



ABOUT SIAM

Faces of SIAM

Photos throughout this brochure were taken with permission
at the 2017 SIAM Annual Meeting in Pittsburgh, PA.

1-2018

ABOUT SIAM

**SOCIETY FOR INDUSTRIAL
AND APPLIED MATHEMATICS**

Science and Industry
Advance with Mathematics



SIAM is a leading international organization of professionals and students whose primary interest is in mathematics and computational science and their applications. SIAM's mission is to advance and raise awareness about applied math and related fields through its books, journals, conferences, online resources, and a variety of programs and initiatives.

Incorporated in 1952 as a non-profit organization, SIAM has worked toward the following goals for more than 65 years:

- to advance the application of mathematics and computational science to engineering, industry, science, and society;
- to promote research that will lead to effective new mathematical and computational methods and techniques for science, engineering, industry, and society;
- to provide media for the exchange of information and ideas among mathematicians, engineers, and scientists.

As an international society of more than 14,500 individual members, SIAM represents applied and computational mathematicians, computer scientists, engineers, physicists, and other scientists. Members include researchers, educators, practitioners, and students from more than 100 countries working in industry, laboratories, government, and academia. SIAM also has about 500 corporate and academic institutional members.

SIAM serves its diverse group of professionals through:

- Activity groups
- Career development
- Chapters
- Conferences
- Membership
- Prizes and recognition
- Public awareness and advocacy
- Publications
- Sections
- Student resources

SIAM's constant and continuous role in fostering cooperation between the mathematics community and science and technology through its many programs is essential to the continued growth of many fields.



WAYS TO GET INVOLVED

SIAM ACTIVITY GROUPS

www.siam.org/activity

Communicate and stay current. SIAG members organize conferences and minisymposia, distribute newsletters and electronic communications, maintain websites and wikis, and award prizes. They receive targeted communication from peers, access to electronic membership directories, and additional discounts on Activity Group-sponsored conferences.

Algebraic Geometry

Jon Hauenstein

Analysis of Partial Differential Equations

Eitan Tadmor

Applied Mathematics Education

Benjamin Galluzzo

Computational Science and Engineering

Hans De Sterck

Control and Systems Theory

Kirsten Morris

Data Mining and Analytics

Ali Pinar

Discrete Mathematics

TBD

Dynamical Systems

Andy Bernoff

Financial Mathematics and Engineering

Sebastian Jaimungal

Geometric Design

Kai Hormann

Geosciences

Susan Minkoff

Imaging Science

Gitta Kutyniok

Life Sciences

Mary Ann Horn

Linear Algebra

James G. Nagy

Mathematical Aspects of Materials Science

Patricia Bauman

Mathematics of Planet Earth

Hans P. Engler

Nonlinear Waves and Coherent Structures

Peter D. Miller

Optimization

Tamás Terlaky

Orthogonal Polynomials and Special Functions

Walter Van Assche

Supercomputing

Rich Vuduc

Uncertainty Quantification

Roger Ghanem



SIAM SECTIONS

www.siam.org/sections

SIAM encourages the formation of sections comprised of members residing in a defined geographic region. Sections organize lectures, meetings, and other activities that serve their members. Some sections include nearby student chapters in their activities.

NORTH AMERICA

Central States Section – Arkansas, Colorado, Iowa, Kansas, Mississippi, Missouri, Nebraska, Oklahoma

Great Lakes Section – Michigan, northern Ohio, northern Indiana, southern Ontario, and surrounding areas

Pacific Northwest Section – Idaho, Oregon, Washington, and the province of British Columbia

Southeastern Atlantic Section – Alabama, Florida, Georgia, North Carolina, South Carolina, Tennessee

Southern California Section – Southern California

Texas-Louisiana Section – Texas and Louisiana

Washington-Baltimore Section – Washington, D.C. and Baltimore, Maryland, metropolitan areas

OUTSIDE OF NORTH AMERICA

Argentina Section AR-SIAM

Bulgaria Section BG-SIAM

Colombia Section COSIAM

East Asia Section EASIAM

United Kingdom and Republic of Ireland Section UKIE SIAM



STUDENT CHAPTERS

www.siam.org/students/chapters

SIAM student chapters promote applied mathematics and computational science to young mathematicians and scientists on college and university campuses. Chapters provide students with opportunities to get to know faculty members outside of the classroom, share ideas and research with people with similar interests, learn about career options, and develop networks with professors and fellow students. Interdisciplinary participation by a variety of departments is encouraged.

