

# 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:

1 August, College PD (Thursday)

Term 4: AMT

## NEWS AND COMMENT

### CMA Conference

The biggest single event on the CMA calendar has always been the annual conference. Last year well over 150 people with an interest in mathematics education attended and a strong turnout is expected again this year.

The conference is a rare meeting of teachers from all sectors and all levels sharing professional ideas, wisdom and experience.

The keynote speakers this year are Dr Amie Albrecht and Dr Jan Watson, and there will be plenty of choice of workshops from a diverse array.

Registration is now available through the CMA [website](#). Please note that a limit of 200 places has been imposed to ensure that catering and other planning is adequate. For this reason it is important to secure your place in good time.

### PD event for college teachers

A workshop for **college teachers** is scheduled for Thursday 1 August at Hawker College, 4-6 p.m.

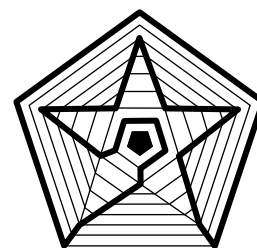
Details are on page 2.

### NMSS

Applications for the ANU-AAMT National Mathematics Summer School for January 2020 are now called for. See page 2.

NMSS is a two-week residential school for mathematically gifted and talented senior high school students held each January at The Australian National University. Applications are invited from Year 11 students.

CMA is proud of the miniMaths—Maths In Nature Inquiries workshops that were developed and run by Bruce Ferrington. See the report on page 6.



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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**

**NMSS 2020**

Year 11 students interested in the National Mathematics Summer School, and their teachers, should visit the CMA web page

<http://www.canberramaths.org.au/nmss.html> for application forms and further information.

The event will be held from 5-18 January 2020 at the ANU and applications should reach the CMA by Friday 9 August 2019.

**PUZZLE**

*Le chemin de fer*

A railway line 1 km long, made of steel, is fixed at both ends. In the hot sun, it buckles upwards at the centre (making an isosceles triangle) extending the total length of the line by 1 metre. How high off the ground is the line at the centre?

Would a nail file, or a mouse, or something bigger squeeze through under the peak of the triangle?

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**AAMT COMMUNITIES**

There are five [Connect with Maths](#) online communities teachers can join.

[Make it count with Indigenous Learners](#) community

[Early Years Learning in Mathematics](#) community

[Maths in Action \(Applications and Modelling\)](#) community

[Engaging All Students](#) (Catering for Diversity) community

[Digital technologies for Mathematics](#) community

**COLLEGE PD**

*A CMA workshop for college teachers.*

Thursday 1 August, Hawker College, 4-6 p.m.

Sheikh Faisal will demonstrate materials that have been developed at Hawker College to help answer the question 'When are we ever going to need this?' In the workshop Sheikh will look at ways to promote successful mathematical learning for all students, but with an emphasis on Mathematical Methods Units 1 & 2.

Sheikh speaks of linking mathematical ideas to practical representations, of connecting the mathematical discourse with its historical and practical contexts, of encouraging reasoning and problem solving, and of promoting understanding above procedural knowledge.

Time and location:

Thursday 1 August from 4-6 p.m. at Hawker College, 51 Murrarji Street, Hawker.

Cost:

Free for CMA members, \$20 for non-members.

Email [canberramaths@gmail.com](mailto:canberramaths@gmail.com) to register your intention to attend.

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**AAMT**

The professional associations of mathematics teachers in each Australian state and territory are affiliated with the Australian Association of Mathematics Teachers.

Membership of AAMT is gained automatically by joining one of the local associations, such as CMA.

Benefits for AAMT members include a range of resources accessible via the AAMT website. The journals Australian Primary Mathematics Classroom and Australian Mathematics Education Journal are published by AAMT and are distributed to members.

Visit the AAMT [website](#).

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**SHORT CIRCUIT**
**CONFERENCES**
**CMA 2019**

17 August, ADFA.

**Keynote speakers:**

**Dr Amie Albrecht** is a Senior Lecturer in the School of ITMS and a researcher within the Centre for Industrial and Applied Mathematics, University of South Australia

Amie's research is motivated by industry-inspired challenges, mainly in Operations Research with applications to transport problems, and is funded by ARC Discovery and Linkage schemes and Cooperative Research Centres.

In her teaching, Amie is particularly interested in developing mathematical thinking and problem-solving skills.

**Dr Jane Watson** is Professor Emerita in the Faculty of Education, University of Tasmania., where she carries out research, mainly in the area of Statistics Education.

