

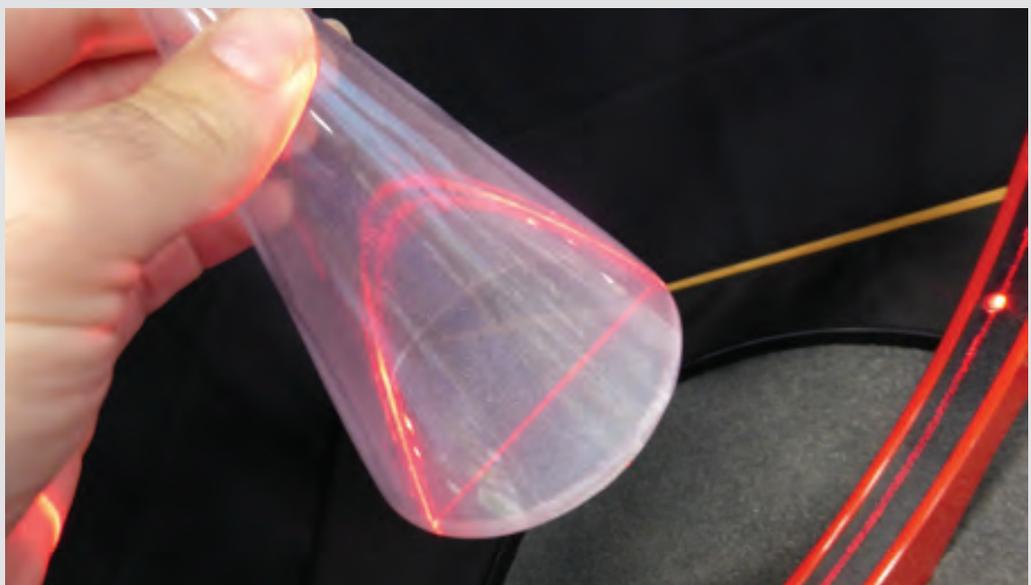


## Welcome to the second issue of our Newsletter



The Ring of Fire (Photo: Imaginary)

- > **New Exhibits:** We have acquired the Ring of Fire, purchased from the National Museum of Mathematics (MoMath) in New York. This is a circular laser beam projection that picks out 2-dimensional cross sections of 3-dimensional objects passed through it. It is a table-top version of one of their most popular exhibits and has been well-tested in the field.



Close -up of the Ring of Fire showing a parabolic section of a cone



**We are using crowd funding to support the purchase of the Ring of Fire (see our website [www.mathsworlduk.com](http://www.mathsworlduk.com) for further details). MoMath is offering free entry to the first hundred donors.**

Our first touchscreen exhibit is also well on the way. We have been awarded a grant of £20 000 from the Association of Information Technology Trust to develop three interactive demonstrations on Digital Thinking, from computer logic to interactive memory and pattern recognition. It should be ready for trial in June 2017.

These are in addition to our two large exhibits, Parabola Bounces and the Tautochrone, made to our design by Science Projects Ltd in Acton. We also have a few display posters and smaller exhibits.



The Tautochrone and other displays at the MathsWorldUK stall at the MATRIX conference

We shall demonstrate some or all these during 2017 at:

- a family Science Fair at Leeds City Museum on Saturday March 18th, part of the Leeds Festival of Science
- a workshop session at the Annual Mathematical Association Conference, Royal Holloway, Egham, Surrey on Saturday 10th April
- the IMA Festival of Maths at Greenwich University on Tuesday June 27th and Wednesday June 28th (all exhibits).



The Leeds and Greenwich festivals are open to anyone to attend (and help with these would be welcome too).



## **Organising The 2nd MATRIX International Conference**

The most important event of the year for us was the organisation of the Second International MATRIX Conference, a joint collaboration between MathsWorldUK, the National Museum of Mathematics (MoMath) in New York and the University of Leeds. MATRIX is the acronym for Mathematics Awareness, Teaching Resources and Information eXchange. The conference was for mathematics museum people from around the world and more broadly for anyone involved in mathematics outreach and public awareness activities. The first MATRIX conference took place in Dresden in September 2014. Our MATRIX 2 took place at the University of Leeds in September 2016.

