

# 2024 SIAG/MPE

## Mathematics of Planet Earth Business Meeting

Tuesday, June 11<sup>th</sup>, 6:15 PM – 7:00 PM  
Grand II – Ballroom Level

2024 SIAG/MPE BUSINESS MEETING

# SIAG/MPE Officers

## Chair:

Pierre Lermusiaux

\*

## Vice Chair:

Irina Tezaur

\*

## Program Director:

Julie Bessac

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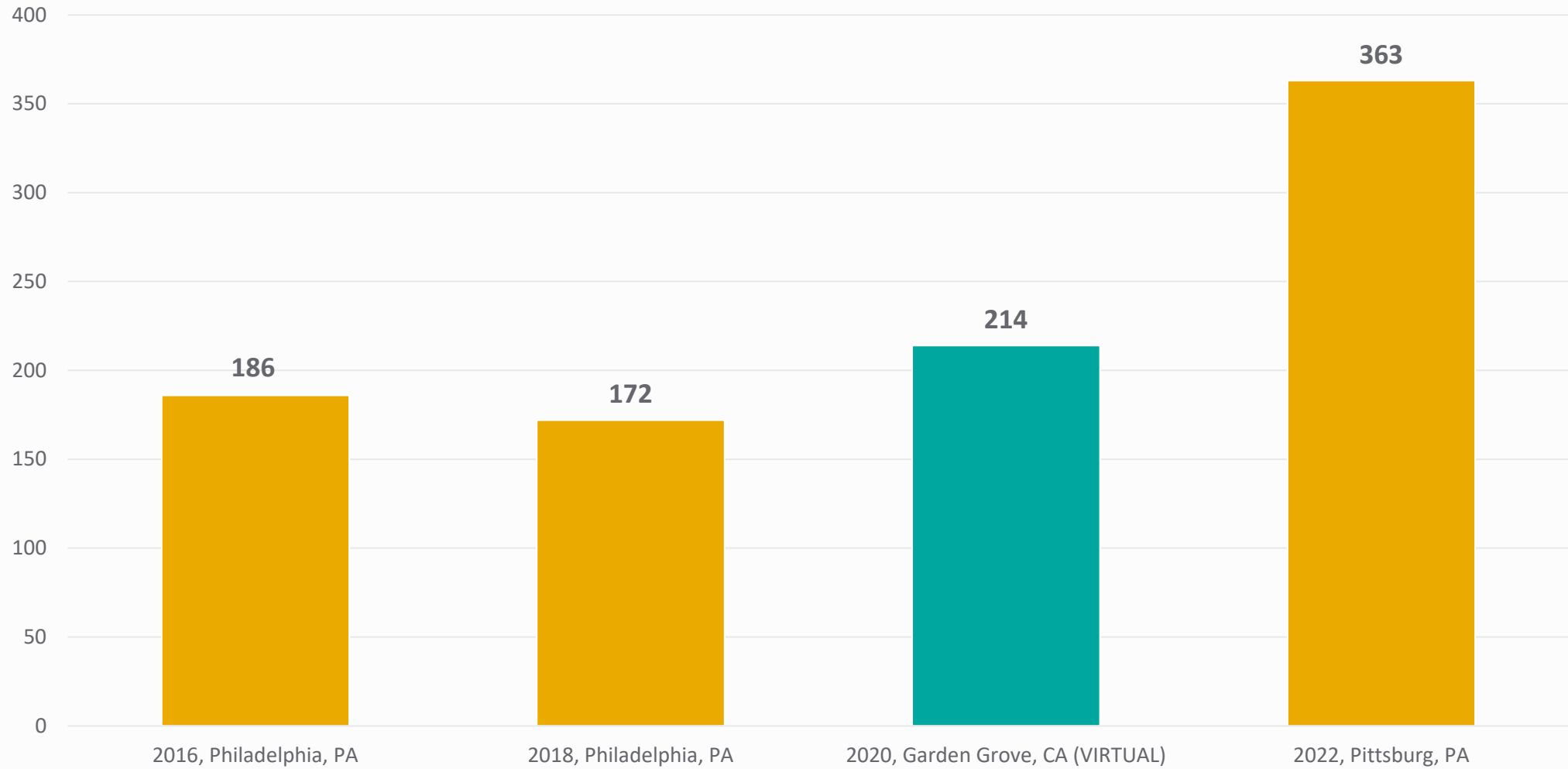
## Secretary:

