SIAM ANNUAL BUSINESS MEETING
July 2018

Nick Higham
SIAM President

Jim Crowley
Executive Director

Meet Your Officers

President: **Nicholas Higham,** University of Manchester

Secretary: **Chen Greif,** University of British Columbia

VP at Large: **Carol Woodward,** Lawrence Livermore National Lab

Treasurer: **Samuel Gubins**, Annual Reviews

VP for Publications: **Michael J. Miksis,** Northwestern University

VP for Programs : **Cynthia Phillips**, Sandia National Laboratories

VP for Science Policy: C. David Levermore, University of Maryland

VP for Education: Rachel Levy, Harvey Mudd College

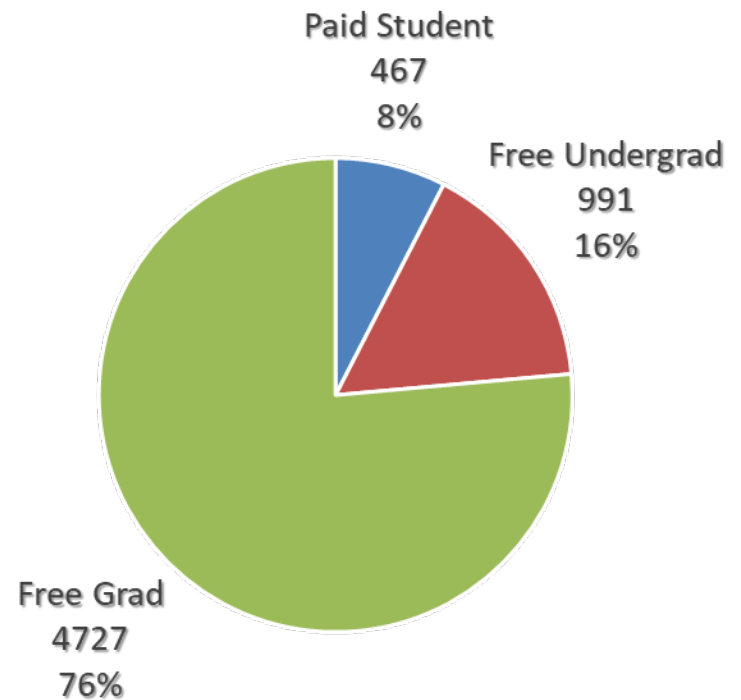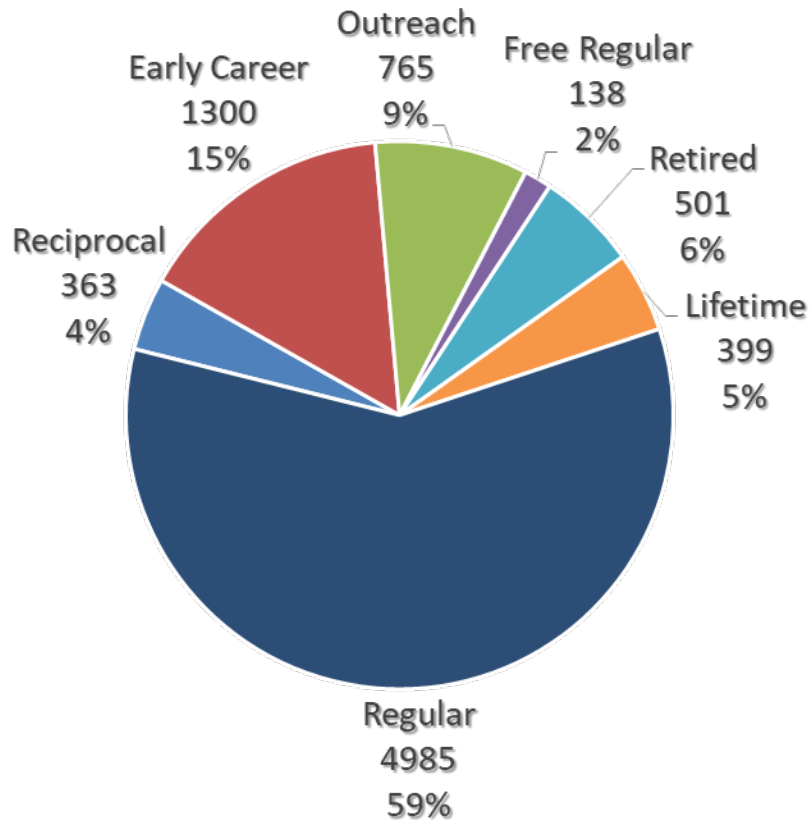**VP for Industry: Amr El-Bakry,** Exxon-Mobil Upstream Research

President-Elect: Lisa Fauci, Tulane University

Chairman of Board of Trustees: Tim Kelley, North Carolina State University
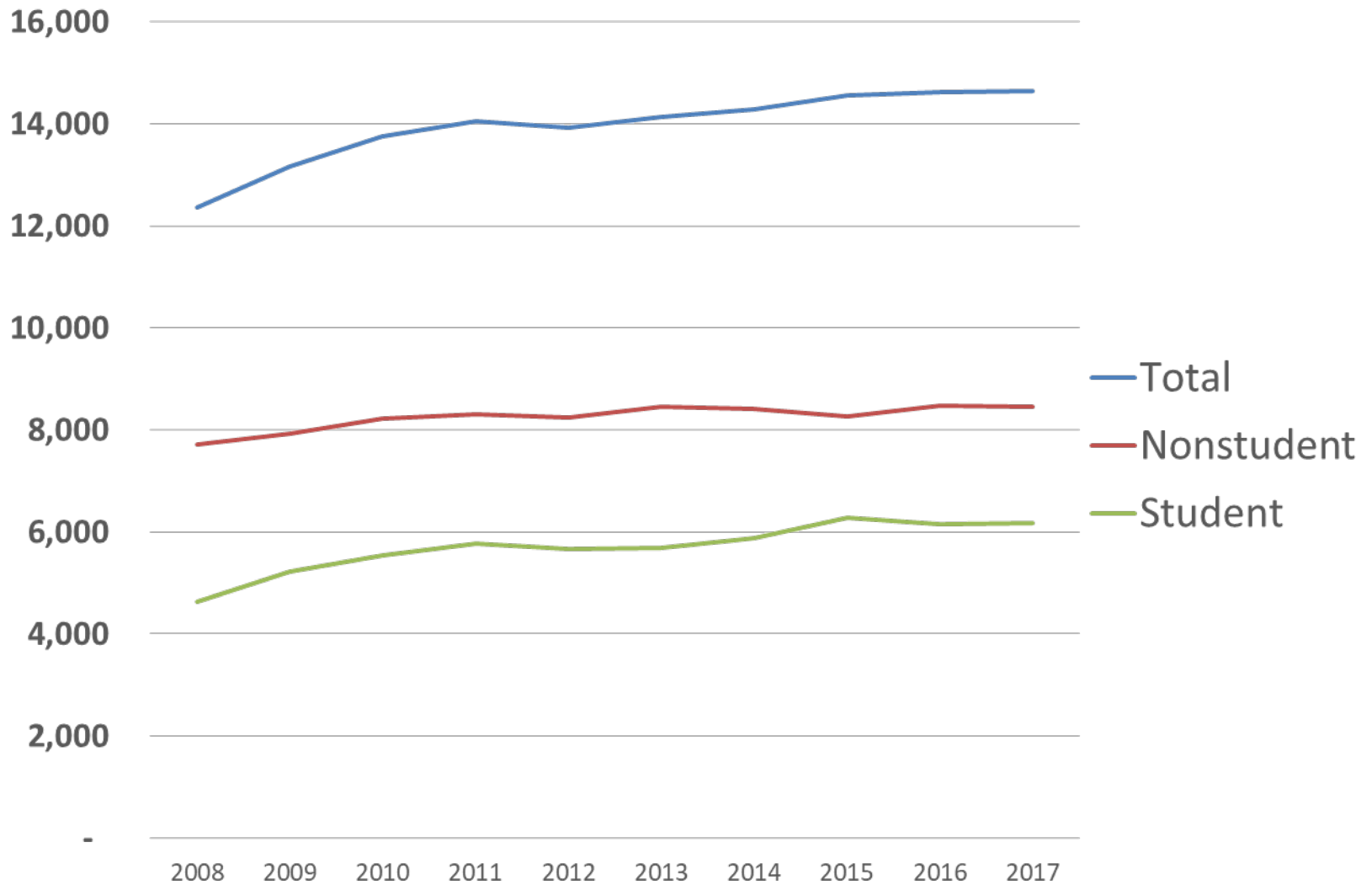
Members as of Dec 31, 2017

