Notes from the SIAG ACDA Business meeting (20 July 2021, online 12pm Eastern Daylight Time); these notes supplement the slides presented by Henning Meyerhenke.

We have 40 participants in the zoom session, including SIAM officers and vFair support (4 in total).

Blair Sullivan informed us that there were 28 travel awards.

The PC chairs of 2021 reported that weak-double blind submissions is generally found to be useful ("strong yes" and "yes" from PC members and the authors for support), but it still needs to be discussed within the community. The Engage Portal is suggested as the suitable venue.

The next ACDA conference will likely be co-located with SIAM Conference on Optimization in 2023. They have a meeting in late spring--early summer period. They will be happy to have us (Stefan Wild and David Shmoys noted).

Sivan Toledo reminds that the conferences should be at locations with big airport hubs.

Fredrik Manne/Sivan Toledo and others asked about physical, virtual, and hybrid conferences. Richard Moore (SIAM) informed us that SIAM officers are pondering on this, with many angles (including the fear that an option to attend virtually can hurt the impact/importance of the conferences).

People should be encouraged to give feedback using the post-conference survey (from SIAM).

We are reminded by Tim Fest (SIAM) to nominate students for SIAM memberships (www.siam.org/form/nominate-a-student), and to consider starting a student chapter (www.siam.org/students-education/student-chapters).

On the issue of having smaller number of members from Europe (in comparison to the US), Sivan Toledo suggested that organizing a conference in Europe can bring that number up.

Alex Pothen raises two questions for long term: What kind of awards could we offer? Shall we consider starting an ACDA journal within SIAM? He suggested that these issues should be discussed at length in the Engage Portal.

2021 SIAG/ACDA

SIAM Conference on Applied and Computational Discrete Algorithms

Applied and Computational Discrete Algorithms Business Meeting

siam 2021 | Conference on Applied & Computational Discrete Algorithms

2021 SIAG/ACDA BUSINESS MEETING

siam | Society for Industrial and Applied Mathematics

Agenda

- SIAG/ACDA ``vision," prizes
- ACDA co-chair items (Bruce Hendrickson and Blair Sullivan)
- ACDA program co-chair items (Michael Bender and John Gilbert)
  - Best-paper award
- ACDA'23: co-chairs, (co-)location, become annual?
- Discussion: How to improve the ACDA conference
- Discussion: How to improve the ACDA SIAG: providing benefit to membership
- SIAG stats

SIAG ACDA

- Applied and Computational Discrete Algorithms: Application-centered discrete algorithms
- Problems motivated by real applications, where algorithms can be useful and used
- Started in 2019
- Areas/communities
  - Combinatorial Scientific Computing (minitutorial introduction was this morning)
  - Theoretical Computer Science
  - Operations Research
  - Computational Biology (minitutorial tomorrow)
  - Experimental Analysis of Algorithms
  - Network science, data science/analytics, security, etc

SIAG/ACDA Officers

Chair:

Cynthia Phillips

*

Vice Chair:

Henning Meyerhenke

*

Program Director:

Uwe Naumann

*

Secretary:

Bora Uçar

SIAG/ACDA Thank you to all 2019/2020 Officers

Chair:

Alex Pothen

*

Vice Chair:

Blair Sullivan

*

Program Director:

John Gilbert

*

Secretary:

Cynthia Phillips

SIAG/ACDA Fellows

Class of 2020

Srinivas Aluru

Umit Catalyurek

Class of 2021

Martín Farach-Colton

Jeremy Kepner

SIAG/ACDA Early Career Prize

- First award will be at ACDA 2023
- For outstanding early-career research in applied and computational discrete algorithms
- Within 6 years of PhD (as of January 1 of award years)
- Certificate, travel award to attend ACDA, invited to give a talk at ACDA

SIAG/ACDA Conference 2021

Organizing Committee Co-Chairs

Bruce Hendrickson, Lawrence Livermore National Laboratory, U.S.
Blair D. Sullivan, University of Utah, U.S.

*

Organizing Committee

Rob Bisseling, University of Utrecht, the Netherlands
Christine Heitsch, Georgia Institute of Technology, U.S.
Monika Henzinger, University of Vienna, Austria
Cynthia Phillips, Sandia National Labs, U.S.
Cliff Stein, Columbia University, U.S.
David Williamson, Cornell University, U.S.

*

Program Committee Co-Chairs

Michael Bender, Stony Brook University, U.S.
John Gilbert, University of California, Santa Barbara, U.S.

SIAG/ACDA Conference 2021: Co-chairs' Remarks

Some special thanks

Preliminary registration/engagement numbers:

416 attendees

(indicated intent to attend ACDA at registration)

58 participants in Introduction Blitz

62 unique attendees for IP1

28 travel awards

SIAG/ACDA Conference 2021

Program Committee

David Bader, New Jersey Institute of Technology, U.S.
Austin Benson, Cornell University, U.S.
Jon Berry, Sandia National Laboratories, U.S.
Aydin Buluc, Lawrence Berkeley National Laboratory, U.S.
Ümit Çatalyürek, Georgia Institute of Technology, U.S.
Tzu-Yi Chen, Pomona College, U.S.
Alex Conway, VMware Research, U.S.
Tim Davis, Texas A&M University, U.S.
Maryam Dehnavi, University of Toronto, Canada
Lori Diachin, Livermore National Laboratory, U.S.
Anne Driemel, University of Bonn, Germany
Martin Farach-Colton, Rutgers University, U.S.
Sándor Fekete, TU Braunschweig, Germany
Jeremy Fineman, Georgetown University, U.S.
Assefaw Gebremedhin, Washington State University, U.S.
Phil Gibbons, Carnegie Mellon University, U.S.
Michael Goodrich, University of California, Irvine, U.S.
Oded Green, NVIDIA, U.S.
Laura Grigori, INRIA, France
Paul Hovland, Argonne National Laboratory, U.S.
Rob Johnson, VMware Research, U.S.
Jeremy Kepner, MIT Lincoln Laboratory, U.S.
Stephen Kobourov, University of Arizona, U.S.
Sherry Li, Lawrence Berkeley National Laboratory, U.S.
Ivana Ljubic, ESSEC Paris, France
Kamesh Madduri, Penn State University, U.S.
Fredrik Manne, University of Bergen, Norway
Samuel McCauley, Williams College, U.S.
Nicole Megow, University of Bremen, Germany
Michael Mitzenmacher, Harvard University, U.S.
Jose Moreira, IBM, U.S.
Ben Moseley, Carnegie Mellon University, U.S.
Jelani Nelson, University of California, Berkeley, U.S.
Guillaume Pallez, INRIA, France
Prashant Pandey, Lawrence Berkeley National Laboratory/University of California, Berkeley, U.S.
Rob Patro, University of Maryland, U.S.
Richard Peng, Georgia Institute of Technology, U.S.
Ali Pinar, Sandia National Laboratories, U.S.
Alex Pothen, Purdue University, U.S.
Emilie Purvine, Pacific Northwest National Laboratory, U.S.
Eva Rotenberg, Technical University of Denmark, Denmark
Peter Sanders, Karlsruhe Institute of Technology, Germany
TB Schardl, MIT, U.S.
Julian Shun, MIT, U.S.
Sabine Storandt, University of Konstanz, Germany
Yihan Sun, University of California, Riverside, U.S.
David Tench, Stony Brook University, U.S.
Shanghua Teng, University of Southern California, U.S.
Sivan Toledo, Tel Aviv University, Israel
Denis Trystam, Grenoble Institute of Technology, France
Rich Vuduc, Georgia Tech, U.S.
Andrea Walther, Humboldt-Universität zu Berlin, Germany
Ulrike Yang, Livermore National Laboratory, U.S.

