

PRESIDENT'S REPORT
Karen Mickle



CELEBRATING ABC13
with Glen Lichtwark

PRESIDENT'S REPORT

By Karen Mickle

Hello members and a belated Happy New Year. I hope you had an enjoyable summer break and that you got the chance to spend some time with your loved ones and do things that make you happy. I enjoyed a well-overdue trip back to Western Australia to spend Christmas and New Year with my family before spending 3 weeks with our 3rd year Exercise and Sport Science students in the Maldives for their placement activities. But I'm now suddenly back in the swing of a teaching semester, as I'm sure many of you are now too!



2022 came to a close with ABC13 and it was so good to see many of you in attendance, both old and new faces. Thanks again to the organising committee, particularly Glen Lichtwark, all the sponsors, and volunteers who ensured the conference was a great success. I would also like to thank the executive committee who supported me over the last year and I look forward to working with everyone again over the next two years. The only change in the executive is our conference liaison officer. Thanks to Egon Perilli who provided valuable input to assist with the ABC13 conference and welcome to Patricio Pincheira who will serve on the board until 2024 and the ABC14 conference.

Speaking of ABC14, it was a pleasure to announce that Swinburne University, led by Oren Tirosh, will be hosting us down in Melbourne at the end of 2024. But before we get there, we have a big 2023 ahead of us. I'm hoping to see many of you at ISB in Japan after we missed being in person in Sweden. Keep an eye out for travel grants to be announced soon. We'll also have our annual publication of the year award, support to host a National Biomechanics Day event, and information about our regional end-of-year meeting. I really look forward to serving as President of ANZSB for the year ahead, please always feel free to reach out if I can be of any assistance. Wishing you all the best for a safe, healthy and successful 2023.

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@ANZSB

CELEBRATING ABC13

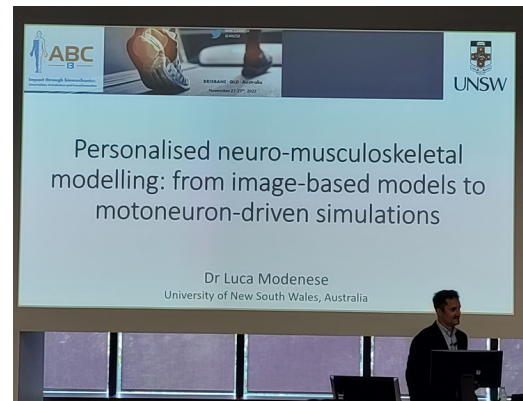
By Glen Lichtwark

149 attendees, 56 Podium Presentations, 27 Poster Presentations, 5 Exhibitors, 1 giant digital 'Cube', 521 Cups of tea and coffee...

The organising committee for ABC13 in Brisbane would like to thank all of the ANZSB members for their support and attendance of a hugely successful return to face-to-face national conferences (almost!). This year's conference was held at the Queensland University of Technology, Gardens Point Campus, Brisbane, with the theme of **Impact through biomechanics: innovation, translation and transformation**. Despite a few tricky issues, including good old COVID-19 popping up again, the conference was run successfully and highlighted the strength of biomechanics in this region.

The conference was opened by Queensland Chief Scientist, Prof Bronwyn Harch, followed by an outstanding keynote address from **A/Prof Elizabeth Clarke**. A/Prof Clarke not only provided an overview of her outstanding translational research, but also provided the audience with the background behind how the research developed and the risks and rewards in establishing industry based research partnerships. This was followed by the welcome drinks event, which allowed delegates to reacquaint themselves with old friends and for many of our students to meet up, feels like a life-time of COVID induced online conferences.

Day 1 continued with open presentations in themed sessions including Orthopaedic Biomechanics, Sports and Injury Biomechanics, Locomotion and Balance and Musculoskeletal Modelling and Simulation. Amongst these a fantastic invited presentation from **Dr Luca Modenese**. The day ended with poster session and social drinks around 'The Cube'. Having such wonderful facilities to display content digitally certainly gave delegates a taste of how poster sessions can evolve into the future.



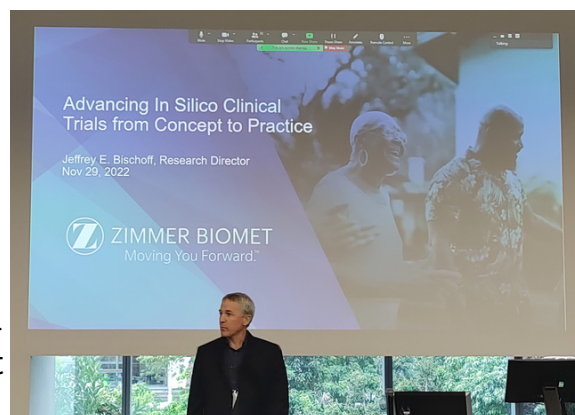
ABC13 Workshops - Our platinum and gold sponsors, [Logemas](#) and [Materialise](#), each held introductory and advanced workshops around using their products on the Sunday before the conference opening. The Australia-New Zealand Clinical Motion Analysis Group also ran a workshop ('Implementing new technologies into clinical practice') at the Centre for Children's Health Research. All workshops were well attended and with very positive feedback from attendees.

