

# Notices

of the American Mathematical Society

April 2015

Volume 62, Number 4

Malaysia Airlines Flight  
MH370: Water Entry of an  
Airliner

page 330

Herbert S. Wilf  
(1931–2012)

page 346

The Exterior Algebra  
and Central Notions in  
Mathematics

page 364

Alexander Grothendieck:  
A Country Known Only by  
Name

page 373

# Notices

of the American Mathematical Society

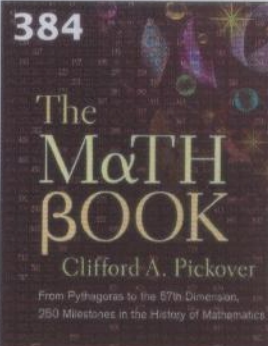
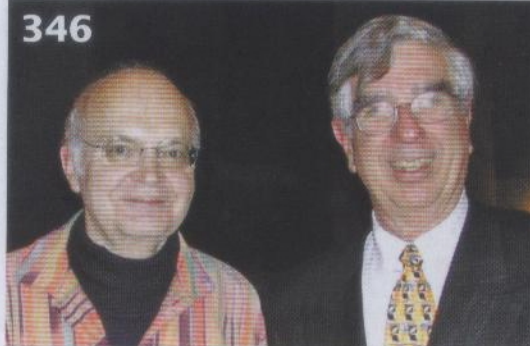
April 2015

## Communications

- 362** A Photographic Look at the Joint Mathematics Meetings, San Antonio, TX, 2015
- 388** Paying Tribute to James Eells and Joseph H. Sampson  
*Yuan-Jen Chiang and Andrea Ratto*
- 395** The Morgan Prize for Outstanding Research by an Undergraduate Turns Twenty  
*Joseph A. Gallian*
- 401** Mathematicians Discuss the Snowden Revelations: Cryptographic Standards, Mass Surveillance, and the NSA  
*Bart Preneel*
- 406** Fall 2013 Departmental Profile Report  
*William Yslas Vélez, James W. Maxwell, and Colleen A. Rose*
- 416** 2015 Steele Prizes
- 421** 2015 Morgan Prize
- 423** 2015 AMS–SIAM Birkhoff Prize
- 425** 2015 Cole Prize in Algebra
- 427** 2015 Conant Prize
- 429** 2015 Satter Prize
- 431** 2015 Whiteman Prize

## Commentary

- 327** Opinion: Is the Fields Medal the Nobel Prize of Mathematics?  
*Sergiu Klainerman*
- 328** Letters to the Editor
- 384** The Math book— A Book Review  
*Reviewed by Sarah J. Greenwald and Jill E. Thomley*



Our offering for April is rich and diverse. We have an article detailing mathematical analysis of the crash of Malaysian Airlines Flight MH370. There is a remarkable article, from someone very close to the source, about the recently departed Alexander Grothendieck. We further present an assessment of the universal nature of exterior algebra. Finally, there is a memorial for the combinatorialist Herb Wilf. —*Steven G. Krantz, Editor*

## Features

- 330** Malaysia Airlines Flight MH370: Water Entry of an Airliner  
*Goong Chen, Cong Gu, Philip J. Morris, Eric G. Paterson, Alexey Sergeev, Yi-Ching Wang, and Tomasz Wierzbicki*
- 346** Herbert S. Wilf (1931–2012)  
*Fan Chung, Curtis Greene, and Joan Hutchinson, Coordinating Editors*
- 364** The Exterior Algebra and Central Notions in Mathematics  
*Gunnar Fløystad*
- 373** Alexander Grothendieck: A Country Known Only by Name  
*Pierre Cartier*

# Notices

of the American Mathematical Society

EDITOR: Steven G. Krantz

**ASSOCIATE EDITORS:**

Krishnaswami Alladi, David Bailey, Eric Bedford, Jonathan Borwein, Susanne C. Brenner, Danny Calegari, Bill Casselman (Graphics Editor), Jennifer Chayes, Gerald Folland, Susan Friedlander, Robion Kirby, Rafe Mazzeo, Harold Parks, Mark Saul, Carla D. Savage, Steven Strogatz, James Walker

**SENIOR WRITER and DEPUTY EDITOR:**

Allyn Jackson

**PRODUCTION EDITOR:** Rachel L. Rossi

**CONTRIBUTING WRITER:** Elaine Kehoe

**CONTRIBUTING EDITOR:** Randi D. Ruden

**EDITORIAL ASSISTANT:** David M. Collins

**COMPOSITION, DESIGN, AND EDITING:** Kyle Antonevich, Anna Hattoy, Teresa Levy, Michael Haggett, Mary Medeiros, Stephen Moye, Lori Nero, Karen Ouellette, Gil Poulin, Courtney Rose, Arlene O'Sean, Donna Salter, Jennifer Wright-Sharp, Deborah Smith, Peter Sykes

**ADVERTISING SALES:** Anne Newcomb

**SUBSCRIPTION INFORMATION:** Subscription prices for Volume 62 (2015) are US\$592 list; US\$473.60 institutional member; US\$355.20 individual member; US\$532.80 corporate member. (The subscription price for members is included in the annual dues.) A late charge of 10% of the subscription price will be imposed upon orders received from nonmembers after January 1 of the subscription year. Add for postage: Surface delivery outside the United States and India—US\$27; in India—US\$40; expedited delivery to destinations in North America—US\$35; elsewhere—US\$120. Subscriptions and orders for AMS publications should be addressed to the American Mathematical Society, P.O. Box 845904, Boston, MA 02284-5904 USA. All orders must be prepaid.

