

38th Conference of the International Society of Biomechanics in Sports*



Conference Proceedings

*The conference planned for Liverpool, UK did not go ahead due to COVID-19. These proceedings are the accepted papers for the cancelled conference.



Proceedings edited by

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38th Conference of the International Society of Biomechanics in Sports

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Each paper in these proceedings has been reviewed by at least two members of the scientific committee.

The correct format for citations is as per the APA style guidelines for the Sports Biomechanics journal http://www.tandf.co.uk/journals/authors/style/reference/tf_APA.pdf:

Author, A. A. (Year). Title of article. Title of the Journal, Volume(Issue), pp-pp.
Retrieved from WEBSITE

A sample citation for this conference would be as follows:

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The International Society of Biomechanics

Primary Purposes

- To provide a forum for the exchange of ideas for sports biomechanics researchers, coaches, and teachers.
- To bridge the gap between researchers and practitioners.
- To gather and disseminate information and materials on biomechanics in sports.

Members

The International Society of Biomechanics in Sports is composed of members from all over the world with a common desire to study and understand human movement, especially as it relates to applied sports biomechanics. Participants come from a wide range of backgrounds including exercise science, education, engineering, computer science, rehabilitation and medicine to name a few. ISBS members have written some of the most widely used university textbooks as well as practitioner books and manuals. Hundreds of refereed journal articles, as well as widely read practical articles in popular journals, have been published by ISBS members. In addition, members have developed new coaching, teaching and training strategies and patented sports, exercise and rehabilitation equipment. The majority of pioneers from the computer era of sports biomechanics have at one time or another participated in ISBS activities, with most innovations in biomechanics research technology having come from these individuals. In short, if it is sports biomechanics, ISBS members are in it.

Annual Conference

The first full scale conference of the International Society of Biomechanics in Sports (ISBS) was held June 20-25, 1982, in San Diego, California, with 123 participants. ISBS initiated a constitution on May 7, 1983, with subsequent constitutional revisions over time to suit the changing needs of the Society. Some of the first field-based research activities of ISBS were at the 1976 Olympic Games and 1978 Commonwealth Games, with numerous other research projects completed since that time. The Annual Conference of the ISBS family are conducted in a friendly atmosphere, which favours and encourages wide participation. This ISBS congeniality is unique and dear to its members. The quality of research presented and materials produced are at the cutting edge of knowledge and technology. In addition to oral and poster research presentations select sport science topics are covered in depth each year through special lectures. In addition, a special feature includes the Geoffrey H.G. Dyson lecture presented by an outstanding scientist in sports biomechanics. A number of other awards and recognitions are given each year including the new Investigator Award.

Acknowledgements

The 2020 ISBS conference was cancelled, the second time that this has happened. Despite not hosting a physical conference we would like to thank ISBS President Duane Knudson, VP Conferences Tim Exell and VP Publications Sarah Breen and the ISBS committee for their help and support with all preparations and positive discussions in the lead up to the conference cancellation. We would also like to thank everyone who submitted a paper, all members of the scientific committee who conducted reviews and all sponsors who committed to support the conference. A special thanks goes to the Editorial Board and Kirsty Roberts as conference secretary.

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Scientific Program

A total of 242 papers were accepted into this year's proceedings. These papers were not formally presented although members were invited to upload their presentation to the ISBS YouTube channel.

This year's conference papers covered the following topics:

- Athletics
- Paralympics
- Racket Sports
- Combat Sports
- Water Sports
- Injury
- Rehabilitation
- Cycling
- Football
- Strength and Conditioning
- Muscle & Tendon
- Modelling
- Equipment
- Imaging
- Wearable Tech
- Education
- Motor Control
- Methods / Statistics
- Coaching