



SIAG on CS&E Business Meeting

February 22, 2007



Elected officers

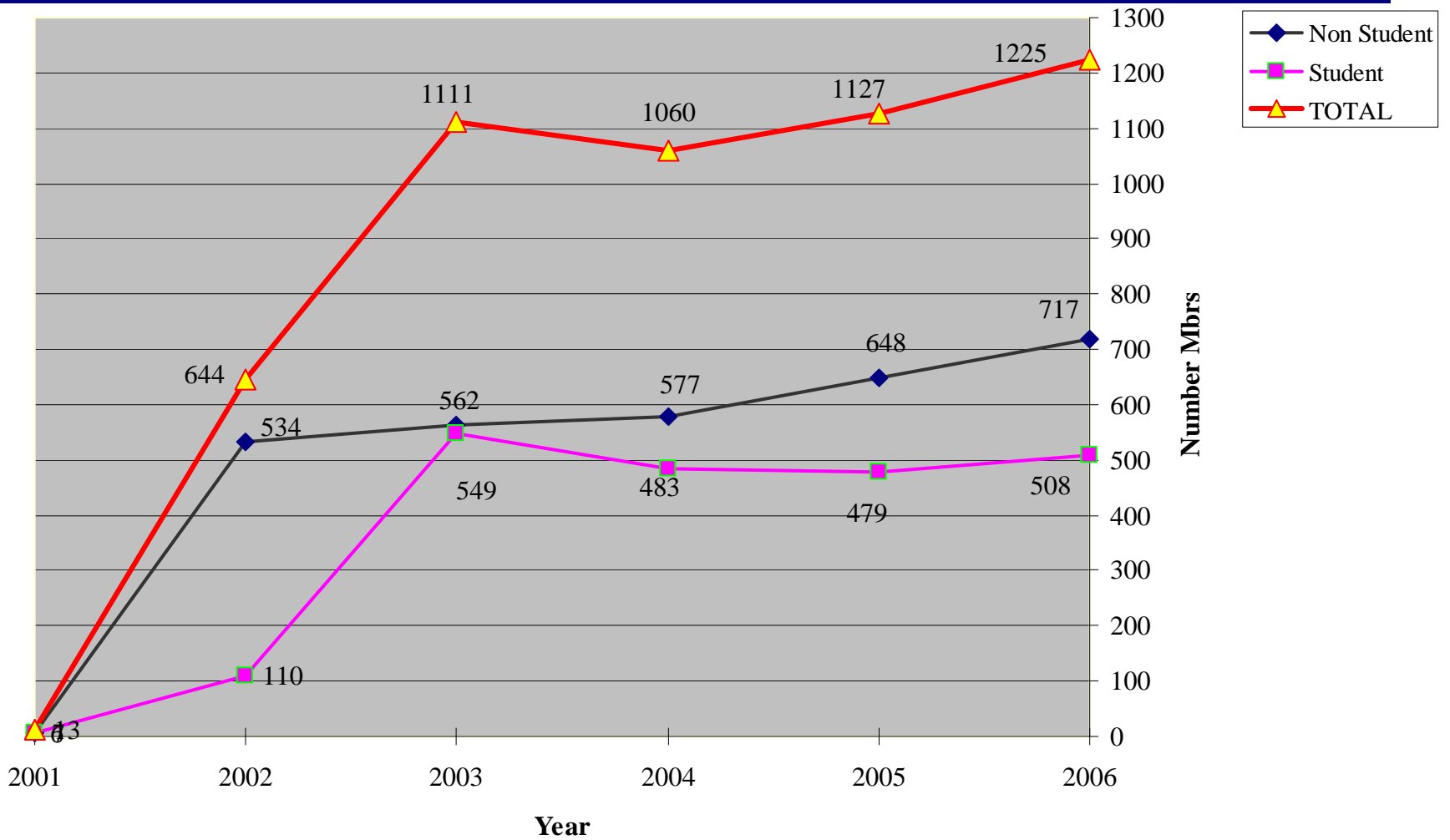
- Chair
John Bell, LBNL
- Vice-chair
Tammy Kolda, Sandia National Lab
- Secretary / Treasurer
Kirk Jordan, IBM
- Program Director
Carol Woodward, LLNL