Student chapter activities often include professional development opportunities; guest lecturers; research presentations by faculty, graduate students, and undergraduates; team projects; social functions; outreach activities; and field trips to industrial laboratories or SIAM section meetings. Visit the website above to find out how to start a SIAM student chapter at your university.

A current list of more than 175 SIAM student chapters worldwide can be found at www.siam.org/students/chapters/current.php.



MEMBERS

INDIVIDUAL MEMBERS

www.siam.org/membership/individual

Individual members enjoy the following benefits:

- Networking opportunities with students and high level professionals
- Career resources
- Access to cutting-edge research
- Subscriptions to *SIAM News*, *SIAM Review*, and *Unwrapped*
- Discounts on print and electronic journal content and archives
- Discounts on SIAM books
- Discounts on SIAM conferences and workshops
- Eligibility to hold office and serve on SIAM committees
- Eligibility to nominate or be nominated as a SIAM Fellow
- Opportunity to join SIAM activity group
- Eligibility to vote in SIAM elections (paid memberships)
- Ability to nominate two students for free SIAM membership (non-student members)
- Opportunity to enroll in group insurance plan
- Inclusion in membership directory

STUDENT MEMBERS

www.siam.org/membership/individual/free.php

Full-time students can join SIAM for free if they:

- attend a SIAM academic member institution,
- are a member of a SIAM student chapter, or
- are nominated by a non-student member of SIAM.

Student members receive two free activity group memberships.

ACADEMIC MEMBERS

www.siam.org/membership/academic

Academic membership is available to degree-granting institutions. Colleges, universities, and their departmental units receive a selection of SIAM journals that match their needs, as well as discounts on the purchase of SIAM books.

Complimentary student memberships are available to full-time students who attend an institution that is an academic member of SIAM. Additional information on academic membership, including a list of nearly 500 SIAM institutional members, can be found on the SIAM website.

To apply for academic membership, go to www.siam.org/membership/join.php



CORPORATE / INSTITUTIONAL MEMBERS, SPONSORS, AND PARTNERS

www.siam.org/membership/corporate.php

Corporate/Institutional membership is offered to non-degree granting institutions that value SIAM for its resources and research support.

SIAM Corporate membership addresses a full-range of corporate/institutional research demands, including discounted subscriptions to SIAM's prestigious journals (print and electronic), reduced prices on exhibiting at SIAM meetings, discounts on book purchases, employee discounts at conferences, and public acknowledgement of members' support in SIAM publications and at SIAM conferences.

SIAM Partners have a business relationship with SIAM and receive discounts on advertising and exhibiting.

SIAM Sponsors are organizations that wish to contribute to SIAM (either with a general donation or one earmarked for a particular activity) without receiving any subscriptions or discounts in return.



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Air Force Office of Scientific Research

Amazon

Argonne National Laboratories

Bechtel Marine Propulsion Corporation

Boeing Company

CEA-DAM

Cirrus Logic

Department of National Defence Communications Security Establishment

DSTO Research Information

Exxon Mobil

Huawei Technologies France SASU

IBM Corporation

IBM TJ Watson Research Center

IBM Zurich Research Lab

IDA Center for Communications Research, La Jolla

IDA Center for Communications Research, Princeton

Institute for Computational and Experimental Research In Materials

Institute for Defense Analysis, Center for Computing Sciences

Lawrence Berkeley National Laboratory

Lawrence Livermore National Laboratory

Lockheed Martin

Los Alamos National Laboratory

Max Planck Institute for Dynamics of Complex Technical Systems

Mentor Graphics Corporation

National Security Agency

National Institute of Standards and Technology (NIST)

Oak Ridge National Laboratory

Sandia National Laboratories

Schlumberger

US Air Force Institute of Technology

US Department of Energy

US Army Corps of Engineers, Research & Development Center

SIAM JOURNALS

www.siam.org/journals

SIAM has a comprehensive publishing program in applied and computational mathematics. Each journal has its own home page with links to its editorial policy, its editorial board, instructions for authors, TeX resources, staff and subscription information, tables of contents, and more.

