

SIAM Unwrapped

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August 2011

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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.

Dear SIAM members,

Don't forget to renew your membership for 2012!

In the second week of September, you will receive an email from "SIAM Membership Renewals [renewals@siam.org]" about renewing your membership for 2012. The e-mail will allow you to link directly to your SIAM membership account and either pay your dues online or print out a renewal invoice to mail or fax your payment. Please whitelist the aforementioned e-mail address to ensure that you receive the message. ""

Regards,

Karthika Muthukumaraswamy
Editor

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::: SIAM HQ UPDATE :::

Officer, Board and Council elections

The 2012 elections for officers and board and council members are coming up! All dues paying members are eligible to vote and will receive an electronic ballot in their e-mail inbox this September. The candidates on this year's ballot are listed below. An asterisk (*) indicates an incumbent. Stay tuned ... once the ballot is up and running, you will be able to view candidates' information on the SIAM website.

Candidates for President Elect:

Juan Meza; Irene Fonseca

Candidates for VP-at-Large:

Nick Higham*; Chris Johnson

Candidates for Secretary:

Hans Kaper; Simon Tavener

Candidates for Board of Trustees: (3 members)

Robert Schreiber*; Mary Ann Horn*; Jean-Pierre Fouque; Tamara Kolda; Kathryn Brenan; Amr El-Bakry

Candidates for Council: (4 members)

Michele Benzi*; Bruce Hendrickson*; Tom Hou*; Rachel Kuske; Robert Bisseling; Alvaro Coutinho; Nilima Nigam; Guillermo Sapiro

Nominations for the 2012 Class of SIAM Fellows

Have a colleague who has made a distinguished contribution to the disciplines of applied mathematics and computational science? Nominate them to the 2012 Class of SIAM Fellows! Each year, SIAM confers Fellows status on academics and professionals who have made outstanding contributions to applied mathematics and related fields in terms of furthering research, serving the larger community, and

promoting the relevance of the subject among the general public. Nominations for the 2012 Class of Fellows are being accepted from the SIAM community until November 7, 2011.

Make a nomination at <http://nominatefellows.siam.org>.

For further information and details on the Fellows program, go to:

<http://www.siam.org/prizes/fellows/>

Annual Membership Report

The annual SIAM Business Meeting took place on Tuesday, July 19, at [ICIAM 2011](#) in Vancouver. The meeting gave SIAM members an opportunity to hear about programs and budgetary issues in addition to providing feedback to SIAM's senior leadership. SIAM President Nick Trefethen gave an overview of the growth of the society in the past year, including updates on member demographics, SIAM sections, activity groups and reciprocal societies. You can view the full report here:

<http://www.siam.org/about/pdf/2010annualreport.pdf>

Susan Palantino, SIAM Director of Finance and Administration, updated the group on the financials, including a report from the auditors, and details on revenue and expenses. The presentation can be viewed at:

<http://www.siam.org/about/pdf/2010financialeport.pdf>

SIAM members in attendance were actively engaged and offered feedback on a range of topics including the Fall Board and Council elections and ways to attract new members.

New SIAG on Data Mining and Analytics coming in 2012

The SIAM Board and Council approved a new SIAM activity group (SIAG) at their meeting held during [ICIAM 2011](#). The new activity group on Data Mining and Analytics will focus on design, analysis and implementation of data mining algorithms and systems, involving research areas such as machine learning, clustering, pattern recognition, stream and text mining, probabilistic and statistical methods, etc. The group is expected to attract researchers associated with computing machinery, and electrical and electronics engineering. In addition, the group will emphasize the benefits of data mining in other fields such as astronomy, astrophysics, web analytics, logistics, finance and more. The SIAG will closely integrate its activities with the international SIAM Conference on Data Mining (SDM) and sponsor minisymposia at other SIAM conferences. Through its activities, the group will seek to promote the growing area of data mining and analysis in industry and government.