Nonstudent – 8,451 Members

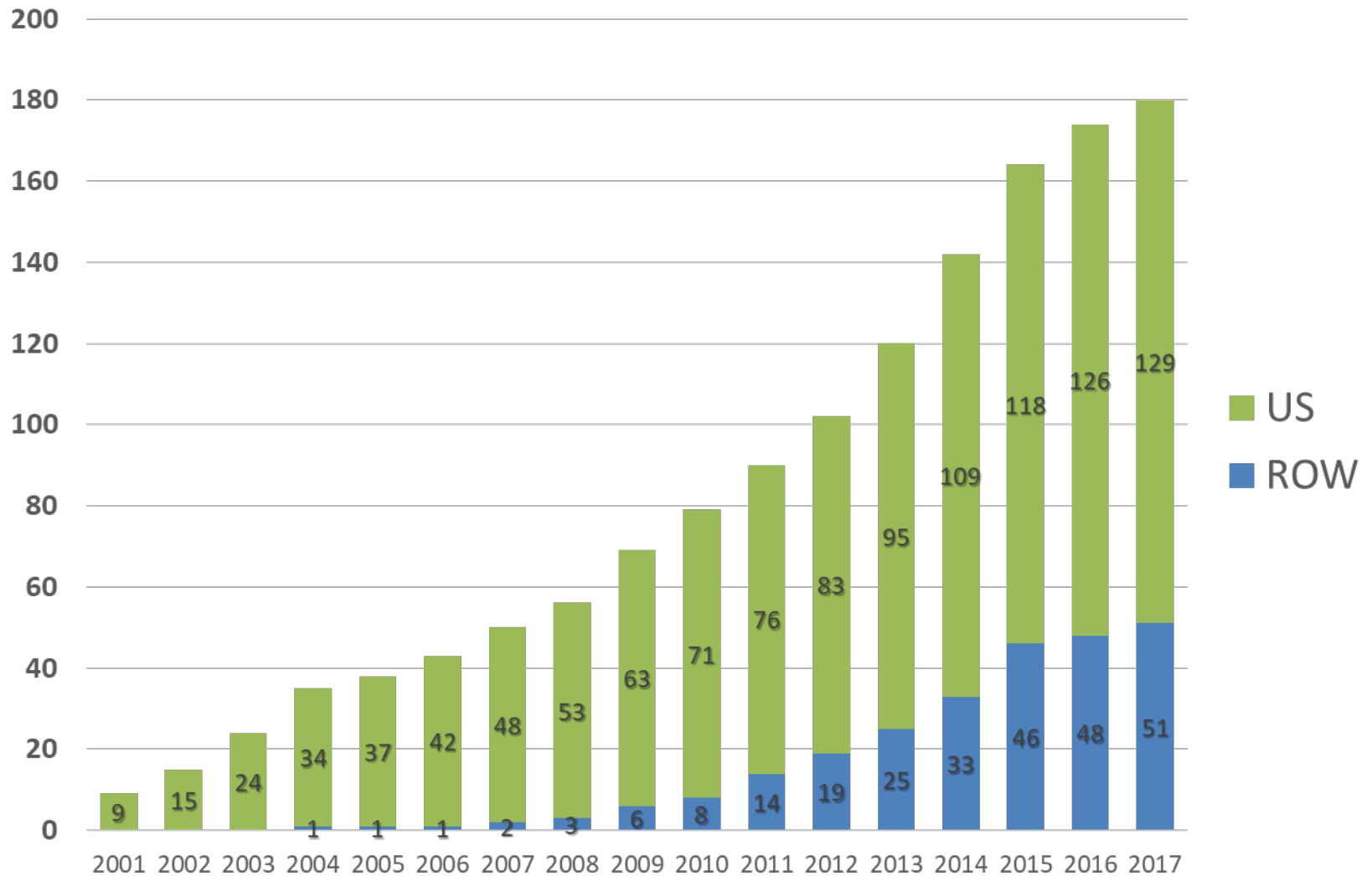Student - 6,185 Members

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Membership Between 2008 and 2017

