

# Australian & New Zealand Society of Biomechanics



## Newsletter, August 2016

### ANZSB Committee

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Doctor Liz Clarke  
The Kolling Institute, University of Sydney, NSW

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Professor Rod Barrett  
Griffith University, QLD

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Victoria University, VIC

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Doctor Alasdair Dempsey  
Murdoch University, WA

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### Note from the Editor

Welcome to the second issue of the newsletter for 2016. Commiseration to those who are receiving this in their second week of teaching. Just remember we can all celebrate the end of another year of teaching at ABC10 in Melbourne in December.

This edition includes the latest on ABC10 as well as a call for nominations for the executive and ABC11. We also get to celebrate winners and announce more prizes.

Like normal I really would like content, both for social media and this newsletter. Please let me know if you have anything that would interest out members from jobs, scholarships, opportunities and news stories.

Alasdair Dempsey  
a.dempsey@murdoch.edu.au

# Presidents Report

It feels like it's been a fairly quiet quarter for our society, but reflecting on it now there has been a fair bit of action. We are gearing up now for ABC10, with conference abstracts now closed and excellent keynote and invited speakers confirmed. The early bird registration deadline is fast approaching – 19th August – so visit the ABC10 website to get your discounted registration. Don't forget that you can contact fellow members on the [Facebook group](#) to organise travel or social arrangements at ABC10. Organisation for ISB Brisbane 2017 is also well underway with the Preliminary Program recently uploaded to their website and dates set for registration and abstract submission. See [www.biomech2017.com](http://www.biomech2017.com) for details. In this newsletter we also call for nominations for the next ABZSB Executive Committee and we have our LAST call for expressions of interest to host the ABC11 meeting in 2018. Please consider nominating yourself to serve our great society. We hope to announce the next ABC conference location and the next ANZSB Executive committee at ABC10 in Melbourne. In other news, here we announce new travel awards and congratulate our previous travel award winners. It has been fantastic to support several travel awards this year and to extend these awards to deserving ECRs as well as the longstanding support for our students.

Liz Clarke

[elizabeth.clarke@sydney.edu.au](mailto:elizabeth.clarke@sydney.edu.au)

## New ANZSB Membership Terms

### Join ANYTIME and you'll get 2 full years

In the past, ANZSB membership terms have coincided with ABC conference dates so that all memberships fell due at the next ABC conference, regardless of when the membership was taken up. The ANZSB Executive Committee have decided to remove this constraint and allow members to join or renew at any time in the year and receive two full years of membership. This makes it fairer for those that would like to join and renew out of sync with ABC meetings. A reminder email will be sent to prompt membership renewals when they fall due.



#### ANZSB on Social Media

Don't forget that we have both a Twitter account ([@ANZSB](#)) and a Facebook page (<https://www.facebook.com/AusNewZealandBiomech>) I will be keeping them up to date with society news and general biomechanics news such as up coming conferences and job opportunities. We also want to promote the work and success of our members. As such we are happy to share papers published by members and news items such as members winning awards or completing PhDs. If you have any items like this please DM [@ANZSB](#) or send me an email to [a.dempsey@murdoch.edu.au](mailto:a.dempsey@murdoch.edu.au).



We also have a Closed Facebook group at <https://www.facebook.com/groups/ANZSB/> If you are not a member please request membership. If your Facebook account is in a different name let me know as we only approve membership for financial members.

# Travel Awards Now Open

As part of our ongoing mission to support young and upcoming researchers we are now calling applications for Student and Early/Mid Career Researcher travel awards. There will be a one award per category of up to \$500 to support travel ABC10. Applications are welcome for individuals in Melbourne however receipts may be requested.

To be eligible for the Student Award you:

- Be currently enrolled in a higher degree by research course (Honours, Research Masters, PhD)
- Be a member of ANZSB as well as your supervisor being a member. To become a member please visit <http://www.anzsb.asn.au/membership/membership.htm>
- Be the presenting author, must attend the conference, must acknowledge support from ANZSB in their presentation, and be willing to write a review of the conference for an ANZSB newsletter

To be eligible for the ECMR Award you:

- Be less than 10 years post-doctoral (can be extended for career disruption on application)
- Be a member of ANZSB. To become a member please visit <http://www.anzsb.asn.au/membership/membership.htm>
- Be the presenting author, must attend the conference, must acknowledge support from ANZSB in their presentation, and be willing to write a review of the conference for an ANZSB newsletter

To submit an application submit the following to Professor Rob Herbert (ANZSB Secretary/Treasurer) at [austnzbiomech@gmail.com](mailto:austnzbiomech@gmail.com) by 9th of September. You should receive a confirmation email.

