MATHEMATICAL ASSOCIATION

Mα

supporting mathematics in education

Welcome to the MA monthly newsletter

The Mathematical Association
259 London Road
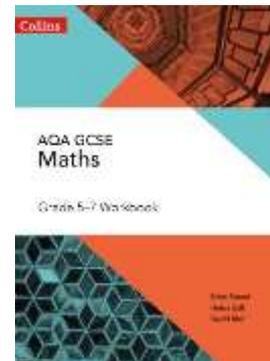Leicester LE2 3BE
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January 2019

Sir Michael Atiyah (1929–2019)

It is with great sadness that The Mathematical Association has learnt of the death of Sir Michael Atiyah at the age of 89. Sir Michael was one of the great luminaries of British mathematics in recent decades, with major contributions to algebraic geometry, topological K-theory, index theory and gauge theory. He held a string of top academic positions, including the Savilian Professor of Geometry at Oxford University, Director of the Isaac Newton Institute for Mathematical Sciences and Master of Trinity College, Cambridge. Sir Michael also held the Presidency of the Royal Society of London and of the Royal Society of Edinburgh. He was awarded the Fields Medal in 1966 and the Abel Prize in 2004. In recognition of these achievements, he was knighted in 1983 and became a member of the Order of Merit in 1992. Sir Michael served as MA President in 1981-82 and was elected as an Honorary Member of the Association in 2016.

One of Sir Michael's most recent lectures was an Oxford Mathematics Public Lecture - *Numbers are Serious but they are also Fun* - in 2018; it can be viewed **here**.

Kavli Education Medal and Lecture

The Kavli Education Medal was awarded to Professor Alice Rogers, OBE, for her outstanding contributions to mathematics education, on January 15 2019 at the Royal Society. The Kavli Education Medal is awarded for impact in the field of science, mathematics or computing education.

Alice gave an inspiring lecture, Free Range Mathematics, which raised the questions about how can education policy support teaching with a wider horizon than the next examination and what should those wider horizons be.

More details can be found here and here.

Bursaries for the 2019 Conference

Have you booked your place for the jointly badged annual conference in 2019 at Chesford Grange, Warwick from **15-18 April**? The theme of the conference will be Mathematics. Collaboration. Creativity.

Autograph and the London Mathematical Society are offering exciting bursaries of up to £200 for the upcoming 2019 MA / ATM Conference.

Click here for details.

Early Bird rates are still available until the end of January.

Maths Hub Event

BBO, GLOW and Enigma Maths Hubs are hosting the Love Maths Secondary Conference on Thursday 14th February 2019 at Unipart House, Oxford. It will be an informative day with the keynote speeches by Rob Eastaway and Ben Sparks, and a series of workshops covering developments in maths at secondary level. Free tickets can be booked here: https://bbomathshub.org.uk/events/secondary-conference-2/.

Mathematics in School Survey

The Mathematical Association is always trying to ensure that its service to teachers is as relevant as possible. Currently, we are gauging the opinions of readers of Mathematics in School and it would be helpful if you could take a few moments to respond to the questions here: https://goo.gl/forms/RoazA3yLq934sZNW2.

Branch Events

Branch: Exeter MA/ATM
Title: Algebradabera!
Presenter: Dietmar Küchemann
Summary: In early 2018, Dietmar started posting sets of algebra tasks on Twitter (via his alter ego @ProfSmudge) and writing more extensively about them in a blog at http://mathsmed.co.uk/ALGblog/. The tasks are intended to help students make sense of school algebra, by focussing on structure. Some of the tasks will help teachers, as well as students, think about the 'purpose and utility' of algebra. In this interactive session, Dietmar will work through some of the tasks and consider how they might be used in the classroom and will share any experiences participants might have had of trying them with their students. In the past 10 years Dietmar has worked mainly on the ICCAMS project, where, through close collaboration with teachers and interviews with small groups of students, he helped develop lesson materials in algebra and

multiplicative reasoning. The focus has been on Key Stage 3, though the materials are also relevant to younger and older age groups. Dietmar is now semi-retired and divides his time between London and a quiet retreat on the edge of Exmoor.
Date: 6th February 2019
Time: 6.15pm – 8pm (coffee from 6pm)
Venue: Exeter Mathematics School, Rougemont House, Castle Street, Exeter, Devon EX4 3PU
Contact: Please email **Richard Perring** as spaces are limited and allocated on a first come first served basis.
Cost: Free

Branch: Liverpool
Title: Are women safer drivers? Are Saudi Arabia women safe drivers?
Presenter: Corina Constantinescu, University of Liverpool.
Date: Wednesday, 13 Feb 2019
Time: 5pm
Summary: Pricing car insurance is a complex mathematical problem. It accounts for the likelihood of having a future accident/claim. Many factors could describe this likelihood, one of them being the age and another one the gender of the driver. What do you think could happen in Saudi Arabia where women were recently allowed to drive, and all of a sudden the drivers' population will have women of all ages as new drivers? Should we expect more accidents? Or fewer? More severe, or less severe? Should the insurance companies charge women more than men? Let's try to answer these together. This talk is for Year 11 up, teachers and all those interested in mathematics and its applications.
Venue: tbc
Contact email: **Peter Giblin**
Door Charge: Free to all students and members of LivMS. Others pay £4.

News of Publications

Recent publications include *Primary Padlock Challenges* by Rachel Horsman (see https://members.m-a.org.uk/Shop/product/1131) and a revised and updated *Leadership to Count On* (see https://members.m-a.org.uk/Shop/product/1132). The second of these sold very well over Christmas.

A new book *The Room in the Elephant* by Chris Pritchard is being printed and should be well worth getting.

The Publications Committee needs help. We would like some new members and we need to augment our pool of proof-readers. For more information contact Bill Richardson.

News of Journals

The 2019 flow has started with the arrival last week of *Mathematics in School*, *Primary Maths* (paper and online) and *SYMmetryPlus*. In the final stages of preparation is *MA News* which will arrive soon along with *Mathematical Pie*. The March *Gazette* will be off to the printers next week and should appear before the end of February (at least in the UK).

MA Heritage

One aspect of our heritage which may sometimes be taken for granted is the position of President. Throughout the life of The Association for the Improvement of Geometrical Teaching (AIGT) and its successor The Mathematical Association (MA) there has been a President. The Honours Boards in MA headquarters list them all from the first, Thomas Arthur Hirst in 1871, to the present incumbent, Mike Askew. Having a list in a building in Leicester is all very good but visiting to see that list could be onerous. However, most of those who are interested will have internet access and visiting www.m-a.org.uk/ma-presidents is not difficult. This leads to the list and is well worth a look.

That in turn, leads to the question of who these people were and what they did in their lives. One source of information available to members is to use JSTOR to access past issues of the *Gazette*. Almost all deceased Presidents had obituaries written by MA colleagues. But I have recently been made aware of another source, usually more detailed, which was pointed out to me by our Librarian, Mike Price. This resource is the *Oxford Dictionary of National Biography* and many of those listed on the website have a flag (ODNB) showing that they appear in the ODNB. Mike has identified over 40 entries! But, how can one see the ODNB? If your workplace has access, then it is job done. I am fortunate that my local library in Elgin, of which I am a member, has access to the ODNB and, even better, I can sit at home, log on to the Library site and bring the ODNB into my house! I hope you find an easy way and enjoy looking. I would welcome comments.

Bill Richardson

Compiled by Ed Southall