometimes intimidating, is a crucial component of graduate school and one of the most beneficial events at a research conference. I’m grateful for ISBS for facilitating such a great networking opportunity for students and look forward to participating in the student mentor program next year!
Dr Valentina Camomilla (University of Rome) participated in the Student Mentor Programme and shared these experiences:

I have been participating in the ISBS Mentor Program as a Mentor more than one time in the past. Organizing meetings between Mentors and Mentee at the annual ISBS Conference is one of the many initiatives of ISBS that testify the Society focus on individuals, fostering human interactions as foundation of good science. I’m proud of being part of such a human-centred community.

The meeting usually takes place for a short time (for example at breakfast time) equal for all. This year, of course, the format was different given the virtual setting of the Conference and of most of our 2020 research life. Having an online meeting allowed for a more in depth exchange of information, document sharing, and a less strict limit in time. I particularly appreciated the careful matching of mentor-mentee. I enjoyed quite a lot my conversation with my mentee.

The student had comments on the upcoming Viva which I contributed answers to, and later told me that the conversation reinforced personal confidence for the Viva and beyond. If it was, in the student’s words, a pleasure and privilege to be speaking to the expert in this area, of no minor importance was the effect of the interaction on my mood and self-perception: the ISBS mentoring interaction boosted my enthusiasm for this profession giving me energies and motivation to carry on in a tiring time. I’m grateful to ISBS for the time spent for the young members of the society and to the student that made it worth spending it!

Thank you to all of the mentors who volunteered their time and experience. Details regarding the Student Mentor Programme at ISBS 2021 in Canberra will be available in the Volume 37 Issue 1 of the 2021 ISBS newsletter and on the conference website. I hope to see many of you there!

Ina Janssen
ISBS Vice President (Research and Projects)
ISBS Women in Sport Biomechanics Event

During the ISBS 2020 virtual conference, the first ISBS Women in Sports Biomechanics event took place. The planning for this event started during the ISBS 2019 conference where the need for more support for women in our society was identified. 42 members participated in the online event (57% from Europe, 19% from Australia/New Zealand, 17% North America, 5% Asia and 2% Africa). The majority of the participants were either PhD students (37%) or Early Career Researchers (32%) and also included industry and applied sport practitioners.

Following months of brainstorming and discussions amongst various members, the virtual format was developed which included a moderator (A/Prof Veni Kong) and panel speakers including PhD student/applied sport practitioner Danielle Trowell, Early Career Researcher Dr Laura-Anne Furlong, Senior Academic A/Prof Benedicte Vanwanseele, Industry Representative Dr Kim Duffy and experience from elite sport with Rachel Balkovec. The aim of the event was to highlight and discuss various topics which affect women in sports biomechanics.

There were three panel discussions;

- What strategies have you found effective to help develop your career?
- What challenges do women in sports biomechanics face?
- How do you balance everything? Carer, extra responsibilities

Following each panel discussion, members were organised into pre-defined breakout rooms with their fellow members in similar stages or in mixed stages. This provided members an opportunity to meet and share their experiences with other members related to the panel discussion.

Tips and take home messages from the event included:

- **Find a mentor and support network**
- **Identify your allies**
- **Acknowledge good science**
- **Say no right away, wait 24hrs to say yes!**
- **Ally with the men that will support you**
- **Balancing family – be present..be present at work and be present at home**
- **To your work you are replaceable, to your family and friends you are not**

Thank you again to all of the organisers, speakers, and participants who made this event possible. We look forward to many more events in the future!
ISBS Mother’s Café

ISBS Member Diana Soares

Diana Soares (PhD Candidate from the University of Bedfordshire) participated in the Mothers’ Café and shared these experiences:

The Mothers’ Café event was held for the first time at the annual ISBS 2020 virtual conference. Moderated by Dr Ina Janssen and Dr Liz Bradshaw, this online informal meeting was part of the first Women & Mothers in Sports Biomechanics event, aimed to support women in the ISBS society.

Several women Biomechanists from different backgrounds and career stages shared their experiences, journeys and stories, providing inspiration and support for the attending members. The informal format of this event allowed those attending to feel at ease, to share personal experiences and ask all sorts of questions. Ways of staying connected with the society were also discussed during this meeting. As ISBS mothers could benefit from hearing others’ experiences and staying connected with one another, it was proposed to meet in a regular basis. Since the challenges for some women are now even larger with the Covid-19 pandemic, this timely event brought us encouragement and made us feel that we are not alone on this journey.

