



SIAM Unwrapped

News & announcements for the SIAM membership community

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April 2012

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Dear SIAM Members,

We are pleased to announce the 2012 Class of SIAM Fellows in this issue. Find details on the new class below.

If you're moving or graduating, please be sure to bring SIAM with you! Don't miss out on our publications, discounts, and other member benefits. Update your address at <http://my.siam.org>.

If you're graduating, take advantage of SIAM's postgraduate membership discount. Find details on it here: <http://connect.siam.org/?p=1809>

Regards,

Karthika Muthukumaraswamy

Editor

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::: SIAM HQ UPDATE :::

A new Class of SIAM Fellows

We are pleased to announce our [Class of 2012 Fellows](#). Nominated by the SIAM community, the new class includes 35 academics and professionals who have made significant contributions to the fields of applied mathematics and computational science by their exemplary research as well as outstanding work in the community, both of which help advance this broad discipline. More information on the new Fellows, including their affiliations, citations and research interests can be found on our news page here:

<http://connect.siam.org/?p=1979>

The [SIAM Fellows Program](#) was approved in 2008 in order to recognize and honor noteworthy contributions to fields served by SIAM.

SIAM's Annual Business Meeting

SIAM's bylaws call for a business meeting of the membership each year. Voting members are encouraged to attend the SIAM business meeting, which will be held during the SIAM Annual Meeting in Minneapolis, Minnesota (July 9—13, 2012). The business meeting will take place on Tuesday, July 10, at 6:15 p.m. The location will be posted on the [AN12 program page](#) as soon as it is available. SIAM officers will give a short presentation on SIAM's programs and plans, during which members may raise questions for discussion or make suggestions for future action. Light fare and beverages will be served.

::: APPLIED MATH COMMUNITY NEWS :::

Report on Verification, Validation, and Uncertainty Quantification

A report discussing Verification, Validation, and Uncertainty Quantification (VVUQ) and surveying the science and methods in this growing area has been produced by the Board on Math Sciences and their Applications (BMSA) via its Committee on Mathematical Foundations of VVUQ. Entitled "Assessing the Reliability of Complex Models: Mathematical and Statistical Foundations of Verification, Validation, and Uncertainty Quantification," it touches upon three main aspects:

Verification: How accurately does the computation solve the underlying equations of the model for the quantities of interest?

Validation: How accurately does the model represent reality for the quantities of interest?

Uncertainty Quantification (UQ): How do the various sources of error and uncertainty feed into uncertainty in the model-based prediction of the quantities of interest?

A pre-publication version of this report is available through the National Research Council at:

http://www.nap.edu/catalog.php?record_id=13395

The report appears as SIAM, in cooperation with the ASA and USACM, holds its first [Conference on Uncertainty Quantification](#)—another indication of the growing importance of this area.

DOE solicitation for new applied math centers

At a recent meeting of the Advanced Scientific Computing Research Advisory Committee (ASCAC), the Department of Energy (DOE) announced its plan to issue a solicitation for a new component of the Applied Mathematics Program within the next month: Mathematical Multifaceted Integrated Capability Centers (MMICC), which will support large teams of mathematicians working across mathematical disciplines on complex, multiscale research challenges. With five-year terms, the centers will focus on mathematical abstractions of science problems in key DOE challenge areas—such as the smart grid or materials for energy applications—with a goal of impacting DOE efforts in a five to ten year timeframe. It is anticipated that the new program will absorb 25 percent of the Applied Mathematics budget. Pre-applications are due on April 30, 2012.

The DOE National Laboratory announcement can be found here:

http://www.science.doe.gov/grants/pdf/SC_FOA_0000698.pdf

You can read details on the new centers by viewing [presentation slides](#) from the ASCAC meeting. The university/industry announcement can be found by scrolling through the list of publicly posted opportunities on the FedConnect site:

https://www.fedconnect.net/FedConnect/PublicPages/PublicSearch/Public_Opportunities.aspx

::: PUBLISHING NEWS AND NOTES :::

Shortening journal review times

Review times for journals in the mathematical sciences are typically rather long; authors often have to wait many months between submission and notification of acceptance, revision or rejection, and several more until eventual publication. SIAM journals are no exception. While long review times ensure the quality and standard that SIAM publications are known for, they can also be a detriment to researchers in their early careers. To address this issue, SIAM President Nick Trefethen is launching an initiative to

attempt to shorten review times without sacrificing quality. He discusses this issue and the progress that has been made in this area after extensive consideration by SIAM staff, officers, and journal committees and editors in an upcoming *SIAM News* article.

The article will be available in the April issue of *SIAM News*, and can also be found on Dr. Trefathan's website here:

<http://people.maths.ox.ac.uk/trefethen/apr12.pdf>

Submit to the *SIAM/ASA Journal on Uncertainty Quantification*!

The newly formed Editorial Board for the *SIAM/ASA Journal on Uncertainty Quantification (JUQ)* held its initial meeting in Raleigh, North Carolina, on April 4. The journal will begin accepting author submissions as of May 10.

