



## January 2014

### News & announcements for the SIAM membership community

Dear SIAM members,

Here's wishing you the very best in 2014! As we ring in the New Year, we debut a new *Unwrapped* format and welcome our new Board, Council and Activity Group officers. Read details on them below.

Though 2013 is past us, we don't have to leave Mathematics of Planet Earth behind. The successful year-long initiative continues on. Please visit [mpe2013.org](http://mpe2013.org) for details on what to expect in 2014.

Regards,

Karthika Muthukumaraswamy

Editor

## SIAM HQ UPDATE

### Welcoming new SIAM and SIAG officers

SIAM would like to welcome new officers for several of its activity groups. Officers began their terms on January 1 and will serve 2-year terms, with the exception of SIAG/OPT and SIAG/OPSF whose officers serve 3-year terms.

**SIAG on Algebraic Geometry** (SIAG/AG) — Chair: Jan Draisma; Vice Chair: Elisa Gorla; Secretary: Kristian Ranestad; Program Director: Greg Blekherman



### Recent on SIAM Blogs

Read about [must-read resources](#) for mathematical writing, tips on insightful [interview questions](#), overviews of SIAM's [student outreach](#) and [educational activities](#), and a [curious intersection](#) of applied math and U.S. history on SIAM Blogs!



### Latest SIAM Nuggets

The latest Nuggets explore mathematical models for the [use of stents](#) in the treatment of coronary heart disease, seasonal variations in [Lyme disease transmission](#), and the math behind the [spread of epidemics](#) on an airplane.



### Newest lectures & videos

Audio [slides from PD13](#)—lectures on applications of PDEs including those in biology and medicine, imaging, data extraction, and climate change—are now ready to view. The [latest SIAM videos](#) explore the underlying math of utility costs, traffic jams, conservation decision making, social networks & an aerospace perspective on optimal control.

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**SIAG on Control and Systems Theory** (SIAG/CST) — Chair: George Yin; Vice Chair: Fariba Fahroo; Secretary: Maurizio Falcone; Program Director: Bozenna Pasik-Duncan

**SIAG on Data Mining and Analytics** (SIAG/DMA) — Chair: Zoran Obradovic; Vice Chair: Jeremy Kepner; Secretary: Kirk Borne; Program Director: Takashi Washio

**SIAG on Discrete Mathematics** (SIAG/DM) — Chair: Doug West; Vice Chair: Lenore Cowen; Secretary: Rick Brewster; Program Director: Guantao Chen

**SIAG on Dynamical Systems** (SIAG/DS) — Chair: Timothy Sauer; Vice Chair: Vivi Rottschaefer; Secretary: Elizabeth Cherry; Program Director: Lora Billings; Advisory Board: Danielle Bassett, Janet A. Best, Wolf-Jurgen Beyn, Tasso J. Kaper, Chad M. Topaz

**SIAG on Imaging Science** (SIAG/IS) — Chair: Naoki Saito; Vice Chair: Peter Kuchment; Secretary: Marcelo Bertalmio; Program Director: Rebecca Willett

**SIAG on Mathematical Aspects of Materials Science** (SIAG/MS) — Chair: Qiang Du; Vice Chair: John Lowengrub; Secretary: Maria Emelianenko; Program Director: Peter Smereka

**SIAG on Optimization** (SIAG/OPT) — Chair: Juan Meza; Vice Chair: Martine Labbe; Secretary: Kim Chuan Toh; Program Director: Michael Friedlander

**SIAG on Orthogonal Polynomials and Special Functions** (SIAG/OPSF) — Chair: Walter Van Assche; Vice Chair: Jeff Geronimo; Secretary: Yuan Xu; Program Director: Diego Dominici

**SIAG on Supercomputing** (SIAG/SC) — Chair: Ali Pinar; Vice Chair: Karen Devine; Secretary: Bora Ucar; Program Director: Laura Grigori

The new SIAM VP for Programs, Cynthia Phillips of Sandia National Laboratories, also took office on January 1. VP for Programs is one of five appointed officer positions made by the President with the concurrence of the Board and Council. The other four appointments remain unchanged from 2013. View the [full list](#) of officers from the 2013 fall elections.

