

Becoming Aware of Mathematics and the Climate

April is Mathematics Awareness Month, and this year's theme will be *Mathematics and the Climate*. The announcement highlights the many mathematical challenges that are involved in modeling the climate and trying to detect long-term changes:

“Calculus, differential equations, numerical analysis, probability, and statistics are just some of the areas of mathematics used to understand the oceans, atmosphere, and polar ice caps, and the complex interactions among these vast systems. Indeed, analyzing feedback effects is a crucial component of global climate modeling and often a significant factor in long-term predictions. For example, warmer temperatures cause ice to melt, exposing more land and water, so that more sunlight is absorbed—instead of being reflected, in turn leading to more warming.”

As usual, several essays on the theme are available at <http://www.mathaware.org>. This year, they are supplemented by audio segments in mp3 format in which the authors talk about the topics discussed in more detail in their essays. Colleges and universities are encouraged to organize events related to the MAM theme, and to that end the web site provides several resources, including tips on how to get media coverage for your event. There is also a page that allows you to share your ideas for events.

Mathematics Awareness Month, held every year in April, is a project of JPBM, the Joint Policy Board for Mathematics, whose members are the American

Mathematics Awareness Month - April 2009
Mathematics and Climate
 Discover how math and science are used to address questions of climate change:

How long will the summer Arctic sea ice pack survive?
 How much will sea level rise as ice sheets melt?
 Are hurricanes getting stronger?
 How do human activities impact global warming?
 How is climate monitored on a global scale?
 How can we improve our understanding of climate change and what can we do about it?

$$\frac{\partial u}{\partial t} + (\mathbf{u} \cdot \nabla) u = \frac{1}{\rho} \nabla p + \mathbf{F} + \frac{\mu}{\rho} \nabla^2 u$$

$$\frac{\partial \rho}{\partial t} + \nabla \cdot (\rho \mathbf{u}) = 0$$

www.mathaware.org

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Joint Policy Board for Mathematics: American Mathematical Society, Mathematical Association of America, Society for Industrial and Applied Mathematics, American Statistical Association

Mathematical Society, the Society for Industrial and Applied Mathematics, the American Statistical Association, and the MAA. The goal is to increase public understanding and visibility of mathematics in the “public square.” Each year’s theme is chosen to highlight the power and fascination of mathematics. 🍌

George Andrews Becomes President of AMS

At the end of January George Andrews became the new president of the American Mathematical Society, replacing James Glimm. Andrews is an Evan Pugh Professor of Mathematics at Pennsylvania State University. Number theory is his main area of research specifically the theory of partitions and related areas. 🍌



Photograph of George Andrews courtesy of the American Mathematical Society.