



# Swedish Society of Biomechanics Newsletter

Issue 1, 2021

## Message from the president of SSB

Soon the end of another challenging year! This stubborn pandemic still has not released its grip on us, personally or professionally. Despite that, it's been an outstanding year in many ways. I first want to wish our former/first SSB President Hanna Isaksson a giant congratulations for earning an ERC Consolidating Grant earlier this year! Impressive and well-deserved!

**A huge congratulations** also to our SSB members who earned VR grants this year! Well done! I am *thrilled* with the outcome of VR grants this year and in recent years! You may recall that one of the original motivations for starting the SSB was to increase the visibility and status of biomechanics research and development in Sweden and to influence major funding sources to acknowledge the quality, amount, and impact of our work, and it is very exciting to see the outcome of these efforts!

It's also been an exciting year as Toni Arndt (GIH), Li Felländer-Tsai (KI) and I (KTH) hosted the ISB congress in July, with excellent help from Joakim Holmberg (LiU), Ruoli Wang (KTH) and Sofia Brorsson (GIH). We had to go fully digital this year, but are still very satisfied with the outcome – there were almost 1100 participants from 51 countries, 6 continents, spanning 23 (!) time zones. There were 950 submitted abstracts, 8 plenary lecturers, 5 scientific debates and very lively online chats during, between and after all sessions. I'm also very pleased to report that this was the first entirely gender-balanced ISB congress; the gender balance in the scientific organizing committee, plenary and invited speakers, tutorial instructors, and debate speakers was exactly balanced, and thus much more closely represented the gender balance of the attendees and of young biomechanics scientists today.

We can also happily report that since almost no participants actually came to Stockholm, we sent in a special application to host the ISB congress again in 2025 and it was accepted, so ISB2025 will be held in Stockholm! It is really anyone's guess how conferences will evolve in the future – I think many of will be happy to be able to meet and network in person again, as social interactions are usually at least as impactful and interesting as scientific content in a conference, but there are undoubtedly some advantages to digital and streaming conference platforms. It will be exciting to see how the societal interest in incorporating physical with remote participation will play out over the next few years.

**I will be waving out 2021** with mixed emotions, and welcoming 2022 with renewed optimism, not in the least because **we have scheduled the 4th SSB meeting for 17-18 March 2022, with a PhD student/post doc seminar on 16 March. Save the date!** We in the council hope the 4th SSB meeting can once again be held as a physical meeting. We are still working out the details, but we believe we in Stockholm will be able to sponsor the meeting again as previously. Stay tuned for more information in the next few weeks.

Until then, happy holidays all, and let's hope we can meet in person more frequently in 2022!

Best wishes

**Lanie Gutierrez-Farewik,**  
Professor of Biomechanics  
And Director of the  
KTH BioMEx Center



# SSB annual meetings

## SSB annual meeting 2021

The third annual meeting of the SSB was a great success, despite being held in the middle of the ongoing Covid-19 pandemic. Due to the current situation with Covid-19, the meeting was held completely online on Zoom. The online format enabled us to have two amazing keynote talks being delivered from both the US and Finland – one held by Prof. Max Ortiz Catalan from Chalmers University of Technology, and one held by Prof. Taija Finni from University of Jyväskylä, Finland.

Present during the meeting were many old but also new faces, with a total of 83 attendees. In addition to the keynote speakers, 21 attendees presented their research during a 5-minute talk and Zhou Zhou from KTH Royal Institute of Technology was awarded for the best presentation during the meeting.

The general assembly was held during the meeting. The sitting council was thanked for their services and a new council was elected; Lanie Gutierrez-Farewik (KTH) as President, Toni Arndt (GIH) as Secretary, Treasurer and Liaison with other societies, Rodrigo Moreno (KTH) as responsible for Communications and membership, Lina Lundgren (HH) as responsible for Education, Isabella Silva Barreto (LU) as Student representative and social media responsible and Johan Davidsson (Chalmers) as Liaison with industry and awards. We in the new council are excited for the coming years within the society and have started working on the meeting for next year, where we can hopefully finally see each other face to face again after such a long time apart!