**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](mailto:alan@cdnalma.poznan.pl)

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**MASA**

2019 MASA Annual [Conference](#)

St Peters College

18-19 July

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**MANSW**

2019 MANSW annual conference.

*Mathematics: The Greatest Show.*

Crowne Plaza Terrigal, 20-22 September. The keynote speakers will be Matt Parker and Doug Clarke. Submission of abstracts for presentations is now open.

[See the website.](#)

**MAV**

*Making+Connections*

The Mathematical Association of Victoria invites you to the 56<sup>th</sup> Annual Conference ([MAV19](#)) in Melbourne from Thursday 5 – Friday 6 December 2019

**ICME 2024**

Sydney

**AAMT 27TH BIENNIAL CONFERENCE**

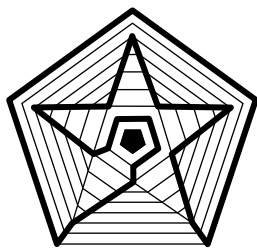
9-11 July 2019, South Brisbane, Qld, Australia.

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

The AAMT (QAMT) 2019 conference has a focus on inspirational mathematics teaching, collaborating with our communities and the future of mathematics education.

Key speakers include Dr Alan Finkel, Australia's Chief Scientist; Dr Cathy Foley, CSIRO Chief Scientist; James Tanton (MAA - US); Dr Toh Tin Lam (NIE – Singapore); Dr Catherine Attard; and other representatives from education, government and industry (yet to be announced).

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



**NEWSLETTER OF THE CANBERRA  
MATHEMATICAL ASSOCIATION  
INC**

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Weston ACT 2611  
Australia

E-mail: [canberramaths@gmail.com](mailto:canberramaths@gmail.com)

We're on the Web!

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

## THE 2019 CMA COMMITTEE

President	Jo McKenzie
Vice Presidents	Bruce Ferrington Aruna Williams
Secretary	Valerie Barker
Treasurer	Paul Kruger
Councillors	Belinda Fox Rajesh Prasad Peter McIntyre Theresa Shellshear
Website	Vivienne Sheridan Steve Thornton
Memberships	Paul Turner Heather Wardrop Andrew Wardrop

## ABOUT THE CMA

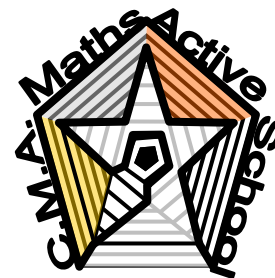
The Canberra Mathematical Association (Inc.) is the representative body of professional educators of mathematics in Canberra, Australia.

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.

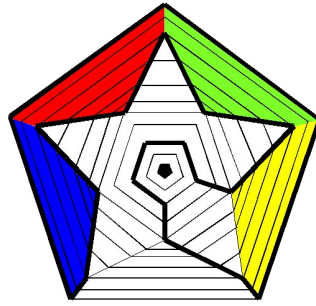
ACT Education Directorate  
Radford College  
Mount Stromlo High School  
  
Saint Mary MacKillop College  
  
Saint Mary MacKillop College  
Campbell High School  
University of NSW Canberra  
Australian Catholic University  
Canberra Grammar School



Short Circuit is edited by Paul Turner.

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**Find us on Facebook**



**CANBERRA MATHEMATICAL ASSOCIATION  
2019 MATHEMATICS CONFERENCE**

**Optimisation:  
Making the Most of Maths**

**Date: Saturday 17 August**

**Venue: Australian Defence Force Academy**

**Registration: \$50 member**

**\$25 concession**

**\$70 non-member**

**Sessions of talks/workshops for all levels**

**Great prizes, Trade stalls, Maths merchandise**

**Registration = All food + President's drinks**

**Details/registration: <http://www.canberramaths.org.au>**

**Please register soon so we can cater for everyone.**

## MATHS IN NATURE

### *miniMaths – Maths In Nature Inquiries*

In 2018, the Canberra Mathematical Association was awarded an ACT Government Nature Play grant. This grant provided the funding for the production and dissemination of a book for preschool and early childhood teachers. The book contained ten maths tasks that could be taken outside into the natural environment. A group of Canberra Mathematical Association members consulted with a range of Early Childhood educational specialists to produce what is a very practical and useful resource.

Throughout February and March the CMA vice president Bruce Ferrington ran workshops to share the tasks contained in the miniMaths program with early childhood and preschool educators around Canberra. There were six free workshops and about 150 teachers in total attended.