Student Chapters – 185 Total

Student Chapters

177 Total Active – 122 US, 55 Foreign in 25 Countries
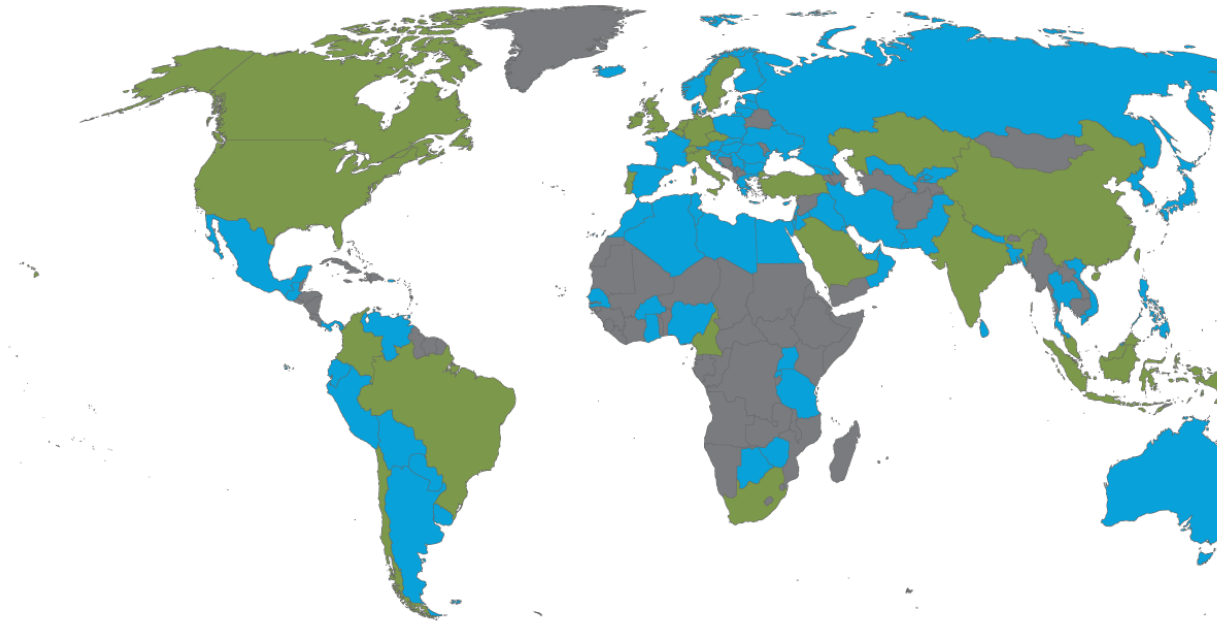
Chapters by Country	
USA	122
UK	10
Germany	6
Canada & India	5
Taiwan	3
Chile, China, Ireland, Italy, Netherlands, South Africa	2
Belgium, Brazil, Cameroon, Colombia, Czech Republic, Hong Kong, Indonesia, Kazakhstan, Malaysia, Saudi Arabia, Singapore, Sweden, Switzerland, Turkey	1

SIAM STUDENT CHAPTERS

- FUNDING – Receive up to $500 each per year plus travel for one to AN
- INTERACTION – Students representing chapters meet with SIAM leadership at AN
- ACTIVITIES

Members by Country as of Dec 31, 2017
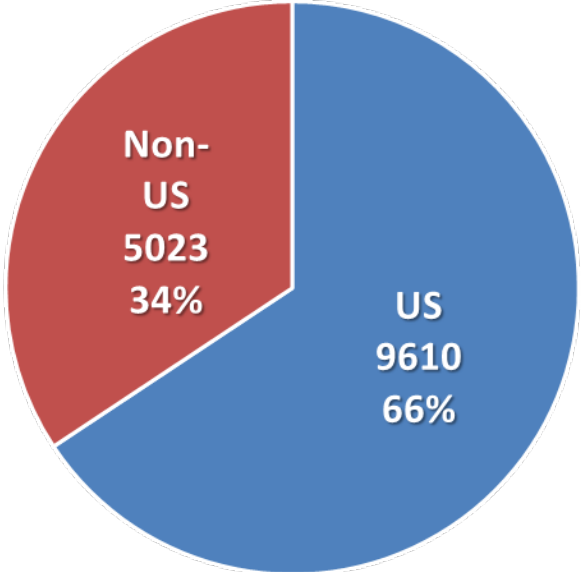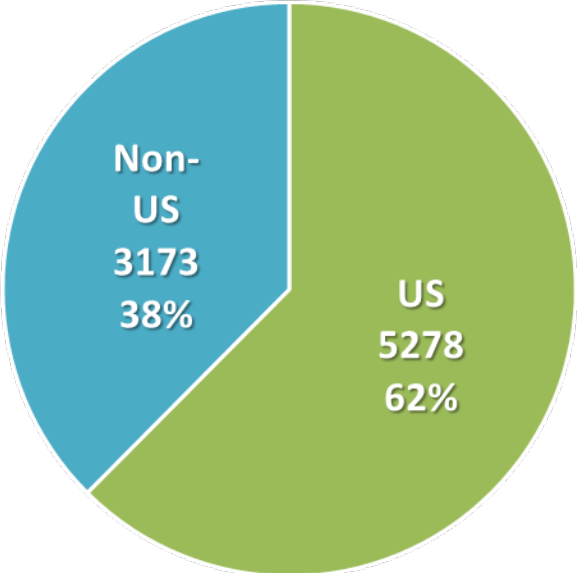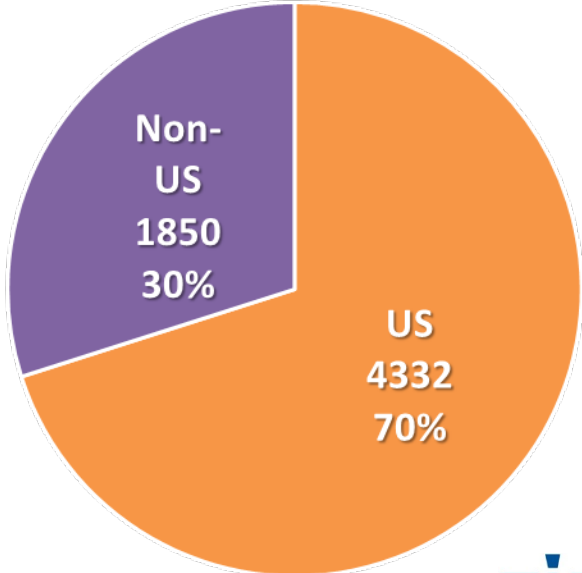
Countries with Members – 100 Countries
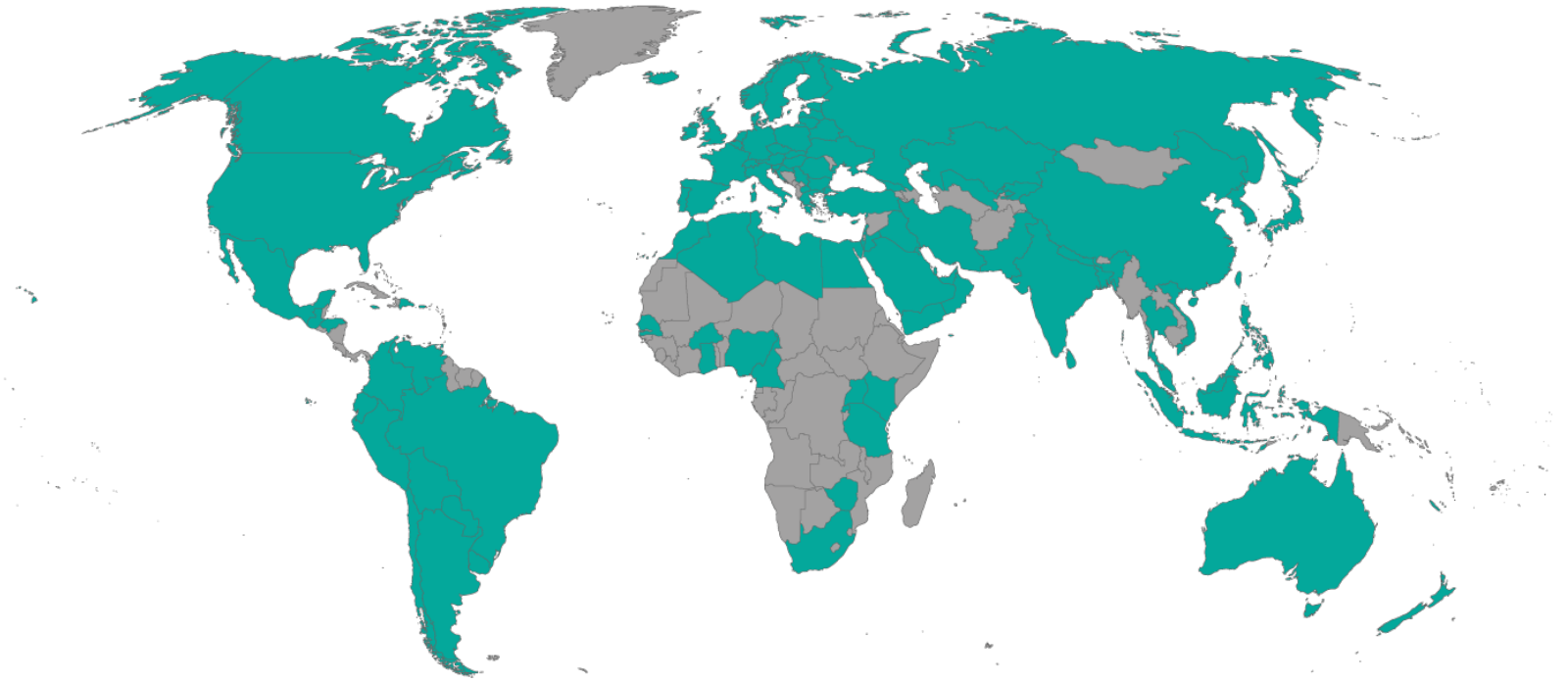
Top 10 by Total Members				
1	USA	9610	6	China	312
2	United Kingdom	616	7	Japan	222
3	Germany	489	8	Italy	158
4	Canada	463	9	Australia	126
5	India	392	10	France, Netherlands, and Switzerland (tie)	124