Agenda

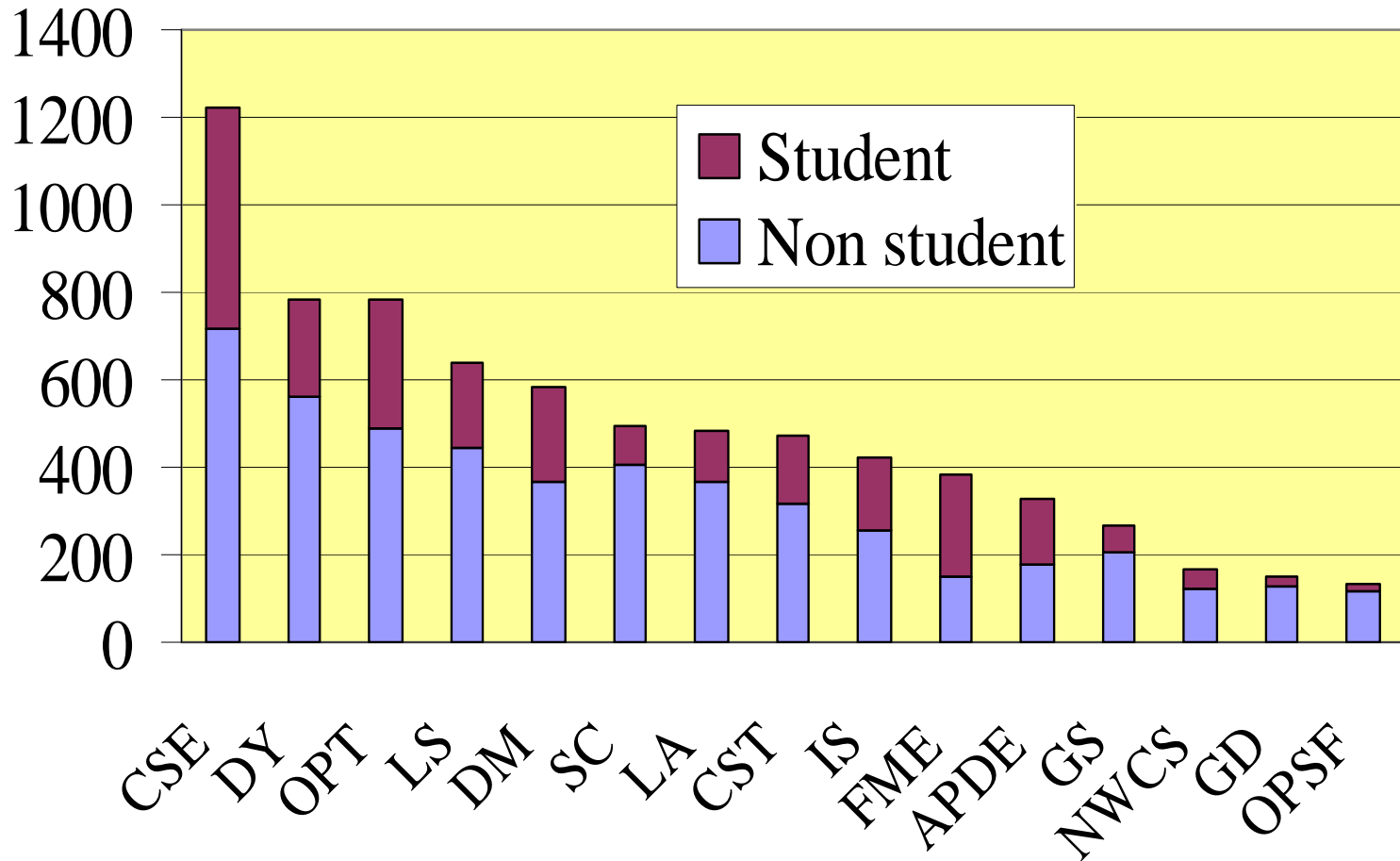
- Membership
- Current SIAG activities
- Other roles for the SIAG
- Open Forum