One of the participants, Sheeba Davis said: “It was indeed a great meeting. I was fortunate to get to meet such wonderful women Biomechanists which wouldn't have been possible if it was a regular conference (...). All your stories inspired me a lot and as you rightly mentioned there might be several other mothers who might benefit from this”.

For me, as a PhD student and recent mother, it was great to hear different stories and get advice from experienced mothers in Biomechanics to obtain new insights on how to juggle motherhood with career responsibilities and aspirations. I very much enjoyed attending this event and I am looking forward to attending the next meeting!

SAVE THE DATE 2nd ISBS Mother’s Café November 19 2020 (8am GMT)

We are pleased to announce the next ISBS Mother’s Café! Come and join us for an informal meeting to catch up. We will also share the latest developments in the ISBS initiatives to further support (future) mothers. All welcome! To join this event, please send an email to vpresearch-projects@isbs.org by November 18 2020.
The following awards were presented as part of the Online Conference activities in July 2020.

Geoffrey Dyson Award

The Geoffrey Dyson Award and Keynote Presentation is the most prestigious award offered by ISBS. It is awarded to an individual who through his/her professional career has embodied and carried out the primary purpose of ISBS; to *bridge the gap between researchers and practitioners*.

The award is named after one of the founding fathers of Sports Biomechanics, Geoffrey Dyson. 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”.

The 2020 recipient was Professor David Lloyd from Griffith University, Australia. Professor Lloyd delivered an excellent, thought-provoking keynote presentation entitled *The future's in-field sports biomechanics: wearables plus modelling compute real-time in vivo tissue loading to prevent and repair musculoskeletal injuries*. This lecture was delivered online and is still available for any of you to view should you have missed it, wish to re-watch it, or wish to recommend it to friends and colleagues:

[https://isbs.org/isbs-2020-online/isbs-2020-keynote-lectures](https://isbs.org/isbs-2020-online/isbs-2020-keynote-lectures)
**ISBS Awards 2020 (cont.)**

**Neil Bezodis**

It was announced during the Online Conference activities that the 2021 Geoffrey Dyson Award Winner will be **Senior Professor Julie Steele from the University of Wollongong, Australia**. We all look forward to hearing Senior Professor Steele’s Keynote Presentation next year.

---

**Life Member**

This is a special membership category that is reserved for members who have made outstanding contributions to ISBS. One Life Membership was awarded this year:

**Professor Gareth Irwin**, Cardiff Metropolitan University, UK

---

**Fellow**

The ISBS Fellow award recognises substantial scholarly and service contributions to ISBS and Sports Biomechanics. Fellowships were awarded this year to (below, from left to right) **Dr Veni Kong** (Nanyang Technological University, Singapore) **Professor Mark King** (Loughborough University, UK) and **Dr Peter Sinclair** (University of Sydney, Australia).
ISBS Awards 2020 (cont.)

Neil Bezodis

Hans Gros Emerging Researcher Award

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 Hans Gros Emerging Researcher Award was first awarded in Taipei, Taiwan as part of the 31st ISBS conference. The winner is invited to present a lecture on his/her research at that year’s ISBS conference.

The award was named to commemorate Hans Gros for his contribution to ISBS. Hans Gros was a founding member of ISBS and was President in 1996-1998. 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 Gillian Weir from the University of Massachusetts, Amherst, USA, who delivered an excellent, engaging presentation entitled **ACL injury prevention in team sports: biomechanically informed approaches and applications**. This gave a wonderful overview of her work to date which has truly embodied the primary purpose of ISBS. This lecture was also delivered online and for those of you who were unable to view it or wish to watch it again, you can find it via the following link:

[https://isbs.org/isbs-2020-online/isbs-2020-keynote-lectures](https://isbs.org/isbs-2020-online/isbs-2020-keynote-lectures)
With the New Investigator Award not run this year due to the cancellation of the ‘in person’ conference in Liverpool, the ISBS Executive decided to support several “People’s Choice Awards”. All conference paper authors who uploaded presentations to the conference website were eligible for this award, and the winners were entirely voted for by you, the members of ISBS. We had great engagement with the presentations (including almost 200 votes being cast) and awarded complimentary ISBS memberships to our 15 winners who are listed below.