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Countries with Reciprocal – **15 Organizations**
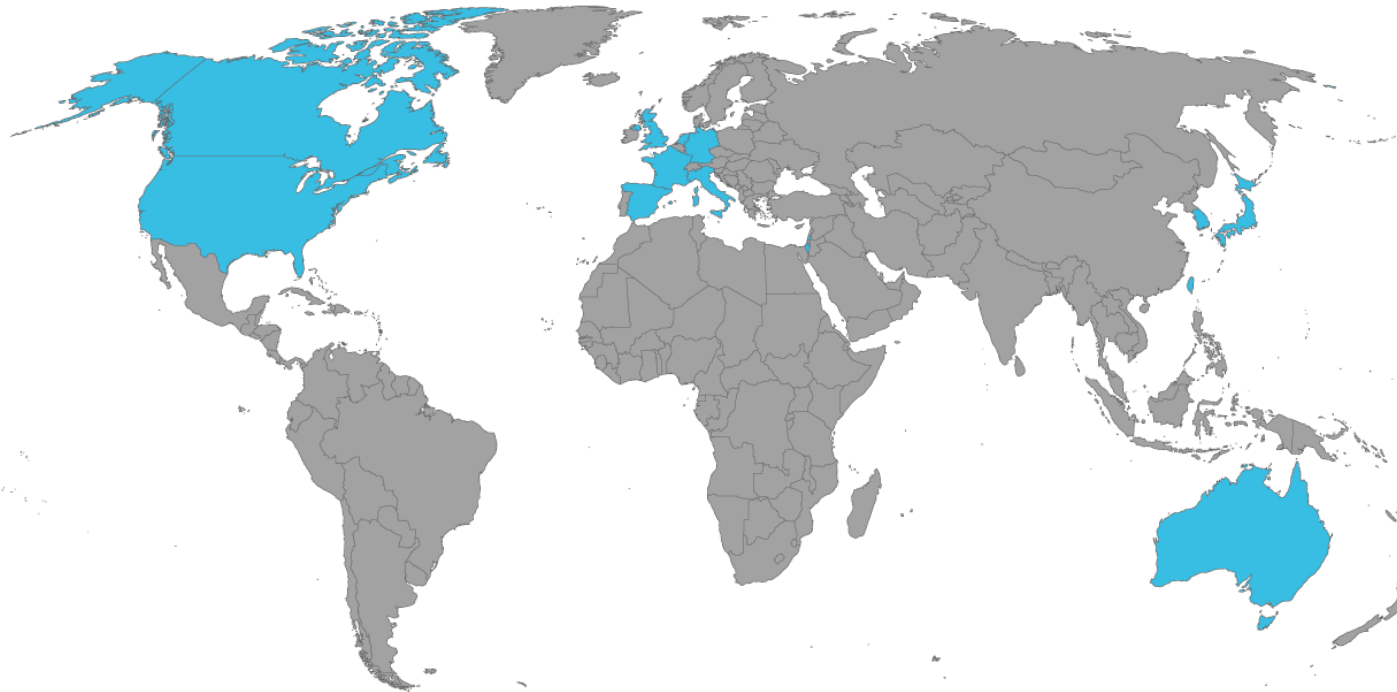
Reciprocal Societies List – 363 Members		
AustMS (Australia)	IMU (Israel)	SEMA (Spain)
CAIMS (Canada)	JSIAM (Japan)	SIMAI (Italy)
EMS (Scotland/UK)	KSIAM (S. Korea)	SMAI (France)
GAMM (Germany)	KWG (Netherlands)	TWSIAM (Taiwan)
IMA (UK)	SMS (Singapore)	AWM (USA)