SIAG/CSE Membership History



SIAM Activity Group Memberships

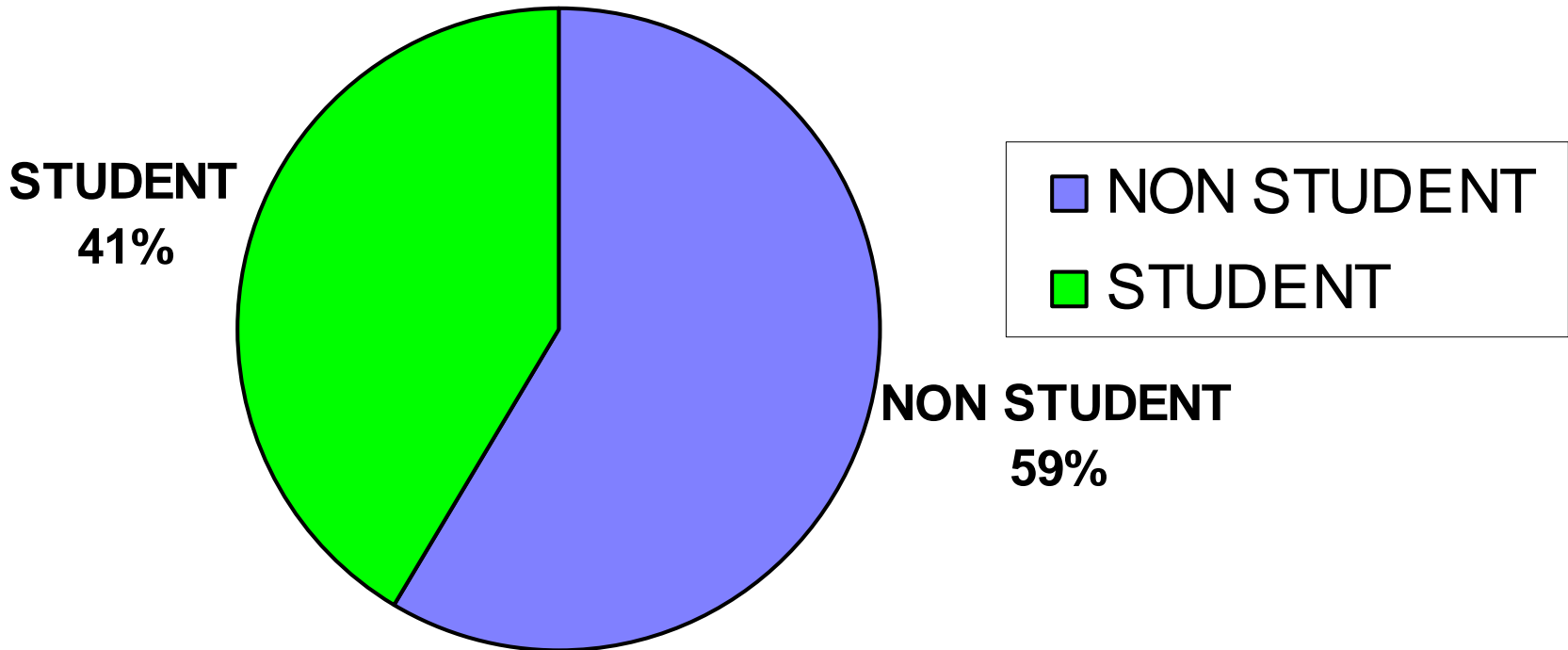
12/31/06