## SSB annual meeting 2022

As mentioned by our President, the **4th SSB meeting is scheduled for 17-18 March 2022**. One day before, we plan to host a PhD student/post doc seminar on 16 March. As last year's event was cancelled, we keep the topic: Ethical principles in science and academic misconduct. The seminar will be hosted by Prof. Toni Arndt and guests will be invited for some of the sessions. We hope that you find this interesting, save the date in your calendar. For supervisors, please forward this information to your doctoral students who may not yet be subscribing to the newsletter. More information and signing up will be provided later.

# Upcoming events



## **World congress of biomechanics (WCB)**

Taipei, Taiwan on the 10-14th July 2022  
deadline for abstracts on the 15th of December 2021

<https://www.wcb2022.com/>

## **Orthopaedic research society annual meeting(ORS)**

Tampa bay, Florida, US on the 4-8th February

<https://www.ors.org/2022annualmeeting/>

## **European society of biomechanics (ESB)**

Porto, Portugal on the 26-29th June 2022  
deadline for abstracts on the 31st of January 2022

<https://esbiomech2022.org/>

## **International conference on computational bioengineering (ICCB)**

Lisbon, Portugal on the 11-13th April 2022

<https://iccb2022.tecnico.ulisboa.pt/>

## **World congress on computational mechanics (WCCM)**

Yokohama, Japan on the 31st July – 5th August 2022  
deadline for abstracts on the 9th of January 2022

<https://www.wccm2022.org/>

## **International Society of Biomechanics in Sports (ISBS),**

Liverpool, England on the 19th – 23rd July  
Deadline for abstracts on the 21st January 2022

<http://www.isbs2022.org/>

## **IEEE International Ultrasonics Symposium (IUS)**

Venice, Italy 10-13th October 2022  
Deadline for abstracts on the 8th of April 2022.

<https://2022.ieee-ius.org/>

## **IEEE International Engineering in Medicine and Biology Conference (EMB)**

Glasgow, United Kingdom on the 11-15<sup>th</sup> July 2022

Deadline for abstracts 3rd of December 2021

<https://embc.embs.org/2022/>

## **Annual Meeting of the International Society for Magnetic Resonance in Medicine (ISMRM)**

London, United Kingdom on the 7-12th May

2022

<https://www.ismrm.org/>

## **ISMRM Workshop on Magnetic Resonance Elastography.**

Berlin, Germany on the 25-26th August 2022

Deadline for abstracts TBA.

<https://www.ismrm.org/workshops/2022/MRE/>

## **Computed aided radiology and surgery (CARS)**

Tokyo, Japan on the 7-11th June

Deadline for abstracts 10th of January 2022

<https://www.cars-int.org/>

## **International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)**

Singapore on the 18th-22nd of September 2022

Deadline for papers 1st of March 2022

<https://conferences.miccai.org/2022/>

# Recent PhD defences

## Tiago Canal Jacques

*GIH The Swedish School of Sport and Health Sciences*

**Title:** Bilateral lower limb analysis of kinetic, kinematic, muscle activation and muscle-tendon properties of habitual runners.

**Supervisors:** Toni Arndt, Rodrigo Bini (GIH The Swedish School of Sport and Health Sciences)

[Link](#)

## Paul Sandamas

*GIH The Swedish School of Sport and Health Sciences*

**Title:** print start biomechanics: Investigations into the relationships between 3D lower body technique, first step width and performance

**Supervisors:** Toni Arndt (GIH The Swedish School of Sport and Health Sciences), Lanie Gutierrez Farewik (KTH)

[Link](#)

## Joeri Kok

*Lund University*

**Title:** Hip fractures: A biomechanical analysis of fracture strength prediction, prevention, and repair

**Supervisors:** Hanna Isaksson, Lorenzo Grassi (Lund University)

[Link](#)

## Longbin Zhang

*KTH Royal Institute of Technology*

**Title:** Biomechanical Parameter Estimation for Wearable Exoskeleton System Design

**Supervisors:** Lanie Gutierrez-Farewik, Ruoli Wang, Christian Smith (KTH)

[Link](#)