A sophisticated search interface, including the ability to search over both Locus (archival) and SIAM Journals Online content at the same time, helps users find what they need in one search. Subscribers can access reference links to *MathSciNet*, *Zentralblatt für Mathematik*, *Inspec*, *MEDLINE*, and go directly to cited articles via Crossref.

SIAM JOURNALS ONLINE (1997–PRESENT)

epubs.siam.org

All SIAM journal content from 1997 to present is published electronically and is included with a current journal subscription. Users can download article citations in BiBTeX format as well as in other reference manager types.

SIAM Review

Desmond Higham, Editor-in-Chief
Published quarterly electronically and in print

SIAM Journal on Applied Algebra and Geometry

Bernd Sturmfels, Editor-in-Chief
Electronically published continuously

SIAM Journal on Applied Dynamical Systems

Evelyn Sander, Editor-in-Chief
Electronically published continuously

SIAM Journal on Applied Mathematics

Paul A. Martin, Editor-in-Chief
Electronically published continuously and available in print

SIAM Journal on Computing

Leonard J. Schulman, Editor-in-Chief
Electronically published continuously and available in print

SIAM Journal on Control and Optimization

George Yin, Editor-in-Chief
Electronically published continuously and available in print

SIAM Journal on Discrete Mathematics

Daniel Kral, Editor-in-Chief
Electronically published continuously and available in print

SIAM Journal on Financial Mathematics

Jean-Pierre Fouque, Editor-in-Chief
Electronically published continuously

SIAM Journal on Imaging Sciences

Michael Elad, Editor-in-Chief
Electronically published continuously

SIAM Journal on Mathematical Analysis

Arnd Scheel, Editor-in-Chief
Electronically published continuously and available in print



SIAM Journal on Matrix Analysis and Applications

Daniel B. Szyld, Editor-in-Chief
Electronically published continuously and available in print

SIAM Journal on Numerical Analysis

Angela Kunoth, Editor-in-Chief
Electronically published continuously and available in print

SIAM Journal on Optimization

Stephen J. Wright, Editor-in-Chief
Electronically published continuously and available in print

SIAM Journal on Scientific Computing

Jan S. Hesthaven, Editor-in-Chief
Electronically published continuously and available in print

SIAM/ASA Journal on Uncertainty Quantification

David Higdon and Andrew Stuart, Editors-in-Chief
Electronically published continuously

Multiscale Modeling and Simulation: A SIAM Interdisciplinary Journal

Jack Xin, Editor-in-Chief
Electronically published continuously and available in print

Theory of Probability and Its Applications

An English translation of a Russian journal, edited by Michael Reyz
Published quarterly electronically and in print.

COMING SOON! SIAM Journal on Mathematics of Data Science

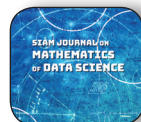
will begin to accept submissions in spring 2018. The journal seeks to advance mathematical, statistical, and computational methods in the context of data and information sciences. It invites papers that present significant advances, including applications to science, engineering, business, and medicine. Further information about SIMODS will be available at <http://siam.org/journals/simods.php>.

LOCUS (1953–1996)

locus.siam.org



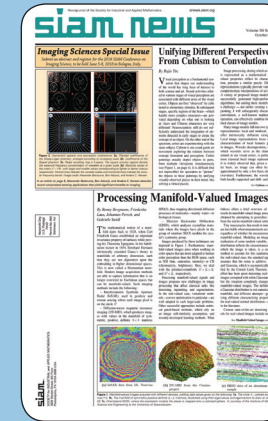
SIAM's online journal archive contains electronic full text for every SIAM journal article published from each journal's inception through 1996. Available as a one-time purchase or on an annual access basis.



SIAM NEWS

sinews.siam.org

SIAM News, under the direction of Editor-in-Chief Hans Kaper, features technical overview articles, commentaries on issues that affect the mathematical sciences community, book reviews, news about legislation and funding, a calendar of events, and professional opportunity advertisements. The news journal is available in print and online. Visit sinews.siam.org for articles and additional blog content.



