



## ***SIAM Unwrapped***

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**December 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,

Do you know other mathematicians or scientists that could benefit from the value of a SIAM membership? Encourage them to [join](#) today!

There are only a couple weeks left for your chance to win a free SIAM Membership, conference registration, or book through our [Member Get a Member](#) contest. If your friend or colleague joins by December 31 and enters your name as the 'referring member,' you and the new member will be entered for a chance to [win](#) prizes. Please e-mail [membership@siam.org](mailto:membership@siam.org) with questions. We look forward to seeing your network become a part of the larger SIAM community!

We would also like to remind you again to [renew your membership](#) for 2012 to ensure that you continue to receive all your member benefits without interruption.

We wish you a wonderful and safe holiday season!

Regards,  
Karthika Muthukumaraswamy  
Editor

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### **Contents:**

#### **SIAM HQ UPDATE**

- And the winner is...
- Forward Looking Workshop by SIAG on GeoSciences
- A note from ICIAM on the IMU-ICIAM Journal Rating Blog

#### **STUDENT NEWS & NOTES**

- Travel Funds for Workshop Celebrating Diversity

- Interested in computational geosciences? Apply to G2S3!
- Proposals sought for Gene Golub SIAM Summer School 2013

## PUBLISHING NEWS & NOTES

- SIAM's journal and e-books moving to a new platform
- XML conversion plan for journals rescinded
- New SIAM Books
  - *Nonlinear Water Waves with Applications to Wave-Current Interactions and Tsunamis*
  - *Taylor Approximations for Stochastic Partial Differential Equations*
  - *Spectral Numerical Weather Prediction Models*

## UPDATES ON CONFERENCES & PRIZES

- Nominate a colleague for the 2012 Lagrange Prize!
- COACHing Strong Women in the Art of Strategic Persuasion
- Conferences accepting registrations and submissions
- Open calls for prize nominations

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::: SIAM HQ UPDATE :::

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### And the winner is...

The votes from the 2011 SIAM elections are in! We are pleased to announce that the following candidates will assume office on January 1, 2012:

**President-Elect:** Irene Fonseca, Carnegie-Mellon University

**Vice-President at Large:** Nicholas Higham\*, University of Manchester

**Secretary:** Simon Tavener, Colorado State University

### Board

Kathryn Brenan, The Aerospace Corporation

Mary Ann Horn\*, Vanderbilt University

Tamara Kolda, Sandia National Laboratories

### Council

Michele Benzi\*, Emory University

Bruce Hendrickson\*, Sandia National Laboratories

Tom Hou\*, California Institute of Technology

Rachel Kuske, University of British Columbia

Asterisks indicate incumbent officers who will continue their terms. SIAM would like to express gratitude to all the excellent candidates who stood for election, including those who will have the opportunity to

serve in office and those who will no doubt continue to serve the SIAM community in innumerable ways. SIAM also thanks all who voted.

### **Forward Looking Workshop by SIAG on GeoSciences**

The SIAM Activity Group on GeoSciences organized a Forward Looking Workshop, which convened in Crystal City, Washington, D.C. on Sept. 16-17, 2011. Funded by the National Science Foundation, the workshop discussed research and methodological challenges at the frontier of geosciences and mathematical and computational research. Participants proposed ways to overcome these challenges, presenting models and discussing opportunities for successful collaborations that could be supported by interdisciplinary National Science Foundation (NSF) programs, similar to previous initiatives like the program on Collaboration in Mathematical Geosciences (CMG). Workshop participants and organizers interacted with NSF officers to discuss current initiatives in the mathematical geosciences as well as the many scientific, organizational, and educational challenges facing the field.

Read more details and access a link to the [full report](#) and a [wiki](#) with workshop materials at the link below:

<http://connect.siam.org/?p=1445>

### **A note from ICIAM on the IMU-ICIAM Journal Rating Blog**

In 2008, the IMU, IMS and ICIAM made public [a study](#) on the use of citations in assessing research quality, and in 2010, the IMU and ICIAM created a joint working group to study the more specific question of the reliability of journal rankings based on citations (the group's report is [here](#)). Before going ahead and taking any further action based on recommendations from the two reports, the IMU and ICIAM want to get your input on whether to develop a community-based ranking system, and if so, how. The two organizations want to explore opinions on a larger scale and get as much input as possible from the mathematical sciences community. To that end, a "Blog on Mathematical Journals" has been established at the link below:

<http://www.mathunion.org/journals>

You can submit your opinion by posting an article to the blog (e-mail to: [journal.blog@mathunion.org](mailto:journal.blog@mathunion.org)) or by forwarding a comment (add a comment to a posted article by typing in the "comments" window or sending an e-mail to [journal.blog@mathunion.org](mailto:journal.blog@mathunion.org)).

