



Welcome to the third issue of our Newsletter.



Delegates enjoying mathematical puzzles at MATRIX

## A review of 2017: participation in external events

2017 has been a very active year for us.

In this section we review the more public side of our activities.

Much has happened following the success of the second international MATRIX conference held at the University of Leeds in September 2016, and jointly run between MathsWorldUK (MWUK), the University of Leeds and the National Museum of Mathematics in New York (or MoMath, as more commonly known).

In the last issue we reported the purchase of the *Ring of Fire* exhibit from MoMath, and that we were launching a crowd funding appeal to pay for it. In the end, we received a very generous donation from the US-based Oppenheimer Fund, which covered the cost of this equipment. However, the crowd funding appeal went ahead with a revised objective and from the proceeds we have commissioned from Science Projects (a UK firm which specializes in the design and construction of science and mathematics exhibits worldwide) an exhibit featuring a *Wave Pendulum* that is under construction at the moment.

The *Ring of Fire* exhibit has proved extremely popular at all the events where we have exhibited it. These events include the Annual Conference of the Mathematics Association held at Royal Holloway College, the Leeds Science Fair, the University of Greenwich Maths Fair, the Norwich Science Festival and the forthcoming Winchester Science Discovery Centre Maths Week, early in March 2018.



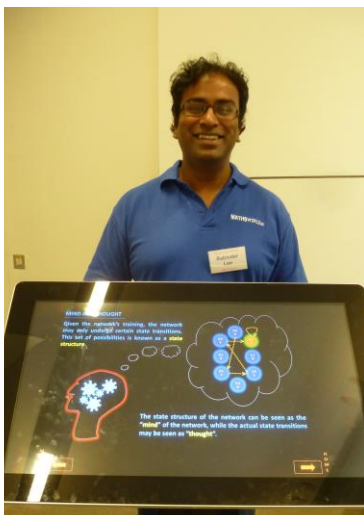
Greenwich Maths Fair



Greenwich Maths Fair: the Ring of Fire

The many visitors of all ages at these festivals showed great interest in all the MathsWorldUK items on display.

One of our big successes in 2017 was the completion of the project on **Digital Thinking**. This is a wonderful series of interactive screens covering Boolean Logic, Neural Networks, Machine Learning and Pattern Recognition. This project was generously funded by the Artificial Intelligence Technology Trust. The research for the project was carried out by Dr Rabinder Lee (pictured below left) with support from Igor Aleksander, Emeritus Professor of Electrical and Electronic Engineering at Imperial College, London. As part of the project we invested in the large touch screen that can be seen in the picture. This exhibit has had visitors hooked on the challenging issues it deals with.



Dr Rabinder Lee



Norwich Science Festival

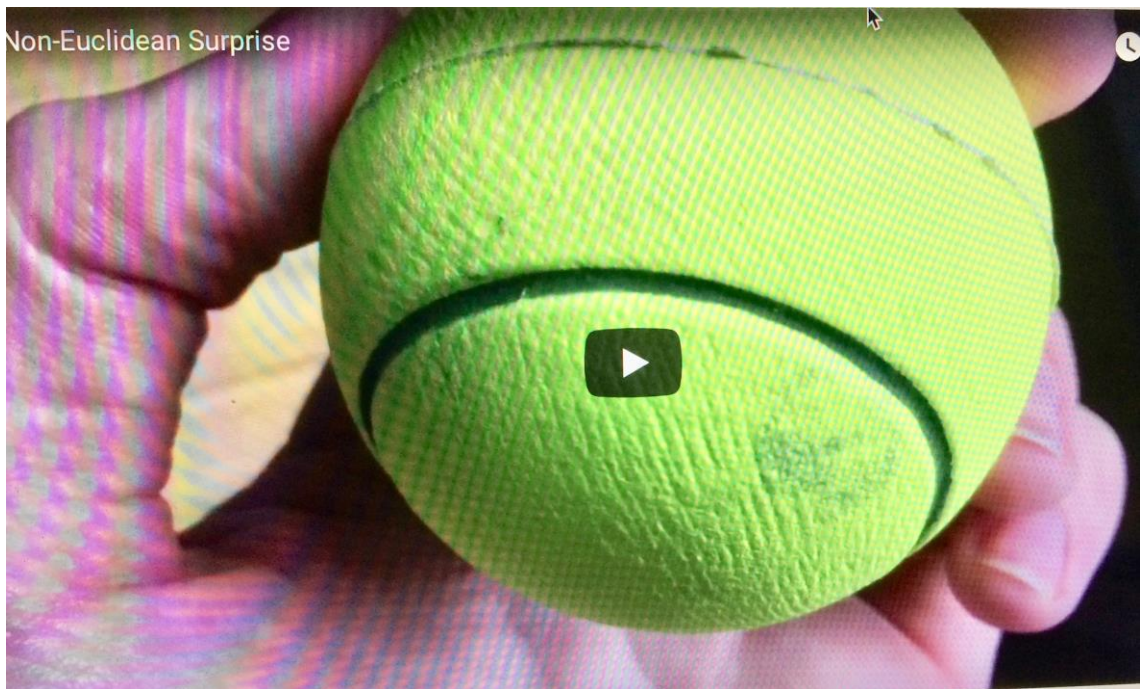
We wish to thank all the many volunteers (up to 12 at Norwich) who gave freely of their time and helped out at all these fairs.