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Countries with Sections
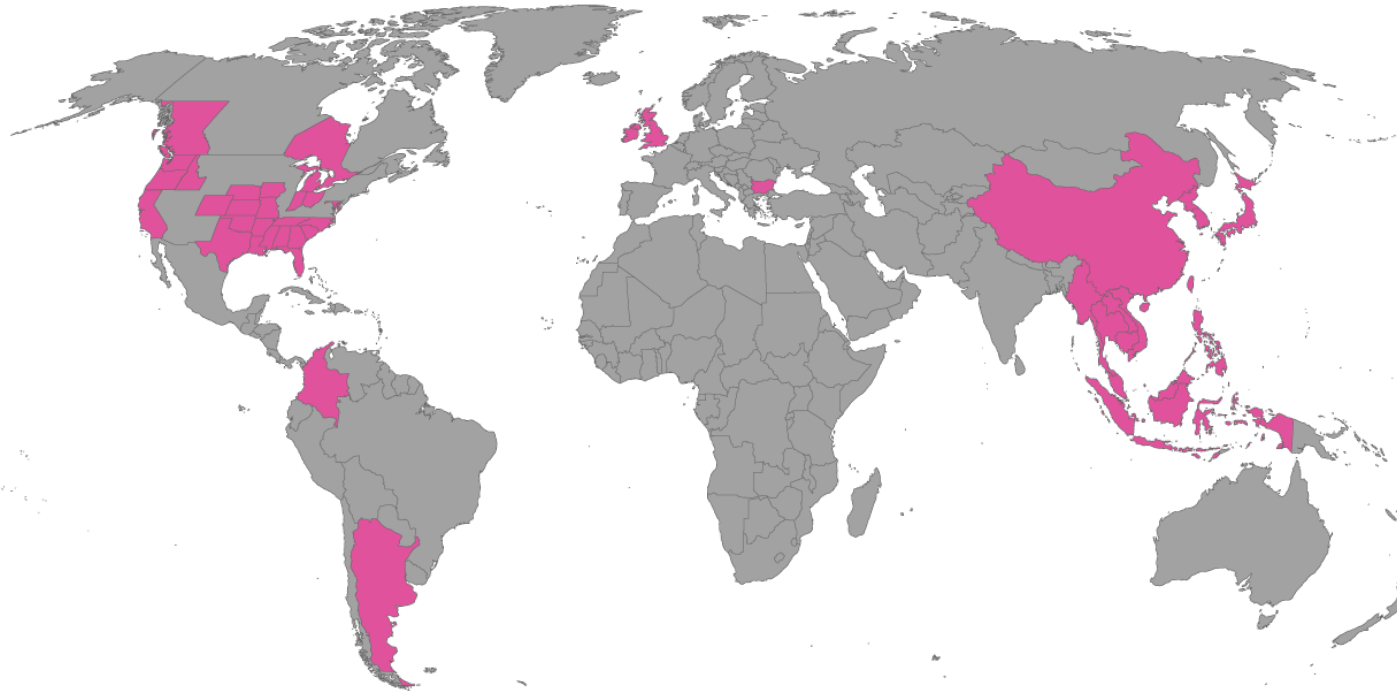
12 Sections (7 US, 5 Outside US)	
SIAM Central States Section (SIAM-CSS)	SIAM Washington, D.C.-Baltimore Section (SIAM DC-Balt)
Great Lakes Section of SIAM (GL-SIAM)	Argentina Section of SIAM (AR-SIAM)
SIAM Pacific Northwest Section (SIAM-PNW)	Bulgaria Section of SIAM (BGSIAM)
SIAM Southeastern Atlantic Section (SIAM-SEAS)	Colombia Section of SIAM (COSIAM)
SIAM Southern California Section (SIAM-SOCAL)	East Asia Section of SIAM (EASIAM)
SIAM Texas-Louisiana Section (SIAM-TXLA)	UK and Ireland Section of SIAM (SIAM UKIE)

Activity Groups – The Heart of SIAM

Year of Formation			
LA	1982	CS&E	2001
DMA	1985	APDE	2003
SC	1985	FME	2003
Opt	1986	NWCS	2003
CST	1987	MS	2008
GD	1989	AG	2010
DS	1990	DMA	2011
OPSF	1990	UQ	2011
GS	1992	AME	2016
IS	2000	MPE	2016
LS	2000		

Activity Group Membership as of Dec 31, 2017
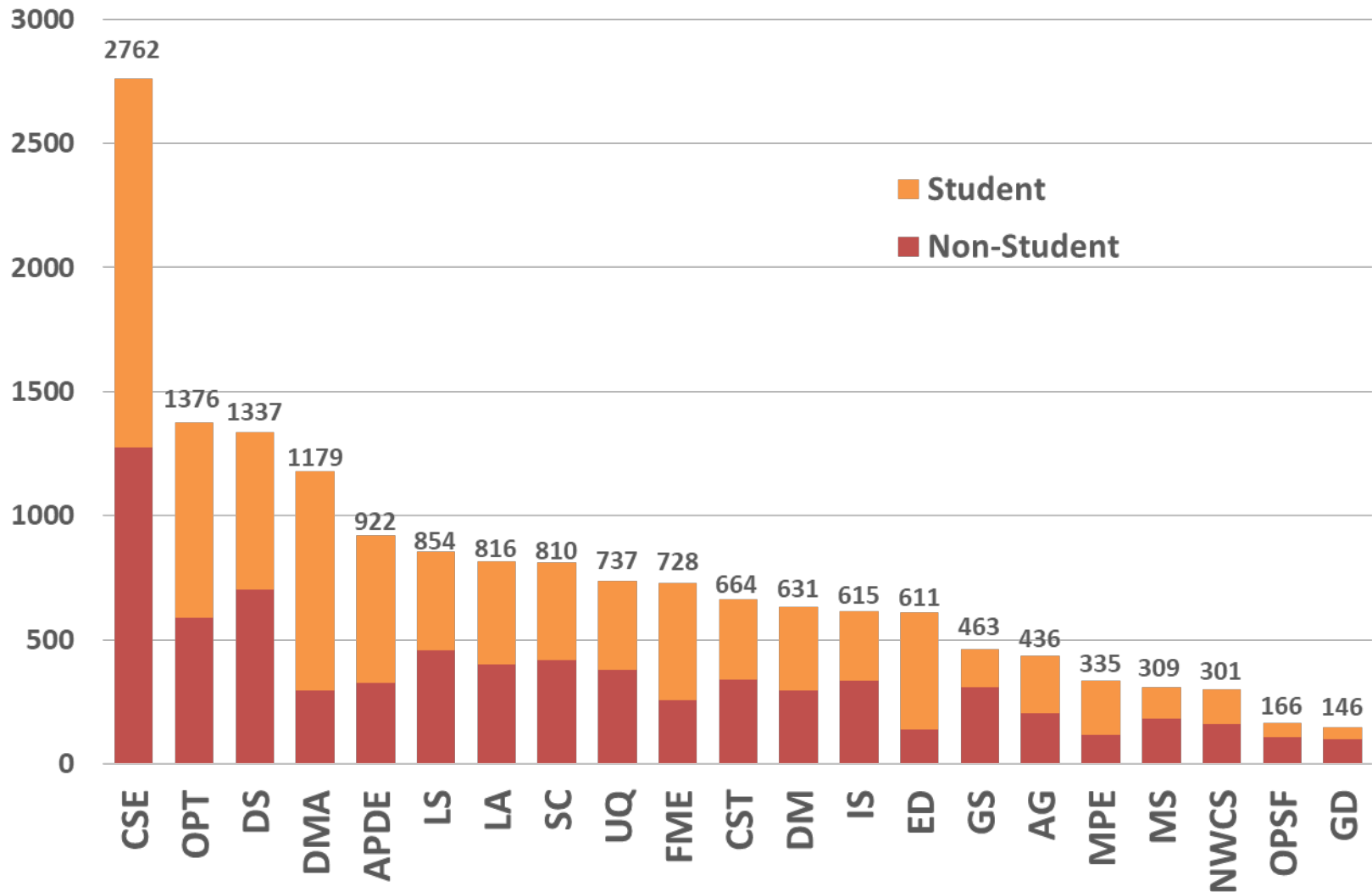
Department (excluding students)