SIAG/CSE MEMBERS

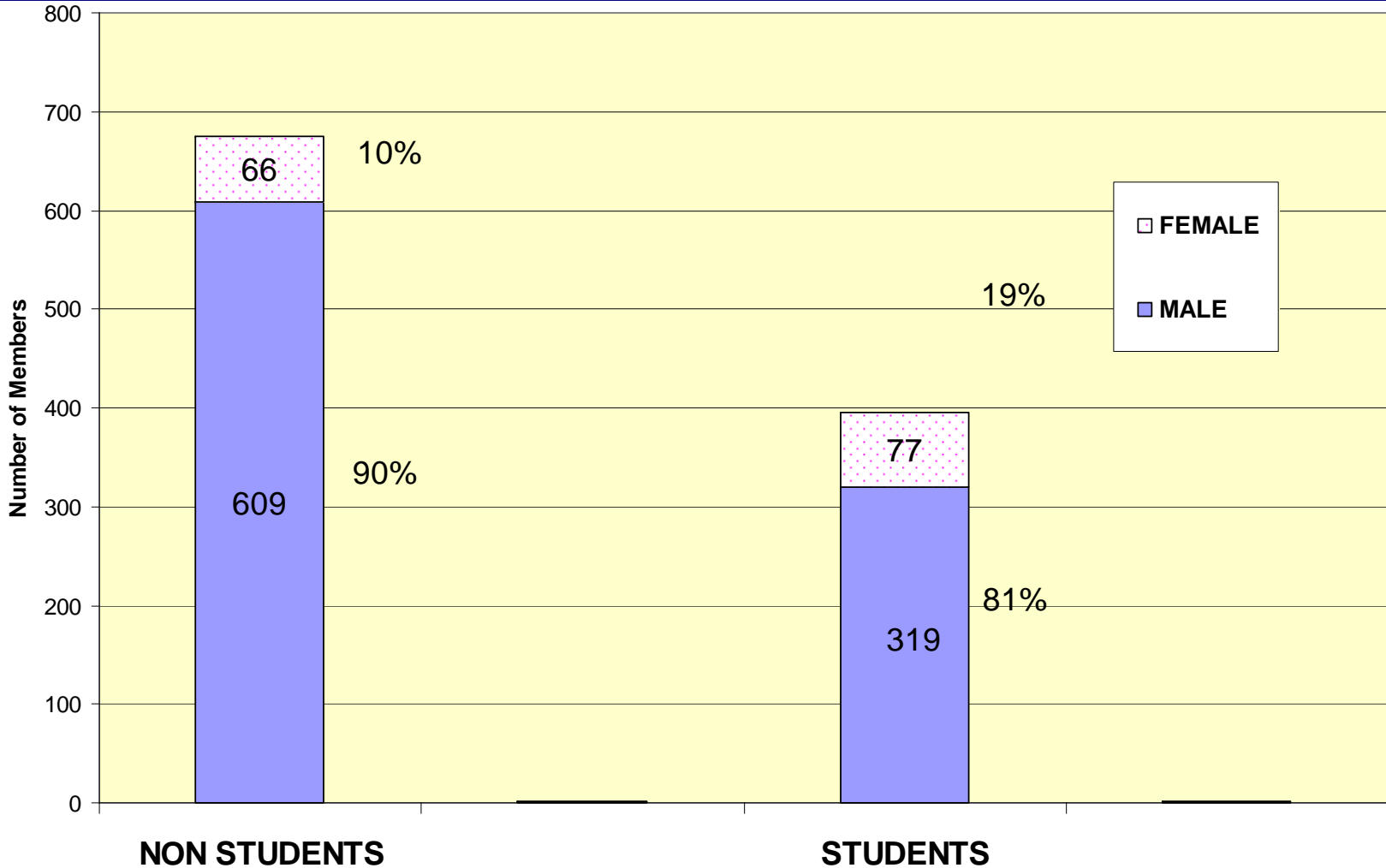
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Total: 1,225