## Maths Miniatures 2017

For the second year running, MathsWorldUK and the University of Leeds, now in partnership with the United Kingdom Mathematics Trust, and the International Mathematics Olympiad 2019 Ltd ran a short film competition for schools and colleges across the UK. Teams of two to six students from Years 7 to 13 were invited to participate. The task was to produce a short film with your classmates describing... ***A Mathematical Surprise!***

This year the first prize was awarded to Barrow Sixth Form College for a video entitled ***Non-Euclidean Surprise***. The runners up were Queen Ethelberga's Collegiate in York, with ***The Ulam Spiral of Prime Numbers*** and St. Wilfred's Church of England Academy, in Blackburn, with the entry ***Monty's Doors***.



Congratulations to all the winners!

The videos can be seen on the MathsWorldUK website:

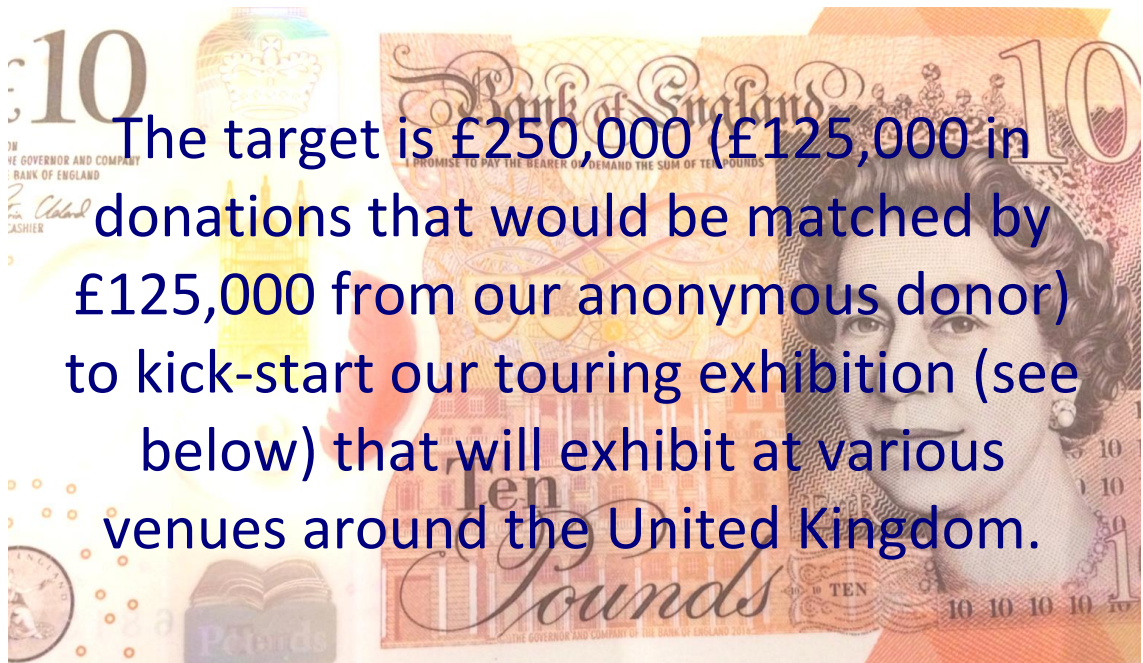
[www.mathsworlduk.com](http://www.mathsworlduk.com)



## A cash bonus to end 2017

Towards the end of the year MathsWorldUK was the beneficiary of a wonderful unsolicited gift and a challenge from an American donor who wishes to remain anonymous. This donor has promised to match, pound-for-pound, any funding we can raise by June 2019, up to a maximum of £125,000.