- Mathematics, 65%
- Engineering, 18%
- Computer Science, 7%
- Other, 3%
- OpResearch, 2%
- Other Phys Sci, 2%
- Physics, 2%
- Statistics, 1%
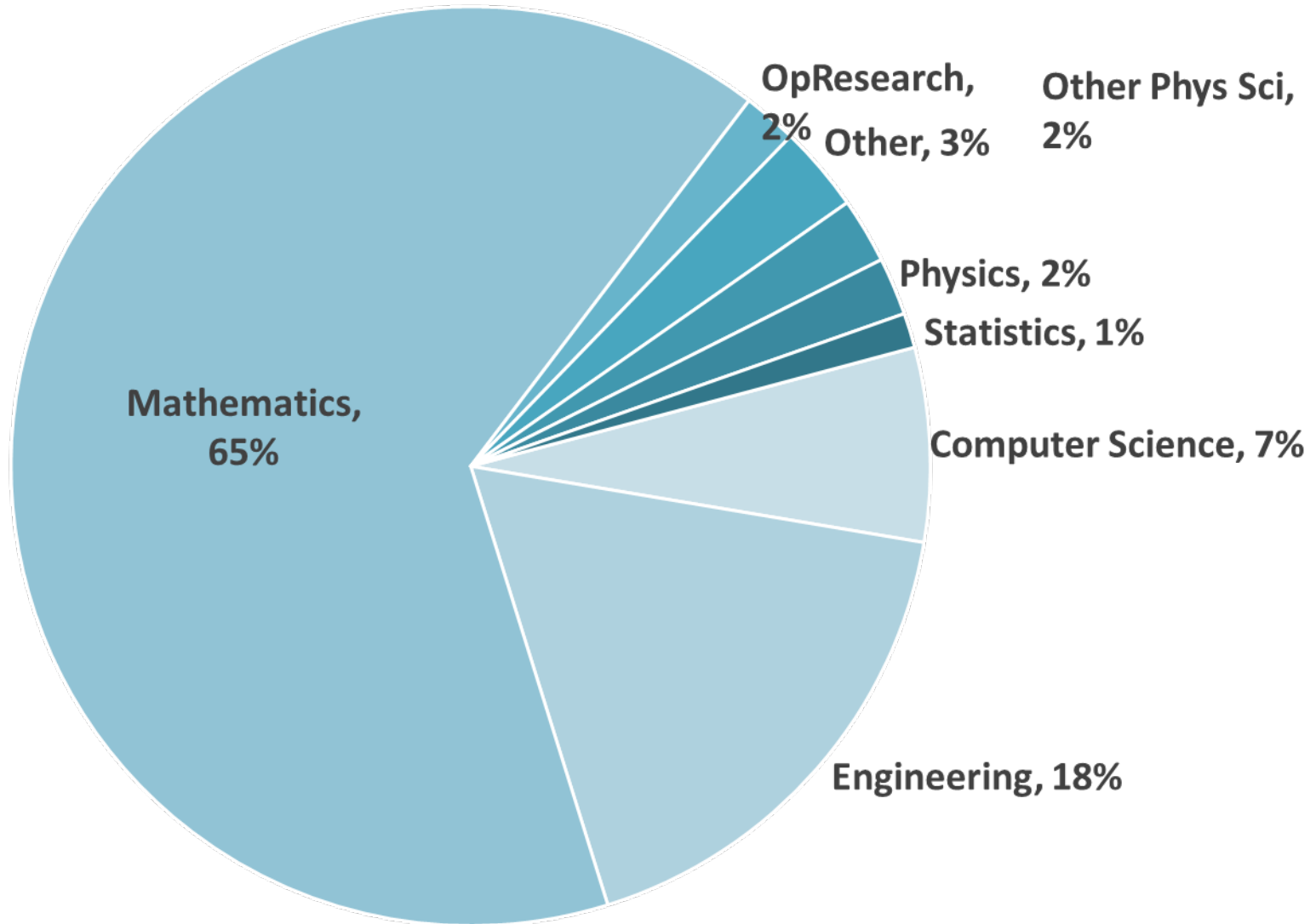
Student Travel Awards

- Provides travel support for approximately 315 students to attend SIAM conferences

- Funding by NSF, various companies, and SIAM ($200,000), book authors, and donors for a total of about $240,000 per year.

We thank SIAM members and book authors for their generous donations!

See *Donate* button at top of www.siam.org

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SIAM Prizes

- **Nominations needed**, especially:

  – women, people in industry, and other under-represented groups.

- See https://www.siam.org/Deadline-Calendar for nomination deadlines for open calls.

- The SIAM/ACM Prize in CS&E closes soon. Other major awards with open calls include the Reid Prize, Dahlquist Prize, the Kleinman Prize, the Henrici Prize, and the Polya Prize.

- There are many SIAG prizes with open calls as well.

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SIAM ADVANCE: the Workshop

- Strategic planning workshop, April 27–28, 2018.
- 25 attendees.
- Professional facilitator.
- See article in SIAM News, July–August 2018.

- Fund raising officer.

- "Html view" of journal papers.

- Review journal pricing.

- Increase number of SIAM sections and student chapters.

- Outlet for papers from industry.

- Make better use of data when making decisions.

Being followed up by Council, Board, Committees, officers, staff.

SIAM Conferences

- 2017 was successful for SIAM conferences with over 6,000 paid attendees at SIAM conferences (including two in Europe).

- About 1,000 attended AN17/GD17/CT17 in Pittsburgh.

- Increasing trend towards conferences outside U.S. with 3 in 2018 (PP18 in Tokyo; IS18 in Bologna; ALA18 in Hong Kong).

SIAM Conferences Continue to Grow

conferences

Attendees
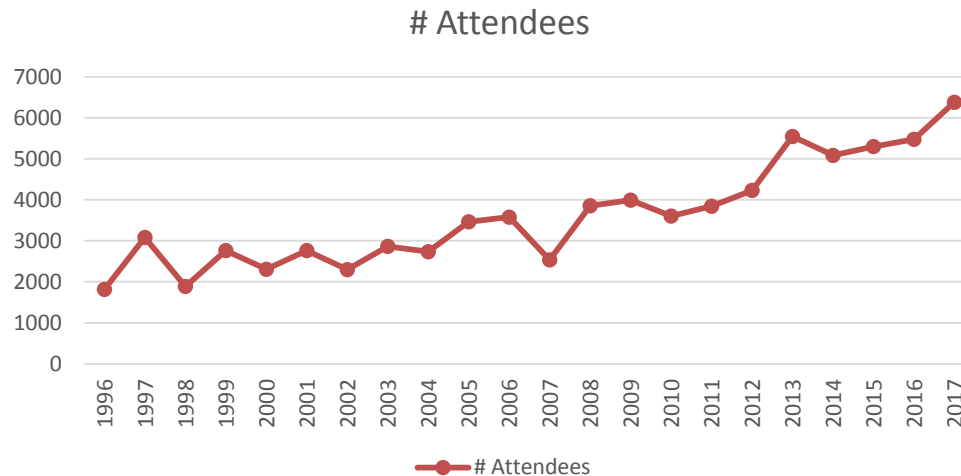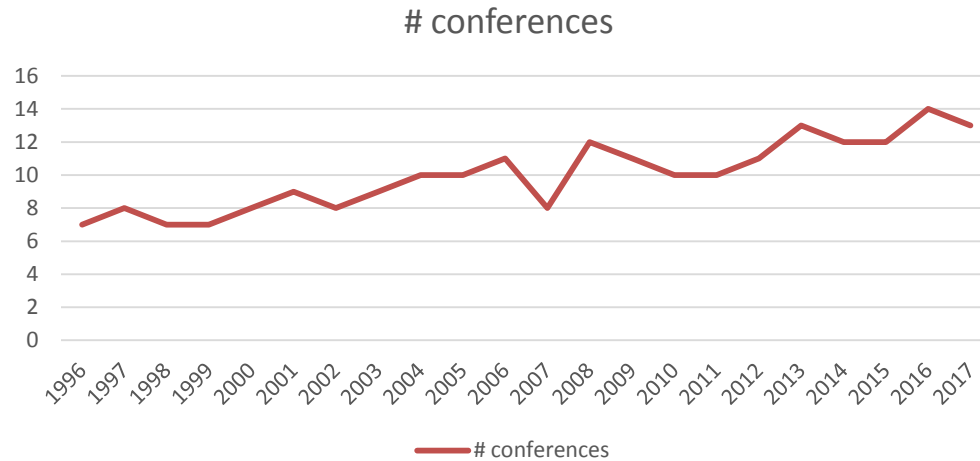
…With More Conferences Outside North America

