For Your Information

Mathematics Awareness Month—April 2011

Unraveling Complex Systems
How do epidemics spread, birds flock, and stock markets operate?
Many of these answers fall within the realm of mathematics.
From natural entities such as living cells, insect colonies and whole ecosystems to man-made inventions like power grids, transportation networks and the World Wide Web, we see complex systems everywhere. Deciphering the mathematics behind such systems can unravel well-structured networks and discernible patterns in natural and artificial structures. That is the idea behind Mathematics Awareness Month, April 2011. Understanding these complex systems cannot only help us manage and improve the reliability of such critical infrastructures of everyday life, but can also allow us to interpret, enhance and better interact with natural systems. Mathematical models can delineate interactions among components of these systems, analyze their spontaneous and emergent behaviors, and thus help prevent undesirable developments while enhancing desirable traits during their adaptation and evolution.

In an effort to improve our understanding of such systems, the Joint Policy Board of Mathematics has chosen the theme, "Unraveling Complex Systems" to highlight the role of mathematics in the discipline. The 2011 Mathematics Awareness website www.mathaware.org has articles and other resources to help explain the math behind such diverse systems as our dynamic response to HIV infections to production links that determine product trade between countries.

—Society for Industrial and Applied Mathematics

Google Donation to Support IMO
Google has donated 1 million euros (approximately US$1,370,000) to the Advisory Board of the International Mathematical Olympiad (IMO) to support the next five annual International Mathematical Olympiads (from 2011 to 2015). This grant will help cover the costs of this global event and ensure that students from around the world can continue to demonstrate their passion for mathematics.
Robbert Dijkgraaf, president of the Royal Netherlands Academy of Arts and Sciences and chair of the IMO 2011 Foundation, said of the gift: "Mathematics is a field in which talents can shine at a very young age. This generous gift of Google will allow the brightest young mathematicians to show their amazing abilities to the world. The scientific community is grateful for this wonderful support of Google and the recognition it expresses of the fundamental importance of mathematics to our society."
Peter Barron, director of External Relations for Google, said: "The International Math Olympiad is an event which demonstrates both the extraordinary abilities of the students who take part and the value to wider society of mathematics. We are delighted to be able to support the event over the next five years and to encourage excellence in mathematics around the world."
The International Mathematical Olympiad is the world championship of secondary school mathematics, designed to test ingenuity and insight and tax the sharpest minds in the world. It is held each July at locations around the world. About one hundred nations compete each year. The 2011 IMO will be held in the Netherlands.
Further information can be obtained from the following: Peter Barron, Director of External Relations, Google (through Mark Jansen, +31615129329); Wim Berkelmans, Director of IMO 2011 in the Netherlands (+31 6 53323968, wim@imo2011.nl); Robbert Dijkgraaf, President of the Royal Netherlands Academy of Arts and Sciences; and Geoff Smith, University of Bath, U.K., member of the IMO Advisory Board (+44 7941147895, G.C.Smith@bath.ac.uk). The official IMO site is http://www.imo-official.org/, which provides a detailed historical record.

—From an IMO/Google announcement

Corrections
The introduction to the article “Interview with Abel laureate John Tate” described Tate as the recipient of the 2009 Abel Prize when he was actually the 2010 Abel Prize winner.
In the same article, on page 449, the article refers to “$K^2$ groups of number fields”. It should have said “$K_2$ groups of number fields”.
The Notices apologizes for these errors.

—Sandy Frost