2021 SIAG/CSE
SIAM Activity Group on Computational Science and Engineering
Business Meeting

Part 1: (this) March 3
Part 2: (CSE23) March 4, 9:15AM Central
Chair:
Stefan Wild

Vice Chair:
Jeff Hammond

Program Director:
Judith Hill

Secretary:
Tan Bui-Thanh
Thank you to all 2019/2020 Officers

**Chair:**
Karen Devine

**Vice Chair:**
Suzanne Shontz

**Program Director:**
Stefan Wild

**Secretary:**
Judith Hill

scan QR code
or enter #CSE21 at http://sli.do to provide interactive input!
SIAG/CSE Conference 2021

Organizing Committee Co-Chairs

Laura Grigori, Inria, France
Misha E. Kilmer, Tufts University, U.S.
Stefan M. Wild, Argonne National Laboratory, U.S.

Organizing Committee

Ann Almgren, Lawrence Berkeley National Laboratory, U.S.
Nathan Baker, Pacific Northwest National Laboratory, U.S.
Kevin Carlberg, Facebook, U.S.
John Gilbert, University of California, Santa Barbara, U.S.
Vicki Howle, Texas Tech University, U.S.
Tobin Isaac, Georgia Tech, U.S.
Kirsten Morris, University of Waterloo, Canada
Pat Quillen, The MathWorks, U.S.
Adrian Sandu, Virginia Tech, U.S.
Peter Tang, Facebook, U.S.
Françoise Tisseur, The University of Manchester, United Kingdom
Kees Vuik, Delft University of Technology, Netherlands
Barbara Wohlmuth, Technical University of Munich, Germany
Carol Woodward, Lawrence Livermore National Laboratory, U.S.
Rio Yokota, Tokyo Institute of Technology, Japan

*SIAG/CSE Conference 2021

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2021 SIAG/CSE BUSINESS MEETING
SIAG/CSE Conference History

scan QR code or enter #CSE21 at http://sli.do to provide interactive input!
SIAG/CSE Conference 2023: Amsterdam!
the 12th CSE conference is the 1st outside of US

Organizing Committee Co-Chairs
Karen Devine, Sandia National Laboratories, U.S.
Dirk Hartmann, Siemens AG, Germany
Wil Schilders, Technische Universiteit Eindhoven, The Netherlands

February 26 – March 3, 2023

Info Session March 4, 9:15AM Central
SIAG/CSE 2020 Charter Renewal

- Fast forwards planning to facilitate what is now regularly SIAM’s largest meeting
- SIAG/CSE year X officers aid planning for year X+2 meeting and siting of year X+4 meeting
- SIAG/CSE Program Director a co-chair of year X+4 meeting
  - Judy Hill will co-chair CSE25

CSE25 will be in U.S.
SIAG Overall Membership

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or enter #CSE21 at http://sli.do to provide interactive input!
Announcements

- New SIAG/CSE electronic mailing list
  - siam-cse@connectedcommunity.org
  - **Editable frequency:** digest or instant messages
  - Reply privately or publicly on the website or directly through email
  - Post files and events; searchable SIAG membership database
- SIAG/CSE website
  - [https://www.siam.org/membership/activity-groups/detail/computational-science-and-engineering](https://www.siam.org/membership/activity-groups/detail/computational-science-and-engineering)
- SIAM News: Story Ideas
- SIAM Blogs
- SIAG/CSE Leadership Suggestion Form:
  - [https://www.siam.org/forms/siam-activity-group-leadership-form](https://www.siam.org/forms/siam-activity-group-leadership-form)
SIAG/CSE Prizes

SIAG/CSE Early Career Prize

Paris Perdikaris
University of Pennsylvania, United States

“For his work on machine learning using Gaussian processes and neural networks, which has set the foundation for a new paradigm in data-driven and physics-informed scientific computing.”

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to provide interactive input!

3rd time prize awarded
SIAG/CSE Prizes

SIAG/CSE Best Paper Prize

Venkataramanan Balakrishnan
Purdue University, United States

Stephen Cauley
Massachusetts General Hospital, Harvard University, United States

James Vogel
Purdue University, United States

Jianlin Xia
Purdue University, United States

SIAG/CSE Prize Lectures at CSE21

SIAM Activity Group on Computational Science and Engineering Early Career Prize
SIAM/ACM Prize in Computational Science and Engineering

SIAM Activity Group on Computational Science and Engineering Best Paper Prize
James H. Wilkinson Prize for Numerical Analysis and Scientific Computing

Awards Session Friday March 5 - 12:05 PM Central
+ poster prizes
+ 8th Bavarian Graduate School in Computational Engineering (BGCE) Student Paper Prize

scan QR code or enter #CSE21 at http://sli.do to provide interactive input!
SIAG/CSE Thank you 2021 CSE Prize Committees

