

An Introduction to SIAM

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Original slides by Joey Hart

What is SIAM?

- the Society for Industrial and Applied Mathematics (SIAM) was founded in 1952
- an international community of over 14,500 individual members in 100+ different countries
- there are 189 student chapters globally, 128 are in the US

SIAM's Mission

- 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
- to build community in applied mathematics and computational science
- to support the next generation studying and working in these areas

SIAM's Services

- 18 peer reviewed journals
- 21 SIAM activity groups (SIAGS)
- first quality book publications
- dozens of regularly scheduled conferences, workshops, tutorials, and summer schools
- 24 committees serving various needs of the mathematics community
- prize programs to recognize excellence in the field
- advocacy and outreach to government, industry, and the public

Industry Members

- Adobe
- The Aerospace Corporation
- Air Force Office of Scientific Research
- Alcatel-Lucent
- Amazon
- Aramco Services Company
- Argonne National Laboratory
- AT&T Laboratories
- Baxter Healthcare
- The Boeing Company
- Boston Scientific
- CenturyLink
- Chevron
- Citibank
- Clear Chancel Communications
- Daniel H. Wagner Associates
- Department of National Defense (DND/CSEC)
- DSTO- Defense Science and Technology Organization
- Dupont Chemical
- Exxon Mobil
- FedEx Corporation
- French Alternative Energies and Atomic Energy Commission
- General Motors
- GlaxoSmithKline
- Google
- Hewlett-Packard
- Honeywell
- Huawei FRC French R&D Center
- IBM Corporation / IBM Research
- IDA Center for Communications Research, La Jolla
- IDA Center for Communications Research, Princeton
- IFP Energies nouvelles
- Institute for Defense Analyses, Center for Computing Sciences
- Kuberre Systems
- Lawrence Berkeley National Laboratory

Industry Members (continued)

- Lockheed Martin
- Los Alamos National Laboratory
- The MathWorks, Inc.
- Max-Planck-Institute for Dynamics of Complex Technical Systems
- McKinsey and Company
- Medtronic
- Mathematical Sciences Research Institute (MSRI)
- Mars
- Mentor Graphics
- Merck & Co., Inc.
- Microsoft
- Moody's Corporation
- Morgan Stanley
- Mosek
- Motorola Mobility and Motorola Solutions
- MSC Software Corporation
- MITRE Corporation
- National Institute of Standards and Technology (NIST)

Industry Members (continued)

- National Security Agency (NSA)
- Naval Surface Warfare Center
- National Research Council Canada
- Oak Ridge National Laboratory
- Pacific Northwest Laboratory
- Palo Alto Research Center
- Petroleo Brasileiro S/A/ Petrobras
- Pfizer
- Philips Research
- Proctor & Gamble
- Prudential
- RAND Corporation
- Sandia National Laboratories
- Schatz Energy Research Center (SERC)
- Schlumberger-Doll Research
- United Parcel Service
- US Department of Energy
- US Army Corps of Engineers, Engineer Research and Development Center
- US Naval Research Labs

Benefits of Student Membership

- two activity group memberships
- conference registration discounts
- conference travel awards (\$320,000+ annually)
- SIAM news
- textbook discounts
- networking opportunities
- job board and job search resources
- 50% your first three years of paid membership after graduation

Cost for Students: \$ 0 and \approx 5 minutes

SIAM Activity Groups (SIAGS)

- Algebraic Geometry
- Analysis of Partial Differential Equations
- Applied Mathematics Education
- Computational Science and Engineering
- Control and Systems Theory
- Data Mining and Analytics
- Discrete Mathematics
- Dynamical Systems
- Financial Mathematics and Engineering
- Geometric Design
- Geosciences
- Imaging Science
- Life Sciences
- Linear Algebra
- Mathematical Aspects of Materials Science
- Mathematics of Planet Earth
- Nonlinear Waves and Coherent Structures
- Optimization
- Orthogonal Polynomials and Special Functions
- Supercomputing
- Uncertainty Quantification

More About SIAGS

- aid in organizing the community in its specific field
- organize conferences and minisymposia
- provide email announcement lists for the community
 - conference announcements
 - job openings

Conference Travel Awards

- SIAM provides several graduate student travel awards for most of its conferences
- the award provides
 - \$ 650 for travel expenses
 - waived conference registration fee
 - a nice CV line
- applying for a SIAM student travel award requires
 - a CV
 - a recommendation letter
 - a letter of interest
 - it helps if you are a SIAM member, active in the SIAM student chapter, and active in the conference (organizer or speaker)

- Newspaper mailed to you every 2 months
- It contains
 - accessible articles about current research
 - articles about professional development
 - announcements for job openings
 - conference and workshop announcements
 - highlighted journal publications

Other Opportunities

As a graduate student member in SIAM you may:

- serve in a student chapter
- serve on a SIAM committee
- participate in SIAM's organizational planning
- receive awards and travel funding
- network with leading researchers

A Few Other Things to Highlight

- Gene Golub SIAM Summer School
 - two week summer school taught by leading researchers
 - hosted annually
 - application deadline is typically in late January or early February
- SIAM Student Paper Prize
 - 3 awards are given annually
 - provides up to \$ 500 for conference travel
 - includes a \$ 1000 cash prize
 - must be nominated by your advisor
 - deadline is typically in mid February
- Student Days at the SIAM Annual Meeting

How to Join

Visit <http://www.siam.org/joinsiam/>