

**SIAM Unwrapped – February 2015**

News & announcements for the SIAM membership community



Dear SIAM members,

One of SIAM's largest conferences is just around the corner. Are you all set to attend?

Read details on what to expect at the [SIAM Conference on Computational Science and Engineering \(CSE15\)](#) in this issue, among other updates.

We hope to see you in Salt Lake City in March!

Regards,

Karthika Swamy Cohen

Editor

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**::: CSE15 UPDATES :::**  
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**What to look forward to at CSE15**

The [2015 SIAM Conference on Computational Science and Engineering \(CSE15\)](#) will take place Saturday, March 14 through Wednesday, March 18, 2015 in Salt Lake City, Utah. Highlights of the program include:

- A stellar lineup of [invited plenary speakers](#)
- [Featured minisymposia](#) on fundamental CSE advances with broadly accessible introductions to topics and presentations
- [NSF-SIAM Symposium on Materials](#) featuring three sessions on the mathematical and computational aspects of materials science
- [Minitutorials](#) on *Python Visual Analytics for Big Data* and *Lab Skills for Scientific Computing*
- Expanded poster sessions, including demos and *minisymposia* (thematic poster groups), as well as new poster prizes

**Let your research be heard—and seen!**

Do you have a cool animation or visual of your research work? Are you working on something you want to share but don't know how to get started? Head to the communication "doctors" at CSE15!

Mathematicians, educators, science advocates and writers will help break down your research to a general-audience level, making it more accessible to the media and public. If you have an interesting visual or animation, load it on a flash drive and bring it along. Animations are not mandatory, however. You can use only words to summarize your research or project and the "doctors" will come up with key points and relevant narratives to write your scientific story for the lay audience. Science writer Flora Lichtman, whose work has appeared in the *New York Times*, NPR's *Science Friday*, and *Popular Science*, will be among the doctors on staff.

Visit the booth in Room 255 between 4:30 and 6:30 PM on Sunday, March 15 or Monday, March 16.

**Submit your resume for the CSE15 career fair**

As a pre-registered attendee for the SIAM Conference on Computational Science and Engineering (CSE15), you may be interested in the career fair sessions on Saturday, March 14, 2015. Job seekers are requested to submit their resumes to [marketing@siam.org](mailto:marketing@siam.org) (using subject line "CSE15 Career Fair Resume – LAST NAME") through February 27, 2015 so they can be provided in advance to participating employers. See complete resume preparation requirements at [The Career Fair at SIAM Conferences: A Guide](#).

The fair will feature representatives from employers in industry and government who will be prepared to discuss opportunities for internships, postdoctoral appointments and full-time jobs.

For a growing list of employers participating in the career fair, please visit:

<http://www.siam.org/meetings/cse15/career.php>.

View full details on the sessions being offered here:

<http://connect.siam.org/attend-the-career-fair-at-the-siam-computational-science-and-engineering-conference/>

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::: **SIAM HQ UPDATE** :::  
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### **The latest from ICIAM**

Are you registered for ICIAM 2015? The [8th International Congress on Industrial and Applied Mathematics \(ICIAM 2015\)](#) will be held in Beijing, China on August 10-14, 2015.

Read the latest updates from ICIAM in their newsletter, *Dianoia*:

<http://www.iciam.org/News/>

Following recent traditions, SIAM will not hold its Annual Meeting in 2015 in order to support the ICIAM Congress, and encourages those who wish to participate to submit minisymposium proposals or contributed talks [directly to Congress](#) organizers. SIAM is a founding member society of ICIAM.

### **Members help spread the word about SIAM**

SIAM's Member-Get-a-Member (MGAM) program brought in a host of new members, proving, once again, that one of the best ways to help SIAM grow is through our community. We are pleased to welcome our new members and express gratitude to our referring members. This past year, 87 members brought in 89 friends and colleagues through the program. Referring and new members were entered into a drawing to win prizes last month; winners of the drawing can be found here:

<http://connect.siam.org/mgam-winners-announced/>

Missed our contest last year? A new one starts right now, so go ahead, refer your colleagues while you are thinking about it for a chance to win next year:

[www.siam.org/membership/mgam.php](http://www.siam.org/membership/mgam.php)

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**::: STUDENT NEWS & NOTES :::**  
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**Student chapters are innovative with SIAM funds**

SIAM student chapters, as usual, put SIAM funds to good use as they carried out activities to promote student involvement and outreach in various areas of the mathematical sciences.

<http://connect.siam.org/chapter-funding-2014-15>

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**::: PUBLISHING NEWS & NOTES :::**  
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**New SIAM Books**

***Finite Element Methods for Computational Fluid Dynamics: A Practical Guide***

*Dmitri Kuzmin and Jari Hämäläinen*

This informal introduction to computational fluid dynamics and practical guide to numerical simulation of transport phenomena covers the derivation of the governing equations, construction of finite element approximations, and qualitative properties of numerical solutions, among other topics. To make the book accessible to readers with diverse interests and backgrounds, the authors begin at a basic level and advance to numerical tools for increasingly difficult flow problems, emphasizing practical implementation rather than mathematical theory.

Additional information: <http://bookstore.siam.org/cs14>

2014 / viii + 313 pages / Softcover / ISBN 978-1-611973-60-0 / List Price \$104.00 / Member Price \$72.80  
**/ Order Code CS14**

***Model Emergent Dynamics in Complex Systems***

*A. J. Roberts*

Arising out of the growing interest in and applications of modern dynamical systems theory, this book explores how to derive relatively simple dynamical equations that model complex physical interactions. The author's objectives are to use sound theory to explore algebraic techniques, develop interesting applications, and discover general modeling principles. Model Emergent Dynamics in Complex Systems unifies into one powerful and coherent approach the many varied extant methods for mathematical model reduction and approximation.

