

SHORT CIRCUIT

Newsletter of the Canberra Mathematical Association INC

Coming Events:

9-11 July. AAMT conference, Brisbane.

17 August, CMA conference

13 November, 2019—AGM

Wednesday Workshops:

20 March at Hedley Beare Centre,
'Japanese Lesson Study' Steve Thornton.

NEWS AND COMMENT

Term one is under way and so is the tenth year of Short Circuit. This newsletter took its name from an earlier and more substantial CMA publication called Circuit, the name reflecting the Hamilton circuit of the CMA logo.

Short Circuit aims to inform readers about events, initiatives and changes that are happening in local schools and in education more broadly, and about ideas relevant to mathematics education. Readers' contributions in the form of comments, observations, opinions and feedback are keenly sought. Communicate with us through the CMA email address:

canberramaths@gmail.com

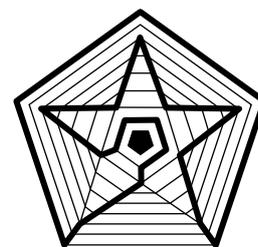
There is a Wednesday Workshop scheduled for 20 March at the Hedley Beare Centre, 51 Fremantle Drive, Stirling, ACT. The workshop will be presented by Dr Steve Thornton and

will be on the topic of Japanese Lesson Study. We hope teachers from both north and south of the lake will attend this single session. It will assist our planning if you let us know that you wish to attend. Email canberramaths@gmail.com.

The session will run from 4:00 to 6:00 p.m.

Membership renewals and new memberships are arriving steadily. If you have not already done so, you can get the 2019 membership forms from the CMA [website](#). If you make a payment through the banking system, please make sure it is clearly marked with your name so that your membership can be identified and processed.

Read about the miniMaths workshops, on page 5.



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MEMBERSHIP

CMA memberships expire on **31 Dec. each year**

A membership application form can be accessed from the CMA website:

<http://www.canberramaths.org.au>

CMA membership includes automatic affiliation with the Australian Association of Mathematics Teachers and a full-year subscription to a AAMT journal.

Members are entitled to attractive rates for CMA professional development events and the annual conference.

CMA members may attend conferences of other AAMT affiliates, MAV, MANSW, etc. at member rates.

Note: Receipts for membership and other payments are sent out by e-mail. If you have paid for your membership but have not received a receipt or if your AAMT journal(s) have not been arriving, please advise CMA.

**CANBERRA
MATHEMATICAL
ASSOCIATION**

IM²C

Australia's pre-eminent mathematical modelling competition

It's IMMC time again! Team registrations for the 2019 **International Mathematical Modeling Challenge** (IMMC) opened during the first week of Term 1. At the time of writing, ACER has already received registrations from 38 teams, involving about 140 students (currently 56% boys; 44% girls). Teams registered so far comprise students from Years 7 to 12, and have come from most of Australia's states and territories.

In 2018, following Australia's national phase of the IMMC, two teams were selected as Australia's entry to the international phase of the Challenge: a team from Radford College in ACT, and a team from Baulkham Hills High School in NSW. The Radford College team went on to achieve the highest award internationally, with team members Ryan Stocks, Brianna Wiseman, Emily Li, and Stone Sima, and team advisor Kym Palfreman, receiving the sole 'Outstanding Achievement' award at the international awards ceremony held in Melbourne in August. Links to videos from the awards ceremony can be viewed here

(<https://www.immchallenge.org.au/articles>).

Team registration for 2019 will be open right until the dates for commencement of this year's Challenge (teams must choose a period of up to 5 consecutive days between 12 March and 5 April). Registrations are processed through the IMMC website (<https://www.immchallenge.org.au>) where you can find further information about the IMMC and excellent resource materials designed to help teachers develop modelling skills in their students. A consolidated resource guide is available for free download from <https://www.immchallenge.org.au/files/IM2C-Teacher-and-student-guide-to-mathematical-modelling.pdf>.

Frequently asked questions

1. How can teams structure the 5-day period they choose for the IMMC?

Schools can support team participation in a variety of ways. They can allow maths class time to be used, as well as negotiating student release from other classes. Lunchtimes and time after school are also generally used. Teams often work together on three school days, and for some time over a weekend.

It is up to the team advisor to agree to a team's particular arrangements, to ensure that he or she is in a position to certify that the team has abided by the rules.

2. For which students is the IMMC intended? How many teams can be entered? Are there different divisions for students of different age?

In each year of Australia's participation in the IMMC, teams have been formed of secondary students in Years 7 to 12. A major goal of the IMMC is to promote mathematical modelling for all students, not just for high-ability students. The highest concentration of students has come from Years 9–11. Teams can include students from different year levels.

Schools are able to enter as many teams as they can sensibly manage and should keep in mind that team advisors have to sign a declaration for each submitted report that the authoring team abided by all the rules.

A single modelling problem is set for all teams participating (not only teams in Australia, but also teams in the other 55 or so countries involved). The judging panel takes criteria into account that include but go well beyond the technical level of the mathematics used, giving suitable emphasis to the various parts of the modelling process (clarifying the question to be answered, identifying relevant variables and relationships among them, devising a workable model, testing and evaluating the model and results in relation to the question context, communicating results). We routinely see brilliant work done in relation to these criteria by younger students as well as older and more mathematically advanced students.

3. How much does participation in the IMMC cost?

Team entry is free.

4. How closely does the team advisor need to monitor the work of the team?

Team advisors need to decide how much direct observation is needed in order for them to sign the declaration that the team has abided by the rules.

Team members are able to use any resources they find but cannot have input from non-team members. They must acknowledge all information sources used in the team report.