Day 2 Presentations - Like previous years, we elected to hold the conference presentations within the one venue so that people could see the diversity of research being undertaken within the Australasian region. The day opened with a captivating keynote from **Prof Dario Farina** on his work on the neural control of muscles and movement, ways to quantify this and potential for translation in neuro-rehabilitation settings.



Women in Biomechanics - Led by ANZSB President, **Karen Mickle**, and attended by more than 40 people, the breakfast and associated activities provided great discussion around gender equity in the sciences and the inspiring work of the [BRInC](#) project, bringing biomechanics to high school girls.

Day 3 Presentations – We had 3 invited presentations on the final day, starting early with the President’s lecture from **Dr Karen Mickle** on her research journey around foot health and running. This was followed by an industry presentation from **Dr Jeffrey Bischoff** from Zimmer Biomet, which gave terrific insights into how industry views and conducts research. And finally, **Dr Michelle Hall** provided details of her clinical research into osteoarthritis and some of the important clinical trials done this space. With further presentations in the areas of Spine Biomechanics, Clinical Biomechanics and Imaging and the emerging area of Shape Modelling in Biomechanics, this was again a jam packed day of quality science. The day finished with a video presentation of the inspiring work being done by the BRInC (Biomechanics research and innovation challenge) team, an awards ceremony and announcement that Swinburne University will be hosting ABC14.



Conference Dinner – Delegates made their way along the Brisbane river to the Howard Smith Wharves Barrel Hall for the conference dinner. It was a fantastic way to complete the conference, with plenty of great food and conversation. It was particularly encouraging to see so many students mingling with more experienced academics within this more casual environment, which has long been a hallmark of this conference.

Award Winners – We congratulate the following award winners:

- Best Poster: **Jayishni Maharaj** (Griffith University).
- Young Investigator: **Robert Lloyd** (NeuRA).
- New Investigator: **Sarah Woodford** (University of Melbourne).
- Emerging Female (Runner-up): **Maryam Al Sadat Ram** (University of Technology Sydney).
- Emerging Female (Winner): **Elyse Passmore** (Murdoch Children’s Research Institute).
- Best Podium (Runner-up): **Nataliya Perevoshchikova** (Griffith University).
- Best Podium (Winner): **Randika Perera** (Auckland Bioengineering Institute).
- Commendation (MSK modelling & simulation) **Julie Kim** ((ABI).
- Commendation (Orthopaedic biomechanics): **Lauren Wearne** (Flinders)
- Commendation (Sports/injury, locomotion, and balance): **Jemima Po** (UQ)
- Commendation (Spinal/Clinical Biomechanics): **Lionel Rayward** (QUT)



New Investigator Award

Young Investigator Award

Best Poster

Best Podium Presentation

Running a conference that represents value for money often means doing most things on a volunteer work basis. ABC13 could not have been achieved without all of the work that was done. The organising committee would particularly like to thank the following postdoctoral researchers who did a lot of the leg work – Max Lavail (QUT), Hoa Hoang (QUT), Patricio Pincheira Miranda (UQ). We would also like to thank Maddie McIntyre (QUT) who was also instrumental in the process. We were fortunate to have some excellent student volunteers as well; Francois Bruyer-Monteleone (QUT), Xiaolong Fan (QUT), Matthew Hambly (Griffith University), Yumei Sun (Griffith University), Eric Su (UQ), Cristian Riveros Matthey (UQ) and James Williamson (UQ).

A special thanks to Celeste Coltman and Luke Jessup for organising the Early to Mid career research retreat and student event. You can here more from Celeste and Luke on the next page. Finally, I would like to thank the ABC13 Organising Committee members, the scientific committee and the ANZSB Executive for their constant support and tireless efforts. The ANZSB community has shown how well we can work together, and long may this continue into the future.

I look forward to seeing you all at Swinburne University for ABC14!
Glen(conference co-chair)



STUDENT AND EMCR EVENTS

ANZSB EMCR Retreat, by Celeste Coltman

The ANZSB EMCR Retreat was held immediately prior to ABC13 on Saturday and Sunday. The retreat kicked off with Drinks on Saturday at The Gresham Bar and dinner at Corbett and Claude. It was a lovely opportunity to meet some new EMCRs and catch up with some familiar faces (pictured).

Two formal sessions were held the following day focusing on research and teaching. Seventeen members attended the research workshop where, in a speed meeting format, we shared our research areas/strengths, unique skills, areas we would like to move into and current opportunities to collaborate. The aim was to build meaningful collaborations and new links for collaboration were formed on the day. Eight members attended the teaching workshop where we shared our



unit structures, discussed assessments, practicals and delivery mode. There was a particular focus on strategies and new tools for effective online delivery. Discussions around the use of OpenCap and Lumi HP5 were particularly relevant and helpful. I know many of us are already implementing these tools into our units following this session! Thanks to all the ANZSB EMCR community who attended – such a great bunch of researchers, teachers and people 😊.