Gerardo Hernandez-Duenas

# SIAG/MPE Announcements

- SIAM Engage:
  - <https://engage.siam.org/communities/siag-mpe-home?CommunityKey=ed7c3bd8-cbe2-40a9-bbd2-ba7406d96c0b>  
SIAG/MPE websites:
  - <https://www.siam.org/membership/activity-groups/detail/mathematics-of-planet-earth>
- SIAM News: Story Ideas
- SIAM Blogs
- SIAG/MPE Leadership Suggestion Form:
  - <https://www.siam.org/forms/siam-activity-group-leadership-form>

# SIAG/MPE Conference History



# SIAG/MPE Conference 2022

## Organizing Committee Co-Chairs

**Julie Bessac**, National Renewable Energy Laboratory, U.S.

**Lea Jenkins**, Clemson University, U.S.



## Organizing Committee

**Jochen Broecker**, University of Reading, United Kingdom

**Alex Cannon**, Environment and Climate Change Canada, Government of Canada, Canada

**Yawen Guan**, Colorado State University, U.S.

**Alan Hastings**, University of California, Davis, U.S.

**Nicole Jackson**, Sandia National Laboratories, U.S.

**Suzanne Lenhart**, University of Tennessee, U.S.

**Vianey Leos Barajas**, University of Toronto, Canada

**Alice Nadeau**, C.H. Robinson, U.S.

**Malgorzata Peszynska**, Oregon State University, U.S.

**Annalisa Quaini**, University of Houston, U.S.

# SIAG/MPE Conference 2022

## SIAG/MPE Prize

### **A Circuitous Journey of Computational Science around the Earth**

Wednesday, June 12<sup>th</sup>, 1:30 PM – 2:30 PM

*Room: Grand II - Ballroom Level*

Earth and its component systems are complex, multiscale, and interconnected. Properly recreating and predicting its behavior as more carbon is released into the atmosphere is a grand challenge that requires teams of scientists with backgrounds that span the different Earth science domains, computer scientists, software engineers, and applied mathematicians. This talk will present several examples of efforts to address accuracy and time to solution via faster and more scalable algorithms in multiple Earth system model components. Just as critical, we have focused on expanding testing capabilities to perform robust verification and validation during model development to quantify the effects of algorithmic as well as more general performance changes across the full software infrastructure and time scales of simulations. Incorporating the statistical nature of Earth system outcomes into our testing strategy allows us to evaluate the quality of deterministic or machine learning based models and design metrics that track both scientific and computational performance.

We will discuss how further progress in Earth system prediction requires attention to the efficiency, scalability, and accuracy of its algorithms even as the models in which they are implemented and the target computational platforms on which they will run are increasing in complexity.

**Katherine J. Evans**

*Oak Ridge National Laboratory, U.S.*

# siam 2024 | Annual Meeting

July 8<sup>th</sup> – July 12<sup>th</sup>, 2024  
Spokane Convention Center  
Spokane, Washington, U.S.



The Annual Meeting provides a broad view of the state of the art in applied mathematics, computational and data science, and their applications through invited presentations, prize lectures, minitutorials, minisymposia, contributed presentations, and posters.

The 2024 online component will take place July 18<sup>th</sup>-20<sup>th</sup>

## Organizing Committee Co-Chairs

Michael P. Friedlander, University of British Columbia, Canada

Anna Mazzucato, Pennsylvania State University, U.S.

# Annual Meeting

July 8<sup>th</sup> – July 12<sup>th</sup>, 2024  
Spokane Convention Center  
Spokane, Washington, U.S.

## Held Jointly with:

- SIAM Conference on Discrete Mathematics (DM24)
- SIAM Conference on Applied Mathematics in Education (ED24)

- *Online component July 18th-20th*

## Tracks of Sessions by SIAM SIAGs:

- Dynamical Systems

## Registration Deadline:

- June 10th, 2024

## Hotel Registration Deadline:

- June 10th, 2024

## Travel Fund Application Deadline:

- April 8th, 2024

More information available at:

<https://www.siam.org/conferences/cm/conference/an24>



# Gene Golub SIAM Summer School

**Iterative and Randomized Methods for Large-Scale Inverse Problems**

July 22<sup>nd</sup> - August 2<sup>nd</sup> 2024

Campus of the Escuela Politécnica Nacional, Ladrón de Guevara E11-253, Quito, Ecuador.

