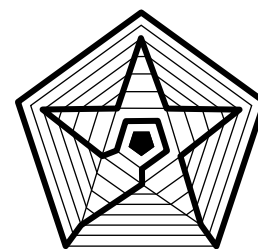


SHORT CIRCUIT



Newsletter of the Canberra Mathematical Association INC

Coming Events:

July 30 *'Hands on Maths'* Charles Lovitt
August 20 *CMA Conference*
October 27 *AGM*

Wednesday Workshops:

Saturday July 30: ACU - Charles Lovitt

Term 4:

Number Line (primary)—Theresa Shellsbear
A Whetstone topic (secondary)—Paul Turner

VOLUME 7 NUMBER 3

JUNE 2016

MEMBERSHIP

NEWS AND COMMENT

Statistics and data are topics that are threaded through the curriculum from primary to senior secondary levels. Teaching them effectively should, one hopes, make them opportunities for enlightenment rather than, as they can be, tools for deception.

From RMIT University, we learn of a resource that promises to assist. To quote, 'The *Islands in Schools Project* set out to improve student attitudes towards, and understanding of, the role of statistics and data analysis in the real world...'

Teachers wishing to use the potential for mathematical thinking in practical contexts that the study of statistics offers, will be interested in what is said about the *Islands* project on page 3.

School 2017—before the students disappear at the end of term 2. Applications are due by 29 July. See page 2 for details.

CMA is pleased to announce an all-day workshop with Charles Lovitt to be held on Saturday 30 July at the Australian Catholic University.

Charles Lovitt is known for the [Maths300](#) project. His session will be titled 'Hands on Maths'. Demand for places is likely to be strong.

Save the date and look out for further details, which will be distributed by email, shortly.

For readers with promising year 11 students, now is the time to consider the National Mathematics Summer

Join or renew your membership for calendar year 2016.

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

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

CMA membership includes automatic affiliation with the Australian Association of Mathematics Teachers and a free 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 membership secretary, Paul Turner, or another committee member.

**CANBERRA
MATHEMATICAL
ASSOCIATION**

CMA MERCHANDISE

Contact Elaine Hooke on 0407 788 493 or e-mail cmamerchandise@gmail.com for the following items:

Canberra Mathematics Association Navy Polo shirts \$36 with logo, Pi Earrings \$15, Easy as Pi badges and Pi pins \$8.

Free delivery to your ACT school. Elaine can attend your Maths staff meeting.

RESOURCES—WEB

[SageMath](#) is a free open-source mathematics software system .

[Codecademy](#)—Learn to code interactively, for free.

AAMT—CONNECT WITH MATHS

There are now 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

Subscription to these communities is FREE.

If you would like to join one or more communities, click on the link.

CONTRIBUTE TO SHORT CIRCUIT

Short Circuit welcomes your contributions and your feedback. Communicate with us through the CMA email address: canberramaths@gmail.com

CONFERENCES

[CMA](#), Saturday 20 August, UNSW—ADFA

ACER [Research Conference 2016](#):

Improving STEM Learning: What will it take?

7–9 August, Brisbane Convention Centre

Early bird registration before July 1

[AAMT 50](#): Directions

7-8 July, Adelaide.

[MERGA 39](#): *Opening up Mathematics Education Research*

3-7 July, Adelaide.

NATIONAL MATHEMATICS SUMMER SCHOOL—JANUARY 2017

The [National Mathematics Summer School](#) is a two week residential school held each January in Canberra, at the ANU. It is aimed at talented students of mathematics who have just completed Year 11 Mathematics.

Current ACT Year 11 mathematics students who are interested in attending the summer school next January should complete a self-nomination form. [Click here to download](#). Students must also provide a recommendation from their teacher.

ACT teachers can nominate one or more of their students who they believe would benefit from attending. [Click here to download](#).

Nominations for the January 2017 Summer School should be sent to CMA by email canberramaths@gmail.com by Friday 29 July 2016.