## Submission deadlines for ICIAM 2015 announced

The [International Congress on Industrial and Applied Mathematics \(ICIAM 2015\)](#) will be held in Beijing, China on August 10-14, 2015. Following recent traditions, SIAM will not hold its Annual Meeting in 2015 in order to support the ICIAM Congress. SIAM encourages those who wish to participate to submit minisymposium proposals or contributed talks directly to the Congress organizers. For those planning to participate, some key deadline

## SIAM Conference Registrations & submissions

### [SIAM Conference on Parallel Processing for Scientific Computing \(PP14\)](#)

February 18-21, 2014, Portland, OR, USA

[Pre-registration](#) deadline: January 22, 2014

### [SIAM International Conference on Data Mining \(SDM14\)](#)

April 24-26, 2014, Philadelphia, PA, USA

[Travel award application](#) deadline: January 22, 2014

### [SIAM Conference on Imaging Science \(IS14\)](#)

May 12-14, 2014, Hong Kong

[Pre-registration](#) deadline: February 17, 2014

### [SIAM Conference on Uncertainty Quantification \(UQ14\)](#)

March 31-April 3, 2014, Savannah, GA, USA

[Pre-registration](#) deadline: Monday, March 3, 2014

### [SIAM Conference on Discrete Mathematics \(DM14\)](#)

June 16-19, 2014, Minneapolis, Minnesota, USA

Minisymposia proposal [submission deadline EXTENDED](#) to January 15!

Abstracts for minisymposia and contributed speakers [submission deadline](#): February 11, 2014

[Travel award application](#) deadline: February 7, 2014

### [2014 SIAM Annual Meeting \(AN14\)](#)

July 7-11, 2014, Chicago, Illinois, USA

Minisymposia proposal [submission deadline EXTENDED](#) to January 27!

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information is now available on the conference website [here](#). Note, for example, that minisymposium proposals may be submitted starting March 31, 2014, with a final deadline of September 30, 2014.

SIAM has applied to the National Science Foundation for funding for a limited number of people from U.S. institutions to travel to the Congress. Application details will be posted in the near future. Priority will be given to students and early career researchers.

## Never too early to look forward to the SIAM Annual Meeting!

Recently, *The New York Times* Sunday travel section highlighted some interesting things to do in Chicago ("[36 Hours in Chicago](#)," January 1, 2014). This piece is an update of an article of the same title published in the paper in 2010 ("[36 Hours in Chicago](#)," 22 September). Both articles highlight things one can do in the city "fortified both by 19th- and 20th-century public spaces brimming with 21st-century attractions."

The [2014 SIAM Annual Meeting \(AN14\)](#) will be held in Chicago on July 7-11 at the Palmer House hotel. The Annual Meeting will feature two workshops—a two-day workshop on [network science](#) and a one-day workshop on [challenges for applied mathematics in exascale computing](#)—both beginning a day prior to the start of the meeting.

The Annual Meeting will host the usual array of outstanding [invited speakers](#), and features [Leslie Greengard](#) as the Von Neumann Lecturer. In addition, [Sep Kamvar](#) will deliver the I.E. Block Public Lecture. Details on these and other invited speakers will be posted on the [Annual Meeting website](#) as they become available. AN14 promises to be an interesting and exciting scientific meeting with themes that should interest most SIAM members and their community. And then there is the "36 hours." Make your plans to attend the meeting and spend a few extra days in Chicago.

## STUDENT NEWS & NOTES

### Funds available for student travel to SIAM meetings

If you're a graduate student attending a SIAM conference in 2014, you may be eligible for travel funds. The awards (unless otherwise noted in the award letter) come with free registration. For 2014, SIAM Student Travel Awards, which will be allocated on a competitive basis, include \$650 for domestic and \$800 for international travel. Several hundred travel awards are expected to be available in 2014, so you are encouraged to apply! You can find eligibility criteria on the student travel awards page:

<http://www.siam.org/prizes/sponsored/travel.php>

## SIAM Conference Registrations & submissions

Abstracts for minisymposia and contributed speakers due: January 27, 2014

[Student travel award application](#) deadline: January 20, 2014

## [SIAM Workshop on Combinatorial Scientific Computing \(CSC14\)](#)

July 21-23, 2014, Lyon, France

Abstract [submission](#) deadline: February 15, 2014

Student and early-career [travel award application](#) deadline: March 21, 2014

## [SIAM Conference on the Life Sciences \(LS14\)](#)

August 4-7, 2014, Charlotte, North Carolina, USA

Minisymposia proposal [submission deadline](#) EXTENDED to January 27!