Our Summer School will enable students to learn state-of-the-art mathematical and statistical tools to discover information hidden within large-scale data sets and solve complex inverse problems. Through hands-on experience with techniques from Randomized Numerical Linear Algebra, data assimilation, iterative algorithms, and inverse problems we will offer students a two-week summer school to learn this valuable range of computational mathematics topics.



SIAM will be accepting proposals for the 2026 school in the fall, with a deadline of January 31, 2025.

**For more information visit:** <https://www.siam.org/students-education/programs-initiatives/gene-golub-siam-summer-school>

# SIAM Journals

SIAM's 18 journals are all available for download on SIAM's virtual library, [epubs.siam.org](https://epubs.siam.org). SIAM's virtual library is the definitive source for the final, peer-reviewed version of every published article, so be sure to utilize it!

*Questions about using [epubs.siam.org](https://epubs.siam.org)?  
Contact [sales@siam.org](mailto:sales@siam.org) for a user guide  
and personal assistance!*



# Future conferences?

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LOCATION

DATES

THEMES

# 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
- Eligible for Group Insurance
- Nominate 2 Students for Free Membership
- Qualifying Student Members can join 2 SIAGs for *free!*
- SIAG membership FREE for one year

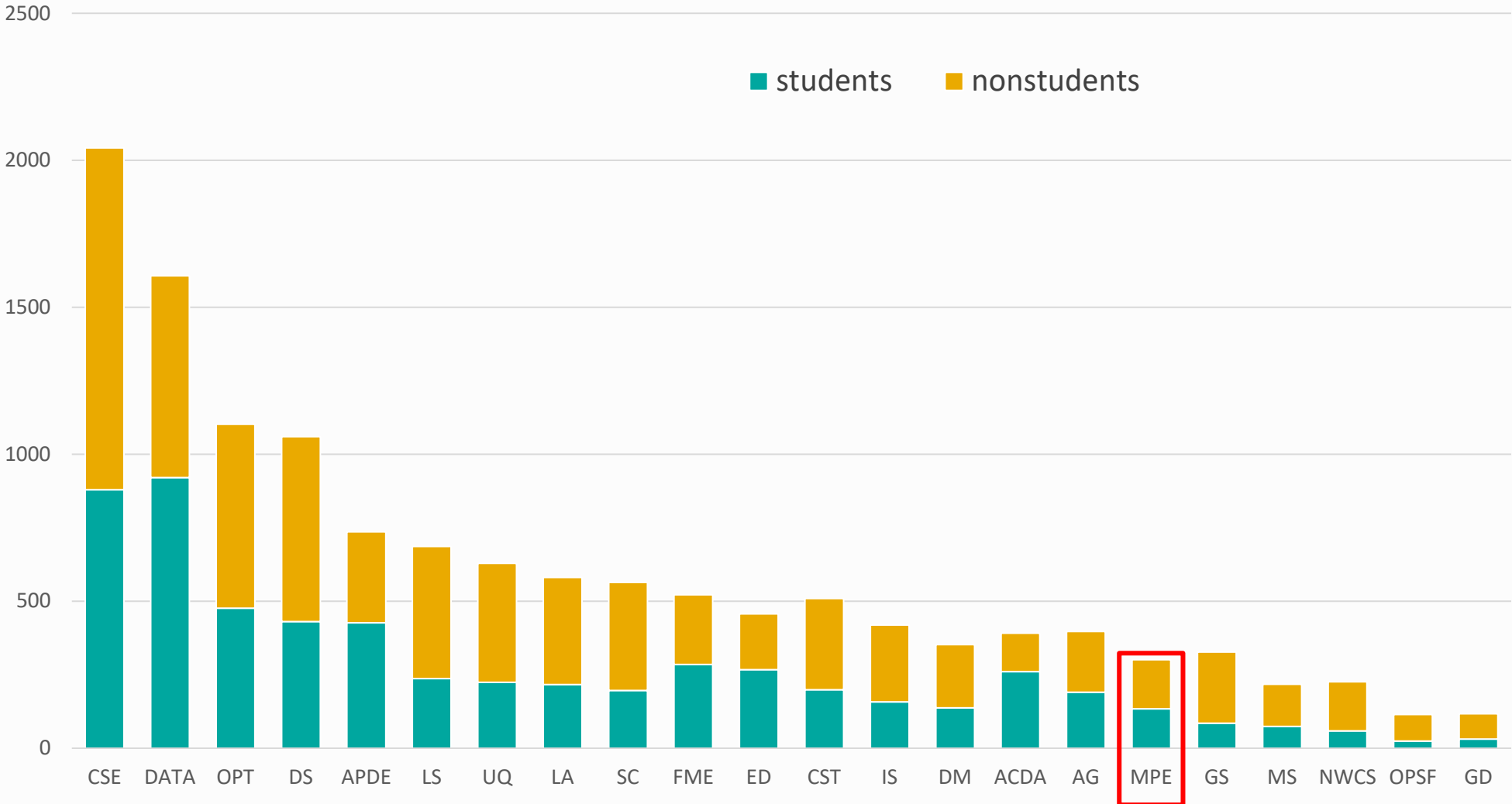
# 2022 SIAG/MPE

## Membership Report

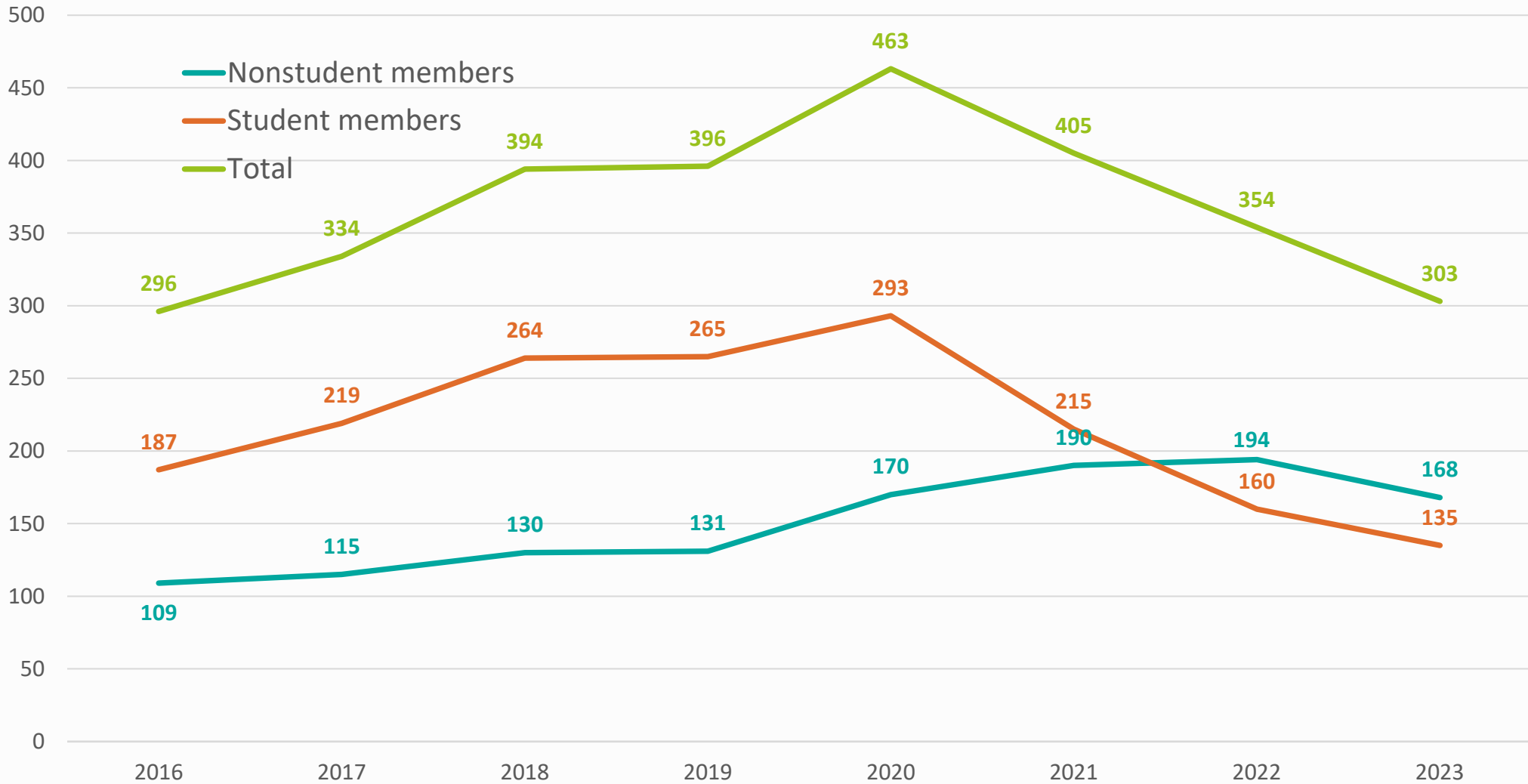
*(data as of December 31, 2023)*

2024 SIAG/MPE BUSINESS MEETING