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Andrea Walther, Humboldt-Universität zu Berlin, Germany
Ulrike Yang, Livermore National Laboratory, U.S.

Large and distinguished PC

- But almost everyone we invited said yes

Energetic and assiduous PC

- 800 comments during deliberations
- Ave of 10 comments per paper
- One paper had 29 comments

(These numbers are exact)

SIAG/ACDA 2021 Best Paper Award

Chosen by the Program Committee from papers in ACDA21 Proceedings

***Fairmandering: A column generation heuristic for fairness-optimized political districting*.**
Wes Gurnee and David Shmoys

to be presented in
Session CP5: Tuesday, 4:30PM EDT

Congratulations to the authors of the winning paper!

SIAG/ACDA Statistics 2021

	2021
submitted	80
accepted	33

SIAG/ACDA Statistics 2021

	2021
submitted	80
accepted	33

21 talks + archival papers

12 talks only

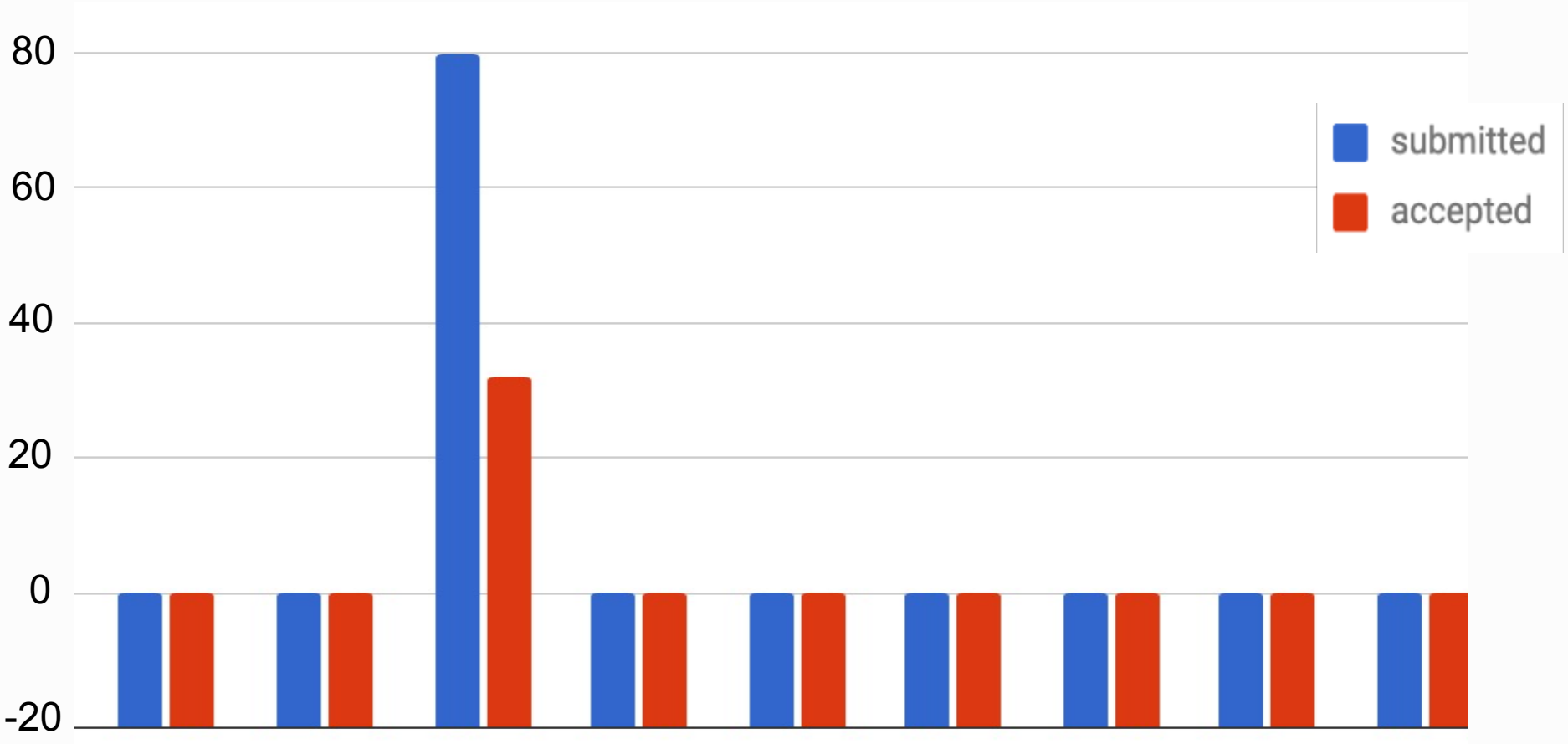
17 posters

SIAG/ACDA Creative Statistics 2021

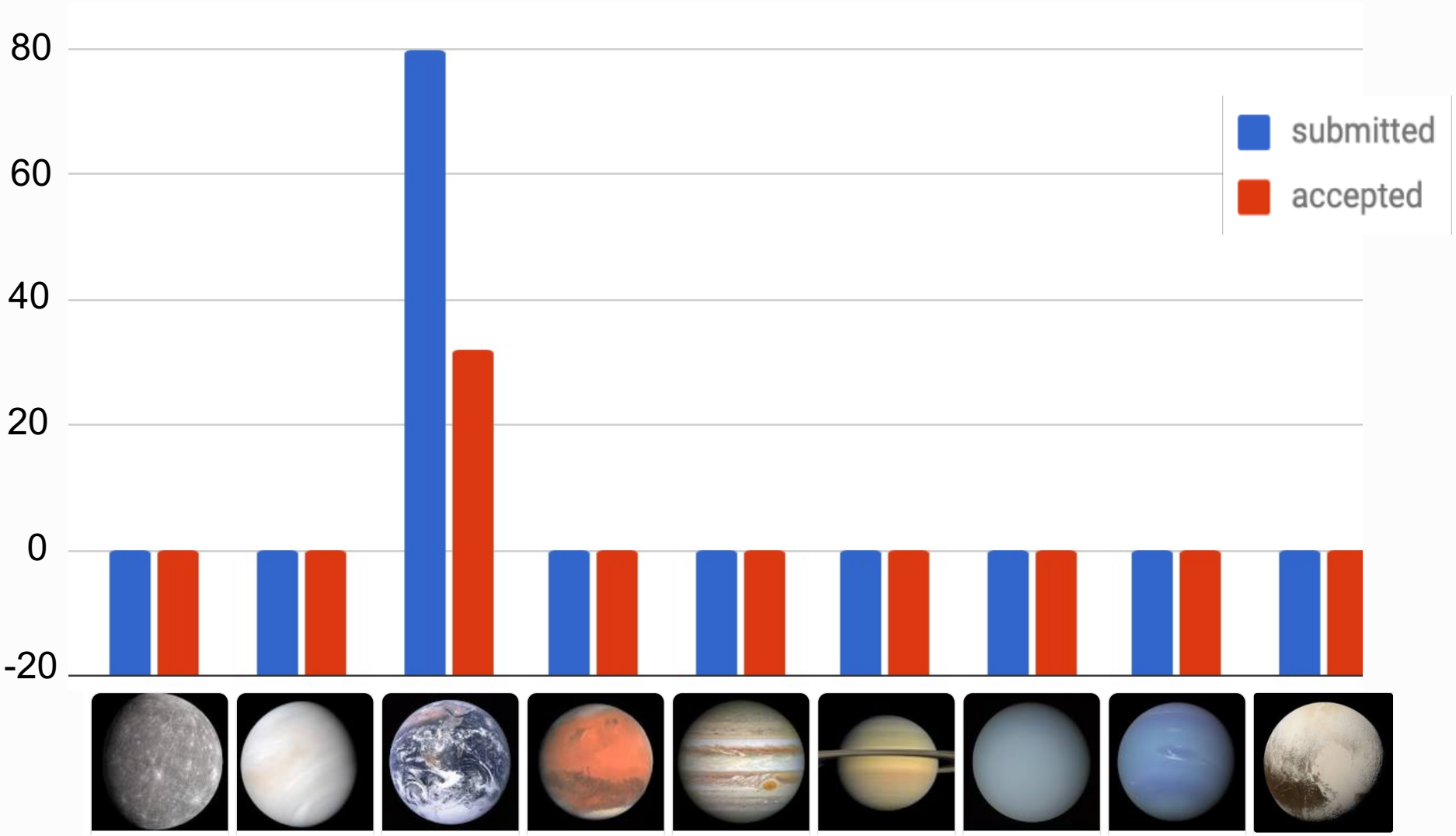
	2019	2020	2021
submitted	0	0	80
accepted	0	0	33

Impressive growth rate. If we maintain the 2021 growth rate, the next ACDA will become quite large.