New NWCS Activity Group prize

A new award proposed by the SIAG on Nonlinear Waves and Coherent Structures (NWCS) was approved by the SIAM Board and Council. Titled the Martin D. Kruskal Lecture in honor of the American

mathematician best known for his role in starting the “soliton revolution,” the prize will recognize and reward research excellence in areas pertinent to nonlinear waves and coherent structures, staying neutral to the awardee’s professional standing or career phase. The prize lecture, a first for this activity group, is expected to grow and enrich the objectives of the eight-year old SIAG. The award will include a plaque, a certificate with the citation, and an invitation to deliver a plenary lecture at the biennial SIAM Conference on Nonlinear Waves and Coherent Structures. The first lecture will be given at the June 2012 conference in Seattle:

<http://www.siam.org/meetings/nw12/>

::: ICIAM UPDATES :::

Wrapping up ICIAM 2011

Overview

With over 2,700 attendees from 70 countries participating in scientific discussions on a wide range of topics that covered everything from cancer modeling to the Gulf Coast Oil Spill, ICIAM 2011 was a resounding success. Set in the beautiful Convention Center in downtown Vancouver, with gorgeous views of the ocean and mountains, it was an idyllic setting to bring together students, researchers and professionals, allowing a meeting of industry and academia, early-career professionals and seasoned scientists.

The Congress tackled pertinent topics that allow us to use math to address real-world problems from disease epidemics to climate change, as SIAM Executive Director Jim Crowley [explained in an interview](#) with the Philadelphia-based NewsWorks (National Public Radio’s local news service). Chris Budd’s public lecture, *Math in and out of the Zoo*, offered the perfect reprieve from a week of a high-level mathematical equations and formulae, as he both engaged mathematicians and entertained youngsters with his analysis of penguin egg incubation, aquarium temperatures and more. A tribute to Jerry Marsden, Co-Chair of the Scientific Program Committee who lost his battle to cancer last September, took the form of a memorial lecture and several minisymposia discussing topics of interest to the mathematician, such as geometry, mechanics and dynamics.

Archives

Though the conference is behind us, you can view the many images, videos and updates that captured highlights from ICIAM 2011. Read roundups from each day of the Congress on SIAM Connect:

<http://connect.siam.org/?tag=iciam2011>

View the photo gallery on our Flickr page:

http://www.flickr.com/photos/siam_connect/sets/72157627153043305/

Watch videos from ICIAM-TV with speaker interviews, highlights from sessions and other events and activities from the Congress here:

<http://connect.siam.org/?p=839>

Many more videos to come!

Social media use at ICIAM 2011 was impressive with organizers, exhibitors, attendees and local organizations extensively using Twitter and Facebook to make announcements, share comments and feedback, and participate in scientific discussion. View a Twitter archive of the meeting here:

<http://www.twapperkeeper.com/hashtag/ICIAM2011>

Thanks to Sponsors

In the aftermath of the exciting week that was ICIAM 2011, we would like to extend a very special thanks to all exhibitors and sponsors who not only made the conference possible, but also generously extended prizes and resources to attendees. Congratulations to our two Maplesoft raffle winners, who are the happy owners of Maple 15 12-month academic term licenses. The very popular student book giveaway organized by SIAM on the final day of the conference was made possible due to all exhibitors who generously contributed their books and resources. Please read details [here](#).

Congratulations, prize recipients

The [2011 Class of SIAM Fellows](#) were honored, and recipients of [major SIAM prizes](#) including the John von Neumann Lecture (Ingrid Daubechies); the AWM/SIAM Sonia Kovalevsky Lecture (Susanne C. Brenner); the Peter Henrici Prize (Bjorn Engquist); the Ralph E. Kleinman Prize (Gunther Uhlmann); the W.T. and Idalia Reid Prize (Irena Lasiecka); and the SIAM Prize for Distinguished Service to the Profession (David Keyes) were recognized at the CAIMS/Mprime/SIAM Awards Lunch on Thursday, July 21. Winners of the SIAM Outstanding Paper Prize, the Student Paper Prize and the SIAM Award in the Mathematical Contest in Modeling were also recognized.

Please view the prize booklet for more details on prizes and awardees:

http://www.siam.org/prizes/2011_luncheon.php

You can view individual press releases here:

<http://connect.siam.org/?tag=iciamawardslunch>

::: **CYBER-SIAM UPDATES** :::

SIAM's online membership portal gets a new look

Soon, you'll notice something new and different when you login to your online account to renew your membership, purchase a journal, register for a conference, or change your address. In a few weeks, SIAM's online membership portal will sport a fresh new look featuring new pages and sections. Best of all, it will offer more information at your fingertips and eventually, many more options to manage your account. Don't worry, your user name and password will remain the same. This change should have minimal impact on our members, except for a new interface and improved functionality. If you have any questions about the upcoming new platform, please contact customer service at service@siam.org.