The latest in SIAM's collection of peer-reviewed journals, jointly offered with the American Statistical Association, will feature research articles that present significant mathematical, statistical, algorithmic, and application advances in uncertainty quantification and related fields such as sensitivity analysis, model validation, model calibration, data assimilation, and code verification. Under the leadership of Max Gunzburger, Don Estep, and Jim Berger, SIAM's newest journal will enable synergistic interactions among various sub-communities in this growing area.

Visit www.siam.org/journals/juq.php for more information.

New SIAM Books

Introduction to Optimization and Semidifferential Calculus

M. C. Delfour – Université de Montréal

This book offers an original and well integrated treatment of semidifferential calculus and optimization, with an emphasis on the Hadamard subdifferential, introduced at the beginning of the 20th century and somewhat overlooked for many years. References to original papers by Hadamard (1923) and Fréchet (1925) are included, along with fundamentals of convex analysis. The book also includes complete definitions, theorems, and detailed proofs, along with commentaries that put the subject into historical perspective and numerous examples and exercises throughout each chapter, and answers to the exercises provided in an appendix. Useful background material in classical analysis has been added at the end of Chapter 1 to make the book self-sufficient.

Additional information: <http://www.ec-securehost.com/SIAM/MO12.html>

2012 / xvi + 347 pages / Hardcover / ISBN 978-1-611972-14-6

List Price \$97.00 / SIAM Member Price \$67.90 / **Order Code MO12**

::: 2012 SIAM ANNUAL MEETING UPDATES:::

Student activities at AN12

All days at the SIAM Annual Meeting could rightfully be called [Student Days](#)! Spanning Sunday through Thursday, organizers have a whole spate of events planned, such as the industry panel, career fair, book giveaway, and professional development evening, all of which will offer opportunities for students to learn about the latest research in the field, in addition to opportunities to meet and network with peers and professionals in the community. Students will also be able to meet with members of SIAM Student Chapters from around the world at a special minisymposium session organized by the SIAM Education Committee. Details can be found here:

<http://connect.siam.org/?p=1829>

Please find the full Student Days program here:

<http://www.siam.org/meetings/an12/studentday.php>

COACHing Strong Women in the Art of Strategic Persuasion

Two professional development workshops directed toward women will take place the day prior to the SIAM Annual Meeting (Sunday, July 8, 2012). With one session targeted to senior faculty and the other to junior faculty and those in their early careers, the workshop will help women be effective in leading and participating in discussions, meetings, and group negotiations. Priority registration is given to women but male participants are also invited.

For details, please visit:

<http://www.siam.org/meetings/an12/workshops.php#coach>

::: UPDATES ON CONFERENCES & PRIZES :::

Endre Szemerédi Wins Abel Prize

Endre Szemerédi of the Alfréd Rényi Institute of Mathematics, Hungarian Academy of Sciences, Budapest, and the Department of Computer Science at Rutgers University, has been awarded the Abel Prize for his “fundamental contributions to discrete mathematics and theoretical computer science, and in recognition of the profound and lasting impact of these contributions on additive number theory and ergodic theory.” Dr. Szemerédi received SIAM’s George Pólya Prize in 1975. A highly influential researcher, Dr. Szemerédi has over 200 published papers in a career spanning more than five decades. Founded in 2003, the Abel Prize is funded by the Norwegian government and is awarded each year for contributions to mathematical sciences.

Conferences accepting registrations and submissions

[2012 SIAM Annual Meeting \(AN12\)](#), July 9—13, Minneapolis, Minnesota, USA

Deadline Extended! Deadline for submitting an abstract for a poster is April 16, 2012

Visit the submissions page for more information:

<http://www.siam.org/meetings/an12/submissions.php>

[SIAM Conference on Imaging Science \(IS12\)](#), May 20—22, 2012, Philadelphia, Pennsylvania, USA

Pre-registration deadline: Monday, April 23, 2012

<https://www.siam.org/meetings/is12/regform.php>

[SIAM Conference on Nonlinear Waves and Coherent Structures \(NW12\)](#), June 13—16, 2012,

Seattle, Washington, USA

Pre-registration deadline: Wednesday, May 16, 2012

<https://www.siam.org/meetings/nw12/regform.php>

[SIAM Conference on Discrete Mathematics \(DM12\)](#), June 18—21, 2012, Halifax, Nova Scotia, Canada

Pre-registration deadline: May 21, 2012

<http://www.siam.org/meetings/dm12/regform.php>

[SIAM Conference on Applied Linear Algebra \(LA12\)](#), June 18—22, 2012, Valencia, Spain

Registration is still being accepted before the meeting.

For details, visit:

<http://siamla2012.webs.upv.es/index.php/registration/>

Open calls for prize nominations

[SIAM/ACM Prize in CS&E](#) Deadline for nominations is June 1, 2012.

Find the complete list of calls for nominations at:

<http://www.siam.org/prizes/nominations.php>

If your email does not support the hyperlink features, please copy any of the above URLs and paste them into your Internet browser.

Questions/comments/suggestions? Send them to karthika@siam.org.

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SIAM Unwrapped is a free electronic newsletter distributed monthly to SIAM members. It provides links to industry news, membership information, meetings, publications, and other items of interest.

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