In some cases, teams have been given support such as a room to work in, or help with on-line communications tools that facilitate team collaboration, and sharing work in progress.

SHORT CIRCUIT
CONFERENCES
POSITIVE MATHEMATICS FOR INDIGENOUS STUDENTS (PM4IS)

8 – 9 March 2019, Trinity Bay State High School, Cairns, Qld

Adding communities, Multiplying Success.

The event has a focus on mathematical processes, STEAM, relationships, and student empowerment.

The keynote speakers will be *Dr Chris Matthews* (ATSIMA) and *Professor Pauline Taylor-Guy* (ACER).

Friday, 8 March: creating connections. Saturday, 9 March: a visit to Yarrabah, Aboriginal community.

www.pm4is.com

MERGA 2019

30 June 2019 – 4 July 2019 Curtin University, Perth, WA. The conference will also feature a Teachers' Day on the 29 June 2019.

The theme of the 2019 conference is Research Impacting Classroom Practice.

<http://www.promaco.com.au/events/MERGA/>

AAMT 27TH BIENNIAL CONFERENCE

9-11 July 2019, South Brisbane, Qld, Australia.

Theme: ['Why Maths? Inspiration beyond the classroom'](#).

AAMT warmly welcomes participation from all teachers, education leaders, policy and decision makers, and mathematics practitioners. We are looking forward to a stimulating and practical discussion that will further mathematics education in Australia.

Offers to present are due by 18 February 2019.

For registration and information visit the [website](#).

15TH INTERNATIONAL CONFERENCE OF THE MATHEMATICS EDUCATION FOR THE FUTURE PROJECT

Theory and Practice: An Interface or A Great Divide?

4-9 August 2019, Maynooth University, Kildare, Ireland

The Mathematics Education for the Future Project was founded in 1986 to develop innovation in mathematics, statistics, science and computer education. Since 1999 there have been 14 conferences throughout the world. The conferences are renowned for their friendly and productive atmosphere and attract many of the movers and shakers in education world-wide.

Download the first announcement and call for papers: <http://directorymathsed.net/public/Ireland/IrelandConferenceFirstAnnouncement.docx>

For queries, email: alan@cdnalma.poznan.pl

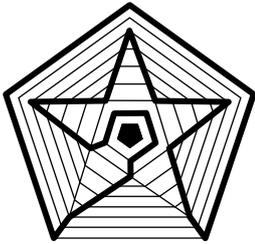
CMA 2019

17 August

Aimee Albrecht is confirmed as a keynote speaker. Further details to be announced soon.

reSOLVE & MATHS 300

[AAMT](#) provides workshops to support Maths 300 and Resolve. If your school would like to inspire your teachers and students with Maths by Inquiry, contact Matt Skoss (msskoss@aamt.edu.au) for information about professional learning.



**NEWSLETTER OF THE CANBERRA
MATHEMATICAL ASSOCIATION
INC**

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We're on the Web!

<http://www.canberramaths.org.au/>

THE 2019 CMA COMMITTEE

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	Steve Thornton	Australian Academy of Science
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Find us on Facebook

ABOUT THE CMA

The Canberra Mathematical Association (Inc.) is the representative body of professional educators of mathematics in Canberra, Australia.

It was established by, among others, the late Professor Bernhard Neumann in 1963. It continues to run - as it began - purely on a volunteer basis.

Its aims include

- * the promotion of mathematical education to government through lobbying,
- * the development, application and dissemination of mathematical knowledge within Canberra through in-service opportunities, and
- * facilitating effective cooperation and collaboration between mathematics teachers and their colleagues in Canberra.

Short Circuit is edited by Paul Turner.

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MINIMATHS RESOURCE

In 2018, the Canberra Mathematical Association was awarded an **ACT Nature Play Grant** to develop maths resources for use with early childhood students in the natural environment. As a result of this funding, we have produced a set of 10 tasks that can be used to help introduce and develop a range of mathematical concepts linked to the Early Years Learning Framework.

We will be running six workshops over February and March to introduce the material to teachers. The workshops are free and will run from 4-6 pm at the following venues

[Wednesday 20th February](#)
[Trinity Christian School Wanniasa](#)

[Wednesday 27th February](#)
[Radford College Bruce](#)

[Friday 1st March](#)
[Torrens Early Learning Centre](#)

[Friday 8th March](#)
[Urambi Early Learning Centre](#)

[Friday 15th March](#)
[Majura Park Childcare Centre](#)

[Wednesday 20th March](#)
[Charles Weston Preschool Coombes](#)

You can register your interest in attending a workshop by visiting the miniMaths website:

<http://www.minimaths.com.au>

We look forward to seeing you and your staff at one of the workshops.

PRIME MINISTER'S PRIZES FOR SCIENCE—2019

Nominations are now open for the 2019 prizes, and the PM's Prizes team at the **Department of Industry, Innovation and Science**, www.industry.gov.au needs your help to spread the word, encourage nominations and nominate deserving candidates.

You can help by sharing this information widely so researchers, innovators and science, technology and mathematics teachers in your networks can be recognised for their achievements. You may also consider nominating a deserving candidate that you know.

The Prizes team wants nominations to reflect the diversity of the communities that the prizes celebrate, so we encourage you to consider nominating someone from an underrepresented group such as women or Indigenous Australians.

Nominations are open until 12 March 2019 and nominating is easier than ever! See the "[how to nominate](#)" [flyer](#) for more information. This flyer, and other resources you can use to help promote the prizes, can also be found in our online [toolkit](#).

For more information about the PM's Prizes, visit industry.gov.au/pm-science-prizes

Contact PMPrize@industry.gov.au or on 13 28 46 if you have any questions.