**Podium Presentation Winners**

Injury & Rehabilitation - **Jill Costley, Boyi Dai**

Strength & Conditioning - **Evan Crotty, Rafael Fujita**

Hitting & Kicking - **Simon Augustus, Boris Bačić**

Pedagogy & Skill Acquisition - **Corey Perrett, Casey Wiens**

Athletics & Swimming - **Victoria Brackley, Hannah Wyatt**

Methods & Equipment - **Laurie Needham, Stuart McErlain-Naylor**

**Poster Presentation Winners**

Motor Control & Rehabilitation - **Adam Brazil**

Athletics - **Ryan Alcantara**

Mixed Topics - **Michael Haischer**

Don’t forget that all of the above presentations, along with every other presentation from the Online Conference can be viewed on the society’s YouTube channel:

https://www.youtube.com/channel/UCYkzE6y_eKWa7KQQoqZ6ZQUA
Awardees of Research Grants 2020

We had a high quality of applications for the student and full-member research grants. Thank you to all that applied. Following the review process the following grant awardees were announced at the virtual conference. Congratulations to all of the awardees, I wish you the best of luck with your research and look forward to hearing about your findings as you present at ISBS the coming years.

Student Research Grant (2 recipients):

Enora Le Flao, Auckland University of Technology, NZ

“Head impact sensors during sparring: differences and similarities between mouthguards, patches and headgear sensors.”

Kellen Krajewski, University of Pittsburgh, USA

“The interactive effects of sex and load magnitude on in vivo tibiofemoral arthrokinematics during prolonged gait tasks.”

Internship Grant (2 recipients):

Alexandra Atack, St Mary’s University, UK

“The effect of fatigue on rugby place kicking technique and performance.”

Glenn Fleisig, American Sports Medicine Institute

“Comparing three-dimensional kinematics and kinetics of automated marker tracking system and an automated marker-less system.”
Recently, world records were set at long-distance running competitions over 5 km, 15 km, half-marathon, marathon, and 100 km distances while running in footwear with stiffening elements (e.g., carbon fibre plates) embedded in the midsole. The use of carbon fibre plates to increase the midsole bending stiffness (MBS) of running shoes has been researched extensively in the past 20 years. Several mechanisms were suggested to underlie the performance benefits when running in footwear with increased MBS. This study aimed to address one of these mechanisms, namely the principle of optimising the force-velocity profile of the ankle plantarflexor muscles. Therefore, the primary purpose of this study was to investigate if the shortening and shortening velocity of the gastrocnemius medialis (GM) muscle can be altered when running in shoes with increased MBS compared to a control shoe. It was hypothesised that GM shortening will not differ between stiffness conditions but that the average shortening velocity will decrease in stiff footwear due to increased stance times.

For this reason, 14 participants ran at 90% of individual speed at lactate threshold for 6 minutes in four shoe conditions (i.e., Control, Stiff, Stiffer, and Stiffest) in a randomised order. The stiff conditions were achieved by inserting carbon fibre plates of various thicknesses into the control shoe. GM muscle fascicle dynamics were obtained using ultrasound imaging, oxygen uptake was recorded using a metabolic cart, and lower limb joint kinematics and kinetics were collected using a 3D motion capture system and an instrumented treadmill, respectively.

Figure 1. (a) Time-normalised, average gastrocnemius medialis muscle fascicle velocity over the stance phase of running. (b) Average (±SD) gastrocnemius medialis fascicle velocity over the stance phase of running.

Compared to Control, running in the plated conditions resulted in less GM fascicle shortening, slower average shortening velocity (Figure 1), and greater estimated Achilles tendon energy return. Furthermore, running in the best plated condition improved the energy cost of running by 2%, on average.

The findings of this study provide the first direct evidence that muscle function can be altered by increasing the MBS of running shoes. It is suggested that running in stiff shoes allows the ankle plantarflexor muscle-tendon unit to continue to operate on a more favourable position of the muscle’s force-length-velocity relationship by lowering muscle shortening velocity and increasing tendon energy return.