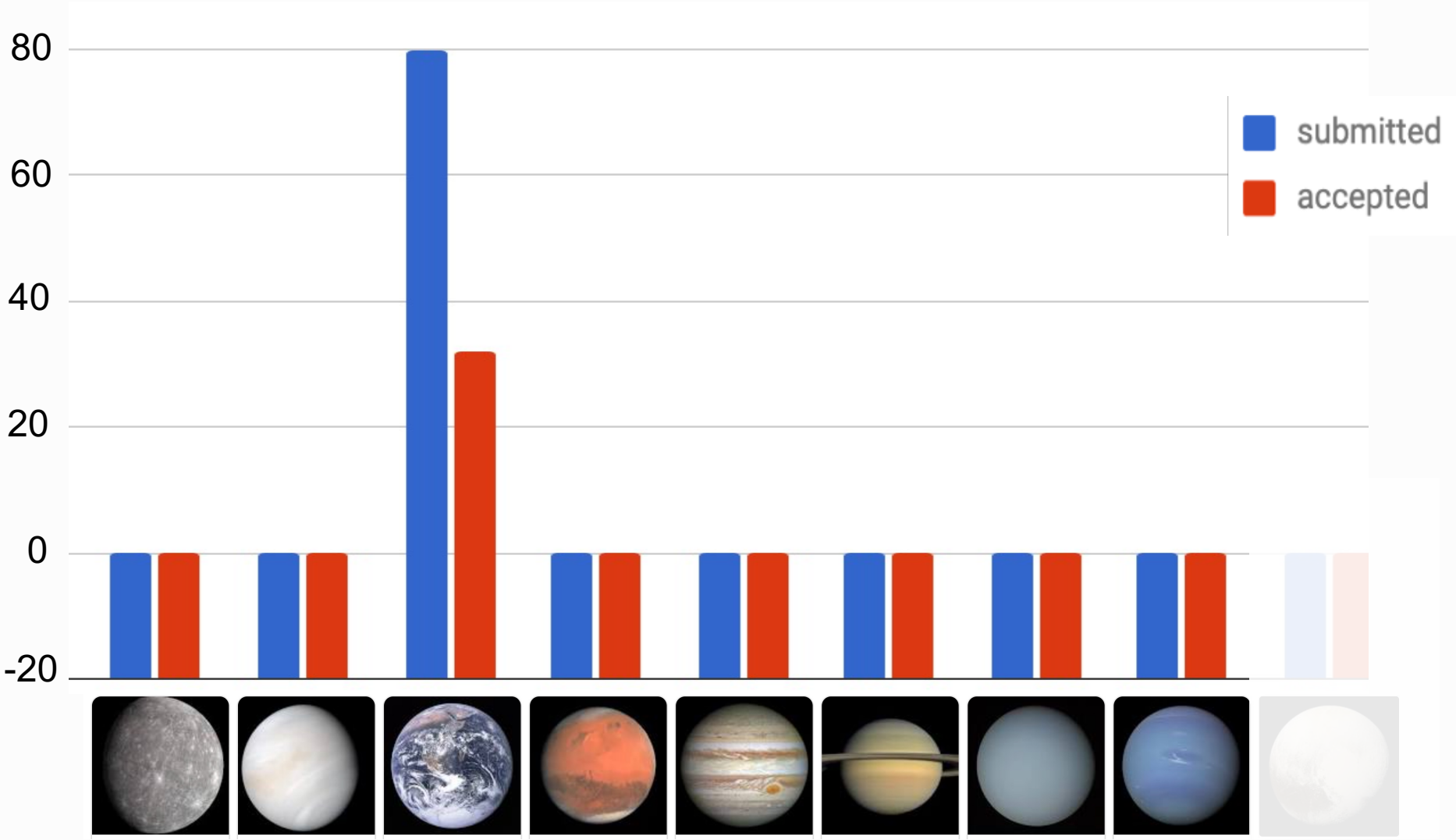
Submission Statistics by Region



Submission Statistics by Region



Submission Statistics by Region



Submission Statistics by Region

country	authors	submitted	accepted	acceptance rate
Austria	2	0.67	0.67	1.00
Brazil	1	0.33	0.00	0.00
Canada	5	1.42	1.42	1.00
China	3	1.58	0.25	0.16
Denmark	-	-	-	-
France	15	4.30	1.50	0.35
Germany	18	7.15	5.28	0.74
Greece	2	0.67	0.00	0.00
Hungary	2	1.00	1.00	1.00
India	2	0.67	0.67	1.00
Israel	-	-	-	-
Italy	3	1.00	0.00	0.00
Luxembourg	1	1.00	1.00	1.00
Mexico	2	1.00	0.00	0.00
Norway	2	0.67	0.33	0.50
Poland	5	1.25	1.25	1.00
Taiwan	3	1.00	1.00	1.00
Turkey	3	0.75	0.75	1.00
United Kingdom	1	0.25	0.00	0.00
United States	162	57.30	34.88	0.61

“Lightweight” Double Blind Reviewing

Double-blind reviewing of archival proceedings papers: ACDA will employ a lightweight double-blind reviewing process for proceedings papers (but not for the other two submission categories). Proceedings submissions should not reveal the identity of the authors in any way. In particular, authors' names, affiliations, and email addresses should not appear at the beginning or in the body of the submission. Authors should ensure that any references to their own related work is in the third person (e.g., not "We build on our previous work ..." but rather "We build on the work of ..."). The purpose of the double-blind reviewing is to help PC members and external reviewers come to an initial judgment about the paper without bias, not to make it impossible for them to discover the authors if they were to try. Nothing should be done in the name of anonymity that weakens the submission or makes the job of reviewing the paper more difficult. In particular, important references should not be omitted or anonymized. In addition, authors should feel free to disseminate their ideas or draft versions of their paper as they normally would. For example, authors may post drafts of their papers on the web, submit them to arXiv, and give talks on their research ideas. Authors with further questions on double-blind reviewing are encouraged to contact the PC chairs.