Abstracts for minisymposia and contributed speakers due:

February 3, 2014

Student and early-career [travel award application](#) deadline: January 20, 2014

## [SIAM Conference on Nonlinear Waves and Coherent Structures \(NW14\)](#)

August 11-14, 2014, Cambridge, United Kingdom

Abstracts for minisymposia and contributed speakers due:

February 10, 2014

Student and early-career [travel award application](#) deadline: January 27, 2014

## Prize Nomination deadlines

### [SIAM Student Paper Prize](#):

February 15, 2014

### [SIAG/FME Junior Scientist Prize](#)

Deadline: March 15, 2014

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Instructions on how to apply are on the awards application site:

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

If you do not find the conference you wish to attend listed on the student travel awards page, visit the [SIAM conference calendar](#) to navigate to the conference of your choice. Click on "Travel Support" from the navigation menu on the right and follow the directions listed.

## Apply to the Gene Golub SIAM Summer School 2014

The 2014 Gene Golub SIAM Summer School (G2S3) on Simulation, Optimization, and Identification in Solid Mechanics will be held on August 4-15 in Linz, Austria. The application deadline for students is **February 1, 2014**. Please visit the [2014 G2S3 site](#) for more information about the courses and how to apply. You may also download the [flyer](#) to distribute or post. Please note that if you received a SIAM Conferences poster in your December 2013 issue of *SIAM News*, the location for G2S3 was mistakenly cited as Shanghai, China. We apologize for the error.

## Submit a proposal to Gene Golub SIAM Summer School 2015

SIAM is calling for letters of intent proposing topics and organizers for the 2015 Gene Golub SIAM Summer School (G2S3). Letters of intent in all areas of applied and computational mathematics will be considered. It is expected that the program will run two weeks and accept approximately 45 graduate students in 2015. SIAM will contribute up to \$85,000 towards running and supporting the attendees of the summer school.

Information about the G2S3 program, including the composition of the G2S3 committee can be found at [http://www.siam.org/about/com\\_golub.php](http://www.siam.org/about/com_golub.php) and archives are [here](#).

The deadline for letters of intent is January 31, 2014. For more details, visit: [www.siam.org/students/g2s3/summer\\_call.php](http://www.siam.org/students/g2s3/summer_call.php)

## PUBLISHING NEWS & NOTES

### Jack Xin leads MMS

The New Year brings a change in leadership at *Multiscale Modeling and Simulation* (MMS). Jack Xin of the University of California, Irvine, succeeds Russ Caflisch as Editor-in-Chief. Caflisch has completed six years at the journal's helm, during which time MMS continued the steady growth that began with its founding in 2002. Caflisch will remain on the editorial board, as will Tom Hou, the journal's founding Editor-in-Chief. MMS publishes to its 12<sup>th</sup> volume

## New SIAM Books

### [Chaotic Signal Processing](#)

Edited by Henry Leung

Chaos is a deterministic random phenomenon. Many signal processes (e.g., radar and sonar) have a random appearance, and chaos provides an alternative approach to processing these signals. This book presents up-to-date research results on chaotic signal processing, including the application of nonlinear dynamics to radar target recognition, an exactly solvable chaos approach for communications, a chaotic approach for reconfigurable computing, system identification using chaos, design of a high resolution LADAR system based on chaos, and the use of chaos in compressive sensing.

### Additional information:

2013 / x + 179 pages / Softcover / 978-1-611973-25-9

List Price \$79.00 / SIAM Member Price \$59.30 / Order Code OT136

### [Analytic Perturbation Theory and Its Applications](#)

Konstantin E. Avrachenkov, Jerzy A. Filar, and Phil G. Howlett

This book considers systems that can be disturbed to varying degrees by changing the value of a single perturbation parameter. The difference between the actual and nominal values of this key parameter, the perturbation, is small but unknown in most applications, so it is important to understand the behavior of the solutions as the perturbation tends to zero.

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this year.

## Growth of Journal on Uncertainty Quantification

SIAM/ASA *Journal on Uncertainty Quantification* has completed publication to Volume 1, comprising 23 papers. Our newest journal now moves to publication of its second volume. Access to all content continues to be complimentary through 2014.

The journal received close to 100 submissions in 2013, marking a healthy start in its first full year. JUQ seeks research articles presenting significant mathematical, statistical, algorithmic, and application advances in uncertainty quantification, defined as the interface of complex modeling of processes and data, especially characterizations of the uncertainties inherent in the use of such models. See <http://www.siam.org/journals/juq.php>.

### Additional information:

2013 / x + 369 pages / Hardcover /  
978-1-611973-13-6  
List Price \$89.00 / SIAM Member  
Price \$62.30 / **Order Code OT135**

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