I would like to thank the ISBS committee for awarding me the ISBS Student Research Grant, which provided the financial support that allowed me to perform this study.
High-intensity movements and changes of direction in sports are known to cause non-contact injuries in athletes. Ankle injuries are among the most common injuries in football. These may result in high costs to the teams due to treatment and rehabilitation, hindering the success of the teams during the season. Some understanding of the causes of non-contact ankle injuries has been obtained from the analysis of accidental injuries that occurred during laboratory testing. Studies of ankle injury pathways have shown that these occur when one or more loading mechanisms follow a defined sequence. Under this principle an increased risk due to inadequate traction can be identified, such as excess grip between the foot and the playing surface or insufficient traction due to a slippery surface.

My PhD uses bivariate functional Principal Component Analysis (bPCA) to identify the variability in ankle kinematics caused by traction during common football movements. This approach analyses two kinetic/kinematic variables relative to each other, identifying relationships that could lead to injury.

The ISBS Student Research Grant helped to obtain shoes and materials to 3D print a variety of studs to test different traction levels on artificial turf. The main data collection used both single participant and group design. During the single participant design, an accidental ankle twist occurred. One male participant performed a series of randomly distributed side-cuts and turns. In the 11th trial, the participant twisted his ankle during a side-cut. As no injury occurred, another 24 side-cut trials were recorded. Even though the participant did not suffer an injury, this case study complements previous reports of ankle injuries occurring in the laboratory. Functional Data Analysis (FDA) demonstrated that the ankle twist trial was characterised by a sudden increase in inversion and internal rotation along with rapid transition from plantarflexion to dorsiflexion. Velocities showed a two-step increase in internal rotation and inversion, exceeding a 300 °/s safety threshold. The shift to dorsiflexion is indicative of an unloading mechanism that likely prevented the injury. FDA revealed variations between the ankle twist and the control that could inform stud design to prevent injuries.

By increasing the understanding of the injury mechanisms, better countermeasures could be developed and more accurate data on expected return to play times could be. Injury reduction ensures player availability and permits trainers to have a desired fixture available for matches. Necessary changes have to be implemented to reduce ankle injury in professional football. Follow up studies of the UEFA Champions League on these reflect that injury prevention strategies are highly successful in reducing ankle sprain rate. This stresses the fact that preventive measures are one of the best strategies that players, physicians and coaches can undertake to contribute to team's success.
CALL FOR STUDENT AND FULL MEMBER GRANTS

ISBS is pleased to announce that the Student Research Grant, Internship Grant and the Mobility Grant will all be available in 2021! 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 all applications is April 15 2021.

The Student Research Grant

The Student 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 as a graduate student at the time of application.
The Internship Grant

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 Early Career and Developing Researcher Mobility Grant

The Early Career and Developing Researcher Mobility Grant will provide funds to support full ISBS members 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.
Dear ISBS community,

This year has been a challenging one. With life as we know it turned completely upside down, how do we, as bachelor, master, and doctoral students manage networking, dissemination, and study-/work-at-home isolation? A year without in-person conferences can feel like lost time for a student’s professional development – not to mention, we miss our friends from abroad!! Now more than ever is the time to support each other and to develop our online networking skills. For this purpose, the ISBS community is indispensable.

The ISBS community has been a central theme in my personal student journey. It started with a research question, an ISBS Student Mini Research Grant application, and a Skype call with one of my master thesis supervisor’s ISBS friends/colleagues. With funding and support from the ISBS community, I journeyed from Northern Michigan University (Michigan, USA) to the University of Salzburg (Salzburg, Austria) in the summer of 2017 for a “satellite” data collection and supervision. There I met and learned from experts in the field, who have since become my PhD working group. That same summer at my first ISBS conference, I met with my future PhD supervisor at the Student-Mentor event. The 2018 ISBS conference brought us together again, where I learned of the PhD opportunity within his working group. The story came full circle when I applied for and accepted the PhD position, ultimately moving myself back to Salzburg, Austria in the summer of 2019 to pursue my doctoral degree. This entire journey was enabled through the immense power and support of the ISBS network.

As your ISBS Student Representative, it is my goal to encourage these powerful student-mentor networking opportunities. When speaking to fellow students, what they desire from their membership in ISBS is exactly what I was fortunate to experience:

“The willingness of members to share ideas and support during ISBS conferences and even post-conference has been significant in my PhD progress. Additionally, ISBS workshops have been a good support structure for advancing learning in an area of biomechanics you are unfamiliar with, but may also form an element of your PhD research.”