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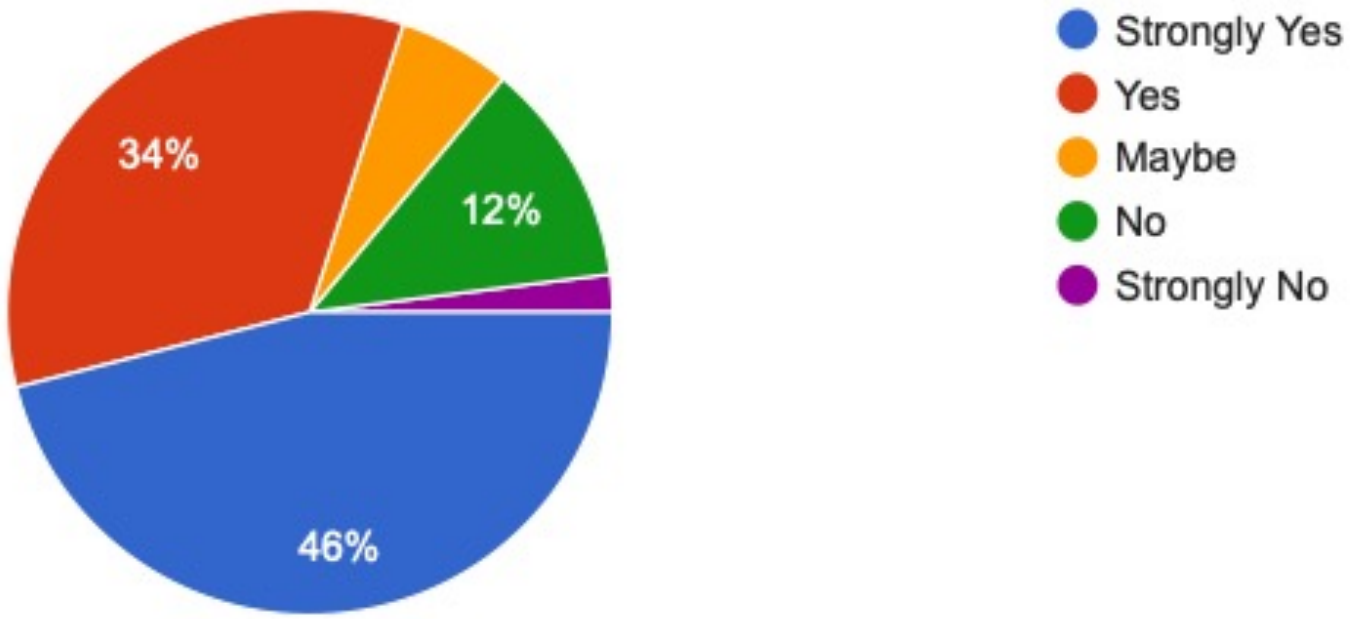
- **Surprisingly smooth**
- **Weak double-blind worked, despite some increased difficulty to find subreviewers**
- **Strong proponents and opponents**

Paper Authors

Would you recommend continuing double-blind reviewing for the next ACDA?

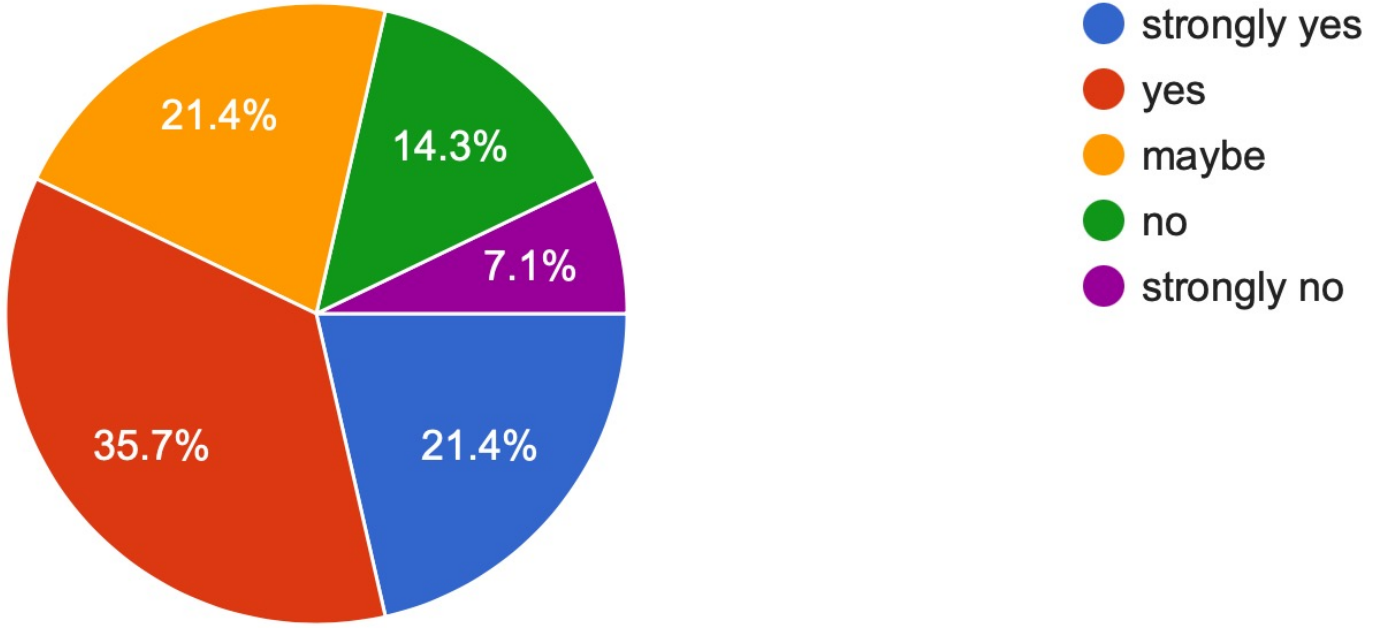
50 responses



PC Members

Would you recommend continuing double-blind reviewing for the next ACDA?

14 responses



PC Members' Comments

What was positive about the experience?

10 responses

- It's good to acknowledge that bias for or against authors exists, regardless of how easy or hard it is to tell that someone authored a particular paper. It's also standard practice in other top conferences to do double-blind, so I don't see any compelling reason not to keep company with such venues.
- nothing particularly positive or negative
- Nothing. It was a disaster.
- I felt the process was fair.
- Clearly double blinded reviews are less likely to be biased.
- no name bias /geographical bias
- The intention is for a fair review process.
- It may have reduced subconscious bias in reviewing.

What issues/obstacles/problems did you experience?

13 responses

- None
- none
- Selecting the right reviewers.
- its more work for all involved parties. Also anonymization removes information that impairs high quality reviewing. For example, I regularly get negative reviews that claim I do not understand techniques that I actually invented. Finally, conflict of interest issues mean that on average we have less experienced reviewers.
- Authors lying on their papers with no consequence.
- I had no problems
- None.
- checking Related Work from the authors (although not a major issue)

(Weak) double blind reviewing is controversial

ACDA 2023

- Most SIAM SIAG conferences are every other year
  - After 2023, we can consider/request annual ACDA meetings
- 2023 co-chairs:
  - Overall co-chairs:
    - Uwe Naumann, RWTH Aachen University, Germany
    - Lenore Cowen, Tufts University
  - Program Committee co-chairs
    - David Shmoys, Cornell University
    - Jon Berry, Sandia National Laboratories

ACDA 2023

- Location?
  - SIAM prefers co-location given our expected size
  - Co-location options currently in consideration

- In case we have a say, suggestions for location?
  - In US for 2023
  - Possibly in Europe occasionally thereafter

Discussion

- How can we improve the ACDA conference?
  - We are only 1/3 through. Please respond to the post-conference survey or send comments to SIAG officers or co-chairs after the meeting

Discussion

- How can we improve the ACDA SIAG?
  - We have to earn your membership
  - What can we do to provide you professional benefit?

SIAG/ACDA Announcements

- SIAG/ACDA electronic mailing list updates
- SIAM Engage
- SIAG/ACDA website:
  - https://www.siam.org/membership/activity-groups/detail/applied-and-computational-discrete-algorithms
- SIAG/ACDA on Twitter: @siam_acda, https://twitter.com/siam_acda
- SIAM News: Story Ideas
- SIAM Blogs
- SIAG/ACDA Leadership Suggestion Form:
  - https://www.siam.org/forms/siam-activity-group-leadership-form

SIAM Symposium on Algorithmic Principles of Computer Systems (APOCS22)

January 12, 2022

Westin Alexandria Old Town | Alexandria, Virginia, U.S.

