

WMI



WARWICK  
MATHEMATICS INSTITUTE

# Mathematics and Beyond

## 1-Day Symposium on Friday 7th July 2006

*All talks will be in Room MS01, Mathematics Institute, Zeeman Building*

Mathematics offers many prime instances of curiosity-driven research leading on the one hand to outstanding intellectual achievements, and on the other to technological advances having enormous economic ramifications. A common-place example is the early development of computers, where arcane questions of formal proof in mathematical logic led to Alan Turing's theorems on automata and formal languages, via the wartime code-busting of the Enigma project all the way through to the development of the first electronic computers based on Von Neumann architecture; this story continues apace, with developments in number theory (the purest branch of pure mathematics) intimately related to questions of mathematical cryptography that are key ingredients of internet security and of central importance to the world's financial sector and security agencies.

The one day symposium, which takes place at the Warwick Mathematics Institute's magnificent purpose-designed and thoroughly stripey new Zeeman Building, will illustrate these two aspects of modern mathematics, with talks on the fertile relation between curiosity-driven mathematical problems and many diverse areas of contemporary science.

### Registration

Anyone interested is welcome (registration fee of £15, waived for some classes of participant). Please e-mail the MRC Office at [mrc@maths.warwick.ac.uk](mailto:mrc@maths.warwick.ac.uk) to register. Or download the Registration Form in Word format from [www2.warwick.ac.uk/newsandevents/events/ac21/globaled/research/math/](http://www2.warwick.ac.uk/newsandevents/events/ac21/globaled/research/math/)

### Posters

Abstracts for poster sessions illustrating public importance of mathematics should be submitted to the MRC Office at [mrc@maths.warwick.ac.uk](mailto:mrc@maths.warwick.ac.uk)

### Faculty include:

Professor David Rand, Professor Caroline Series, Dr Samir Siksek, Professor Ian Stewart FRS, Professor Miles Reid FRS.

### Who's it for?

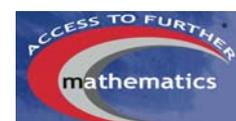
Our mathematical **Grand Day Out** has something to offer young and old alike; the first talks, given by celebrated expositors of popular mathematics, will introduce important ideas in current research in a way designed to be accessible to high school students or university entrants. These will be complemented by poster sessions and hands-on activities such as mathematical quizzes and puzzle sessions organised in association with the *Further Mathematics Network* [www.fmnetwork.org.uk](http://www.fmnetwork.org.uk) and the *National Association of Gifted and Talented Youth* [www.nagty.ac.uk](http://www.nagty.ac.uk). The afternoon's sessions include an introduction to the mathematics surrounding Wiles' famous proof of Fermat's Last Theorem, and to the prominent role that math is current playing in modern biological sciences.

### Programme

- 9:00 - 10:00 ..... *Registration and coffee*
- 10:00 - 11:00 ..... **Caroline Series: Indra's pearls - geometry and symmetry**
- 11:30 - 12:30 ..... **Ian Stewart FRS: All the world's a network**
- 12:30 - 14:00 ..... *Buffet lunch and poster sessions*
- 14:00 - 15:00 ..... **Samir Siksek: Beyond Fermat's last theorem**
- 16:00 - 17:00 ..... **David Rand: Systems biology and its mathematical challenges**
- 17:30 ..... *Reception*



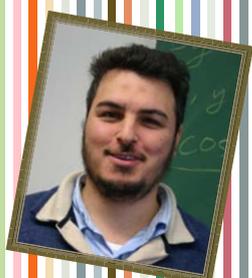
The National Academy for  
Gifted and Talented Youth



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