SIAG/CSE MEMBERSHIP BY GENDER

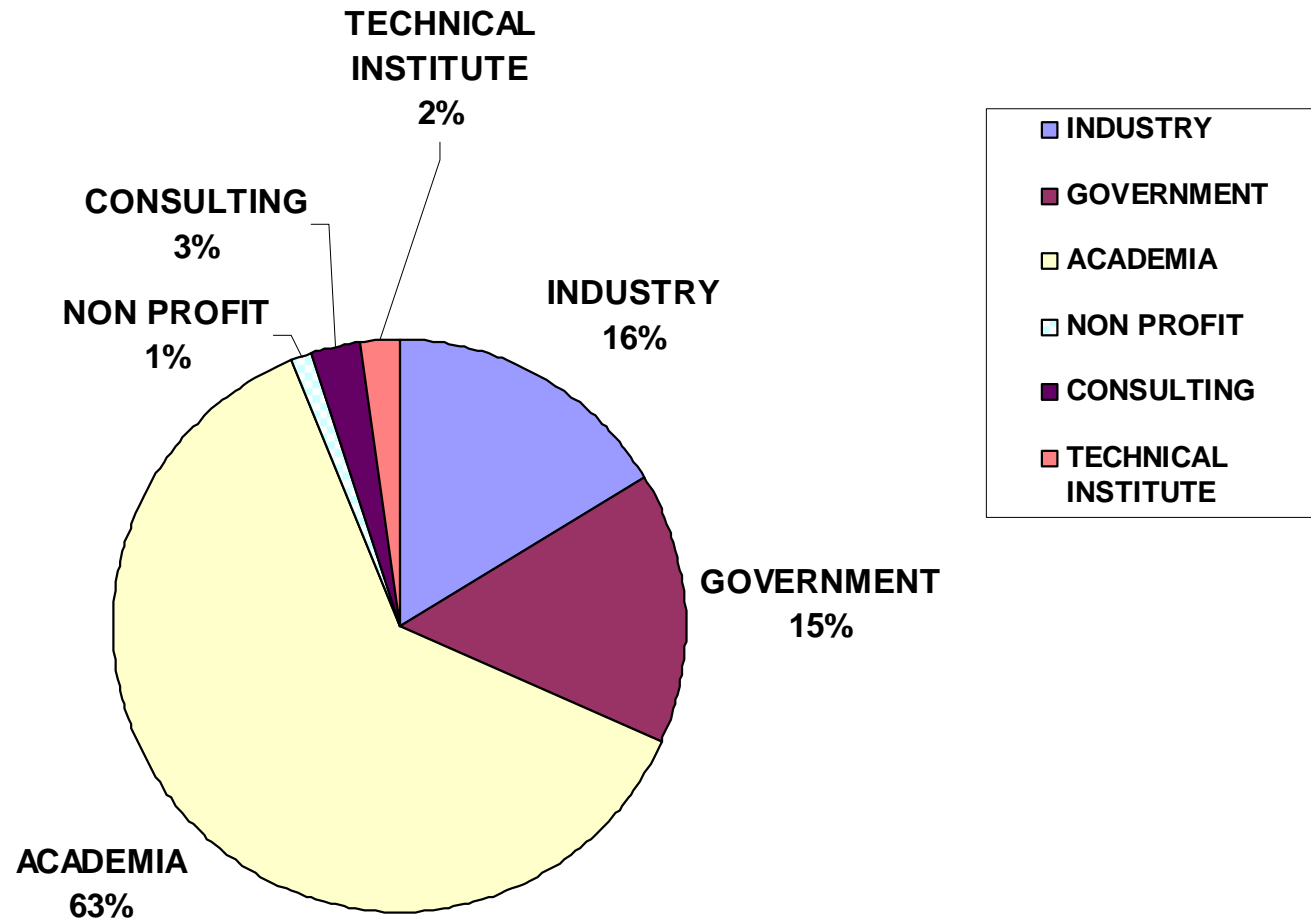
Sample Size: 675 non students (94% of all non student members)
396 students (78% of all student members)