Additional information: <http://bookstore.siam.org/mm20>

2015 / x + 750 pages / Softcover / ISBN 978-1-611973-55-6 / List Price \$114.00 / Member Price \$79.80 / **Order Code MM20**

***Preconditioning and the Conjugate Gradient Method in the Context of Solving PDEs***

*Josef Málek and Zdeněk Strakoš*

Preconditioning and the Conjugate Gradient Method in the Context of Solving PDEs is about the interplay between modeling, analysis, discretization, matrix computation, and model reduction. The authors link PDE analysis, functional analysis, and calculus of variations with matrix iterative computation using Krylov subspace methods and address the challenges that arise during formulation of the mathematical model through to efficient numerical solution of the algebraic problem.

This text challenges commonly held views, addresses widespread misunderstandings, and formulates thought-provoking open questions for further research.

Additional information: <http://bookstore.siam.org/sl01>

2015 / x + 104 pages / Softcover / ISBN: 978-1-611973-83-9 / List Price \$39.00 / MOS/SIAM Member Price \$27.30 / **Order Code SL01**

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::: **UPDATES ON CONFERENCES & PRIZES** :::  
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**Child care grants for Dynamical Systems meeting**

SIAM is offering up to \$250 per family for attendees to bring children to the [2015 SIAM Conference on Dynamical Systems \(DS15\)](#). A description of the kinds of expenses reimbursable can be found under [Guidelines for Reimbursable Child Care Expenses](#).

The deadline for applications for DS15 grants is March 23, 2015. View details here: <http://www.siam.org/meetings/ds15/childcare.php>

**Student travel funds available for SIAM meetings**

SIAM will award several hundred travel awards for graduate students wishing to attend SIAM conferences in 2015. Those eligible are urged to apply! Do you qualify for travel funds? Check out the criteria on the student travel awards page:

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

The awards (unless otherwise noted in the award letter) come with free registration. Funds will be allocated on a competitive basis, and include \$650 for domestic and \$800 for international travel. Application instructions are on the awards application site at <http://awards.siam.org/>. Alternatively, visit the [SIAM conference calendar](#) to select the conference of your choice, and click on "Travel Support" from the right-hand navigation menu.

## **SIAM conference registrations & submissions**

**[SIAM Conference on Computational Science and Engineering \(CSE15\)](#)**, March 14-18, 2015, Salt Lake City, Utah, USA

Online registration deadline: February 11, 2015

<https://www.siam.org/meetings/cse15/regform.php>

**[The 13th International Symposium on Orthogonal Polynomials, Special Functions and Applications \(OPSFA13\)](#)**, June 1-5, 2015, Gaithersburg, Maryland, USA

Abstracts for contributed and minisymposium speaker submissions are due: February 11, 2015

<http://www.siam.org/meetings/opsfa13/submissions.php>

**[SIAM Conference on Control and Its Applications \(CT15\)](#)**, July 8-10, 2015, Paris, France

Hotel information is now posted at <http://www.siam.org/meetings/ct15/hotel.php>. It is recommended that attendees make their reservations early.

**[8th International Congress on Industrial and Applied Mathematics \(ICIAM 2015\)](#)**, August 10-14, 2015, Beijing, China

Closing date for poster submissions: April 30, 2015

Notification of final decisions on posters: within one month of submission

Submissions site and information at <http://www.iciam2015.cn/Submissions.html>

Hotel registration is now open: <http://www.iciam2015.cn/Hotels-Tours.html>

**[SIAM Conference on Applied Algebraic Geometry \(AG15\)](#)**, August 3-7, 2015, Daejeon, South Korea

Pre-registration deadline: July 10, 2015

<http://camp.nims.re.kr/activities/eventpages/?id=200&action=registration>

Student and Early Career Travel Support deadline: March 18, 2015

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

Early Career information: <http://www.siam.org/prizes/sponsored/earlycareertravel.php>

**[SIAM Conference on Applied Linear Algebra \(LA15\)](#)**, October 26-30, 2015, Atlanta, Georgia, USA

Minisymposium proposals submission deadline: March 30, 2015

Abstracts for contributed and minisymposium speaker submission deadline: April 27, 2015

<http://www.siam.org/meetings/la15/submissions.php>

Student and Early Career Travel Support deadline: April 17, 2015

<http://www.siam.org/meetings/la15/tsupport.php>

## **Prize nomination deadlines**

**[SIAM Student Paper Prize](#)**: February 15, 2015

**[Best SICON Paper Prize](#)**: February 15, 2015

**[SIAG/LA Prize](#)**: February 15, 2015

For the complete list of the call for nominations, please visit:

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

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Society for Industrial and Applied Mathematics (SIAM)

3600 Market Street, 6th Floor, Philadelphia, PA, 19104-2688 USA

Phone: +1 215-382-9800 Fax:+1 215-386-7999 [www.siam.org](http://www.siam.org)



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.

Please note: If you would prefer not to receive this e-newsletter, reply to this email with the word "unsubscribe" in the subject line and you will be removed from the *SIAM Unwrapped* mailing list.

Questions/comments/suggestions? Send them to [karthika@siam.org](mailto:karthika@siam.org).