SIAM UNWRAPPED

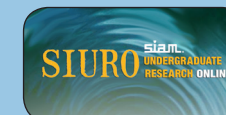
<http://sinews.siam.org/happeningnow/unwrapped>



A free monthly e-newsletter providing links to industry news and information on membership, meetings, publications, and other activities of interest.

SIAM UNDERGRADUATE RESEARCH ONLINE (SIURO)

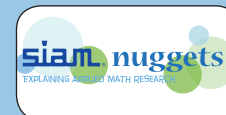
<http://www.siam.org/students/siuro>



This web-based open access publication is devoted to undergraduate research in applied and computational mathematics. Undergraduates engage in the peer-review process as authors, revising their work based on referee and review editor feedback. Papers are posted online as soon as they are accepted and referee turnaround is very short. Luis Melara, Editor-in-Chief

NUGGETS

<http://sinews.siam.org/research/researchnuggets>



Brief articles explaining computational science research for the general public.

MATH MATTERS, APPLY IT!

www.siam.org/careers/matters



Colorful, downloadable flyers featuring real-world uses of math with some available in Spanish.

SIAM BOOKS

www.siam.org/books

For nearly six decades, SIAM has published research monographs and textbooks written by renowned experts, addressing fundamental subjects and emerging topics of vital interest in academics, industry, and government.

BOOK SERIES

Advances in Design and Control

Ralph C. Smith, Editor-in-Chief

ASA-SIAM Series on Statistics and Applied Probability

CBMS-NSF Regional Conference Series in Applied Mathematics

Ron Rosier, CBMS Administrative Officer

Classics in Applied Mathematics

Susanne Brenner, Editor-in-Chief

Computational Science and Engineering

Donald Estep, Editor-in-Chief

Data Science

Ilse Ipsen, Editor-in-Chief

Discrete Mathematics and Applications

Financial Mathematics

Thaleia Zariphopoulou, Editor-in-Chief

Frontiers in Applied Mathematics

Fundamentals of Algorithms

Nicholas J. Higham, Editor-in-Chief

Mathematical Modeling and Computation

Hans Kaper, Editor-in-Chief

Mathematics in Industry

Thomas A. Grandine, Editor-in-Chief

MOS-SIAM Series on Optimization

Katya Scheinberg, Editor-in-Chief

SIAM Spotlights

Software, Environments, and Tools

Jack J. Dongarra, Editor-in-Chief

Studies in Applied and Numerical Mathematics

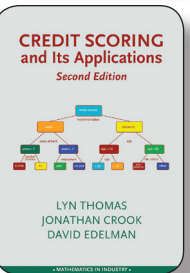
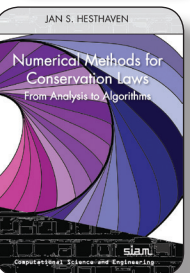
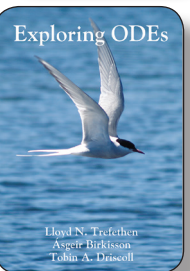
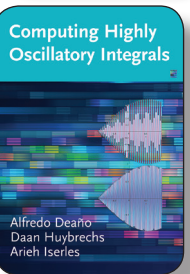
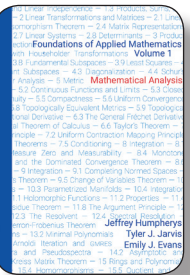
Other Titles in Applied Mathematics

SIAM E-BOOKS

www.siam.org/books/ebooks/index.php

SIAM's e-book program offers libraries and institutions online access to more than

450 SIAM book titles in 16 series, hosted on a reliable and secure platform. SIAM e-books are available for sale or rent to individuals on Google Play™ in select countries for use on computers and most handheld devices.



CONFERENCES

www.siam.org/meetings

SIAM conferences focus on timely topics in applied and computational mathematics and applications such as algebraic geometry, combustion, computational science and engineering, computer and communications networks, data mining, discrete algorithms in computer science, dynamical systems, financial engineering, imaging science, ocean and climate modeling, modeling of materials, the application of mathematics and computation to the life sciences, and uncertainty quantification. SIAM conferences provide a place for members to exchange ideas and expand their network of colleagues in both academia and industry.