Member type

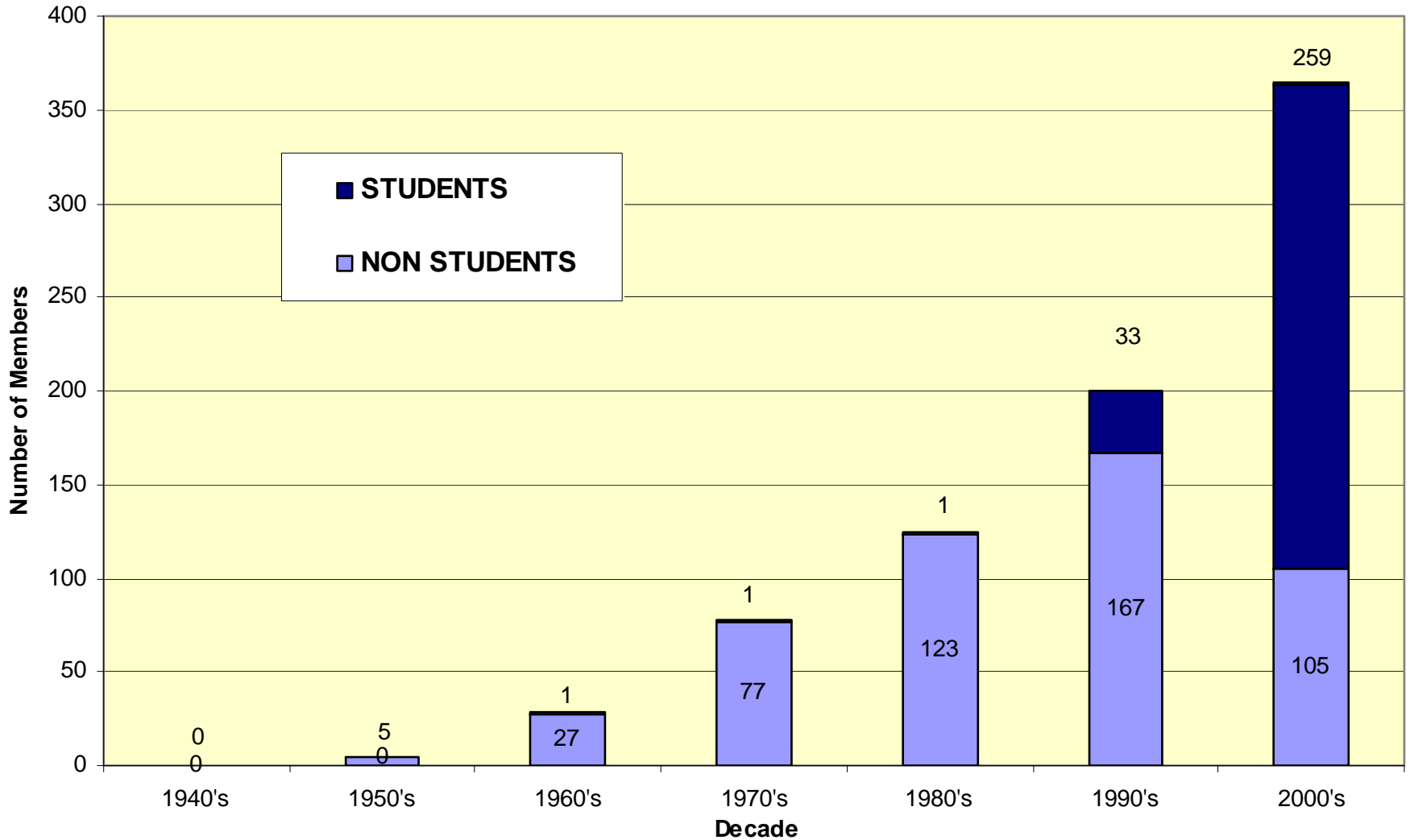
SIAM MEMBERS BY EMPLOYER TYPE - not including students

Sample size = 611 (85% of total non-student membership)



YEAR HIGHEST DEGREE EARNED

Sample size: Non-students 504 (70% all SIAG/CSE members, excluding students)
Students 295 (59% all SIAG/CSE student members)





Current SIAG Activities

- CSE Conference Series
- Web/list serve/newsletter
- Presence at SIAM Annual Meeting
- SIAM News

And Related Activities

- Book Series in CS&E

CS&E Conference Series

■ Attendance History

- 2005: Feb. Orlando, FL 574 Total
- 2003: Feb. San Diego, CA 543 Total, 69 Student
- 2000: Sept. Washington, DC. 444 Total, 58 Student

■ This meeting

- Total attendance 624 (533 pre-registered)
- Number of talks: 530 in 108 minisymposium sessions,
32 contributed sessions
- Number of posters: 63
- Approx. 50 new SIAM members (30 + 20)

Thank you Organizing Committee and SIAM!

- Special thanks to SIAM

Coley Lyons

Connie Young

...



February 19-23, 2007

Hilton Orange County/Costa Mesa

Costa Mesa, California

- Gyan Bhanot, Rutgers University
- Chris Farmer, Schlumberger Abingdon Technology Centre
- Andrew Fitzgibbon, Microsoft Research
- Laura Frink, Sandia National Laboratories
- Max Gunzburger (Co-chair), FSU
- Eldad Haber, Emory University
- Robert Harrison, Oak Ridge National Lab
- Bruce Hendrickson (Co-chair), SNL
- Matthias Heikenschloss, Rice University
- Angela Kuno, Universität Bonn, Germany
- John Lewis, Cray, Inc.
- Bob Lucas, USC
- Jill Mesirov (Co-chair), MIT
- Roy Nicolaides, Carnegie Mellon U.
- Rick Stevens, ANL and U. of Chicago
- Andy Wathen (Co-chair), Oxford