- Your abstract (including title and author list)
- For Students—the name of your university and supervisor
- For ECMR—the date of your PhD Completion
- Confirmation of acceptance will be identified from the ABC10 organising committee

Winners will be notified by email and the ANZSB communication channels.

## Travel Award Winner

Congratulations to Logan Wade from the University of Queensland who was awarded a ANZSB Student Travel Award to attend the 2016 American Society of Biomechanics conference to present his work entitled:

Effect of jump height vs bodyweight on lower limb joint work distribution with increasing work demands

We will bring you a snapshot of the conference in the next newsletter.



# ABC 10 Update

We are currently 5 months away from ABC10 commencement and we have completed the first phase of preparation/organisation for ABC10. Abstract submissions have now closed. We had an excellent yield of abstract submissions with more than 90 abstracts submitted in total. The breakdown of abstracts is as follows: > 85 abstracts from Australia and another 12 international abstracts from New Zealand, Japan, Switzerland, Turkey and Canada. The following table displays number and type of abstracts submitted so far for ABC10:

Sessions	Oral	Poster	Total
Mechanobiology	7	0	7
Medical Imaging	8	1	9
Tissue Engineering	4	2	6
Human Movement	20	4	24
Clinical & Sports Biomechanics	23	3	26
Computational Modelling	9	1	10
Other Topics in Biomechanics	6	1	7
<b>TOTAL</b>	<b>77</b>	<b>12</b>	<b>89</b>

Abstract reviews are currently underway. Delegates will be informed in due course of acceptance of abstracts in August.

**We also focus on** updating the conference 'scientific program' and other attractive incentives to further increase awareness and appeal for ABC10 registration. Currently planned sessions/activities include:

Conference dinner at one of Melbourne's many iconic venues

Networking session on first day of the conference for all registered guests

Optional 2 hour clinical/injury biomechanics workshop

## Sponsorship

Local support for ABC10 was obtained by the University of Melbourne including the Faculty of Medicine and the Faculty of Engineering. Externally we have successfully secured a Platinum sponsorship and are in negotiations with Gold and Silver sponsors. Also smaller sponsorship packages are still available.

The ABC10 organising and scientific committee would like to express their sincere thanks to the Australian and New Zealand biomechanics community which have again shown strong support for our Biennial Scientific meeting. We are looking forward to a very stimulating ABC10 meeting in Melbourne.

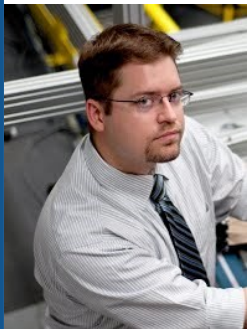
Peter Pivonka

# Keynote Speakers



**[Professor Ralph Müller \(ETH Zurich\)](#)**

Ralph Müller's research employs state-of-the-art biomechanical testing and simulation techniques as well as novel bioimaging and visualization strategies for musculoskeletal tissues. Today, these techniques are successfully employed for the quantitative assessment and monitoring of structure function relationships in tissue regeneration, growth and adaptation. His approaches are now often used for precise phenotypic characterization of tissue response in mammalian genetics, mechanobiology as well as tissue engineering and regenerative medicine.



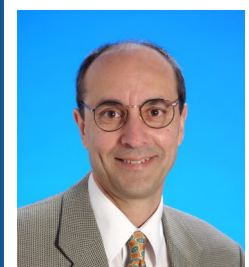
**[Associate Professor David Cooper \(University of Saskatchewan\)](#)**

David Cooper is using 3-D imaging technology to study the microscopic architecture of bones. To accomplish this, he is combining micro-CT scanning technology with synchrotron X-ray technology. This combination of technologies results in high-resolution, 3-D images of bone structures, allowing medical researchers to learn more about how bone remodelling is related to osteoporosis and bone aging. Bone remodelling is a naturally occurring process in which new bone tissue replaces mature bone tissue.



**[Professor Peter Choong \(SV Department of Surgery, University of Melbourne\)](#)**

His research which has been supported by recurrent grant funding focuses on 3 areas, that underpin his clinical programmes, namely improving outcomes of arthritis surgery, studying the molecular regulation of bone tumours and advanced limb reconstruction. Prof Choong is widely published with over 290 peer reviewed articles in these areas.



**[Professor Marcus Pandy \(Dept. Mechanical Engineering, University of Melbourne\)](#)**

Prof Pandy's research is aimed at using computational models of the human musculoskeletal system to describe and explain muscle and joint function during functional activities such as walking. He has published over 100 journal papers on his research related to musculoskeletal biomechanics and currently serves as a principal investigator on a number of grants from the ARC and the NHMRC



**[Professor Qing Li \(Dept. Mechanical Engineering, University of Sydney\)](#)**

Professor Li's research interests include topology optimisation for design of microstructural materials, electromagnetic metamaterials, biodegradable materials for tissue scaffolds and mechanics of bio-materials.



