

## ANZMAG NEWS – AUGUST 2018

By Oliver A.H. Jones (RMIT University - [oliver.jones@rmit.edu.au](mailto:oliver.jones@rmit.edu.au))

Dear all,

Welcome to the August ANZMAG e-newsletter. This month we have the usual mix of magnetic resonance and science related items for you.

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### TEACHING MATERIALS

I am sure I don't need to tell you all that the Fourier Transform is very important for NMR (and IR) Spectroscopy – but it is not always easy to explain. I came across this very nice animation that explains what is going on with the mathematics of the Fourier Transform last week. The link is here <https://www.youtube.com/watch?v=spUNpyF58BY> it goes into a lot of depth and while it focuses on Fourier Transform of soundwaves the principal is the same for NMR.

There is a more complex explanation at <https://www.youtube.com/watch?v=1JnayXHhjlq>

I also came across this very nice video from Bruker on what is 2D NMR which your students might find helpful. You can see it at <https://www.theresonance.com/what-is-2d-nmr/>

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### 2018 ISMAR FELLOW CALL

The ISMAR Fellows Committee (Gil Navon, Bernhard Blümich, Angela Gronenborn, Wolfgang Lubitz, and our very own Prof Frances Separovic) now solicits nominations for new fellows from all regular members and Fellows. Fellows are elected on the basis of their contributions to the field of magnetic resonance, both through the impact of their research on the magnetic resonance community itself and through their efforts to advance the appreciation of magnetic resonance in the broader scientific community. Fellows need not be current members. See <http://www.weizmann.ac.il/ISMAR/2018-ismar-fellows-nomination-call> for more information and if you know anybody could maybe consider a nomination.

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### MAGNETIC RESONANCE IMAGING COURSE

There will be a one-day Magnetic Resonance Imaging Course at the University of Newcastle Sydney campus (55 Elizabeth St Sydney) on Saturday 13th of October 2018. The course will i) present the latest applications in the MR field, ii) provide participants with a deeper understanding of advanced techniques, and iii) have a special focus on musculoskeletal, head and neck, prostate, neuro, pelvis and abdomen MRI in addition to emerging role of MRI in radiation therapy. It will also iv) charge to attend. Please see <https://www.dropbox.com/s/exrlkn6t52t2sgi/MagneticResonanceCourse-13Oct2018-UseMe.pdf?dl=0> for a flyer and <https://sydney.newcastle.edu.au/course/MGRN> for more information on the course.

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## SUPERSTARS OF STEM OPEN FOR APPLICATIONS

Science and Technology Australia's 'Superstars of STEM' is now open for applications. This is a great program and now getting ready for its 2<sup>nd</sup> year. The program provides passionate and articulate women in all areas of STEM – and at all career stages – with the skills and opportunities to become visible public role models and help change the public stereotype of scientists. To find out more and to apply please see <https://scienceandtechnologyaustralia.org.au/what-we-do/superstars-of-stem/> and press the big orange button on the left-hand side.

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## ACS REVIEWER LAB

In my work as an editor it has become obvious that there is a lack of resources for those starting out as reviewers. What makes a good review? We probably all have our own ideas based on our experiences but you need to ACS Reviewer Lab is a free peer-review training course. The unit is an interactive, six module course which covers the basics of the peer review process and provides concrete advice on how to compose and organize a peer review. I think it is a really good idea to put this online to help even those of us who do a lot of reviews. See <https://www.acsreviewerlab.org/> for more.

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## REQUEST TO FILL IN SURVEY ON GENDER ISSUES IN STEM

I have covered this one before but I have been asked to try and encourage more responses to the global survey of gender issues in STEM. The survey is at <http://statisticalresearchcenter.org/global18> and is backed by a group of heavy international professional societies including IUPAC. At present the response rate from Australia/NZ scientists is quite low, and they want more before the survey closes at the end of October. The survey is quite quick to fill out (I've done it) and the data is needed. Please have a look at it today if you can. I know we all hate surveys but this one is potentially quite important.

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## STORIES FROM THE WEB

- <https://www.bruker.com/products/mr/epr/biological-ros-and-rns-detection/ros-detection-diabetes.html>? This story is on the use of EPR to knock out a popular diabetes theory using Mice models of the condition.
- <https://www.cnbc.com/2018/08/21/why-facebook-wants-to-help-with-medical-imaging.html> - This story about the fact that Facebook and NYU Want to Make MRIs 10 Times Faster. How? Read on and find out (OK, it's AI).
- Last month I featured the Bruker NMR test for honey purity – This month all heck breaks loose. Read why here <http://www.abc.net.au/news/2018-09-03/capilano-and-supermarkets-accused-of-selling-fake-honey/10187628?section=business>

- Note to self, the Newspapers don't know what NMR stands for.

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