CSE09 Conference

- Chairs
 - Carol Woodward (Co-chair)
 - Others to be recruited
- Date -- TBD
- Location -- TBD
- Input desired on
 - Short course topics
 - Training workshops
 - Themes for the conference
 - Location preferences (later)



Presence at Annual Meeting

- “Track” at least once every five years
 - 6 minisymposium sessions
 - Required in new Rules of Procedure
 - No track for 2007 (ICIAM)
- CSE track at (AN08)
 - Special designation in the conference program
 - Sponsored minisymposia
 - Topical speakers
 - If you have ideas for a session; see Carol Woodward

SIAG/CSE Mailing List

- Initiated in Nov 2004
- Open only to SIAG/CSE members
 - All members *should* be automatically subscribed
 - Subscription requests & updates can be submitted via the web page
- The following types of postings are appropriate for this mailing list.
 - **SIAG/CSE Business Mailings** including solicitations for SIAG/CSE-sponsored conferences and minisymposia, announcements of SIAG/CSE-related conferences and minisymposia, calls for nominations for SIAG/CSE prizes, and other SIAG/CSE-related announcements
 - **Postings from SIAG/CSE members** including announcements of new technical reports, papers, or software, advertisements for open positions, and other relevant announcements.
 - **SIAM Announcements** including new SISC electronic publications and general conference announcements and other news.
- Web page: <http://lists.siam.org/mailman/listinfo/siam-cse>

SIAG Web Pages

- Our URL is <http://www.siam.org/siags/siagcse.htm>
- Working with SIAM to improve web content for our SIAG
- Related activities for other SIAGs:
 - DSWeb Magazine:
<http://www.dynamicalsystems.org/ma/>
 - Optimization News & Views:
<http://www.mat.uc.pt/siagopt/>
 - e-digests: Discrete Math, Ortho.Polys.
- **Appoint a CSE SIAG web master?**

SIAM News

- SIAM News seeks articles. Sources:
 - Submissions by freelance writers
 - Submissions from the community
 - Leads from conference talks and discussions (perhaps an overview of this meeting) – identify topics from CSE07
 - Thanks to Keyes and Jardin
- Chance for CS&E to speak to entire community
- Ideas:
 - Articles on CS&E education – undergrad, grad levels
 - Overviews on challenges/tools for CS&E domain areas



The SIAM/ACM prize in CS&E

- Jointly awarded by SIAM and ACM
- Recognizes outstanding contributions to the development and use of mathematical and computational tools and methods for science and engineering problems
- Chi-Wang Shu, Brown University, awarded the 2007 prize at this conference
- See SIAM web site for more information

SIAM Book Series on Computational Science & Engineering

Editor-in-Chief

Omar Ghattas
Carnegie Mellon University

Associate Editor

David Keyes
Columbia University

Editorial Board

Kim Baldridge
San Diego State University and University of Zurich

Lori Freitag Diachin
Lawrence Livermore National Laboratory

Charbel Farhat
Stanford University

James Glimm
SUNY - Stony Brook

Teresa Head-Gordon
*University of California - Berkeley and
Lawrence Berkeley National Laboratory*

Rolf Jeltsch
ETH - Zurich

Chris Johnson
University of Utah

Laxmikant Kale
University of Illinois

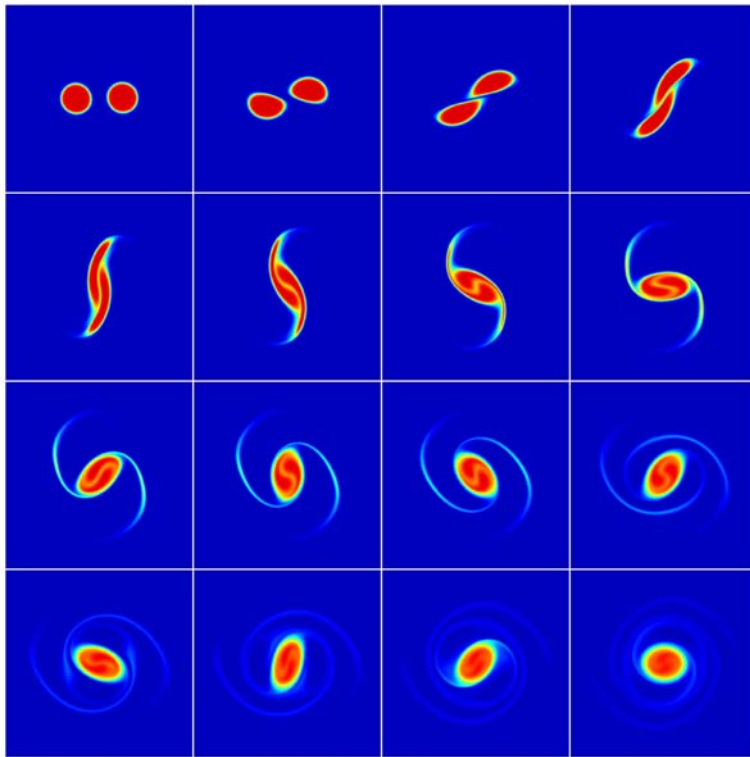
Jelena Kovacevic
Carnegie Mellon University