– Evan Crotty, University of Limerick

“As a PhD student, [this summer] I was desperately hoping to attend conferences to gain experience, network, and meet like-minded people. The mentor program offered by ISBS is hugely beneficial and offers a unique opportunity to engage and learn from experts across the globe. In these unique times ISBS provided the means to make this happen, which is of huge benefit to PhD students.”

– Stuart Evans, Charles Darwin University

“I have found it extremely helpful to hear other PhD students’ experiences and ask questions such as ‘is this normal to feel/do/act etc’ particularly for students like myself who don’t have many other PhD students at the same institution to ask such questions.”

– Celeste Wilkins, Hartpury University
Considering current events and our increasingly “online” society – our traditional means of networking and mentorship are both challenged and jeopardized. Yet, the boundaries for such support systems are being driven in to new realms.

To students:

We are working toward the expansion of student-support networks and infrastructure:

1. We will soon have a student-specific page on the ISBS website, where helpful information and deadlines will be highlighted.

2. We are working towards the first mid-year online ISBS student events to maintain our ISBS relationships and professional growth experiences. Stay tuned on the ISBS website and twitter (@ISBSOFFICIAL and @steph_r_moore) for updates.

3. Your ISBS officers are busy discussing channels for networking and communication within the ISBS community. Once established, we encourage students and mentors alike to join these platforms for the cohesiveness of the ISBS community.

To ISBS full members and mentors:

We know you have also been challenged immensely by the current events. However, we cannot hope to fully support our students without the influence of your participation. As students, we rely on your experiences, advice, and networks to encourage our professional development. Without this year’s in-person conference experiences, this has become much more difficult! We therefore ask you to please remain open and willing to providing support in new, innovative ways, through your busy schedules!

Looking forward to connecting with you all soon!

Sincerely yours,

Stephanie Moore
ISBS Student Representative
Dear Members,

The ISBS annual membership fee is collected for each calendar year. Already now, it can be renewed for next year. Please log yourself in on our homepage: www.isbs.org and renew for 1 or 3 years. We kindly like to invite all of you to check and update your affiliation and postal address as it will be also used for the conference 2021.

All ongoing members have access to the journal "Sports Biomechanics" and the data for your access will be automatically transfer to Taylor and Francis. Please be aware that access to the journal can not be provided if there are any restrictions in place towards the member's home country. We apologize for any inconvenience.

Stay strong, Silvio sl@ethz.ch

1st call for hosting the 42nd Conference (2024)

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 making the first call to ISBS members interested in hosting this attractive event in the year 2024.

This first call is open to interested ISBS members in the preferred region of **Europe / Africa**, with the deadline **31st of March, 2021**.

If no proposals are received from the preferred region, a **2nd call for hosting** will be made on the **1st of April 2021**, **opening the invitation to all global regions**. The deadline for submission will then be **1st of June 2021**.

**Preparation of bid:**
If you are interested in hosting the 42nd ISBS conference in 2024, please prepare your bid according to the 'Policy Manual for Planning and Preparation of the ISBS Annual Conference', which can be found at the ISBS homepage:

This document contains all relevant information to guide the preparation of a proposal to host the conference and information to help prepare and organise the ISBS Conference.

**Submission of bid:**
Those wishing to submit a bid to host the conference in 2024 should submit the electronic file of the application to the VP of Conferences (vpconferences@isbs.org) by the **31st of March, 2021**.

Please don’t hesitate to contact me to indicate your interest and if any further information is needed. I look forward to receiving your bid.

Kind regards

Tim Exell
ISBS Vice President (Conferences and Meetings)
**ISBS 2021 Conference Update**

**Dr Tim Exell**

The current global pandemic is affecting our work and lives in many different ways. It was a shame to not see you all, as planned, in Liverpool this year but I am glad that we were able to use the current video technology to share our research and have some interaction through the forum that ISBS provides.

As our attention has turned to 2021, the ISBS conference committee have been working closely with the hosts in Canberra, trying to plan for ISBS 2021 as best as possible. The dates for the conference have had to change due to the postponement of the Olympic Games and I am pleased to say that ISBS 2021 will now take place between the 3rd and 7th September.