Co-located with SODA 2022

APOCS is sponsored by the SIAM Activity Group on Applied and Computational Discrete Algorithms.

siam 2022 | Symposium on Algorithmic Principles of Computer Systems

The Symposium on Algorithmic Principles of Computer Systems (APOCS) serves as a venue for algorithm papers that are strongly motivated by systems, and systems papers with provable algorithmic guarantees. Contributed papers are sought in all areas of algorithms and architectures that offer insight into the performance and design of computer systems. Topics of interest include, but are not limited to algorithms and data structures for:

Compilers
Computer networks, including mobile, ad hoc, and sensor networks
Databases
Emerging architectures
Energy efficient computing
High-performance computing
Management of massive data
Operating systems
Parallel and distributed systems
Storage systems

Submit Your Work

August 9, 2021
Submission Deadline
4:59 p.m. Eastern Time: Short Abstract Submission and Paper Registration

August 16, 2021
Submission Deadline
4:59 p.m. Eastern Time: Full Paper Submission

Other SIAM venue for application-oriented algorithms, sponsored by the ACDA Activity Group.

SIAM Symposium on Algorithm Engineering and Experiments (ALENEX22)

January 9 - 10, 2022

Westin Alexandria Old Town | Alexandria, Virginia, U.S.

About the Conference

The aim of ALENEX is to provide a forum for the presentation of original research in the design, implementation, and experimental evaluation of algorithms and data structures. Typical submissions will include an extensive experimental analysis of nontrivial algorithmic results, ideally bridging the gap between theory and practice. We also invite submissions that address methodological issues and standards in the experimental evaluation of algorithms and data structures.

Relevant areas of applied algorithmic research include but are not limited to databases; geometry; graphs and networks, including web applications; operations research; combinatorial aspects of scientific computing; and computational problems in the natural sciences or engineering.
Also encouraged are submissions that address algorithms and data structures for advanced models of computing, including memory hierarchies and parallel computing, ranging from instruction parallelism over multicore computing to high-performance and cloud computing.

Co-located with SODA 2022

Submit Your Work

August 11, 2021
Submission Deadline
AOE: Short Abstract Submission and Paper Registration

August 18, 2021
Submission Deadline
AOE: Full Paper Submission

Other SIAM venue for application-oriented algorithms

Gene Golub SIAM Summer School

Financial Analytics: Networks, Learning, and High Performance Computing

August 1–12, 2022

Gran Sasso Science Institute (GSSI), L'Aquila, Italy

Application Deadline: February 7, 2022

The school will offer an introduction to Quantitative Risk Management in Finance, Energy and Commodity Markets, Machine Learning and Financial Technology, and Mean field Games. Students will be exposed to the economic and managerial implications of these subjects, and to tools of applied probability, optimization, and computational techniques.

Gene Golub
SIAM Summer School 2022

For more information visit: siam.org/students/g2s3

Join SIAM Today!

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

2021 SIAG/ACDA

Membership Report

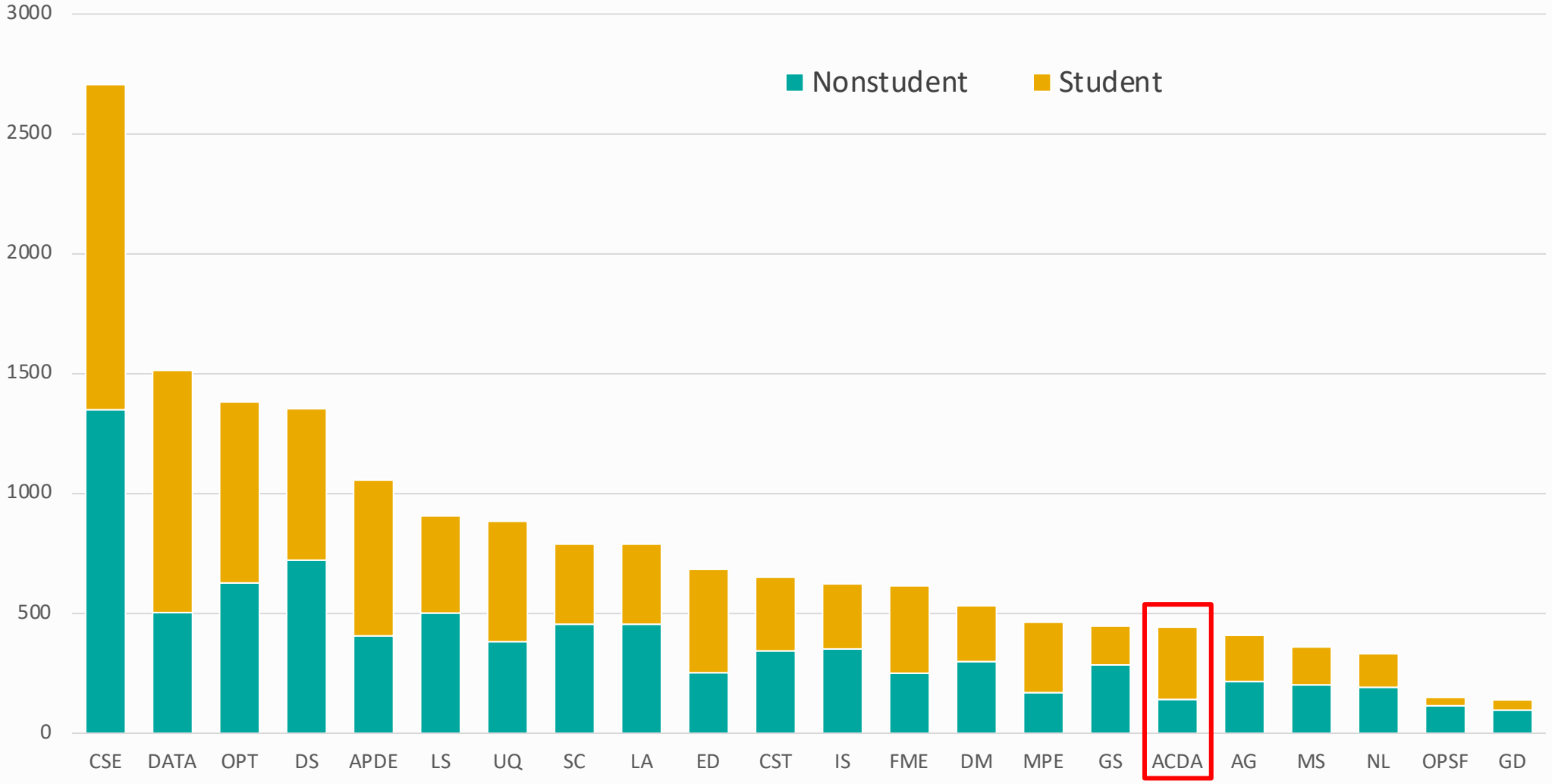
(data as of December 31, 2020)