## Teng Wang

*KTH Royal Institute of Technology*

**Title:** Electroosmosis Based Treatment Approach for Cerebral Edema

**Supervisors:** Xiaogai Li, Svein Kleiven (KTH)

[Link](#)

## Binbin Su

*KTH Royal Institute of Technology*

**Title:** Human motion prediction using wearable sensors and machine Learning

**Supervisors:** Lanie Gutierrez-Farewik, Christian Smith (KTH)

[Link](#)

## Yi-Xing Liu

*KTH Royal Institute of Technology*

**Title:** Facilitating exoskeletons in daily use: Simulations and predictions for design and control

**Supervisors:** Lanie Gutierrez-Farewik, Ruoli Wang and Christian Smith, (KTH)

[Link](#)

## Ghazaleh Ghaffari

*Chalmers*

**Title:** Postural and Muscular Responses of Car Occupants under Pre-Crash Conditions

**Supervisor:** Johan Davidsson

[Link](#)

## Upcoming defences

### Elin Törnquist

*Lund University*

**Title:** Bone structure characterisation using neutron scattering techniques

**Supervisors:** Hanna Isaksson, Ulf Olsson and Stephen Hall (Lund University)

**Date:** 10th December at 9.00

[Link](#)

### Johanna Rosén

*GIH The Swedish School of Sport and Health Sciences*

**Title:** Performance determinants and classification in paracanoe

**Supervisors:** Anna Bjerkefors, Toni Arndt (GIH) and Vickey Tolfrey (Loughborough)

**Date:** 10th December 9.00

[Link](#)

# Communication channels

## Webpage:

Please visit our webpage  
[swebiomech.org](http://swebiomech.org)

We want to make the webpage a tool that is useful for the community. It is important to have it updated. Please contact us if you find incorrect or missing information from your research group ([swebiomech.org/research/](http://swebiomech.org/research/)) or courses you teach ([swebiomech.org/education/](http://swebiomech.org/education/)). In the next few days, we will create a new section with links to the PhD theses defended in the last few years. If you are interested in having your thesis highlighted on our webpage, please send us the basic information of the thesis and a link to the document. Finally, do not hesitate to suggest improvements or new functionalities.

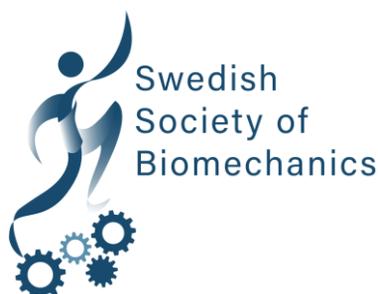
## Other channels

As you know, we are also in Twitter:

@SweBiomech. We feel the closed e-mail list for members of the SSB ([biomechanics@lists.liu.se](mailto:biomechanics@lists.liu.se)) is working very well. We thank Peter Lundberg from Linköping University for helping out with the list. Feel free to post questions, suggestions, ideas, comments, PhD defences, and information that might interest our community. Notice that the e-mails of this list reach all members of SSB. If you want to send information/questions/suggestions to the council, please use the form instead: [www.swebiomech.org/contact/](http://www.swebiomech.org/contact/) or our e-mail: [swebiomech@gmail.com](mailto:swebiomech@gmail.com)

## Suggestions

It is very important for us to receive feedback, suggestions, information that you would like to have in the next number of our newsletter, what information you would like to add to the webpage, the latest PhD defences, articles for the next newsletter, etc.



## Council members

### President

Lanie Gutierrez-Farewik (*KTH Royal Institute of Technology*)

[Visit profile](#)

### Secretary, Treasurer and Liaison with other societies

Toni Arndt (*GIH The Swedish School of Sport and Health Sciences*)

[Visit profile](#)

### Communications and membership

Rodrigo Moreno (*KTH Royal Institute of Technology*)

[Visit profile](#)

### Education

Lina Lundgren (*Halmstad University*)

[Visit profile](#)

### Student representative and social media responsible

Isabella Silva Barreto (*Lund University*)

[Visit profile](#)

### Liaison with industry and awards

Johan Davidsson (*Chalmers*)

[Visit profile](#)