**[A/Prof Adam Bryant \(Centre for Health, Exercise and Sports Medicine, University of Melbourne\)](#)**

Dr Bryant's research interests are on evaluating neuromuscular and biomechanical adaptations to musculoskeletal injury and surgery with a focus on knee injury interventions. He received numerous national competitive grants from ARC and NHMRC

For more details visit <https://www.ivvy.com/event/ABC10/>

# Call for EOI to host ABC11

The executive board of the Australian & New Zealand Society of Biomechanics (ANZSB) invites proposals from organizations interested in hosting the 11th Australasian Biomechanics Conference (ABC11) scheduled to be held in late 2018.

The aim of ABC is to bring together researchers engaged in the scientific study and application of biomechanics to share, listen to, and actively discuss their most recent findings in order to promote the exchange of ideas and stimulate further cutting edge biomechanics research. Since the first conference in 1996, ABC has gained a reputation as a venue for high quality research presented in a welcoming community setting, with a particular focus on student and ECR engagement. Potential hosts of ABC should therefore consider creating a student-friendly conference as a central principle in their bid.

ANZSB will select a host and location from the proposals that are received in response to this call. Proposals should be submitted by ANZSB members affiliated with a university, agency, or institution. An EOI to host ABC11 should be made, in writing, to the Conference Liaison Officer. **If you would like to host ABC11**, please discuss your interest with Karen Mickle in the first instance, and submit your formal expression of interest **by September 30, 2016** to [Karen.Mickle@vu.edu.au](mailto:Karen.Mickle@vu.edu.au)(03 9919 5611).

## Up Coming Conferences

Conference	Venue	Date	Abstracts Due
<a href="#">Sports Medicine Australia</a>	Melbourne	12-15 October 2016	Passed
<a href="#">International Conference on NeuroRehabilitation/International Workshop on Wearable Robotics</a>	Segovia	18-21 October 2016	Passed
<a href="#">ANZ Orthopaedic Research Society (ANZORS)</a>	Melbourne	13-15 October 2016	19th August 2016
<a href="#">Australian Biomedical Engineering Conference</a>	Brisbane	30 Oct—2 Nov 2016	12th August 2016
<a href="#">Australasian Biomechanics Conference 10 (ABC10)</a>	Melbourne	4-6 December 2016	Passed
<a href="#">IOC World Congress on Prevention of Injury and Illness in Sport</a>	Monaco	16-18 March 2017	1 September 2016
<a href="#">International Society of Biomechanics</a>	Brisbane	23-27 July 2017	13 January 2017



# ANZSB Executive Committee: Call for Nominations

Nominations for the following positions are now invited:

- **President:** Provide leadership in chairing the Executive Committee, maintain links between members of the Executive Committee to ensure the continued operation of The Society.
- **Secretary/Treasurer:** Maintain The Society's membership list, handle all official correspondence for The Society, maintain The Society's financial accounts, provide an annual audited statement of accounts.
- **Communications Officer:** Produce regular newsletters to maintain links between members of The Society, liaise with the secretary/Treasurer with regard to sponsorship of The Society through its newsletter, be involved with the general promotion of the Society and manage electronic platforms (e.g. website, Facebook, twitter accounts).

Other Executive Committee positions (not for nomination):

The roles of Past President and Conference Liaison Officer are appointed based on previous roles within the committee: the Past President for 2016-2018 will be Liz Clarke based on 2014-2016 Presidency, and the Conference Liaison Officer for 2016-2018 will be Peter Pivonka based on 2014-2016 role of ABC10 Chair.

Each committee member will serve for two years. Current Executive Committee members may be re-elected. The President of the Society will not stand for immediate re-election, as he/she will be serving as Past President.



If you would like to nominate yourself for one of these positions please send a short biographical paragraph (maximum 250 words) about yourself together with a photo to Rod Barrett ([R.Barrett@griffith.edu.au](mailto:R.Barrett@griffith.edu.au)), who will collate the nominations and email these out to ANZSB members for voting.

**Nominations are due by Friday 26th August, 2016**

Voting will commence shortly after and will close on Friday 4th November, 2016. The new Executive Committee will be announced at ABC10 in Melbourne, 4th-6th December 2016. There will be a general meeting of ANZSB members at the ABC10 conference. More details will follow in the next newsletter.

Please forward this call for nominations to other interested Australian and New Zealand biomechanists who may not be part of our membership or email list.