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March 2009

Issue 50



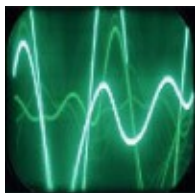
#### Understanding uncertainty: 2845 ways of spinning risk

Would you prefer a game with a 90% chance of winning, or one with a 10% chance of losing? You might scratch your head and say it's the same thing, and you'd be right, but research has shown that people's perception of risk is surprisingly vulnerable to the way it's presented. In this article **David Spiegelhalter** and **Mike Pearson** explore how risk can be spun and there's an interactive animation for you to have a go yourself.



#### It's all in the detail

The computer animation used in movies and games is now so lifelike, it is very hard to believe that you are actually watching a surface built from simple shapes of triangles. **Phil Dench** tells *Plus* how he uses mathematics to help bring these models to life.



#### Sine language

As an electronic musician **Oli Freke** has always been fascinated by sine waves, so much so that he's created a song based on them for the Geekpop festival, which is currently taking place on the Web. In this article he explores his song, touching on ancient Greek mythology, strange piano tunings and Johann Sebastian Bach.



### Restoring profanity

In 1979 decorating work in a house in Vienna revealed a set of medieval frescoes depicting a cycle of songs by a 13th century poet, who was particularly fond of satirising the erotic relationships between knights and peasant maidens. The frescoes are of great historical significance, but they are badly damaged. In this article **Carola Schönlieb** explores how mathematicians use the heat equation to fill in the gaps.



### Births and deaths in fluid chaos

Describing the motion of fluids is a huge and unsolved mathematical problem. There are equations that seem to describe it well, but their complete solution is way beyond reach. But could there be a simpler method? The physicist **Jerry Gollub** tells *Plus* about a new discovery which combines experiment with sophisticated maths.



### Sundaram's Sieve

The prime numbers are the atoms amongst the integers, and while we know that there are infinitely many of them, there's no general formula that generates them all. **Julian Havil** looks at a little-known algorithm that sieves out all primes up to a given number, and which is astonishing in its simplicity.



### Thomas Harriot: A lost pioneer

It's International Year of Astronomy and all eyes are on Galileo Galilei, whose astronomical observations 400 years ago revolutionised our understanding of the Universe. But few people know that Galileo wasn't the first to build a telescope and turn it on the stars. That honour falls to a little-known mathematician called Thomas

Harriot, who excelled in many other ways too. **Anna Faherty** takes us on a tour of his work.



Career interview: Mathematics educator and author

If you're worried that a mathematics degree might limit your career options, then there couldn't be a better person to talk to than Steve Hewson. Find out how his varied career has taken him from the lofty heights of theoretical physics, via the trading floor of a major investment bank, into the maths classroom, and has also seen him writing his very own maths book.



Teacher package: Geometry

From the geometry of Euclid to the shape of the Universe geometry is a vast field. We've got plenty of articles exploring geometry from all angles, so have a look and take your pick.



*Plus* is part of the family of activities in the Millennium Mathematics Project, which also includes the NRICH and MOTIVATE sites.