Bruce wrote about the miniMaths tasks on his blog “Authentic Inquiry Maths” and through Twitter. As a result, teachers from USA, Canada and Hong Kong contacted him and requested copies. Annieville Preschool in Vancouver used the tasks in a recent Get Outside! 30 day challenge (posted on Twitter as @anniekinders) - they are big fans.

There is also website to support the miniMaths program: <http://www.minimaths.com.au>.

The CMA will be looking at developing more tasks to extend the miniMaths resource in 2019. Teachers from around Canberra have been invited to help with the development of this resource. We have applied for an additional Nature Play grant from the ACT government for 2019 to support the expansion of this project. Hopefully, our application will be successful and we can continue this great work.

## TAX, SUPER + YOU

### *Competition*

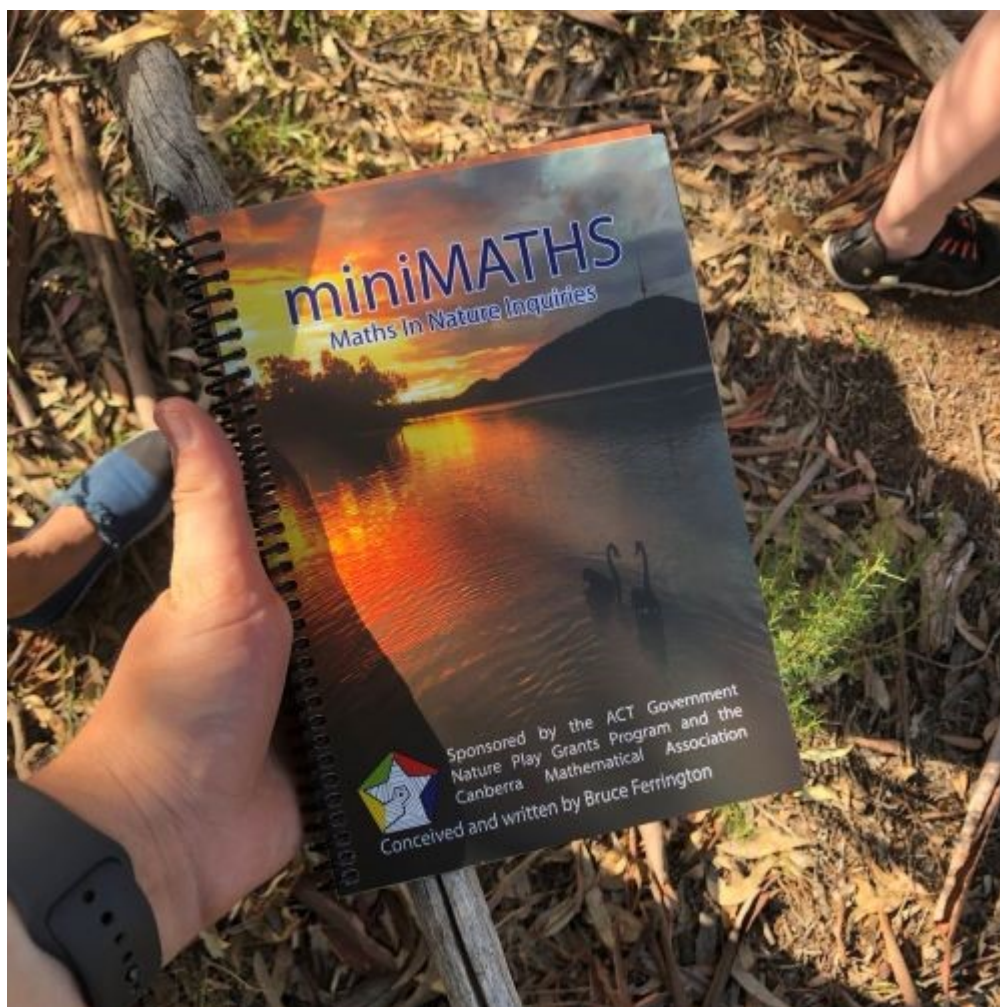
Following its success last year, the Australian Taxation Office’s [Tax, Super + You competition](#) will run from 3 June to 23 August.

High school students are invited to submit creative entries that explain the value tax and/or super brings to our community – and stand a chance to win cash prizes.

There are no limits on what students can submit but some examples are to Write It, Make It or Film it!

There is a total cash pool of over \$6,000 to be won between two categories - Junior (Years 7-9) and Senior (Years 10-12).

The Tax, Super + You competition is an interactive and engaging way to incorporate the Tax, Super + You teaching resources into classroom lesson plans. You can find out more by visiting the ATO’s [competition teachers kit](#).



The miniMaths booklet