siam 2021 Conference on Applied & Computational Discrete Algorithms

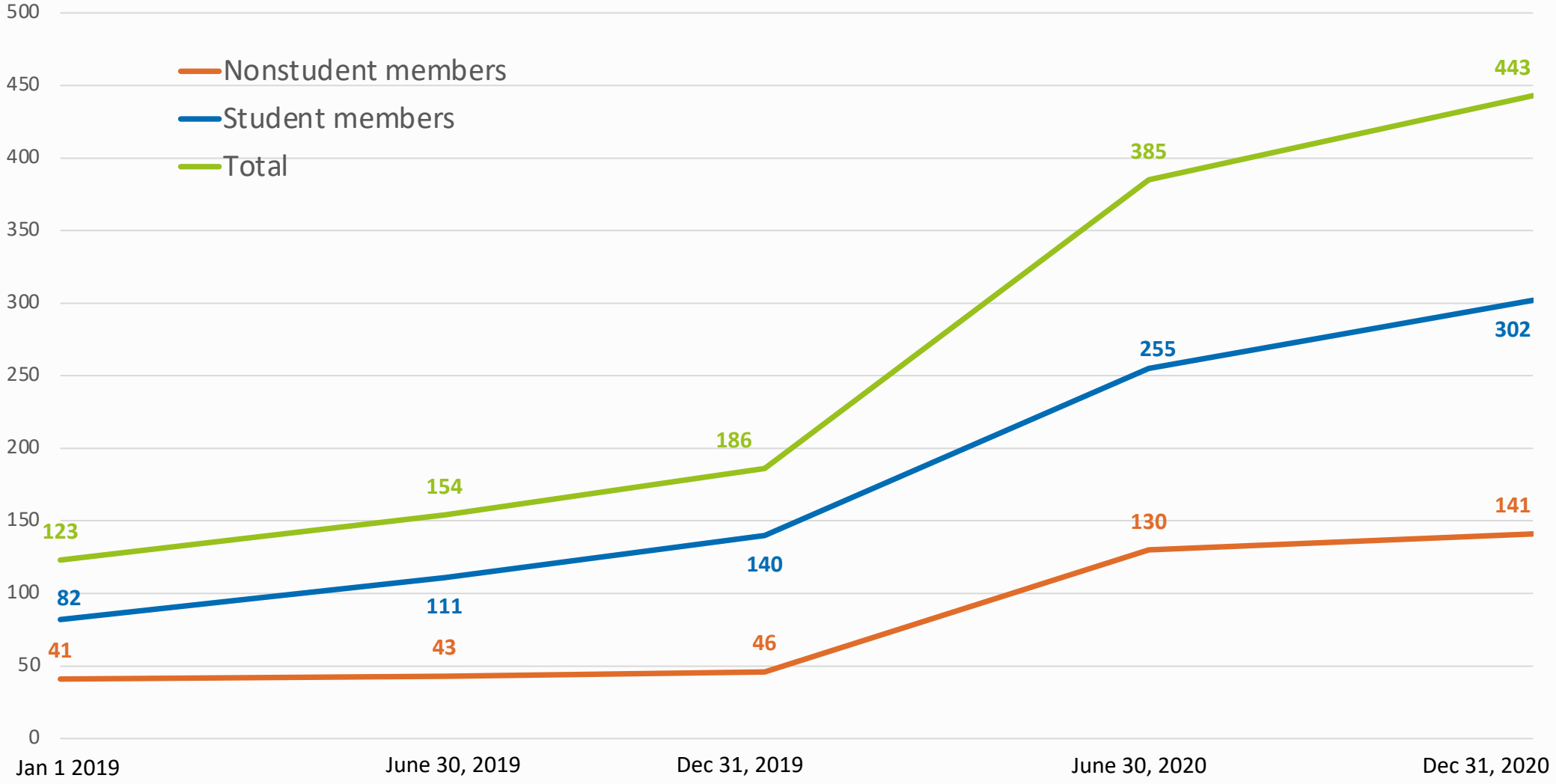
2021 SIAG/ACDA BUSINESS MEETING

siam Society for Industrial and Applied Mathematics

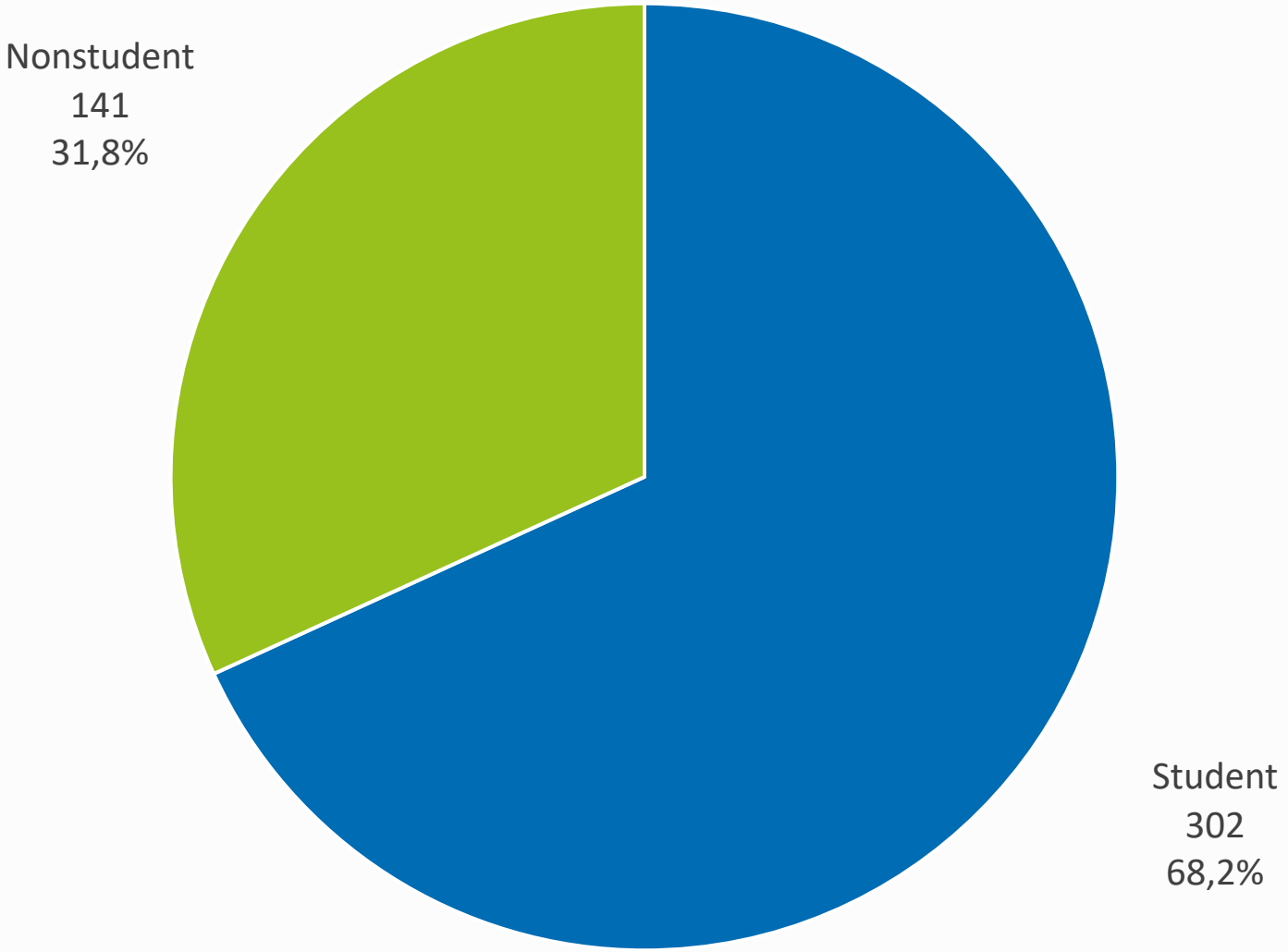
SIAG Overall Membership



SIAG/ACDA Membership Demographics



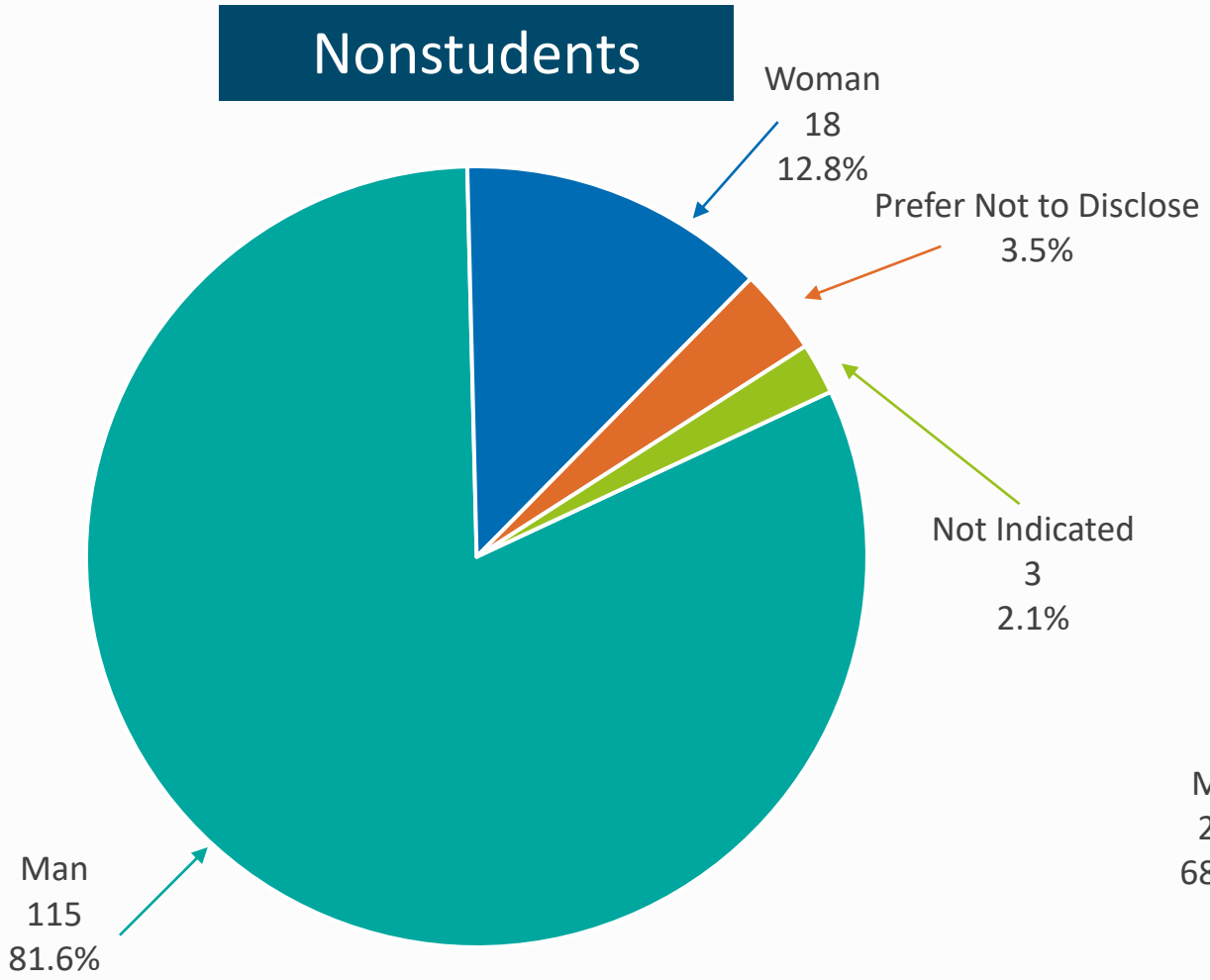