ICIAM and IMU also request you to spread the information about the report and blog on mathematical journals widely in your community through your organizations' listservs or newsletters. Please find the complete letter with details on the IMU-ICIAM Journal Rating Blog [here](#).

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**::: STUDENT NEWS & NOTES :::**

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**Travel Funds for Workshop Celebrating Diversity**

Limited funding is available for underrepresented minority students and early career researchers to attend the Workshop Celebrating Diversity (WCD) sessions, which will be held during the 2012 SIAM Annual Meeting, July 9–13 in Minneapolis, Minnesota, USA.

You can find information about [student](#) and [post-doc/early career](#) awards for the WCD sessions and SIAM conferences at the links below:

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

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

Be sure to indicate that you plan to attend the WCD sessions and that you are an underrepresented minority when you apply. Information about the WCD sessions can be found at:

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

**Interested in computational geosciences? Apply to G2S3!**

The 2012 Gene Golub SIAM Summer School (G2S3) on Simulation and Supercomputing in the Geosciences, will be held July 29–August 10, 2012 at the Casa Munras in Monterey California, USA. Now in its third year, the school is designed to complement regular university curricula and expose students to state-of-the-art topics presented by outstanding researchers in the field. The 2012 school will offer three mini-courses over the two-week period, introducing students to advanced simulation and computational techniques used for early warning, planning and data analysis in the event of natural hazards like storms, earthquakes and tsunamis. Deadline for applications is February 1, 2012. Go to the [G2S3 website](#) for more information and updates on the application site:

<http://www.mac.tum.de/g2s3/>

**Proposals sought for Gene Golub SIAM Summer School 2013**

Alternatively, you can run the 2013 Gene Golub SIAM Summer School! We are calling for letters of intent for proposals for G2S3 2013. The proposed two-week school for approximately 40–50 graduate students is slated for the period June–August 2013. Preference will be given to a computational linear algebra theme, but letters of intents in all areas will be considered. Courses are expected to be at the research level, covering topics not usually found in regular university curricula. SIAM strongly encourages participation of women and minorities as organizers and lecturers.

Letters of intent, which should include names of the organizers, their previous experience, and a proposed topic for the summer school, in addition to suggestions for courses and lecturers, are due January 31, 2012. More information is available at:

[http://www.siam.org/students/g2s3/summer\\_call.php](http://www.siam.org/students/g2s3/summer_call.php)

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**::: PUBLISHING NEWS AND NOTES :::**

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**SIAM's journal and e-books moving to a new platform**

We are pleased to announce that beginning in June of 2012, our content will be hosted by Atypon, using their digital publishing platform, Literatum. Atypon is well known in the scholarly publishing industry, providing software, hosting, and systems development to numerous societies and commercial publishers alike. With over 11,000,000 articles and more than 70,000 e-books residing on their platform, they are well-positioned to give SIAM the functionality we expect. So, what will change? For you, very little. We want to make the transition nearly invisible to the end-user and are working with Atypon to make the conversion as smooth as possible. We may be adding some new features, but for the most part, our site will function and look very much as it does now. The shift was prompted by our current provider moving in a different direction, necessitating a new online home for our journals and e-books.

**XML conversion for journals plan rescinded**

Many of you are aware that over the past 20 months we have been experimenting with converting our journal workflow to an XML (Extensible markup language) based system, which was initiated due to its universal format and standardized method for encoding text and data. However, we have encountered unexpected issues during the conversion. While most of the journal articles produced in XML exhibited no discernable problems, approximately 10% were not of the quality we expect and require. As a result, we have concluded that continuing with this experiment is not in the best interests of our authors and readers at present. Beginning January 1, 2012, we will revert to processing our journals as we have traditionally.

**New SIAM Books**

***Nonlinear Water Waves with Applications to Wave-Current Interactions and Tsunamis***

*Adrian Constantin – University of Vienna*

This overview of some of the main results and recent developments in nonlinear water waves presents fundamental aspects of the field and discusses several important topics of current research interest. It contains information about water-wave motion for which advanced mathematical study can be pursued, enabling readers to derive conclusions that explain observed phenomena to the greatest extent possible. The author discusses the underlying physical factors of such waves and explores the physical relevance of the mathematical results that are presented.

Additional information: <http://www.ec-securehost.com/SIAM/CB81.html>

2011 / ix + 331 pages / Softcover / ISBN: 78-1-611971-86-6

List Price 89.00 / SIAM Member Price 62.30 / **Order Code CB81**

### ***Taylor Approximations for Stochastic Partial Differential Equations***

*Arnulf Jentzen – Princeton University*

*Peter E. Kloeden – Goethe University*

This book presents a systematic theory of Taylor expansions of evolutionary-type stochastic partial differential equations (SPDEs). The authors show how Taylor expansions can be used to derive higher order numerical methods for SPDEs, with a focus on pathwise and strong convergence. Recent developments on numerical methods for random and stochastic ordinary differential equations are also included since these are relevant for solving spatially discretised SPDEs as well as of interest in their own right.

