

AMS Website Connects Math and the Public

Math in the Media is an online magazine posted monthly on the AMS website. Its main aim is to inform and entertain both mathematicians and interested members of the general public, by highlighting coverage of mathematics in the mainstream media. Another offering on the AMS website is the monthly *Feature Column*, which provides expositions about mathematical topics accessible to the general public. This fall, the AMS inaugurated a snazzy new design for both *Math in the Media* and the *Feature Column* that makes them even more fun and easier to use.

Each month, the main page of *Math in the Media* carries “Tony’s Take”, a survey of the previous month’s news relating to mathematics, written by Tony Phillips of the State University of New York at Stony Brook. His brief synopses of stories appearing in print and on radio and television are witty and eloquent. As one sees in his recent summary of a story in *Nature* about how cells develop in the eyes of fruit flies, Phillips has a knack for distilling the mathematical substance in stories about all kinds of things. He has a broad view of mathematics as a subject in its own right and in its relations to art, literature, society, and science. As a way of keeping up on how the media are covering mathematics, Phillips’s column is a must-read.

The “Math Digest” section takes a more comprehensive approach to following math coverage in the media. Pooling the efforts of AMS staff and AMS-AAAS Mass Media Fellows, the “Math Digest” section provides bibliographic references and short summaries of media stories about mathematics. Among the outlets systematically covered are *Science*, *Nature*, *New Scientist*, the *New York Times*, the *Chronicle of Higher Education*, and *American Scientist*. The “Math Digest” contributors also stay on the lookout for math stories in other print outlets and on radio and TV. With archives reaching back to 1995, this may be the most comprehensive resource for media coverage of mathematics available on the web.

The “Reviews” pages contain pointers to reviews of books, plays, movies, and television shows that are related to mathematics. There are references for reviews of nearly 200 books, most of them

aimed at the general public. The reviews appeared in a variety of newspapers, magazines, and journals, and links to the reviews are provided where possible. One also finds here references to reviews of about ten movies and plays that feature mathematicians as main characters—a sign of the newfound appeal of mathematics as a theme in popular culture.

Another offering of the AMS website that connects math and the general public is the *Feature Column*, which each month presents a lively and accessible introduction to a mathematical topic. For the past three years, Joseph Malkevitch of York College of the City University of New York has written columns on such topics as marriage theorems, voting, bin packing problems, prime numbers, and mathematics and art. A patient and knowledgeable guide, Malkevitch strikes a good balance between providing needed details and shielding the reader from complications. These essays can be profitably read by members of the general public, as well as by mathematicians interested in broadening their horizons or finding topics to awaken their students’ interest.

The *Feature Column* archives contain a total of more than 80 columns written since 1997, when this section of the AMS website was started by Steven Weintraub of Lehigh University. Tony Phillips wrote the columns for three years, and Bill Casselman of the University of British Columbia also wrote a few. Starting in February 2005, Casselman, Malkevitch, Phillips, and David Austin of Grand Valley State University will collaborate on editing the column, with pieces written by one of them or by other authors.

On the *Math in the Media* page one also finds links to AMS news, the “Headlines and Deadlines” email news service, and “This Mathematical Month,” which contains vignettes about mathematics organized according to the month. Overseen by the AMS Public Awareness Office, these web offerings are excellent resources for the mathematical community and the general public. Check them out.

—Allyn Jackson

FEATURE COLUMN *Monthly Essays on Mathematical Topics*

➤ This Month's Feature Column
Euler's Polyhedral Formula


A theorem which would make both my list of 10 favorite theorems and my list of 10 most influential theorems. . .

1. Introduction

It's coming to the end of the calendar year and a lot of people are producing lists. What were the 10 largest box-office blockbusters? What were the 10 best movies of the year? Who are the 10 best dressed men and 10 worst dressed women? One can also construct more grandiose lists. Who were the 10 best pitchers of all time or what were the 10 greatest movies? What appears on a list constructed by the same person can change dramatically with slight wording changes. Thus, the list of my 10 favorite movies might not coincide with my list of the 10 greatest movies ever made.

Does it make sense to construct lists related to mathematics? What about a list of the 10 greatest mathematicians? 10 greatest women mathematicians? The 10 most influential theorems? The 10 nicest theorems?

On the one hand constructing lists is perhaps silly. How can one make a list of the 10 greatest composers of classical music? Must I leave Tchaikovsky out to include Mahler or Handel? Yet, from another perspective constructing lists of this kind makes one think about a wide variety of value-laden issues. What makes a composer great? Should a composer of a few great pieces be put on a short list of greats while another composer who perhaps composed nothing that rose to the heights of the first person, yet composed 100 times as many pieces at a very high level of inspiration, is omitted? This being the first of my last two columns as solo editor of the Feature Column, perhaps readers will indulge me if I write two columns about a theorem which would make both my list of 10 favorite theorems and my list of 10 most influential theorems. This



FROM THE EDITOR'S DESK

Welcome!

These web essays are designed for those who have already discovered the joys of mathematics as well as for mathematics skeptics. Mathematics is a fast growing and evolving subject. The domain of ways that mathematics is being applied is growing by leaps and bounds. (Examples include CAT scans, audio CD's, face recognition systems etc.) My goal is to share my excitement about these developments with you.

[More . . .](#)

2004 FEATURE COLUMNS AT A GLANCE

- December: Euler's Polyhedral Formula
- November: Mathematical Marriage
- October: Voting Games I
- September: Voting Games II
- July/August: Machine Scheduling
- June: Bin Packing and Machine Scheduling
- May: Bin Packing
- April: Networks
- March: Diagonals: Part II
- February: Diagonals: Part I
- January: Cubes

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MATH in the MEDIA

A Monthly Magazine from the American Mathematical Society



Image of the Month

This month Tony Phillips and the Math Digest report on mathematics and art.



Tony Phillips' Take on Math in the Media
A monthly survey of math news

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Math Digest
Short summaries of articles about mathematics in the popular press

IT and the Riemann Hypothesis

"What is the Riemann Hypothesis and why Should I Care?" is the provocative title of a piece by Robin Bloor posted at [IT-Director.com](#) on October 5, 2004. The site "provides IT decision makers with a one stop source of all current IT news, information, analysis and advice." (IT = Information Technology). Naturally, there is no attempt at a correct statement of the Riemann Hypothesis ("Without bothering to state the details, it is a proposed formula that calculates the number of primes less than a given number") but the reason why IT decision makers might be concerned is the "worrying predictions that if the Riemann Hypothesis is confirmed mathematically, then most of the encryption schemes we use in commerce and government will suddenly be vulnerable ..." together with news of its possible confirmation by Louis de Branges and perhaps by others. The risk for IT is "if the mathematics surrounding the solution reveals quicker ways to factorize numbers. Actually even then it will only matter if it reveals much quicker ways to factorize numbers." Because public-key cryptography "is

Recent Math Digest Summaries:
Posted here 2 December 2004:

"What Makes an Equation Beautiful," New York Times, 24 October 2004

In a column in *Physics World* magazine, philosopher and historian Robert P. Crease asked readers which equations they considered to be the greatest. He got 120 responses proposing 50 different equations. This article discusses Crease's experiment and also provides readers with a nice context to appreciate the power of mathematical equations. The top vote-getters were Maxwell's equations for electromagnetism and Euler's equation, $e^{ix} + 1 = 0$. A list of 18 other winners is given in a sidebar. Most of the equations relate to physics, but the Pythagorean theorem and the Riemann zeta function made it onto the list.

-- Allyn Jackson

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