**ADVERTISING:** *Notices* publishes situations wanted and classified advertising, and display advertising for publishers and academic or scientific organizations. Advertising material or questions may be sent to [classifiedads@ams.org](mailto:classifiedads@ams.org) (classified ads) or to [notices-ads@ams.org](mailto:notices-ads@ams.org) (display ads).

**SUBMISSIONS:** Articles and letters may be sent to the editor by email at [notices@math.wustl.edu](mailto:notices@math.wustl.edu), by fax at 314-935-6839, or by postal mail at Department of Mathematics, Washington University in St. Louis, Campus Box 1146, One Brookings Drive, St. Louis, MO 63130. Email is preferred. Correspondence with the production editor may be sent to [notices@ams.org](mailto:notices@ams.org). For more information, see the section "Reference and Book List".

**NOTICES ON THE AMS WEBSITE:** Supported by the AMS membership, most of this publication is freely available electronically through the AMS website, the Society's resource for delivering electronic products and services. Use the URL [www.ams.org/notices/](http://www.ams.org/notices/) to access the *Notices* on the website.

[Notices of the American Mathematical Society (ISSN 0002-9920) is published monthly except bimonthly in June/July by the American Mathematical Society at 201 Charles Street, Providence, RI 02904-2294 USA, GST No. 121892046RT\*\*\*\*. Periodicals postage paid at Providence, RI, and additional mailing offices. POSTMASTER: Send address change notices to Notices of the American Mathematical Society, P.O. Box 6248, Providence, RI 02940-6248 USA.] Publication here of the Society's street address and the other information in brackets above is a technical requirement of the U.S. Postal Service. Tel: 401-455-4000, email: [notices@ams.org](mailto:notices@ams.org).

© Copyright 2015 by the American Mathematical Society.

All rights reserved.

Printed in the United States of America. The paper used in this journal is acid-free and falls within the guidelines established to ensure permanence and durability.

## Departments

About the Cover .....	449
<b>Mathematics People</b> .....	433
<i>Chelkak Awarded 2014 Salem Prize, Rabinowitz Awarded Schauder Prize, Freiburger Retires from QAM after 50 Years, Kołodziej and Ohsawa Receive Bergman Prize, Clay Research Fellows 2015.</i>	
<b>Mathematics Opportunities</b> .....	436
<i>Math in Moscow Scholarship Program, Call for Proposals for Poincaré Chair, Call for Proposals for 2016 NSF-CBMS Regional Conferences, NSF-Enriched Doctoral Training in Mathematical Sciences, NSF-CBMS Regional Conferences 2015, AWM M. Gweneth Humphreys Award, Call for Nominations for the 2016 Hans Schneider Prize of the International Linear Algebra Society.</i>	
<b>Inside the AMS</b> .....	438
<i>AMS Hosts Congressional Briefing, AMS Holds Department Chairs Workshop, From the AMS Public Awareness Office, Deaths of AMS Members.</i>	
<b>For Your Information</b> .....	439
<i>A. Everett Pitcher Lectures.</i>	
<b>Reference and Book List</b> .....	441
<b>Mathematics Calendar</b> .....	445
<b>New Publications Offered by the AMS</b> .....	450
<b>Classified Advertisements</b> .....	455
<b>Meetings and Conferences of the AMS</b> .....	456
<b>Meetings and Conferences Table of Contents</b> .....	464

## From the AMS Secretary

<b>Call for Nominations for 2016 Chevalley Prize in Lie Theory</b> .....	326
<b>Call for Nominations for Mathematics Programs That Make a Difference</b> .....	372
<b>Call for Nominations for 2016 Morgan Prize</b> .....	386
<b>Call for Nominations for Exemplary Program Award</b> .....	394
<b>Call for Nominations for the Distinguished Public Service Award, E. H. Moore Research Article Prize, and the Levi L. Conant Prize 1998</b> .....	
<b>Call for Nominations for the David P. Robbins Prize, Oswald Veblen Prize in Geometry, and the Norbert Wiener Prize in Applied Mathematics</b> .....	399

Opinions expressed in signed Notices articles are those of the authors and do not necessarily reflect opinions of the editors or policies of the American Mathematical Society.