**We appeal to all who have an interest in promoting the development of the first interactive museum of mathematics in the United Kingdom to donate generously towards this matched funding challenge and to spread the word about this appeal as widely as possible.**



Details of how to donate to MWUK can be found on our website [www.mathsworlduk.com](http://www.mathsworlduk.com).

## Interactive Mathematics Touring Exhibition

The National Museum of Mathematics (MoMath) in New York, the Mathematikum in Giessen in Germany and the Museum of Mathematics in Catalonia (MMACA) in Spain all began life through highly successful touring exhibitions. MathsWorldUK has close contacts with these centres and we have decided to follow in their footsteps.

We plan an interactive exhibition of some twenty items, which will tour at various venues throughout the UK. The planning and development of these items will require research, time and money.

Our anonymous donor from the US has agreed that his donation should be used to get this development underway as soon as is practicable. In order to facilitate this, he is willing for some of the donation to be available immediately so that we can make a full time appointment for a professional to take charge of the planning and necessary fund-raising activities working alongside our Executive Committee that will steer the development. The section on page 6 of this newsletter explains how to apply for this post.



Please let us know if you are aware of individuals who might be highly suitable for such a post. Also, please forward to us any ideas for items that you think might be suitable for inclusion in the touring exhibition, supplying explanations and reasons for your choice. We would be interested to hear your views on whether a touring exhibition should focus on ideas built around a single theme of mathematics, or on applications of a few unifying mathematical principles, or on a wide variety of different topics.

### Venue for MathsWorldUK

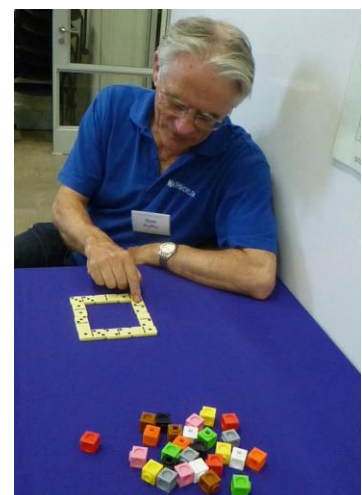
We are seeking venues for a possible site in a major city in the UK. The city should be a magnet for local area residents and tourists, and preferably be one with a university department of mathematics, which would be willing to enter into partnerships with us. We want to enter into dialogue with local government officials, city planners and developers, entrepreneurs, local industry and teacher communities. At the current time all development proposals are up for grabs, so if you know of groups that might be of interest to us, and we to them, do let us know.

Discussions are going on in Leeds about a possible venue, but these are just the beginnings. We are already working closely with the School of Mathematics at the University of Leeds and with the STEM outreach group in the Educational Engagement Team and are grateful to them for their support. We are seeking a large venue of at least 6,000 square metres. At the time of publication of this Newsletter we will have met with representatives from the Department of Digital, Culture, Media and Sport, which supports National Museums in the UK and with people in the Department for Education.

We look forward to your continuing support in the coming year.



Greenwich Maths Fair





Greenwich Maths Fair

All photos courtesy of Jack Abramsky

## Seeking a Chief Executive Officer

MWUK is seeking to appoint, for one year in the first instance, a Chief Executive Officer (CEO) to lead and support the working towards our ultimate mission – an interactive museum space devoted solely to Mathematics and its applications.

The CEO will be a key member of the management group, reporting to a Chairman of the Executive Committee, representing MWUK with a range of strategic partners and contacts, managing a comprehensive fund-raising programme, leading on the development of a Touring Exhibition, and furthering our reputation for Mathematics engagement.

This role offers an excellent and exciting opportunity for someone looking for a challenging but rewarding senior executive role with a fledgling national organisation, passionate about popularising Mathematics.

To see the full job description and person specification please visit our website, or The Guardian Jobs online at:

<https://jobs.theguardian.com/job/6670765/chief-executive-officer/?LinkSource=PremiumListing>.

**To apply, please contact Professor Margaret Brown at the email address below providing a CV and a letter of application and explain why you are interested and what you can bring to the role, plus names and contact information for at least two referees, one of whom must be a recent employer or senior colleague. The deadline for applications is 22nd March 2018. Initial inquiries may be made to Margaret Brown via email to [margaret.brown@kcl.ac.uk](mailto:margaret.brown@kcl.ac.uk).**

Please pass this information to anyone who might be a suitable candidate for this post.