SIAM ANNUAL MEETING

www.siam.org/meetings

The SIAM Annual Meeting provides a broad view of the state of the art in applied mathematics, computational science, and their applications through invited presentations, prize lectures, minisymposia, minitutorials, and contributed papers and posters.

THE GENE GOLUB SIAM SUMMER SCHOOL (G²S³)

www.siam.org/students/g2s3



G²S³ serves graduate students in mathematics and computational science and is supported by a generous bequest left to SIAM by long-time member and premier numerical analyst of his generation, Gene Golub. Proposals to run a G²S³ session in any relevant area of applied mathematics, computational sciences, and industrial mathematics are considered.

SIAM PRESENTS...

FEATURED LECTURES FROM OUR ARCHIVES

www.siam.org/meetings/presents.php



Since 2008, SIAM has produced audio/slide captures of presentations at select meetings each year. This includes many invited and prize lectures, minitutorials, and minisymposia. Some presentations synchronize the slides with audio and include PDFs of the slides available for download. Short video clips on a variety of topics are also available. The archive contains over 2,000 presentations, and more are added each year.

PROCEEDINGS

www.siam.org/proceedings

SIAM produces electronic proceedings for six of its meetings. Proceedings include peer-reviewed papers and are a record of the research presented at the meeting.



INDUSTRY CONNECTIONS

SIAM is committed to promoting the application of high quality research results to solving real world problems in industry. SIAM's Career Opportunities Committee organizes SIAM career fairs as well as workshops on careers in industry to help members at every stage identify opportunities and obtain sought after jobs.

Industry, government, and laboratories confront many important mathematical problems and SIAM has developed programs to bring the applicable methodologies into focus. One such effort is Mathematics in Industry, a study of the industrial environment for applied and computational mathematicians that resulted in recommendations for improving graduate education to match the needs of industry. You can find Math in Industry reports at www.siam.org/reports.

EDUCATION

GAIMME REPORT

www.siam.org/reports/gaimme.php

Guidelines for Assessment and Instruction in Mathematical Modeling Education (GAIMME).

A partnership between SIAM and Consortia for Mathematics and Its Applications (COMAP) produced GAIMME in 2016 to define core competencies to include in student experiences, suggest assessment methods, and provide direction to enhance math modeling education at all levels. GAIMME was an outgrowth of discussions at a SIAM-NSF workshop on Modeling Across the Curriculum. Freely available online.



ADVOCACY

A champion for applied mathematics and computational science on the national and international level, SIAM has its own voice in Washington, D.C., and speaks on behalf of its members to key congressional representatives, agencies, and other organizations to promote research funding and development of science policy in these important areas of research. To further these purposes, SIAM is a member of various advocacy organizations such as the Coalition for National Science Funding, which advocates on behalf of the National Science Foundation, the Computing Research Association, and the Joint Policy Board for Mathematics.

SIAM promotes an understanding of the applications of mathematics both in daily life and in the advanced sciences by sharing news stories through social networks such as Facebook and Twitter.

SIAM is a founding member of the International Council on Industrial and Applied Mathematics, which promotes industrial and applied mathematics to a global audience through the quadrennial International Congress on Industrial and Applied Mathematics (ICIAM).

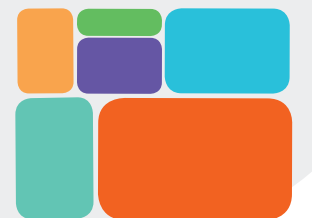
SIAM COMMITTEES

SIAM has several committees that work to promote SIAM's mission and to fulfill specific objectives of the Society. SIAM also appoints representatives to national and joint committees. SIAM encourages diverse participation and seeks appointments from the entire SIAM membership. More information is available at www.siam.org/about/committees.php

SIAM STAFF

www.siam.org/contact/staff-resp.php

More than 70 full- and part-time employees work at SIAM in Philadelphia. A list of SIAM staff by department is available at www.siam.org/about/more/staff.php



MathWorks Math Modeling Challenge

m3challenge.siam.org



The 2017 Championship Team from Adlai Stevenson High School in Lincolnshire, Illinois.