There are many unknowns relating to international travel restrictions and guidance on large events that might be in place next year, therefore the conference committee are keeping an open mind as to whether ISBS 2021 will be able to take place in person or virtually. These situations will be monitored closely over the next few months and a decision will be made in March 2021 as to the exact format of the conference. Regardless of the format, we will work to ensure that ISBS 2021 provides an opportunity to share our work, find out about new and updated technology, engage and communicate with each other and celebrate our shared passion of sports biomechanics!
The Sports Biomechanics Lecture Series ran successfully from March until September. The guest lectures covered the biomechanics of specific sports as well as biomechanical data collection and analysis techniques. The 28 lectures have been viewed over 50,000 times and are now being used to support the teaching of biomechanics in many different contexts. We thank Stuart McErlain-Naylor for organising the series, everybody who presented as part of the series, and our society sponsor Vicon for their support. Please check out the lectures at youtube.com/c/StuartMcErlainNaylor and share with anybody who may be interested.

ISBS is pleased to announce our Virtual Mid-Year Symposium to take place February 4 -5 2021. More details will be posted on the ISBS Website and distributed via email and social media once details are confirmed.

Various themes will be presented across varying time zones to accommodate international members. Events will include: Student event, Women’s event, Mother’s Café, Various Sport Biomechanics Themed Webinars. All events will be free and available to all ISBS membership. Please ensure that your membership is current to participate and register. Unsure of your status? Check your status on the ISBS website.

ISBS has followed up on suggestions and needs of members following the ISBS 2020 Women in Sport Biomechanics Event. Specifically,

- Members identified that they were interested in more online events. For this reason, an online event is being planning during the ISBS Virtual Mid-Year Symposium. The theme of this event will be: Effective Mentoring. More information will be communicated via the website closer to the date, all members are welcome!

- A poll during the event identified that several members have experienced inappropriate behaviour due to their gender at our ISBS conference. The ISBS board is currently composing a society-wide code of conduct to be applicable to all ISBS related events. In addition, a protocol for the reporting of harassment during ISBS events is being developed with the ambition to have it in place by the next ISBS conference.

- The further need for mentoring and networking opportunities was apparent. Following this feedback, the mixed career groups are being extended and ISBS Women’s Network Groups have been proposed. These groups of 5-6 members are to be comprised of a variety of career stages, as in the breakout rooms in the event. The idea behind these groups is to have a network of people that can provide advice, support and help each other. If you would like more information or to join a Women’s Network Group, please send an email to vpresearch-projects@isbs.org.

In addition to the Women in Sports Biomechanics Facebook group, the ISBS Executive is working on an ISBS Slack channel with a dedicated women’s channel. Keep an eye out for future announcements.
ISBS Officers & Directors

ISBS Officers

President: Duane Knudson
President Elect: Randall Jensen
Secretary-General: Peter Sinclair
Treasurer: Silvio Lorenzetti

secretary-general@isbs.org
treasurer@isbs.org

Vice President (Awards): Neil Bezodis
vpawards@isbs.org

Vice President (Research & Projects): Ina Janssen
vpresearch-projects@isbs.org

Vice President (Conferences & Meetings): Tim Exell
vpconferences@isbs.org

Vice President (Public Relations): Floren Colloud
vppublic-relations@isbs.org

Vice President (Publications): Sarah Breen
vppublications@isbs.org
<table>
<thead>
<tr>
<th>ISBS Officers &amp; Directors</th>
<th>ISBS Directors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ISBS Directors</strong></td>
<td></td>
</tr>
<tr>
<td>2019-2021</td>
<td>2020-2022</td>
</tr>
<tr>
<td>Laura-Anne Furlong</td>
<td>Gillian Weir</td>
</tr>
<tr>
<td>Steffi Colyer</td>
<td>Steffen Willwacher</td>
</tr>
<tr>
<td>Sina David</td>
<td>Alexandra Atack</td>
</tr>
<tr>
<td>Yasushi Enomoto</td>
<td>Wen-Tzu Tang</td>
</tr>
<tr>
<td>Shinji Sakurai</td>
<td>Ian Bezodis</td>
</tr>
<tr>
<td>Drew Harrison</td>
<td>Mark King</td>
</tr>
<tr>
<td>Mitsuko Osuka</td>
<td>Kristof Kipp</td>
</tr>
<tr>
<td>Kelly Sheerin</td>
<td>Marcus Lee</td>
</tr>
<tr>
<td></td>
<td>Hannah Wyatt</td>
</tr>
<tr>
<td></td>
<td>Stephanie Moore</td>
</tr>
</tbody>
</table>

Student Representative