SIAM/ACM Prize in Computational Science and Engineering

David Keyes (Chair), King Abdullah University of Science & Technology
Robert Schnabel, University of Colorado Boulder
Lois Curfman McInnes, Argonne National Laboratory

SIAM Activity Group on Computational Science and Engineering Early Career Prize

Judith Hill (Chair), Lawrence Livermore Lab (previously at Oak Ridge National Laboratory)
Hans De Sterck, University of Waterloo
Irene Gamba, University of Texas
Bruce Hendrickson, Lawrence Livermore National Lab
Jan Hesthaven, École Polytechnique Fédérale de Lausanne

James H. Wilkinson Prize for Numerical Analysis and Scientific Computing

John Stockie (Chair), Simon Fraser University
Aleksandar Donev, Courant Institute of Mathematical Sciences – NYU
Misha Kilmer, Tufts University

SIAM Activity Group on Computational Science and Engineering Best Paper Prize

Suzanne Shontz (Chair), University of Kansas
Sivasankaran Rajamanickam, Sandia National Laboratories
Christine Shoemaker, National University of Singapore
Ulrich Ruede, Universitaet Erlangen-Nuernberg
Rio Yokota, Tokyo Institute of Technology

Awards Session Friday March 5 - 12:05 PM Central
+ poster prizes
+ 8th BGCE Student Paper Prize
SIAG/CSE SIAM Fellows

Class of 2020
Srinivas Aluru, Georgia Tech, U.S.
Umit Catalyurek, Georgia Tech, U.S.
Laura Grigori, Inria, France
Robert Lipton, Louisiana State University, U.S.
Olaf Schenk, Università della Svizzera Italiana, Switzerland
Jie Shen, Purdue University, U.S.
Barbara Wohlmuth, Technische Universität München, Germany

Class of 2019
Mihai Anitescu, Argonne National Lab, U.S.
David Bader, New Jersey Institute of Technology, U.S.
Fariba Fahroo, Air Force Research Lab, U.S.
Roger Ghanem, University of Southern California, U.S.
Sigal Gottlieb, University of Massachusetts, U.S.
Mike Heroux, Sandia National Lab, U.S.
Misha Kilmer, Tufts University, U.S.
Juan Meza, UC Merced, U.S.

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Future conferences?

Location
Timing
Program committee

Business Meeting Part 2:
CSE23 Info Session March 4, 9:15AM Central

Time for input and Q&A!

Enter #CSE21 at http://sli.do to provide interactive input!
CSE23 is in Amsterdam, CSE25 will be in the U.S.; where should CSE27 be located? (pick up to 2)

- Asia: 44%
- Europe: 31%
- Americas, outside of U.S.: 29%
- U.S.: 27%
- Oceania: 17%
- Far too early/maybe all virtual:
Order these desires in a SIAM CSE conference

1. Bring entire community together with shared events (e.g., plenaries) 3.07
2. Have all talks (minisymposia & contributed talks) be the same length 2.42
3. Keep number of parallel sessions low 2.27
4. Allow for 20+ minute talks (25+ w/ Q&A&transition) 2.24

Join at slido.com #CSE21
What is your favorite part of CSE conferences?

- Networking
- Minisymposia
- Coffee breaks
- Networking breaks
- Panels
- Meeting people
- Conversations
- Diverse topics
- Chatting
- Plenaries
- Understanding
- Interactions
- Talks
- Well organized
- Friends
- Equations
- Community
- Presentations
- Colleagues
- Hallway chat
- Meet colleagues (even vir)
What is missing from CSE conferences?
**Top questions (3)**

1. **Anonymous**
   - Interdisciplinarity seems to be and should be part of "CSE". However, it often does not really seem to be appreciated. This is also true for SISC submissions.

2. **Anonymous**
   - Does CSE coordinate with the Parallel Processing meeting as far as whether meetings are foreign or domestic?

3. **Anonymous**
   - Will you share the lessons learned from this virtual meeting, somehow? What worked well, what didn't etc.?
2023 SIAM Conference on Computational Science and Engineering
February 26 – March 3, 2023
Amsterdam, The Netherlands
Go beyond presentations ... roundtables, hackathons ... Learn from industrial challenges to spur new math research
Share success stories: how mathematics enabled industry to excel
Network among researchers from industry and academia

Emphasize the I in SIAM

2023 SIAM Conference on Computational Science and Engineering
February 26 – March 3, 2023
Amsterdam, The Netherlands
Contacts

Chair  Stefan Wild  
      wild@anl.gov

Vice Chair  Jeff Hammond  
             jeff_hammond@acm.org

Program Director  Judith Hill  
                   judy@llnl.gov

Secretary  Tan Bui-Thanh  
           tanbui@oden.utexas.edu
2020
SIAG/CSE
Membership Report
(data as of December 31\textsuperscript{st}, 2020)
SIAG Overall Membership

