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SIAM/ASA Journal on

UNCERTAINTY QUANTIFICATION

SIAM Unwrapped

News & announcements for the SIAM membership community

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May 2012

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Dear SIAM Members,

In case you missed the Annual Meeting Special issue, you can find an HTML version here:

<http://connect.siam.org/?p=2120>

Among the highlights included are a special professional development [workshop for women](#) and a [tutorial](#) on mathematically modeling interest rates—pre-registration for both sessions is only open for a few more weeks! In addition, read details on the various plenary sessions, the community lecture, and the many new events available for students.

Look out for the new *SIAM Report on Mathematics in Industry* to be released May 21. A link to the PDF version of the report will be announced on the SIAM website.

Regards,
Karthika Muthukumaraswamy
Editor

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::: PUBLIC AWARENESS :::

SIAM at USA Science & Engineering Festival

SIAM participated in the USA Science & Engineering Festival Expo and Book Fair, April 28–29, 2012 in Washington, D.C. The event, which is the country's largest celebration of science and engineering, was hosted by Lockheed Martin. The SIAM booth, organized by Peter Turner of Clarkson University and the SIAM Education Committee, featured "Math Alive!"—an exhibit designed to help attendees experience living mathematics. Simple hands-on experiments demonstrated the concept of surface tension, and visitors were encouraged to connect the experiments with mathematical concepts such as, slope, derivative and gradient.

Read more details and view pictures here:

<http://connect.siam.org/?p=2097>

The objective of the festival is to increase public awareness of the importance of science and to encourage youth to pursue careers in the field.

::: STUDENT NEWS & NOTES :::

New Jersey school wins top prize in M3 Challenge 2012

High Technology High School knows a thing or two about Moody's Mega Math Challenge. A team from the New Jersey-based school has made it to the top six teams every year since the contest's inception in 2006. This year, they nabbed the ultimate prize in the contest, winning the Summa Cum Laude Team Prize of \$20,000, becoming the Champion team out of nearly 1,000 teams that participated in this year's contest. Over five thousand high school students from 29 states in the Eastern U.S. spent 14 straight

hours this March, coming up with mathematical models to recommend the best regions in the country for building high speed rail lines as part of a nationwide network. After two rounds of judging, 55 teams were deemed worthy of prize recognition of which the top six were invited to present their solutions at Moody's Corporation in New York City for the final judging round. Awards in 2012 totaled \$115,000. The contest is sponsored each year by The Moody's Foundation and organized by SIAM.

For more details about prize winners and to read the complete press release, please visit:

<http://m3challenge.siam.org/about/mediacenter/?id=1581>

You can view a [video interview](#) with winning students from High Technology High School, watch SIAM Past President Margaret Wright's [address to winning students](#), and listen to a [Bloomberg Radio interview](#) with the team from Staples High School, one of six finalists in the 2012 contest.

An update on Student Chapter activities

SIAM provided over \$36,000 in funds to 76 chapters for activities and events on campuses worldwide during the 2011-2012 academic year. A seminar highlighting the role of mathematics at NYC startups, math fairs to motivate young students, and a "Life After Graduate School" panel are just a few of the exciting events that were organized by SIAM chapters to increase outreach and provide opportunities for students. The new SIAM chapters at the National University of Singapore and the University of Heidelberg organized their first events this year. Read further details on some of the past chapter events as well as those planned for the future here:

<http://connect.siam.org/?p=1871>

::: CYBER-SIAM UPDATES :::

SIAM Presents... speakers from PP12

SIAM continues to add conference presentations to its digital archive with [audio/slides](#) of invited speakers, prize speakers, and a selection of minisymposia presentations from this year's [Conference on Parallel Processing and Scientific Computing](#). Of broad interest is a [presentation](#) by Eric Brown of IBM's T. J. Watson Research Center talking about the development of Watson, the supercomputer that successfully competed with its human competitors on the television quiz show, Jeopardy!

Please visit the link below to view all PP12 presentation slides:

https://live.blueskybroadcast.com/bsb/client/CL_DEFAULT.asp?Client=975312&PCAT=4072&CAT=4073

You can view audio slideshows from a wide range of conferences since 2008 here:

<http://www.siam.org/meetings/presents.php>

You can browse presentations by meeting, schedule and classification by subject. You can also use the search box to fine-tune your search for a particular speaker or topic.

::: PUBLISHING NEWS AND NOTES :::

Call for Papers! SIAM/ASA Journal on Uncertainty Quantification

The new *Journal on Uncertainty Quantification* (JUQ) is now taking author submissions at <http://juq.siam.org>. SIAM will publish JUQ jointly with the American Statistical Association beginning in 2013. The journal 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.

