

Inside the AMS

Congressional Briefing Highlights New Technology



David Donoho, Senator Charles Schumer, and Representative Nancy Pelosi speak about mathematical research on Capitol Hill.

The American Mathematical Society (AMS) and the Mathematical Sciences Research Institute (MSRI) co-sponsored a Congressional briefing on June 28, 2017, presented by David Donoho, Anne T. and Robert M. Bass Professor of Humanities and Sciences and Professor of Statistics at Stanford University. The briefing, entitled “Blackboard to Bedside: How high-dimensional geometry is transforming the MRI industry,” was held for Members of Congress and staff on Capitol Hill.

Donoho explained how federally funded mathematical research transitioned in just 10 years from “brainiac” math journals to FDA-approved medical devices. His Stanford patents on compressed sensing are licensed by both GE and Siemens in their new generation FDA-approved scanners.

The new technology is a game changer for medical care

Tens of millions of MRI scans annually can soon be sped up dramatically: recent FDA approvals allow for 8 times the current speed in 3D-imaging and 16 times the current speed in dynamic heart imaging.

Diagnostic imaging costs US\$100 billion yearly and MR imaging makes up a big share of that; the increased benefit per dollar spent will result in better use of taxpayer funds. The return on federal investment in basic science will be quite significant.

Representative Nancy Pelosi and Senator Charles Schumer were on hand to give remarks and provide their support of the mathematical sciences and federal funding of basic scientific research.

In years past, the AMS has hosted an annual Congressional briefing as a means to communicate information to policymakers. Speakers discuss the importance of mathematics research and present their work to Congressional staff as a way to inform Members of Congress on how mathematics impacts today's important issues. Moving forward, the AMS plans to partner with MSRI on more Congressional briefings such as this.

—Anita Benjamin
AMS Washington Office

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From the AMS Public Awareness Office

Programs for New Faculty: This web page is a central source for new faculty members to find resources for research, teaching, networking and advancement, and membership. www.ams.org/new-faculty/.

AMS Graduate Student Blog: This blog is written by and for graduate students in the mathematical sciences. Sarah Salmon, University of Colorado, Boulder, Editor-in-Chief; DJ Bruce, University of Wisconsin, Senior Editor; and Irving Dai, Princeton University, Managing Editor, serve on its editorial board. Recent topics include matrix multiplication, optimal control theory, “What is a Manifold?”, and the “imposter syndrome.” Graduate students are invited to join the community by posting comments, questions, and advice on the blog. blogs.ams.org/mathgradblog/.

Math in the Media: View Math in the Media as your central source of news. Explore Tony Phillips’ take on math stories

in the media; ongoing posts with links to media coverage of math and reviews of books, plays, and films; and the AMS Twitter feed. www.ams.org/mathmedia/.

—Annette Emerson and Mike Breen
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The Line Newsletter Connects Supporters and Beneficiaries



Spring 2017 issue of *The Line*.

In the spring and fall, AMS Development publishes *The Line* newsletter, which highlights achievements in the mathematics community and donors who've contributed to those successes.

Recent stories include a conversation with Thomas C. Hales about his decision to establish the Bertrand Russell Prize; an overview from Karen Saxe, Director of the Washington, DC, AMS office, about ways mathematics professionals have donated expertise to positively influence government work; and a report on the AMS Graduate Student Chapter at Arizona State University's interdepartmental Python programming training, made possible by an AMS Graduate Student Chapter Grant.

The Line Fall 2017 issue will come to your mailbox soon! Feel free to contact us with news items or feedback at development@ams.org. PDFs of past issues can be found at www.ams.org/support.

—Development Office

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