Student events

Happy new year to you all,

I firstly wanted to speak on the great turnout that we had to the student Q&A and social event at ABC13, as well as to give a massive thanks to Dr. Elizabeth Clarke, Dr. Julie Choisne and Dr. Ben Hoffman for chairing the Q&A. We received a lot of positive feedback from the students that attended and will definitely be aiming to put on similar events going forward. Speaking of, you may remember that I sent out a survey last year to poll the topics that are of most interest to ANZSB student members. Aside from Q&A's with professionals from academia and industry, there seemed to be a lot of interest in research technology workshops, so look out for events in this space as well, and please do email me if you have any specific tech workshop requests! Also, for those students attending ISB 2023, be sure to keep an eye out for details on ANZSB travel awards.

As always, if you have any student-related questions or suggestions, please feel free to send me an email.

Luke

SHOUT OUT TO ANZSB TRAVEL AWARD WINNERS

Laura Carman (Auckland Bioengineering Institute)

"Combined shape model of the lower limb in a paediatric population provides accurate bone shape estimation"

I had the opportunity to attend the ABC 13 conference to present my work on a combined shape model of the lower limb in a paediatric population. I thoroughly enjoyed my experience and would like to thank the ANZSB for awarding me a travel grant so I could present my work to a larger audience. The highlight of the conference for me was the social events where I could interact with a wide range of people and find out about their research. It was beneficial for me to see opportunities for potential future research areas.

Dylan Ashton (Kolling Institute of Medical Research)

"Challenging perceptions of human tendon allografts: The effects of donor age, sex, height and tendon mechanical properties"

Recently, I had the privilege of presenting my PhD research at ABC13 exploring ways to increase graft options for ACL reconstruction. We investigated the effects of different donor characteristics on the mechanical properties of the widest range of human leg tendons included in a single study. ABC13 provided the usual interesting presentations, especially from the keynote speakers, but I underestimated how beneficial and fun it was to meet the other students and early career researchers. It was comforting and motivating to hear from those who were also nearing the end of their candidature, and those who have recently finished. I wish my fellow PhD peers the best of luck! It was also great to meet many of our established researchers in person, sometimes I find the best career and personal advice comes from the social events and conference dinner. I would also like to mention how valuable I found the student Q&A session, and I would like to thank the mentors Ben, Julie and Liz for their time and words of wisdom. I would also like to extend my gratitude to the organising committee, our hosts, and anyone else involved in planning and running the conference. ABC13 was not only a valuable learning opportunity, but also a personal highlight of my PhD journey.

Yilan Zhang (NeuRA)

"Three-dimensional architecture of human rotator cuff muscles in vivo"

Maryam Alsadat Rad (University of Sydney Technology)

"Investigation of cellular response to mechanical loading in a 3D in vitro spinal cord contusion injury model"

Maryam Tayebi (Auckland Bioengineering Institute)

"The effect of repetitive subconcussive head impact on the brain of high school rugby players: a longitudinal study"

Rami Al-Dirini (Flinders University)

"Identifying shape features associated with scaphoid fractures"

Jordon Anderson (Macquarie University)

"Peak valgus, but not frontal plane knee RoM, in a body weight squat and countermovement jump are related"

COMMUNICATIONS

by Elyse Passmore



National Biomechanics Day

With National Biomechanics Day fast approaching we are keen to hear about any NBD activities you are hosting.

Expressions of Interest for Journal of Biomechanics editorial board

The ANZSB is taking expressions of interest for our 2 representatives on the Journal of Editorial Board. Please send any questions or expressions of interest to austnzbiomech@gmail.com.

ABC Regional Symposiums

Following from the success of ABC regional symposiums the ANZSB will be offering support for those wishing to host their own regional ABC in 2023. Watch your inbox for more information.

Awards

Applications are now open for **Travel awards** to ISB 2023. ANZSB will be offering Travel awards valued at \$750 for ISB 2023 in Japan for students and EMCRs. For further details and to apply, check it out on the [website](#). Every calendar year, ANZSB announces awards to support its members attending and presenting at conferences in Australia and New Zealand as well as overseas.

ANZSB offers two conference awards per announcement:

- Student Award for those ANZSB members who are currently enrolled in a biomechanics-related research higher degree
- Early-Mid Career Researcher (EMCR) Award for those ANZSB members who are no more than 10 year post-PhD, including approved extensions due to career disruptions

Applications for the **ANZSB Publication of the year award** will open shortly. The ANZSB Publication of the Year Award recognises publication of excellent biomechanical research by ANZSB members. The award will comprise \$250 and a certificate. Please note article must have been published in 2022.

SOCIÉTÉ DE BIOMÉCANIQUE

The Société de Biomécanique (SB) is an affiliated society with the ANZSB. A benefit of this memorandum of understanding is access to SB newsletters and announcements as well as reduced registration rates to attend the annual SB Congress.



Earlier this month in the most recent SB newsletter came out, check it out [here](#), SB newsletters can always be found through the members section of our website (<https://www.anzsb.asn.au/sb>). To access these newsletters, members are required to create a log-in and register for website members access.