Additional information: <http://www.ec-securehost.com/SIAM/CB83.html>

2011 / xvi + 220 / softcover / ISBN 978-1-611972-00-9

List Price \$77.00 / CBMS/SIAM Member Price \$53.90 / **Order Code CB83**

### ***Spectral Numerical Weather Prediction Models***

*Martin Ehrendorfer – Innsbruck, Austria*

This book provides a comprehensive overview of numerical weather prediction (NWP) focusing on the application of the spectral method in NWP models. The author illustrates the use of the spectral method in theory as well as in its application to building a full prototypical spectral NWP model, from the formulation of continuous model equations through development of their discretized forms to coded statements of the model.

Additional information: <http://www.ec-securehost.com/SIAM/OT124.html>

2011 / xxvi + 498 pages / Softcover / ISBN 978-1-611971-98-9

List Price \$129.00 / SIAM Member Price \$90.30 / **Order Code OT124**

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**::: UPDATES ON CONFERENCES & PRIZES :::**

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### **Nominate a colleague for the 2012 Lagrange Prize!**

We are accepting nominations for the 2012 Lagrange Prize in Continuous Optimization. Awarded every three years—jointly by MOS and SIAM—the prize recognizes outstanding work in the area of continuous optimization. Considered works should form the final publication of the main result(s) and should bear a publication date within the six calendar years prior to the year of the award (2006-2011). Award

recipient(s) will receive a certificate and a total cash prize of \$1,500 at the 2012 SIAM Annual Meeting (AN12). Nominations should be submitted to SIAM.

Visit the prize's [nomination page](#) for more about the prize and how to make a nomination:

[http://www.siam.org/prizes/nominations/nom\\_lagrange.php](http://www.siam.org/prizes/nominations/nom_lagrange.php)

### **COAChing Strong Women in the Art of Strategic Persuasion**

Two professional development workshops designed to help women be more effective in leading or participating in discussions, meetings, and group negotiations will take place the day prior to the SIAM Annual Meeting (Sunday, July 8, 2012) at the same location in Minneapolis, Minnesota. The morning half-day session will be targeted to senior faculty women and the afternoon session to junior faculty women who are in their first years of academia. The workshops will combine self-presentation, leadership training, and faculty development in an interactive format. Priority registration is given to women but male participants are also invited.

For more information, please visit:

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

### **Conferences accepting registrations and submissions**

[ACM-SIAM Symposium on Discrete Algorithms \(SODA12\)](#) (January 17-19, 2012), [Algorithm Engineering and Experiments \(ALENEX12\)](#) (January 16, 2012), and [Analytic Algorithmics and Combinatorics \(ANALCO12\)](#) (January 16, 2012) to be held at The Westin Miyako in Kyoto, Japan, are still accepting registrations.

The pre-registration deadline is December 20, 2011.

For more information, go to:

<http://www.siam.org/meetings/da12/reginfo.php>

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

The pre-registration deadline is January 18, 2012

For more information go to:

<https://www.siam.org/meetings/pp12/reginfo.php>

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

The deadline for submission of abstracts for contributed and minisymposium speakers is December 12, 2011.

For more information, visit:

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

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

The deadline for submission of minisymposium proposals is January 4, 2012. Abstracts for contributed and minisymposium speakers are due January 18, 2012.

For more information and/or to make a submission, please visit:

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

**SIAM Conference on Financial Mathematics and Engineering (FM12)**, July 9–11, 2012, and the **2012 SIAM Annual Meeting (AN12)**, July 9–13, are being held jointly in Minneapolis, Minnesota, USA.

The deadlines for submissions to both meetings are as follows:

Minisymposium proposals due January 9, 2012

Abstracts for contributed and minisymposium speakers due January 30, 2012

Go to the conference submissions pages for more information:

SIAM Conference on Financial Mathematics and Engineering (FM12):

<http://www.siam.org/meetings/fm12/submissions.php>

2012 SIAM Annual Meeting (AN12):

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

**SIAM Conference on the Life Sciences (LS12)**, August 7–10, 2012, San Diego, California, USA

Deadlines for submissions:

For minisymposium proposals: January 9, 2012

For abstracts for contributed and minisymposium speakers: February 6, 2012

For more information and to submit, please visit:

<http://www.siam.org/meetings/ls12/submissions.php>

### **Open calls for prize nominations**

**Lagrange Prize in Continuous Optimization** due February 1, 2012

Awarded jointly by SIAM and the Mathematical Optimization Society (MOS)

**SIAM Student Paper Prize** due February 15, 2012

Find the complete list of calls for nominations at:

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

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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](mailto:karthika@siam.org).

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