Percentage of Attendees Outside North America
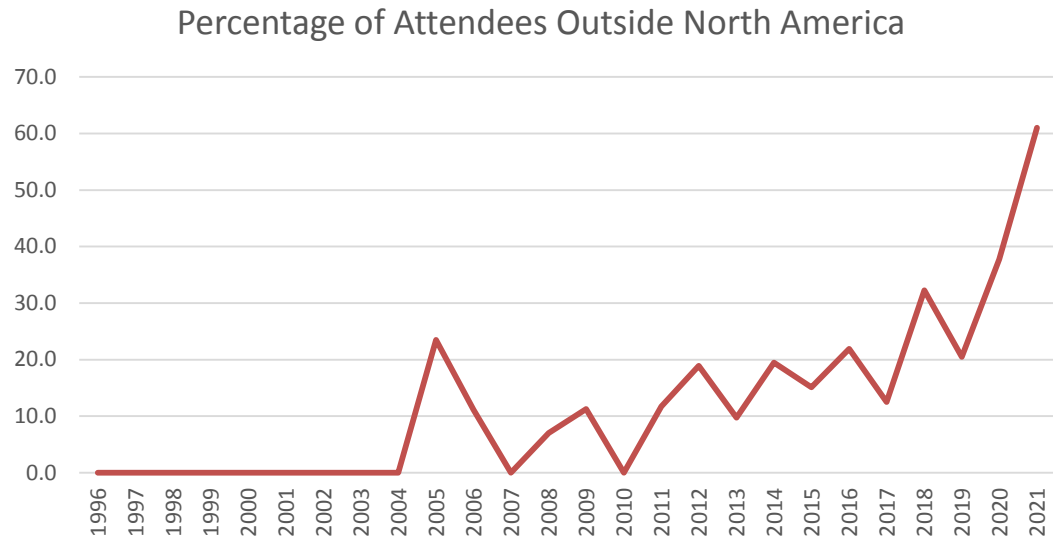
Conferences

Other items of note:

- **ICIAM 2019 will be held in Valencia**, Spain Monday, 15 July, 2019 to Friday, 19 July, 2019
  - SIAM Activity Groups and SIAM members encouraged to participate

- **No SIAM Annual Meeting in 2019**

See http://iciam2019.org/

SIAM Publications

- The SIAM Journal on Uncertainty Quantification (UQ) was launched in 2013; SIAM Journal on Algebraic Geometry in 2016

- **The SIAM Journal on Mathematics of Data Science was launched in 2018.**

SIAM Journals Online

SIAM Journal Trends: # Papers
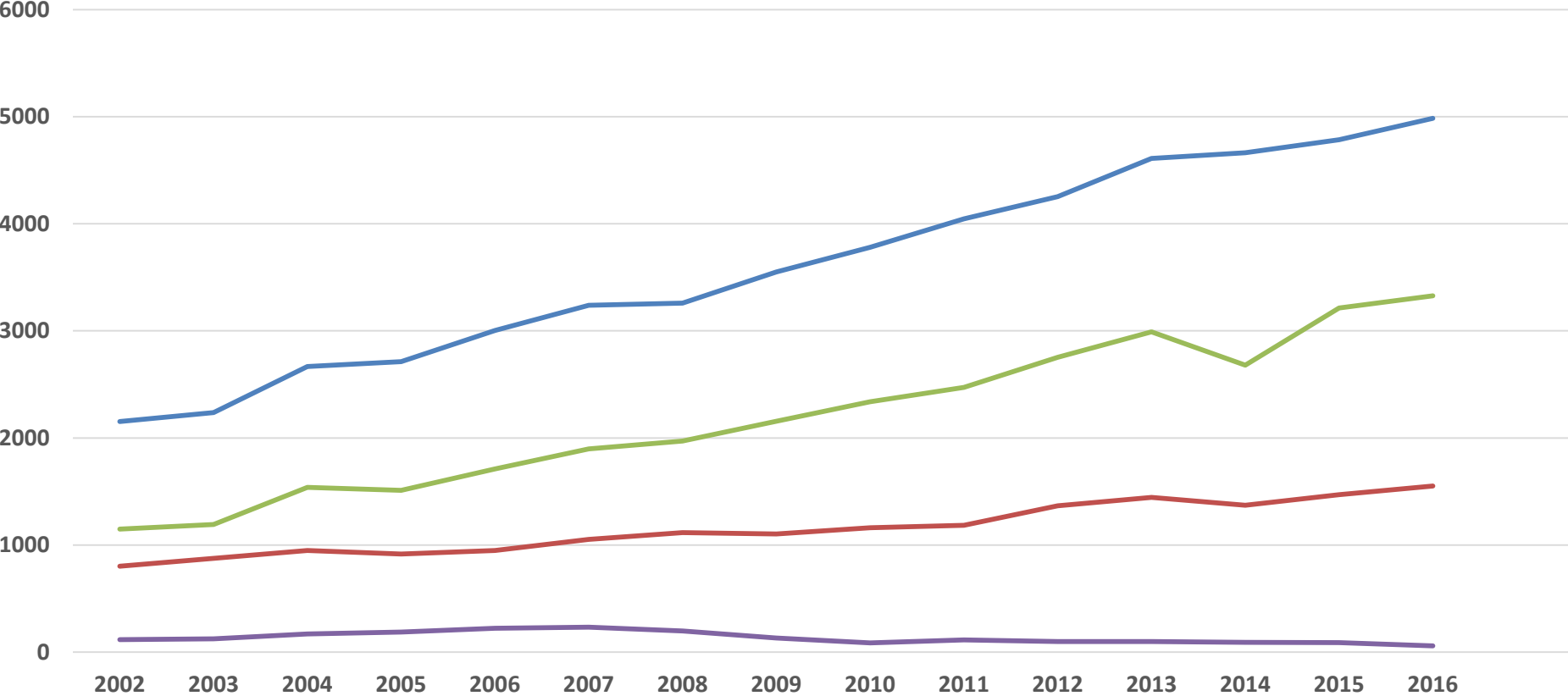
Legend: Received, Accepted, Rejected, Withdrawn

SIAM Publications

Books

SIAM Publishes 18-24 books per year (mostly monographs), with serious review and copyediting services.

