

Early Career Mathematicians in Parliament

Congratulations to Matthew Tointon, Teresa Bautista and Desislava Ivanova who won the Mathematical Sciences Awards at STEM for Britain. Their posters were presented to politicians and a panel of expert judges in the House of Commons on 7 March 2022.

IMA President, Professor Paul Glendinning, said:

Maths is really important. It's the quantitative language of the world. It is important culturally, and it is important economically. According to research from Deloitte, maths is deemed to be responsible for 17% of the UK's GDP – and that is without counting the value of Big Data. The privacy of our banking, the integrity of our national security, the innovation of new ideas and greater efficiencies, can all be traced to mathematics. So a great thanks to all of those that took part in this year's STEM for Britain awards. It showed a wonderful diversity of ideas, and just as importantly, a wonderful diversity of people.



Mathematical Sciences winners

Gold Medal – Matthew Tointon

Dr Matthew Tointon, lecturer in mathematics at the University of Bristol, struck gold, walking away with a £1500 prize, for his research on probability on finite transitive graphs. Matthew said:

It feels fantastic. I really enjoyed coming here. It's very easy to imagine, as a mathematician, that your work is just being contained in a theoretical box and only existing for its own sake. Taking part in this competition has made me think harder about how to justify it to a broader group of people, who may not be interested in mathematics just for its beauty. I've also enjoyed the pleasure of meeting so many people. It was nice to see what others are up to both in and beyond mathematics, and to speak to MPs about research as well. Thangam Debbonaire MP asked very insightful questions about the work and the posters.

STEM for Britain aims to help politicians understand more about the UK's thriving science and engineering base and rewards some of the strongest STEM research.

Stephen Metcalfe MP, Chair of the Parliamentary and Scientific Committee, sponsors of the mathematics awards said:

These early career engineers, mathematicians and scientists are the architects of our future and STEM for Britain is politicians' best opportunity to meet them.



Gold winner, Matthew Tointon with Stephen Benn, Martin Bridson, Paul Glendinning, Geoffrey Grimmett and Stephen Metcalfe MP.

Silver Medal – Teresa Bautista

Dr Teresa Bautista, a postdoctoral research associate at King's College London, was awarded silver and a £1000 prize for her research on the possible gravitational 'atoms' at the edge of our expanding universe. Teresa said:

It's both unexpected, and fantastic at the same time to win this award. It's nice that the effort is rewarded, because explaining your research at the 'popularisation' level is not easy. It takes a lot of time to really put it into language that explains it in the clearest way. As scientists, we have to learn to explain what we are doing to the rest of society, because it's increasingly important that there is no gap between the scientific world and the world in general.

Martin Bridson, President of the Clay Mathematics Institute, which sponsors the Gold and Silver awards, said:

It gives me enormous pleasure to see the wealth of talent that is on display. It shows the beauty, power and universality of mathematics. Scientific ideas have no borders and don't recognise ethnicities. When a theory is proved, it belongs to the whole of mankind.

Bronze Medal – Desislava Ivanova

Desislava Ivanova, a DPhil student at the University of Oxford, was awarded Bronze and a £750 prize for her research, which focuses on automated adaptive experimental design. Desi said:

I think the most important part was to be here today in real life, and to see so many young scientists and their research. I'm super happy about the third place, of course, but I'm just really glad that I had the opportunity to speak to so many other people about both their research and mine. I work in the field of experimental design and there are so many ideas about future extensions of the projects that I'm working on.

Geoffrey Grimmett, Chair of the Heilbronn Institute for Mathematical Research, which sponsors the Bronze award, said:

What this event indicates is the great centrality of mathematics, and how this has enriched the subject and our connections enormously. The recognition of skill and potential in young scientists is essential, and it's been a great privilege to see these wonderful posters.

For all the winning posters from early career researchers at STEM for Britain, see stemforbritain.org.uk/2022-winners/