More information on the journal, including the Editorial Board, full editorial policy, and instructions for authors is available at:

www.siam.org/journals/juq.php

New and improved SIAM Books

Computational Matrix Analysis

Alan J. Laub – University of California, Los Angeles

Using an approach that author Alan Laub calls “matrix analysis for grown-ups,” this new textbook introduces fundamental concepts of numerical linear algebra and their application to solving certain numerical problems arising in state-space control and systems theory. It is written for advanced undergraduate and beginning graduate students and can be used as a follow-up to [*Matrix Analysis for Scientists and Engineers*](#) (SIAM, 2005), a compact single-semester introduction to matrix analysis for engineers and computational scientists by the same author.

Additional information: <http://www.ec-securehost.com/SIAM/OT125.html>

2012 / xii + 156 / Softcover / ISBN 978-1-611972-20-7

List Price \$47.00 / SIAM Member Price \$32.90 / **Order Code OT125**

Mathematica Laboratories for Mathematical Statistics: Emphasizing Simulation and Computer Intensive Methods

Jenny A. Baglivo – Boston College

Although originally published in 2005, the electronic materials accompanying the text (previously provided on CD-ROM) have recently been updated for use with current versions of *Mathematica* and are available online. The text provides a concise introduction to the concepts of probability theory and

mathematical statistics and includes parametric, nonparametric, permutation, bootstrap, and diagnostic methods. The print book does not include *Mathematica* commands. Instead, step-by-step instructions for using *Mathematica* are given in examples in the online materials, which include a series of in-class and take-home computer laboratory problems designed to reinforce the concepts and apply the techniques in real or realistic settings. The labs are accessible to users with little or no experience with *Mathematica*.

Additional information: <http://www.ec-securehost.com/SIAM/SA14.html>

2005 / xx + 260 pages / Softcover / ISBN 978-0-898715-66-8

List Price \$81.00 / ASA/SIAM Member Price \$56.70 / **Order Code SA14**

The Statistical Theory of Linear Systems

E. J. Hannan and Manfred Deistler

The Statistical Theory of Linear Systems deals with identification of multi-input and multi-output linear systems, in particular systems in ARMAX and state space form. Originally published in 1988, this “classic” edition includes an extensive new introduction that outlines central ideas and features of the subject matter, as well as developments since the book’s original publication, such as subspace identification, data-driven local coordinates, and the results on post-model-selection estimators. It also provides a section of errata and an updated bibliography.

Additional information: <http://www.ec-securehost.com/SIAM/CL70.html>

2012 / xvi + 380 / Softcover / ISBN 978-1-611972-18-4

List Price \$99.00 / SIAM Member Price \$69.30 / **Order Code CL70**

::: UPDATES ON CONFERENCES & PRIZES :::

Conferences accepting registrations and submissions

[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
Advanced registration is still being accepted before the meeting.

For details, visit:

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

[2012 SIAM Annual Meeting \(AN12\)](#) and [SIAM Conference on Financial Mathematics and Engineering \(FM12\)](#), July 9–13, Minneapolis, Minnesota, USA

Pre-registration deadline: Friday, June 8, 2012

<https://www.siam.org/meetings/an12/regform.php>

[Analytic Algorithmics and Combinatorics \(ANALCO13\)](#) and [Algorithm Engineering and Experiments \(ALENEX13\)](#) will be held on January 6 and 7 respectively in New Orleans, Louisiana, USA.

This is the first time that these two meetings are being held on the same days as SODA, the **[ACM-SIAM Symposium on Discrete Algorithms \(SODA13\)](#)**, which will take place January 6–8 at the same location in New Orleans.

Submissions are now being accepted for ANALCO13. Submission deadline is August 1, 2012.

Please visit the submissions page for details:

<http://www.siam.org/meetings/analco13/submissions.php>

Submissions are also being accepted for SODA 13.

Submissions deadlines:

Short Abstract Submission and Paper Registration Deadline: June 26, 2012 4:59 PM EDT

Full Paper Submission: July 3, 2012, 4:59 PM EDT

For details:

<http://www.siam.org/meetings/da13/submissions.php>

[SIAM Conference on Computational Science & Engineering \(CSE13\)](#), February 25–March 1, 2013, Boston, Massachusetts, USA

Submissions deadlines:

Minisymposium proposals: August 13, 2012

Abstracts for contributed and minisymposium speakers: September 10, 2012

Open calls for prize nominations

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

For the following prizes, nominations are due October 15, 2012:

Germund Dahlquist Prize

The John von Neumann Lecture - suggestions welcome

Ralph E. Kleinman Prize

James H. Wilkinson Prize in Numerical Analysis and Scientific Computing

W. T. and Idalia Reid Prize

Find the complete list of calls for nominations at:

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

Erratum: SIAM President Nick Trefethen's name was misspelled as Trefathan in the April issue. We apologize for the error.

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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