SIAM welcomes potential authors and suggestions for new topics

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SIAM News

- Editorial Board under Hans Kaper, EIC
- New online format collects all new sources in one place; some features:
  - SIAM News Online.
  - Blog which includes brief news items, where readers can add comments.
  - Videos.
  - Social media sharing.

See http://sinews.siam.org/

SIAM Elections

- Nominating Committee chose slate for Fall 2018 Elections

- 2018 will be an election for members of the Board of Trustees and Council – it is a not a year for President and other officers.

2018 Election Candidates

➢ Board: Katherine Brenan* (the Aerospace Corporation); Linda Petzold* (University of California, Santa Barbara); Andreas Frommer (Bergische Universitaet Wuppertal); Alison Ramage (University of Strathclyde); Wil Schilders (TU Eindhoven); and J. Sanz-Serna (Universidad Carlos III de Madrid)

➢ Council: Toby Driscoll* (University of Delaware); Sherry Li* (Lawrence Berkeley National Lab); Joel Tropp* (California Institute of Technology); Natalia Alexandrov (NASA Langley); Peter Benner (Max Planck Institute,Magdeburg); Qiang Du (Columbia University); Juan Restrepo (Oregon State University); Kim-Chuan Toh (National University Singapore)

*Denotes incumbent

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Appointments

- Committee on Committees and Appointments (Secretary Chen Greif, chair) filling dozens of committee appointments.

Volunteer!

http://bit.ly/SIAMvolunteer

From: https://www.siam.org/About-SIAM/Committees

Additional news items

- On June 1, **SIAM launched its new web site** (www.siam.org). Our 17,000 pages were restructured and moved to a mobile-friendly platform (or archived for continued access).

- A new Conference Management System (CMS) is still in development.

- A new SIAM Bookstore is being developed. Its launch is imminent.

CONGRATULATIONS!

TO OUR NEWEST CLASS
OF SIAM FELLOWS

Class of 2018 Fellows

Todd James Arbogast, The University of Texas at Austin. For contributions to the numerical analysis of partial differential equations, multiscale analysis, and homogenization for flow through porous media

Liliana Borcea, University of Michigan*. For the mathematical and computational study of wave propagation and imaging in random media

Luis Angel Caffarelli, The University of Texas at Austin. For seminal contributions in regularity theory of nonlinear partial differential equations, free boundary problems, fully nonlinear equations, and nonlocal diffusion.

Ronald A. DeVore, Texas A&M University*. For his fundamental contributions to the mathematical foundations of information and computational sciences

Stanley C. Eisenstat, Yale University. For development and analysis of fast computational algorithms for linear and nonlinear systems of equations.

Michael Elad, Technion, Israel Institute of Technology.* For contributions to the theory and development of sparse representations and their applications to signal and image processing.

David A. Field, General Motors Corporation. For pioneering work founding and organizing the SIAM Great Lakes Section, the premier SIAM section integrating industry and academia.

Class of 2018 Fellows

Margot Gerritsen, Stanford University. For contributions to numerical methods for compositional and thermal fluid flow processes in porous media, ocean dynamics, and digital stewardship.

Michael B. Giles, University of Oxford*. For contributions to numerical analysis and scientific computing, particularly concerning adjoint methods, stochastic simulation, and Multilevel Monte Carlo

Alain Goriely, University of Oxford*. For contributions to nonlinear elasticity and theories of biological growth.

Peter Kuchment, Texas A&M University*. For landmark contributions to mathematical physics and inverse problems

Madhav V. Marathe, Virginia Tech. For contributions to high performance computing algorithms and software systems for network science and public health epidemiology.

Alison L. Marsden, Stanford University*. For contributions to the development and clinical translation of cardiovascular patient-specific modeling, optimization, uncertainty and simulation methodology, and open source software development.

Bojan Mojar, Simon Fraser University and IMFM. For contributions to graph theory and computing, in particular structural, topological, and algebraic graph theory.

Class of 2018 Fellows

Helen Moore, AstraZeneca. For impactful industrial application of mathematical modeling in oncology, immunology, and virology. For mentoring, teaching, and leadership.

Pablo A. Parrilo, Massachusetts Institute of Technology. For foundational contributions to algebraic methods in optimization and engineering.

Alex Pothen, Purdue University. For advances in combinatorial algorithms for scientific applications, and leadership in founding the combinatorial scientific computing community.

Helmut Pottmann, Technische Universitaet Wien. For contributions to industrial and applied geometry and pioneering research at the interface of architecture and mathematics

Juan M. Restrepo, Oregon State University. For contributions to the mathematical and computational modeling of the ocean and atmosphere

John N. Shadid, Sandia National Laboratories and University of New Mexico.   For contributions to solution methods for multiphysics systems, scalable parallel numerical algorithms, and numerical methods for strongly coupled nonlinear partial differential equations.

Arthur S. Sherman, National Institutes of Health. For fundamental discoveries using mathematics in physiology and training a generation of successful biomathematicians.

Ralph C. Smith, North Carolina State University. For his contributions to uncertainty quantification and materials science.

Class of 2018 Fellows

Tamas Terlaky, Lehigh University. For fundamental and sustained contributions to the theory and practice of optimization, and for exemplary service to the optimization community.

Robin Thomas, Georgia Institute of Technology. For his contributions to structural graph theory and graph coloring, especially his work on the Four-Color Theorem and its generalizations and a proof the Strong Perfect Graph Theorem.

Kim-Chuan Toh, National University of Singapore*. For his contributions to the development of algorithms and software for semidefinite programming and, more generally, conic programming.

Panayot S. Vassilevski, Portland State University and Lawrence Livermore National Laboratory. For designing algebraic approaches for creating and analyzing multilevel algorithms.

Homer F. Walker, Worcester Polytechnic Institute. For contributions to theory and software of iterative methods for nonlinear systems and optimization, as well as application of these methods to scientific simulations.

Karen E. Willcox, Massachusetts Institute of Technology*. For contributions to model reduction and multifidelity methods, with applications in optimization, control, design, and uncertainty quantification of large-scale systems.

Class of 2017 Fellows

J.A.C. Weideman, Stellenbosch University

 for powerful and elegant numerical algorithms derived from complex analysis.

Fellows Demographics:
All Fellows vs. Class of 2018

	SIAM Members*	% SIAM Members*	All Fellows	% All Fellows	2018 Fellows	% 2018 Fellows
Total			479		28	
US	5278	62.5%	360	75.2%	22	78.6%
Non-US	3173	37.5%	119	24.4%	6	21.4%
Male	6635	84.5%	419	87.4%	23	82.1%
Female	1214	15.5%	60	12.5%	5	17.9%
Academic	4745	85.5%	415	86.6%	24	85.7%
Industry	381	6.9%	31	6.5%	2	7.1%
Govt/Lab	370	6.7%	32	6.7%	2	7.1%
Other	56	1.0%	1	0.2%	0	0.0%

*Comprises available demographic data for nonstudent members as of December 31, 2016