

ANZMAG NEWS – August 2020

By Prof. Oliver A.H. Jones (RMIT University - oliver.jones@rmit.edu.au)

Dear all,

Welcome to the August 2020 edition of ANZMAG News. I hope you are all well?

ANZMAGers in the news

Congratulations to Marc-Antoine Sani from the University of Melbourne who was recently listed as a Australian Research Field Leader in Biophysics in the Australian Newspaper report (<https://specialreports.theaustralian.com.au/1163512/life-sciences-earth-sciences/>) I understand he was also recently promoted to Senior Lecturer. Well done Dr Sani.

EDUCATION/MEETINGS

There have been a few new Zoom meetings recently but unfortunately two just passed (sorry). The list below was compiled by Dr Ann Kwan but I'm the slow link sending them out.

British Biophysical Society 60th Anniversary meeting - <https://britishbiophysics.org/posts/2020/2020-06-01-bbs2020online/> (I haven't see recordings yet, will keep you posted if they appear).

The American Society for Biochemistry and Molecular Biology Policy Webinar Series: The pandemic's impact on non-COVID research - https://zoom.us/webinar/register/WN_B9-K_ljKtKWbYzEQdBTMIA

ASBMB's online meetings 29 and 30 September (free registration) - <https://www.asbmb.org.au/meetings/asbmb-2020/>

Instruct-ERIC 'Structure Meets Function' webinar – 18 September - <https://instruct-eric.eu/content/instructeric-webinar-series-structure-meets-function> Recordings are available online:

The Biophysics Society has a series of webinars on career planning especially in light of the current environment which some may find interesting <https://www.biophysics.org/blog/category/webinar-recordings>

Metabolomics 2020 Online, 27-29 October Free registration but must be a member <http://metabolomics2020.org/>

PAPER OF THE MONTH

This month's paper of the month is sort of also software of the month as well. The title is "DeerLab: a comprehensive software package for analyzing dipolar electron paramagnetic resonance spectroscopy data" It is by Ibáñez et al. The authors show that DeerLab can perform one-step analysis based on separable non-linear least squares, fit dipolar multi-pathway models to multi-pulse DEER data, run global analysis with non-parametric distributions, and more. You can read more at <https://mr.copernicus.org/preprints/mr-2020-13/mr-2020-13.pdf> and find the software at <https://pypi.org/project/DeerLab/>

NEW BOOKS

I came across a couple of new books recently that may be of interest

- Electron Paramagnetic Resonance Spectroscopy: Fundamentals by Patrick Bertrand, covers a lot of ground for presenting the basics of EPR and its applications. See <https://www.springer.com/gp/book/9783030396626>
- Essential Mathematics for NMR and MRI Spectroscopists by Keith C Brown, covers many of the underlying theoretical and practical aspects of NMR and MRI spectroscopy from a maths point of view See <https://www.amazon.com.au/Essential-Mathematics-NMR-MRI-Spectroscopists/dp/1782627979>

GRANTS AND AWARDS

- The Metrohm ED-RACI Young Electrochemist Award 2020 is open to HDR students and Postdocs using electrochemistry and/or spectroelectrochemistry techniques in their research. See <https://www.metrohm.com/en-au/company/events/anz-edraci-young-electrochemist-award>.
- Applications are currently open for the Google Research Scholar grants (<https://research.google/outreach/research-scholar-program/>)
- The Australian Government is inviting applications under the Future Drought Fund: Natural Resource Management Drought Resilience Program - see <https://www.communitygrants.gov.au/grants/nrmdroughtresilienceprogram> for details. There are plenty of applications of MR in agriculture (<https://www.google.com/search?client=firefox-b-d&q=nmr+in+agriculture>)

CALL FOR NIF SURVEY HELP

The National Imaging Facility (NIF) is a project funded by NCRIS, enabling world-class research throughout Australia using MRI, PET, CT, and various other imaging infrastructure. NIF is looking to understand imaging research needs and opportunities to place Australia at the forefront of international developments. To this end they are asking for help with a 5-minute survey for input into the next round of investments carried out by NIF. They ask us to participate before Monday, October 12th at <https://survey.zohopublic.com/zs/w9bAbl>

STORIES FROM THE WEB

- <https://www.miragenews.com/cellular-signposts/>
A story on using EPR to study how reactions catalysed by radical S-adenosylmethionine (SAM) enzymes work.
- https://www.eurekalert.org/pub_releases/2020-09/gsu-rdt093020.php
This article is about using data from functional magnetic resonance imaging (fMRI) to help psychiatrists predict how patients will respond to medication.
- <https://phys.org/news/2020-09-nuclear-magnetic-resonance-powerful-tool.html>
Could a new computational model make nuclear magnetic resonance an even more powerful tool for researchers? Read the story at the link above to find out more.