Graph showing overall membership divided into nonstudent and student categories for different sections.
Membership Demographics

- Nonstudent Members
- Student Members
- Total

Years: 2006 to 2020

Values:
- 2006: Nonstudent Members = 4185, Student Members = 4238
- 2020: Nonstudent Members = 6190, Student Members = 5679

SIAM Membership Demographics
SIAG/CSE Membership Demographics
### Membership by Geography

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>Non-US</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonstudent</td>
<td>4848</td>
<td>35.2%</td>
<td>3342</td>
</tr>
<tr>
<td>Student</td>
<td>3795</td>
<td>27.5%</td>
<td>1784</td>
</tr>
<tr>
<td>Total</td>
<td>8643</td>
<td>62.7%</td>
<td>5126</td>
</tr>
</tbody>
</table>
### SIAG/CSE Membership by Geography

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>Non-US</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nonstudent</strong></td>
<td>882</td>
<td>467</td>
<td>1349</td>
</tr>
<tr>
<td></td>
<td>32.6%</td>
<td>17.3%</td>
<td>49.9%</td>
</tr>
<tr>
<td><strong>Student</strong></td>
<td>919</td>
<td>438</td>
<td>1357</td>
</tr>
<tr>
<td></td>
<td>33.9%</td>
<td>16.2%</td>
<td>50.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1801</td>
<td>905</td>
<td>2706</td>
</tr>
<tr>
<td></td>
<td>66.5%</td>
<td>33.5%</td>
<td></td>
</tr>
</tbody>
</table>
**SIAG/CSE Membership by Gender**

### Nonstudents
- **Male** 1091 (81%)
- **Female** 206 (15.3%)
- **Not Indicated** 44 (3.3%)
- **Prefer Not to Disclose** 6 (<1%)
- **Non-binary** 2 (<1%)

### Students
- **Male** 949 (70%)
- **Female** 291 (21.5%)
- **Not Indicated** 102 (7.5%)
- **Prefer Not to Disclose** 10 (<1%)
- **Non-binary** 4 (<1%)
SIAM Membership by Employer Type

- Academia: 5220 (78%)
- Industry: 729 (11%)
- Laboratory Government: 374 (6%)
- Not Specified (nt): 223 (3%)
SIAG/CSE Membership by Employer Type

- **Academia**: 841 (70%)
- **Laboratory**: 153 (13%)
- **Government**: 11% (59)
- **Industry**: 133 (11%)
SIAM Membership by Department Type

- Mathematics: 1917, 65.7%
- Engineering: 475, 16.3%
- CompSci: 216, 7.4%
- Other: 100, 3.4%
- Other (Physical Science): 63, 2.2%
- Physics: 43, 1.5%
- Statistics: 44, 1.5%
- Op Research: 62, 2.1%
- Other (Physical Science): 63, 2.2%
SIAG/CSE Membership by Department Type

- Mathematics: 329 (56.6%)
- Engineering: 159 (27.4%)
- CompSci: 58 (10%)
- Other: 9 (2.6%)
- Other (Physical Science): 8 (1.4%)
- Physics: 7 (1.2%)
- Statistics: 4 (0.7%)
- Op Research: 2 (0.2%)
Held Jointly with:

- Conference on Applied and Computational Discrete Algorithms (ACDA21)
- Conference on Control and Its Applications (CT21)
- Conference on Discrete Mathematics (DM21)
- Conference on Optimization (OP21)

Tracks of Sessions by SIAM SIAGs:

- Mathematics of Planet Earth
- Nonlinear Waves and Coherent Structures

Conference Information:

- Online registration opens April 2021
- Contingency plans in place for either format, more information available spring 2021
- No other physical site considered for co-located meetings, if Spokane is not viable; all conferences will be held virtually.

More information available at: https://www.siam.org/conferences/cm/conference/an21
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Benefits of SIAM Membership Include………

- SIAM Review (Print & Electronic)
- SIAM News (Print)
- 30% Off SIAM Books
- $15 / Activity Group Membership
- 20% - 30% Off Registrations
- 80% Off Journals (up to 4)
- 95% Off e-Access to Journals
- Spouse may join as Associate Member
- SIAM Unwrapped
- Vote in SIAM Elections
- Eligible to Hold Office
- Eligible for Committee Appointments
- Nominate SIAM Fellows
- Be Nominated as a SIAM Fellow
- Nominate 2 Students for Free Membership
- Eligible for Group Insurance
Contacts

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  wild@anl.gov

Vice Chair Jeff Hammond
  jeff_hammond@acm.org

Program Director Judith Hill
  judy@llnl.gov

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