MathWorks Math Modeling (M3) Challenge (m3challenge.siam.org) is the new name of the prestigious Internet-based competition known for providing a pinnacle high school experience for juniors and seniors and inspiring them to pursue STEM majors and careers. The contest, organized by SIAM and now sponsored by leading software developer MathWorks, is free and open to all U.S. students. M3 Challenge will award top teams this year with \$100,000 in scholarships toward the pursuit of higher education; it has granted more than one million dollars in scholarships to date and has been endorsed by the NASSP since 2010.

PRIZES AND RECOGNITION

SIAM PRIZE PROGRAM

www.siam.org/prizes

SIAM conducts an extensive prize program to recognize outstanding applied mathematicians and computational scientists. Prize recipients are individuals and teams, students, early career researchers, accomplished lecturers, and distinguished scientists. Prizes are awarded for individual papers, research contributions, lifetime achievement, and service to the mathematical sciences community. More than two dozen plenary lectures and award-winning papers are presented at SIAM conferences as part of the prize program.

SIAM Major Prizes

Major Prizes include many named in honor of distinguished applied mathematicians and computational scientists. They are awarded to contributors currently building on their legacy. Prizes are generally presented at the SIAM Annual Meeting.

Major Prizes also include similar prizes co-sponsored with other societies and awarded jointly at a variety of meetings.

Other major prizes recognize scholarship and contributions of students.

Major Prizes and Special Lectures

- The John von Neumann Lecture
- I. E. Block Community Lecture
- Julian Cole Lectureship
- Germund Dahlquist Prize
- Richard C. DiPrima Prize
- Ralph E. Kleinman Prize
- George Pólya Prize in Combinatorics
- George Pólya Prize in Mathematical Exposition
- George Pólya Prize in Mathematics
- W. T. and Idalia Reid Prize in Mathematics
- SIAM Outstanding Paper Prizes
- SIAM Prize for Distinguished Service to the Profession
- Theodore von Kármán Prize
- James H. Wilkinson Prize in Numerical Analysis and Scientific Computing
- James H. Wilkinson Prize in Numerical Software

Major Prizes for students:

- Frank and Brennie Morgan Prize for Outstanding Research in Mathematics by an Undergraduate Student (with AMS and MAA)
- SIAM Award in the Mathematical Contest in Modeling
- SIAM Student Paper Prize

Major Prizes co-sponsored with other societies:

- George David Birkhoff Prize (with AMS)
- SIAM/ACM Prize in Computational Science and Engineering
- George B. Dantzig Prize (with MOS)
- Peter Henrici Prize (with ETH Zürich)
- JPBM Communications Award (with AMS, ASA, and MAA)
- AWM-SIAM Sonia Kovalevsky Lecture
- Lagrange Prize in Continuous Optimization (with MOS)
- Pioneer Prize (with ICIAM)
- Gerald and Judith Porter Public Lecture (with AMS and MAA)
- Norbert Wiener Prize (with AMS)

SIAM Activity Group Prizes

A majority of SIAM Activity Groups award prizes at their own Activity Group sponsored conferences to contributors in their field.

SIAM TRAVEL AWARDS PROGRAM

www.siam.org/prizes/sponsored/travel.php

SIAM Student Travel Awards provide support for travel to SIAM conferences. Funding is awarded on a competitive basis. The awards are in the form of partial reimbursement of eligible travel expenses.

www.siam.org/prizes/sponsored/earlycareertravel.php

Attendees just starting out on their career may apply for SIAM Early Career Travel Awards.

SIAM FELLOWS PROGRAM

www.siam.org/prizes/fellows/index.php

The SIAM Fellows Program recognizes members of the Society who have made outstanding contributions to fields served by SIAM.

2017 Class of SIAM Fellows: pictured are those present at the 2017 SIAM Annual Meeting.



SIAM OFFICERS

www.siam.org/about/board.php

The most up-to-date list of SIAM officers and board and council members can be viewed on the SIAM website.

President

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University of Manchester

President Elect

Lisa Fauci
Tulane University

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Carol Woodward
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