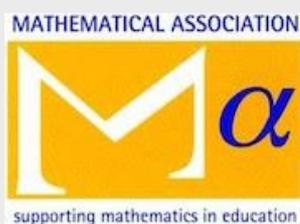


Email:



Welcome to the MA monthly newsletter

The Mathematical Association
259 London Road
Leicester LE2 3BE
Email: office@m-a.org.uk

October 2017

Dear Member

Primary Mathematics PD Day, *Problem Solving and Reasoning*

**Primary Mathematics
Professional Development Day
Problem Solving and Reasoning**

Saturday, 11 November 2017

Wycombe High School
High Wycombe

Keynote
Debbie Morgan
Primary Director NCETM

The sixth Primary Mathematics Professional Development Day will be held in Wycombe High School, Marlow Road, High Wycombe, Bucks HP11 1TB on Saturday 11 November, 10 am to 4 pm. Speakers include:

Debbie Morgan: 'Mastering problem solving'

Julia Brown: 'Working with parents'

Ruth Bull: 'Promoting mathematical thinking through opening up problems' as well as Sue Keith, Jane Liddle, Brenda Robertson and Rachel Walters.

And remember that we provide a lovely lunch and refreshments!

Members £70; Non-members £95, including a £25 voucher towards membership. For an application form, go to www.m-a.org.uk/events/?id=106

Help run an MA bookstall!

We need your help! Every year, the Association runs a bookstall at events such as one-day conferences at various locations around the country. We would like to set up a system by which members volunteer to run the stall but could be paid up to £100 to do so. Of course, if you are interested and wish to take a lesser amount for helping out, that would be particularly welcome. The system is intended to be very flexible. You might sign up for a small number of Saturdays, or perhaps just one, where the event is near your home. Please contact Marcia Murray, (SeniorAdministrator@M-A.org.uk), for further details.

Primary Mathematics Challenge (13-17 November)

The PMC is a nationwide challenge for pupils who want to get involved in some interesting and stimulating mathematics. It consists of multiple-choice problems which interest pupils and are mathematical. Aimed at the top 60% of pupils in Years 5 and 6 in England and Wales, P6 and P7 in Scotland, and Years 6 and 7 in Northern Ireland, the PMC is taken by thousands of children every year.



Buy your PMC packs today via www.primarymathschallenge.org.uk/.

BCME-9

The ninth British Congress of Mathematics Education takes place at the University of Warwick, 3-6 April 2018. This is a coming together of the mathematics subject associations, plus IMA, RSS, BSRLM, BSHM, UKMT ... perhaps 500 teachers and educationalists altogether. For further details and to book a place, go to www.bcme.org.uk/Home. Note that bursaries of £300 are being offered by the LMS (keep an eye on www.bcme.org.uk/Bursary for details, when they are posted). Teachers in Scotland may apply to the SMC for similar funding (www.scottishmathematicalcouncil.org/wp1/smc-bursaries-for-bcme9-warwick-easter-2018/).

Black Mathematician Month

October was designated as Black Mathematician Month, a time to consider the contribution 'black heroes of mathematics'. A good place to start is with a contemporary British mathematician of Jamaican parentage, Dr Nira Chamberlain, whose story is told in his own words at

BLACK
MATHEMATICIAN
MONTH



<http://chalkdustmagazine.com/black-mathematician-month/dont-need-anybodys-permission-great-mathematician/>.

There is also a talk on the subject by Nira in the **UCL Harrie Massey Lecture Theatre, 25 Gordon St., London WC1H 0AY, at 6 pm on Monday 30 October.**



A single association for Mathematics education?

Last month we proposed that all five professional associations for Mathematics, AMET, ATM, MA, NAMA and NANAMIC consider the possibility of coming together into a single, more-powerful body. We are grateful to the Royal Society for offering to host introductory discussions in the next few weeks.



Branch Events in November & December

It's often helpful to intimate attendance, so please see [website](#) for details.