SIAG/ACDA Membership Demographics

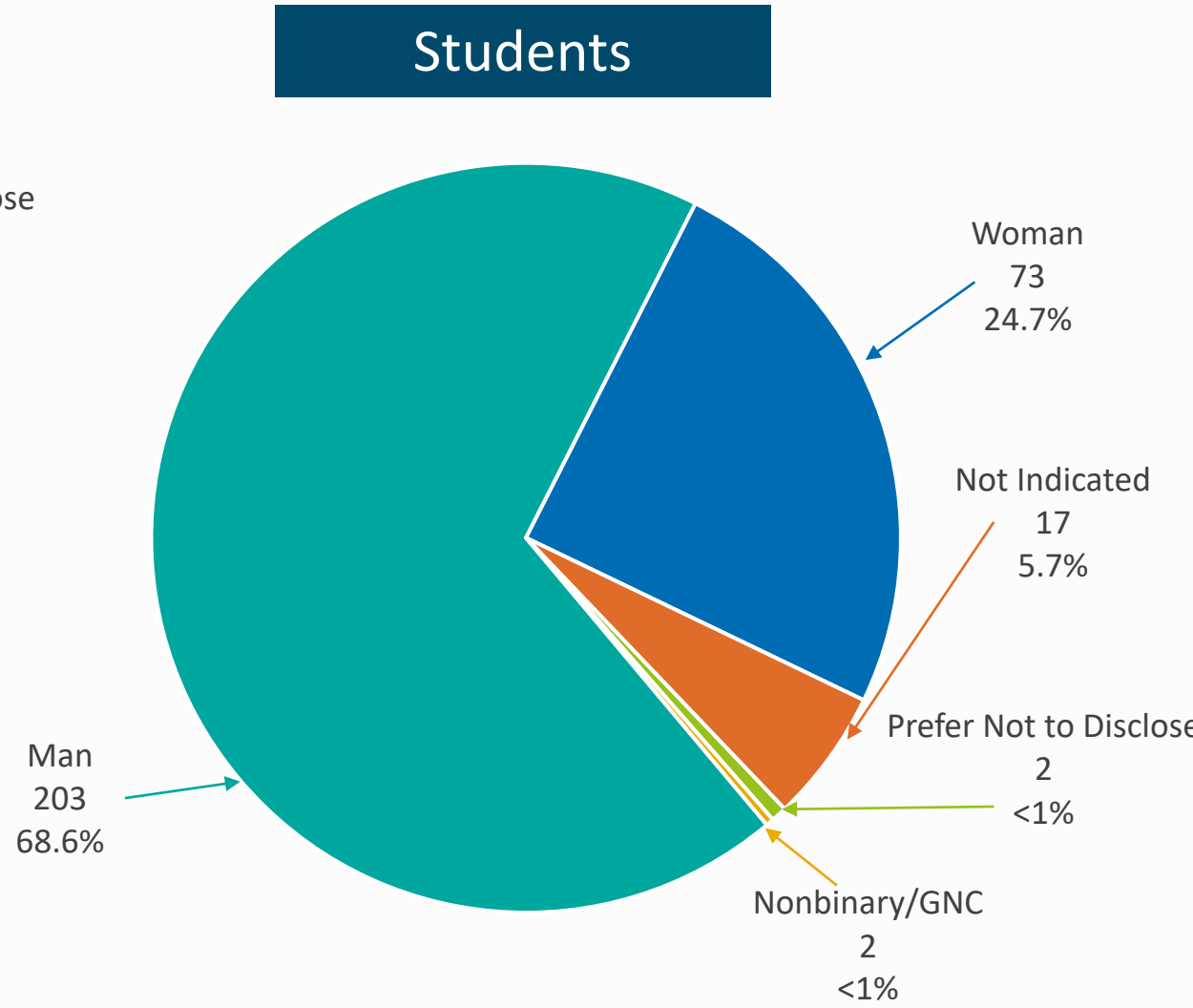


SIAG/ACDA Membership by Geography

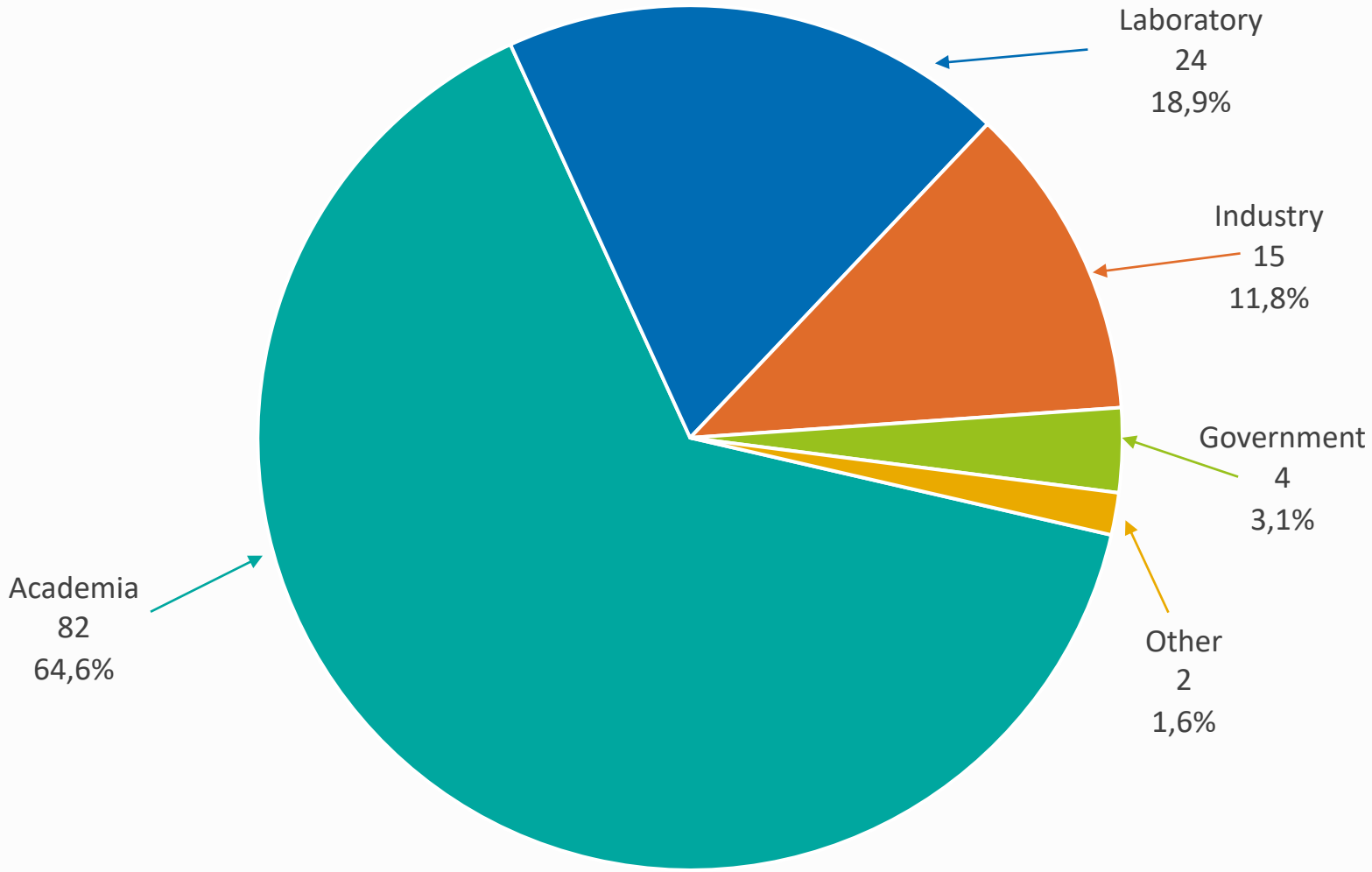
	US		Non-US		Total	
Nonstudent	95	21.4%	46	10.4%	141	31.8%
Student	213	48.1%	89	19.7%	302	68.2%
Total	306	69.5%	135	30.5%	443	

SIAG/ACDA Membership by Gender

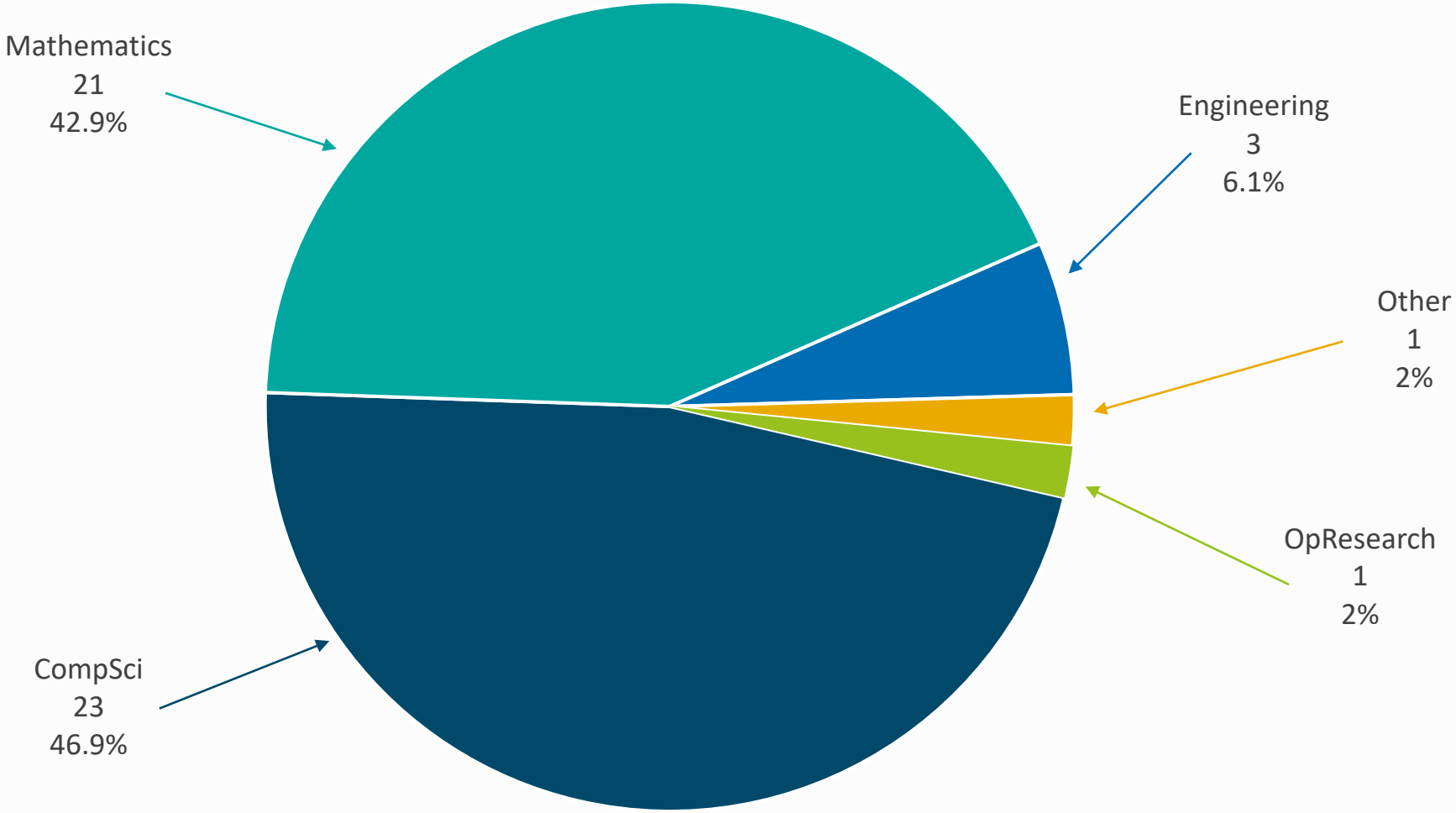




SIAG/ACDA Membership by Employer Type



SIAG/ACDA Membership by Department Type



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Vice Chair	Henning Meyerhenke meyerhenke@hu-berlin.de
Program Director	Uwe Naumann naumann@stce.rwth-aachen.de
Secretary	Bora Uçar bora.ucar@ens-lyon.fr

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