

Celebrating Mathematics: IMA-Ri joint event

The IMA President Dame Celia Hoyles Chaired the third and final major IMA 50th Anniversary Celebration at the Royal Institution (Ri) on 7 October. The event was well attended by over 150 IMA members and invited guests, Ri members, school children and the public.

The first speaker, Dame Julia Higgins, spoke about the Royal Society *Vision for Science and Mathematics Education*. Dame Julia's talk was based on the Royal Society Report which explains their ambition to make mathematics and science education fit for purpose in 20 years' time. The full report and summary can be found at: <https://royalsociety.org/education/policy/vision/>. A detailed article based on Dame Julia's talk can be found on page 284 of this issue.

The second talk on *Big Data* was given by Richard Pinch, IMA Vice-President Professional Affairs & Industry. Richard began by saying how honoured he was to be standing at the famous desk that Michael Faraday lectured from. He mentioned Faraday's response to Gladstone asking the value of Faraday's invention: 'One day sir, you may tax it', and pointed out that the UK government recently leased part of the electromagnetic spectrum for over £22 billion. He then went on to say that the next big thing to be taxed will be Big Data. For a detailed written version of Richard's talk see page 286.

Paul Glendinning, IMA Vice-President Learned Society, gave a personal view on why mathematics is valuable and what it is to be a mathematician in society. In *The Mathematics Manifesto (First Draft)*, Paul's most controversial statement was that 'there are no non-mathematicians', although he did qualify this with 'not all mathematicians are equal'. Paul gave many examples, including a model for walking with straight legs and the feet as arcs, which Paul demonstrated and called 'feeting' – to much laughter. For a detailed written version of Paul's talk see page 281.

Diane Crann, Ri Clothworkers' Fellow in Mathematics and IMA Councillor, spoke briefly about *Mathematics at the Ri*. The most well-known Ri activity is the Ri Christmas lectures, which were started by Michael Faraday in 1825, and are now broadcast on National television. Diane concentrated on the National Programme of Ri Masterclasses, which has 75 secondary and 55 primary mathematics masterclasses as well as 12 engineering and 5 new computer science masterclasses. These masterclasses give the brightest pupils the opportunity to experience mathematics, science and engineering outside the school curriculum. Diane

emphasised the importance of inspiring and enthusing these children to encourage them to continue with science and mathematics, and then go on to discover new mathematics and technology. Diane also encouraged attendees to volunteer. See www.rigb.org/education/masterclasses/get-involved for further information.

An article based on the last main talk, *Eight Great Reasons to do Maths*, given by Chris Budd, IMA Vice-President Communications, can be found on page 287. The title of the talk alludes to the Eight Great Technologies announced by David Willetts MP, see <https://www.gov.uk/government/publications/eight-great-technologies-infographics>. Chris was very concerned that all eight need mathematics, but maths isn't mentioned at all. Chris highlighted the image problem maths and mathematicians have by an informal survey at his children's school, which gave three views: mathematicians are evil, soulless geeks; mathematicians are mad; and mathematicians are useless. Chris set out to show that the modern world wouldn't exist without maths, and finished with a very important use for the quadratic equation – keeping the lights on!

The talks concluded with a short talk from the IMA President on *The IMA Today and Tomorrow*. Celia began by expressing her agreement with Chris that it is terrible that maths is so hidden that it was not mentioned in the Eight Great Technologies. This is something the IMA continues to address, for example with the Mathematics Matters case studies.

Dame Celia emphasised the IMA collaboration with academia, commerce, industry and government. She mentioned many of the activities the IMA provides across these areas, including: seven learned journals, this members' magazine, Mathematics Matters case studies, branches, chartership, corporate affiliates and employers' forums, conferences, education policy and scholarships, MathCareers website,....

Celia also reflected on the IMA's achievements over the past 50 years and mentioned the IMA's 50th anniversary events with affection. She concluded by emphasising the importance the IMA places on making mathematics visible – especially to ministers.

A reception followed where a small part of the Ri Archive was displayed by archivist Charlotte New. The display included the first Greek text of Euclid's *Elements* printed in 1533; a first edition Kepler's *Astronomia Nova* published in 1609; and a second edition of Newton's *Principia* published in 1713. These and many other books in the Ri's collection can be viewed by appointment.

Details can be found at www.rigb.org/about/heritage-and-collections/archive/visiting.

Rebecca Waters
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Images from left to right: Books from the Ri archive, Chris Budd, Dame Celia Hoyles, Paul Glendinning demonstrating 'feeting', Diane Crann and Dame Julia Higgins. For photos of the event see: www.flickr.com/photos/institute_of_mathematics