Habib Najm
Sandia National Laboratory

Alan Needleman
Brown University

Alex Pothen
Old Dominion University

Mary Wheeler
University of Texas - Austin



Mark Peterson, Univ Colorado - Boulder

Current titles

■ Published

- *Solving PDEs in C++: Numerical Methods in a Unified Object-Oriented Approach*, Yair Shapira, 2006.
- *Computational Methods for Multiphase Flows in Porous Media*, Zhangxin Chen, Guanren Huan, and Yuanle Ma, 2006.

■ In press

- *Real-Time PDE-Constrained Optimization*, Edited by Lorenz T. Biegler, Omar Ghattas, Matthias Heinkenschloss, David Keyes, and Bart van Bloemen Waanders, Available April 2007.
- *An Introduction to Modeling and Simulation of Particulate Flows*, Zhodia, Available late June


■ Coming soon:

- Layton: *Introduction to the Numerical Analysis of Viscous Incompressible Flows*
- Ascher: *Numerical Methods for Evolutionary Differential Equations are under contract.*

Possible topics for books in this series

Advanced discretization methods
Computational biology and bioinformatics
Computational chemistry and chemical engineering
Computational earth and atmospheric sciences
Computational electromagnetics
Computational fluid dynamics
Computational medicine and bioengineering
Computational physics and astrophysics
Computational solid mechanics and materials
Coupled multiphysics problems
CS&E education
Large-scale data analysis

Discrete and combinatorial algorithms for CS&E
Inverse problems and data assimilation
Meshing and adaptivity
Multiscale methods and models
Numerical algorithms for CS&E
Optimal design and optimal control
Parallel and distributed computing
Problem-solving environments
Scientific visualization
Sensitivity analysis
Software and middleware systems for CS&E
Uncertainty quantification and stochastic methods



Proposals appropriate for the Computational Science and Engineering series should be sent to:

Omar Ghattas
Depts. of Mech. Eng. and Geological Sciences
University of Texas at Austin
Austin, TX 78712
telephone: (512) 232-434
fax: (512) 953-1774
e-mail: omar@ices.utexas.edu
www.cs.cmu.edu/~oghattas

or

Linda Thiel (Senor Acquisitions Manager)
SIAM
3600 University City Science Center
Philadelphia, PA 19104 USA
telephone: (215) 382-9800 x 371
fax: (215) 386-7999
e-mail: thiel@siam.org
<http://www.siam.org/>

Operations

- Renewed SIAG charter

- Minor modifications to rules and procedures
- <http://www.siam.org/siags/rpSIAGCSE.htm>
- Next renewal will be in 2008

- Election of officers

- Next election in fall 2008
- We will appoint a nominating committee
- <http://www.siam.org/siags/practices.htm>

Other roles for the SIAG

- Should the SIAG play a role at the policy level
 - Serve as spokesperson for the field
 - Represent CSE to OMB, Congressional staff, etc.
- CSE / SIAG policy committee
 - Engage domain scientists as well as math and cs communities
 - Coordinate with SIAM policy committee
 - Relate to current NAS study of the role of CSE in broader community



Education

- Should the SIAG play a stronger role in CS&E education?
 - Resources for graduate and undergraduate education
 - Shared experience in establishing CS&E programs
- What are the appropriate vehicles to accomplish this type of goal?



Open Forum

- Questions
- Comments
- Suggestions
- Complaints
- Where should we have the next meeting?

How can this SIAG best serve your needs?