We had 110 delegates from 15 different countries, including the Fields Medallist Professor Cédric Villani, the Director of the Institut Henri Poincaré, which is now planning a major new mathematics museum, Le Select Musée Henri Poincaré in Paris ,due to open in 2020.



Cédric Villani in discussion

Directors of other well-established mathematics museums and associated groups gave presentations and brought exhibits e.g. The Mathematikum and Imaginary in Germany, MoMath in New York, MMACA in Barcelona.



Two Directors of MoMath with the Directors of the Museu de Matemàtiques de Catalunya (mmaca)

Hannah Fry (of TV fame and University College, London) gave a witty talk on The Mathematics of Love, one of two lectures which were open to schools and other members of the public. Professor Tadashi Tokieda (University of Cambridge and Stanford University) gave the second one, a quite wonderful lecture entitled A world from a sheet of paper.



Author Simon Singh

Many other well-known mathematics communicators from the UK and overseas were also there, and the quality of presentations and discussion was high. Feedback from the delegates was very positive. We are continuing our links with many of the participants.



The exhibition hall at the MATRIX conference

Generous sponsors of the conference included the University of Leeds, the London Mathematical Society, the Institute of Mathematics and its Applications, the Mathematical Association, the Operations Research Society and the Leeds Philosophical and Literary Society.



More details and videoclips of talks and interviews can be found on our website:  
[www.mathsworlduk.com](http://www.mathsworlduk.com)

## The Schools Competition



Some of the prize-winners in the Schools Competition with Hanna Fry

As part of the MathsWorldUK and University of Leeds contribution to the MATRIX conference, we organised a schools competition. Groups of students were asked to produce a 5-minute video exploring the work of a great mathematician. There were many entries from around the country. The winning school was Hollygirt School with an entry on Alan Turing and the Enigma Machine. Second prize went to Cheadle Hulme School for their entry A Brief History of John von Neumann's Game Theory. There were also four runner-up prizes: Samuel Ward Academy (Paul Erdős); St. Paul's Girls' School (An introduction to trigonometry); Greenhead College (Why did the chicken cross the road?) and Notting Hill and Ealing High School (Pythagoras Theorem). The prizes, provided by Pearson, were presented to the pupils by Hannah Fry before her conference lecture.

The schools competition will become an annual feature of the joint activities of MWUK and the University of Leeds.



## **Leeds Developments**

Leeds looks the most likely city to house our interactive mathematics museum. We have developed our relationship with the University of Leeds, especially with the Educational Engagement team and the School of Mathematics who gave strong support to the MATRIX conference. We are also expecting to contribute to the Leeds bid for European Capital of Culture in 2023, and have already had several meetings around this. We have built up a base of supporters in Leeds who gave valuable assistance with the MATRIX conference and with a recent school-based event.

Our co-chair Geoff Wain and his wife Zakiah hosted a garden party for local supporters with barbecue and a Quiz night; together these raised almost £3000.

## **London links**

We continued our discussions with the Science Museum and we were invited to attend the Science Museum Annual Dinner and the official opening of the new Winton Gallery of Mathematics. While impressively designed, MathsWorldUK is working on a different vision of what a mathematics exploratorium might look like. We have also had useful meetings including with representatives from Sadiq Khan's mayoral team for London and with the Chairman of the Maths and Numeracy All-Party Parliamentary Group, leading to a proposal to the Department of Culture, Media and Sport.

## **Next steps**

We are working on raising the next tranche of funding towards a travelling exhibition to take up temporary space in other museums or science centres; and a funded post to enable us to progress these initiatives in a timely manner. We are also exploring the possibility of a maths street festival, building on ideas from Imaginary in Germany, and MoMath.

As always we seek Friends and supporters to donate through our website and volunteers to help us move the project forward as quickly as possible.



Displays from an Imaginary shopping mall in Heidelberg

Finally, we are playing with variations of a new logo proposed by Dr Thomas Woolley – views and/or creative ideas about this (or anything else) would be much appreciated!