Presentations from DS11 available online

Most of the invited lectures and a selection of minisymposia talks were captured at the [2011 SIAM Conference on Dynamical Systems](#) (DS11). The presentation slides, synchronized with the audio can be found at

https://live.blueskybroadcast.com/bsb/client/CL_DEFAULT.asp?Client=975312&PCAT=2976&CAT=3202

The presentations are listed by day, and the "search" capability can be used to find talks over the entire archived collection.

::: PROFESSIONAL DEVELOPMENT :::

The SIAM job board: a great career resource

If you are currently in the job market, seeking to enhance your portfolio, or simply looking for professional development ideas, don't forget that the SIAM Job Board is an excellent place to find information on careers in this specialized niche. Companies that place ads via the SIAM Job Board are interested in reaching the SIAM demographic, so these jobs should be well suited to your unique skills. The SIAM Job Board allows users the ability to best match their criteria and requirements to available positions, access the latest jobs as they are advertised, upload, edit and manage their resumés, and sign up for alerts and announcements. Members seeking employment or looking to advance their careers can set up a personal account on the job board by going to the link below:

<http://jobs.siam.org/>

The [SIAM Careers page](#) also offers helpful resources on career tracks in applied mathematics and related fields, ideas on acquiring internships, advice from seasoned researchers, and much more.

Opportunity available at the DOE Office of Science

The Advanced Scientific Computing Research (ASCR) program run by the U.S. Department of Energy's (DOE's) Office of Science supports fundamental peer-reviewed research to enable the discovery, development and deployment of computational and networking capabilities, which can aid in the analysis, modeling, simulation and prediction of complex phenomena of interest to the DOE. The program also fosters dynamic partnerships among application scientists, applied mathematicians, computer scientists, and facility support staff. The Office is currently seeking exceptional candidates to

help lead its ASCR Program. The Associate Director of the ASCR is responsible for overall management of the program including strategic program planning, budget formulation and execution, project management, program integration with other activities and offices, interagency and international coordination, and management of federal and rotator technical and administrative staff.

The position is open until August 22, 2011. More details on the position and instructions on how to apply can be found on the home page of the Office of ASCR:

<http://science.energy.gov/ascr/>

::: PUBLISHING NEWS AND NOTES :::

New SIAM Books

Polynomial Based Iteration Methods for Symmetric Linear Systems

Bernd Fischer – University of Lübeck, Lübeck, Germany

This book provides a concise introduction to computational methods for solving large linear systems of equations. It is the only textbook that treats iteration methods for symmetric linear systems from a polynomial point of view. This particular feature enables readers to understand the convergence behavior and subtle differences of the various schemes, which are useful tools for the design of powerful preconditioners. To help potential users of numerical iteration algorithms design schemes for their particular needs, the author provides MATLAB® code on a supplementary Web page to serve as a guideline. The code not only solves the linear system but also computes the underlying residual polynomials, illustrating the convergence behavior of the given linear system.

Additional information: <http://www.ec-securehost.com/SIAM/CL68.html>

2011 / 283 pages / Softcover / ISBN 978-1-611971-91-0

List Price \$85.00 / Member Price \$59.50 / **Order Code CL68**

::: CONFERENCE UPDATES :::

Conferences accepting registrations and submissions

[SIAM Conference on Applied Algebraic Geometry \(AG11\)](#), October 6-9, 2011, Raleigh, North Carolina, USA

There is still time to register for the SIAM Conference on Applied Algebraic Geometry (AG11).

Register now at:

<https://www.siam.org/meetings/ag11/regform.php>

Registration closes on Thursday, September 8, 2011.

[SIAM Conference on Geometric and Physical Modeling \(GD/SPM11\)](#), October 24-27, 2011, Orlando, Florida, USA

Registration is also open for the SIAM Conference on Geometric and Physical Modeling. Go to the link below to register:

<https://www.siam.org/meetings/gdspm11/regform.php>

Pre-registration is open until September 26, 2011.

[SIAM Conference on Parallel Processing for Scientific Computing \(PP12\)](#), February 15-17, 2012, Savannah, Georgia USA

Abstracts for contributed speakers are being accepted until August 22, 2011.

Go to the submissions page for information on how to submit:

<http://www.siam.org/meetings/pp12/submissions.php>

Submissions are also being accepted for [Algorithm Engineering and Experiments \(ALENEX12\)](#) and [Analytic Algorithmics and Combinatorics \(ANALCO12\)](#), both being held January 16, 2012 in Kyoto, Japan. This meeting will take place just before the ACM-SIAM Symposium on Discrete Algorithms (SODA12). Check out the links above for more information.

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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