SHORT CIRCUIT

ISLANDS IN SCHOOLS PROJECT

Innovating the Teaching of Statistics and Data Analysis

The *Islands* is a free online virtual human population that can be used to teach statistics, through data investigations, to Australian secondary mathematics and science students. Students are provided with a realistic virtual world where they can propose statistical questions, design investigations and collect the necessary data for statistical analysis and interpretation. The wide range of data and tasks available on the *Islands* caters to many scientific areas and student interests.

Key features of the *Islands* include the following:

- * Over 34,000 virtual inhabitants spread across three geographically diverse islands
- * Inhabitants are born, die, relocate, and get sick in advanced time
- * Inhabitants have unique personal histories, genetics and ethnicity
- * 200+ tasks to experiment with
- * Inhabitants can refuse consent, lie, and sleep during the night, so students learn about the practicalities of investigations
- * Supports many different types of investigations, including surveys, observational studies and experiments
- * Also features agricultural, climatic, educational and employment models

The *Islands in Schools Project* developed research-based and teacher-led learning resources to enrich and contextualise students' experiences of statistics and data analysis in the Australian Curriculum. The project's activities cover a broad range of topics, including mental health, exercise performance, lung capacity across age, and death rates.

Visit www.islandsinschools.com.au to sign up for a free *Islands* account, learn more about using the *Islands* and download the free learning resources. All teachers are welcome to use the project's resources and are

encouraged to share their experiences with others. The *Islands in Schools Project* will help teachers re-invigorate the teaching of statistics in Australian secondary schools using innovative technology.

In 2012, the Australian Chief Scientist, Professor Ian Chubb, urged universities to better engage with schools to inform students of the values of mathematics and science and for teachers to work with practising scientists and mathematicians to innovate the delivery of the Australian curriculum (Office of the Chief Scientist, 2012). The *Islands in Schools Project* was a direct response to this call from the Chief Scientist.

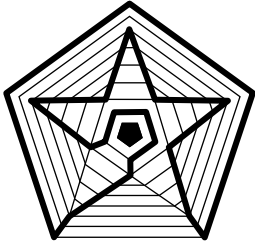
The *Islands in Schools Project* set out to improve student attitudes towards, and understanding of, the role of statistics and data analysis in the real world and thus to encourage career pathways in related fields. It aimed to develop classroom activities and resources for engaging junior secondary school students in aspects of the maths curriculum that relate to scientific experimentation and data investigations.

The *Islands in Schools Project* built on, and was informed by a pilot project funded by a 2014 RMIT University Learning and Teaching Investment Fund (LTIF) entitled: "Mathematics and Statistics Pathways: Connecting with Secondary Schools to Enrich the Teaching of Data Analysis using Innovative Technology".

In 2015, the project was partially funded by the Australian Government Department of Education through the [Australian Maths and Science Partnership Program](#) (AMSPP, Project Title: *Virtualising Science: Using an Online World to Immerse Junior Secondary School Students in Real Applications of Maths and Science Curriculum*).

The *Islands in Schools Project* was a large, national project. A total of 12 junior secondary schools from across Queensland, Victoria, and Western Australia participated in the project, with the *Islands* classroom activities implemented in maths and science classes from years 7-10.

To read more about the project, visit www.islandsinschools.com.au/home/project-overview.



**NEWSLETTER OF THE CANBERRA
MATHEMATICAL ASSOCIATION
INC**

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We're on the Web!
<http://www.canberramaths.org.au/>

THE 2016 CMA COMMITTEE

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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.

Maths by Inquiry
Canberra Grammar School
Australian Catholic University
Australian Catholic University
Maths by Inquiry

Erindale College
Lake Tuggeranong College
Melrose High School
University of NSW Canberra

University of Canberra

Kaleen Primary School

Australian Mathematics Trust
Namadgi School



Find us on Facebook

Short Circuit is edited by Paul Turner.

SHORT CIRCUIT

CONGRATULATIONS

CMA Life Members Andy and Heather Wardrop receive a Public Education Award at the Australian Education Union dinner, 31 May 2016.



Ever the wit, Heather says she is now a 'trophy wife'.