Exeter Branch, *Wednesday 1 November, 6.30 for 7-8 pm.*

Exeter Mathematics School, Rougemont House, Castle St., Exeter EX4 3PU
Caroline Ainsworth: 'Consistency of imagery'

Liverpool Branch, *Monday 18 December, 2.00 – 3.00 pm*

Venue TBC

Adam Townsend: 'The fluid dynamics of chocolate fountains'

Meridian Branch, *Saturday 11 November, 9.30 – 12.30*

Abbey School, 17 Kendrick Road, Reading RG1 5DZ

John Ling: 'What's missing? (a workshop designed for teachers of Y5-9)'

Sussex Branch, *Tuesday 5 December, 4.30 pm*

Lancing College, BN15 0RW

Chris Pritchard: 'Binary investigations'

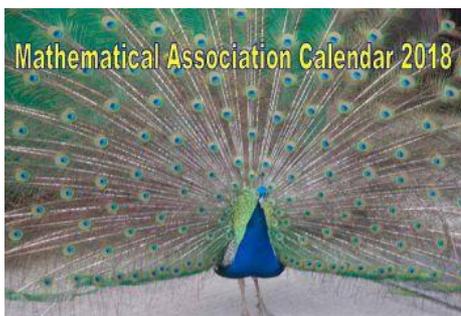


Frances Kirwan elected Savilian Professor

Congratulations to Dame Frances Kirwan who is to be the twentieth Savilian Professor of Geometry at the University of Oxford and the first woman to hold this historic chair. She follows the likes of Henry Briggs, John Wallis, Edmund Halley, J J Sylvester, G H Hardy and one of our Honorary Members, Sir Michael Atiyah, who supervised her doctoral studies in the 1980s. Frances Kirwan's research is directed towards understanding the structure of geometric objects by investigating their algebraic and topological properties. She has also served as chair of UKMT.



Mathematical Association Calendar 2018



Another fabulous selection of mathematically inspired photographs and problems to solve. There is a space for notes next to each day. When folded the calendar is A4 size, but opens out to A3 when hung on the wall. Suitable for the home, school and office, it is intended that the calendar will encourage teachers and young people to think about the wide

variety of context in which mathematics can be found in the world around us. Price: £6.99 each or £5.99 if two or more ordered (prices inclusive of VAT). Go to <http://members.m-a.org.uk/Shop>.



Treat someone to an MA Gift-Membership this Christmas

If you have a friend, family member or colleague who is a maths teacher or a maths enthusiast, then membership of The Mathematical Association would make the perfect Christmas present!



Choose a category of membership (Primary £46; Secondary £62; Primary-Secondary Combo £88) to gift and you'll receive a gift pack containing a membership certificate and a set of Mathematical Association journals, all ready for wrapping! After the initial gift pack, subsequent publications will be sent directly to the member throughout the year.

Members benefit from:

- resources and publications,
- professional development events, conferences and local branch meetings,
- opportunities to contribute to responses to government consultations, to join groups focusing on specific developments within mathematics education and to help develop policy and resources.

Visit the gift membership page to order a gift pack by 15th December 2017 on <http://www.m-a.org.uk/gift-membership>. If you need help selecting the right membership category, please email office@ma.org.uk using 'Gift Membership' as the subject, or call 0116 221 0013.



Tiling the plane with pentagons

In 2015, there was an announcement that a new pentagon had been found that tiles the plane. It was the fifteenth different pentagon shown to have this property. What we didn't know then was that it would be the very last. A team in Lyons have shown that there are exactly 15 convex pentagons that tile the

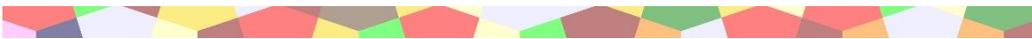
plane! The story is at the PhysOrg website: <https://phys.org/news/2017-09-pentagonal-tiles.html>.



Impossible footballs, ... from Doug French to Matt Parker to an unsympathetic government



Despite our road signs depicting them that way, it is not possible for a sphere to be tiled with 'hexagons' (a combination of hexagons and pentagons is needed). The issue was flagged up years ago by former MA President, Doug French. Recently, Matt Parker has organized a petition to the government which attracted almost 20,000 signatures ... but all in vain. No action will be taken because of the cost of correcting the situation. The story is at www.espn.co.uk/football/english-premier-league/story/3243299/uk-government-answers-petition-to-change-football-geometry-on-road-signs



Compiled by Chris Pritchard, Tom Roper, Jo Morgan and Lucy Rycroft-Smith