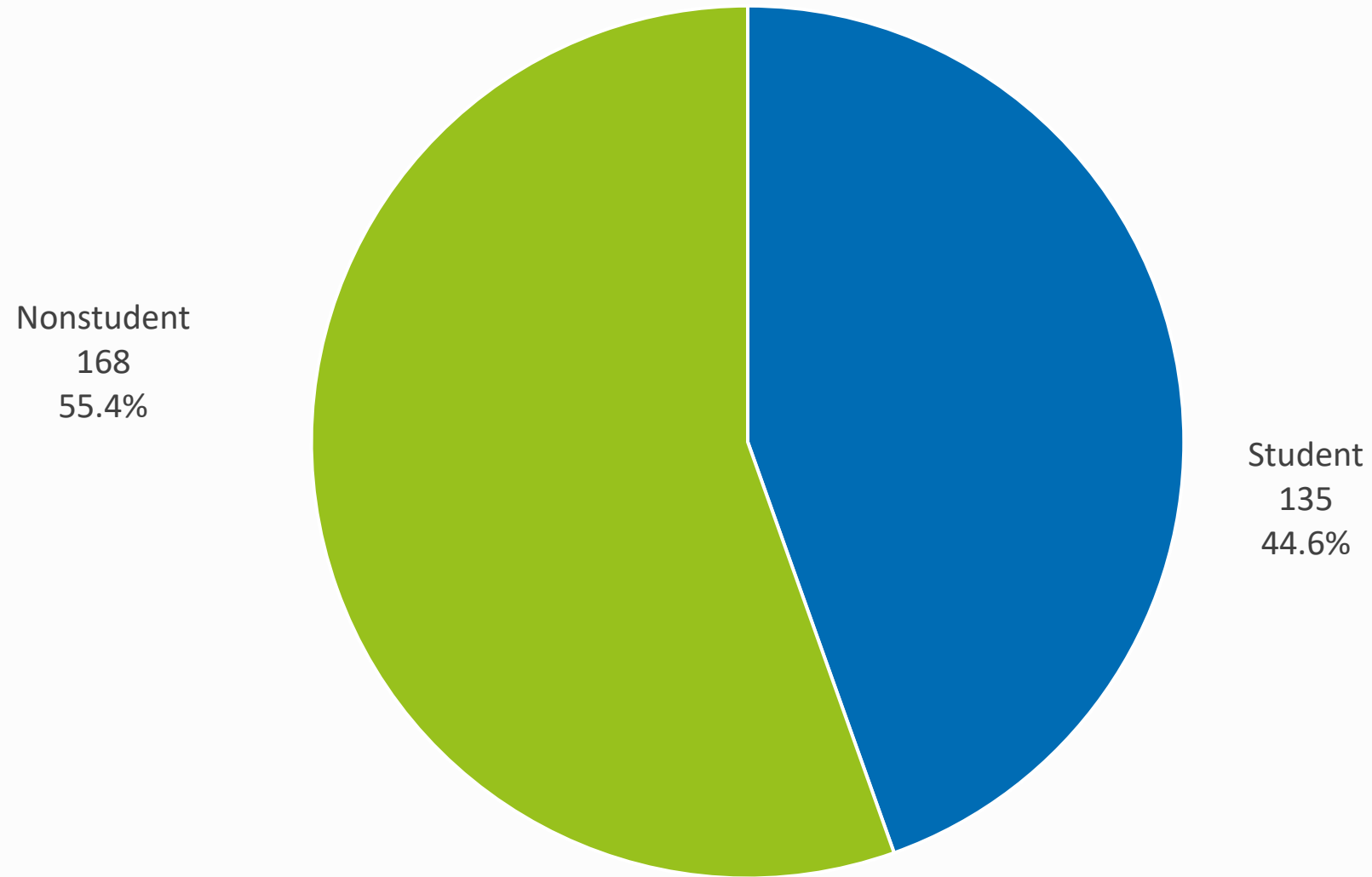
# SIAG Overall Membership



# SIAG/MPE Membership Demographics



# SIAG/MPE Membership Demographics



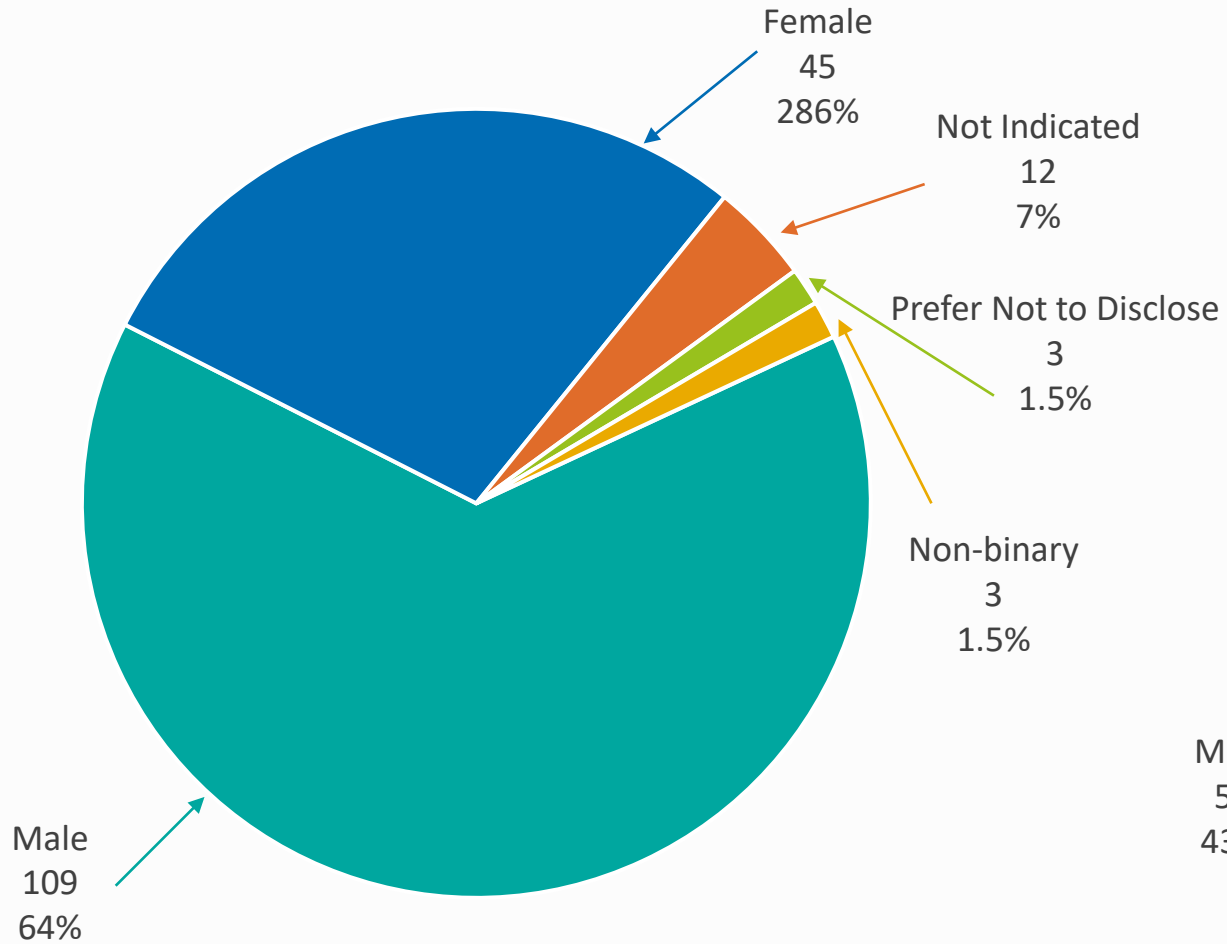


# SIAG/MPE Membership by Geography

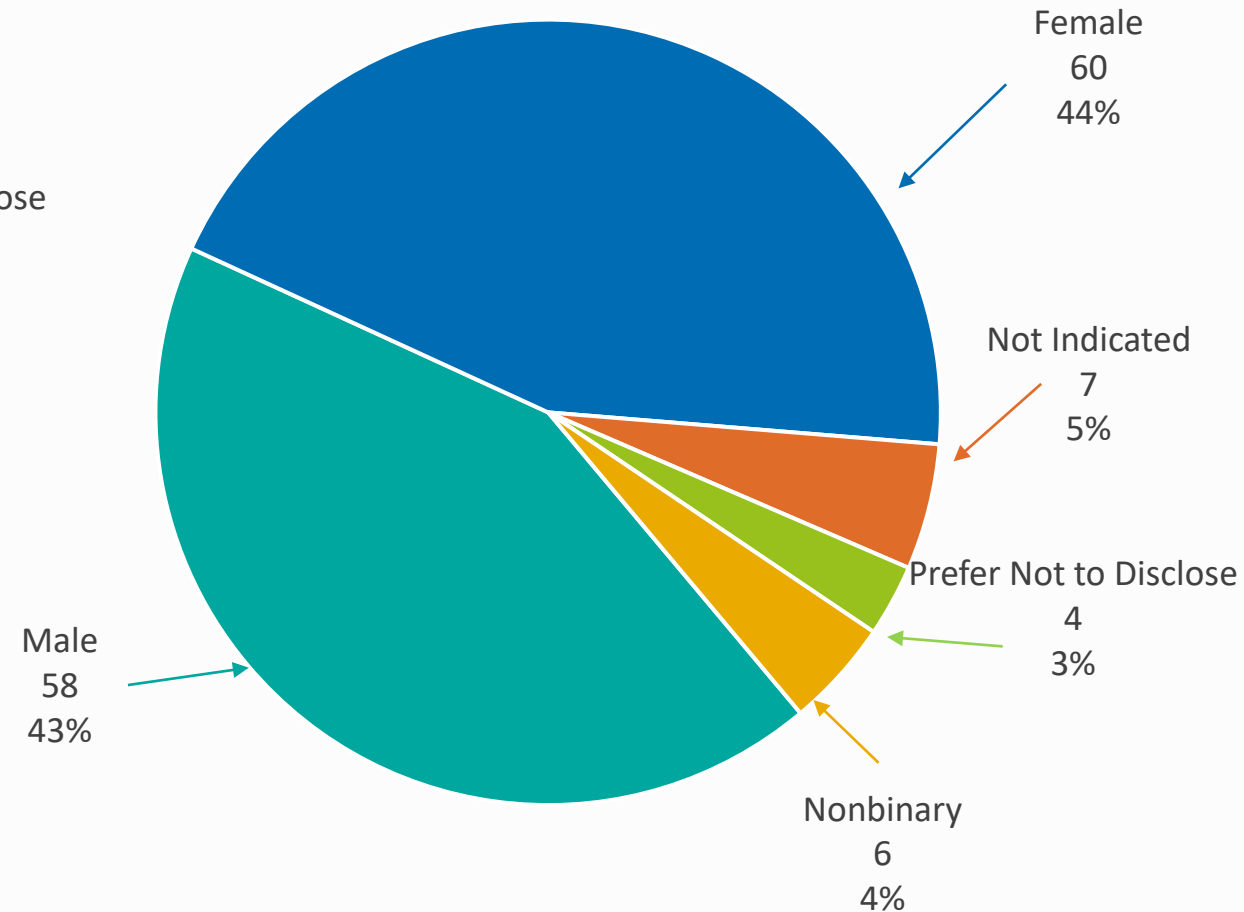
	US		Non-US		Total	
Nonstudent	100	33%	68	22%	168	55%
Student	88	29%	47	16%	135	45%
Total	188	62%	115	38%	303	

# SIAG/MPE Membership by Gender

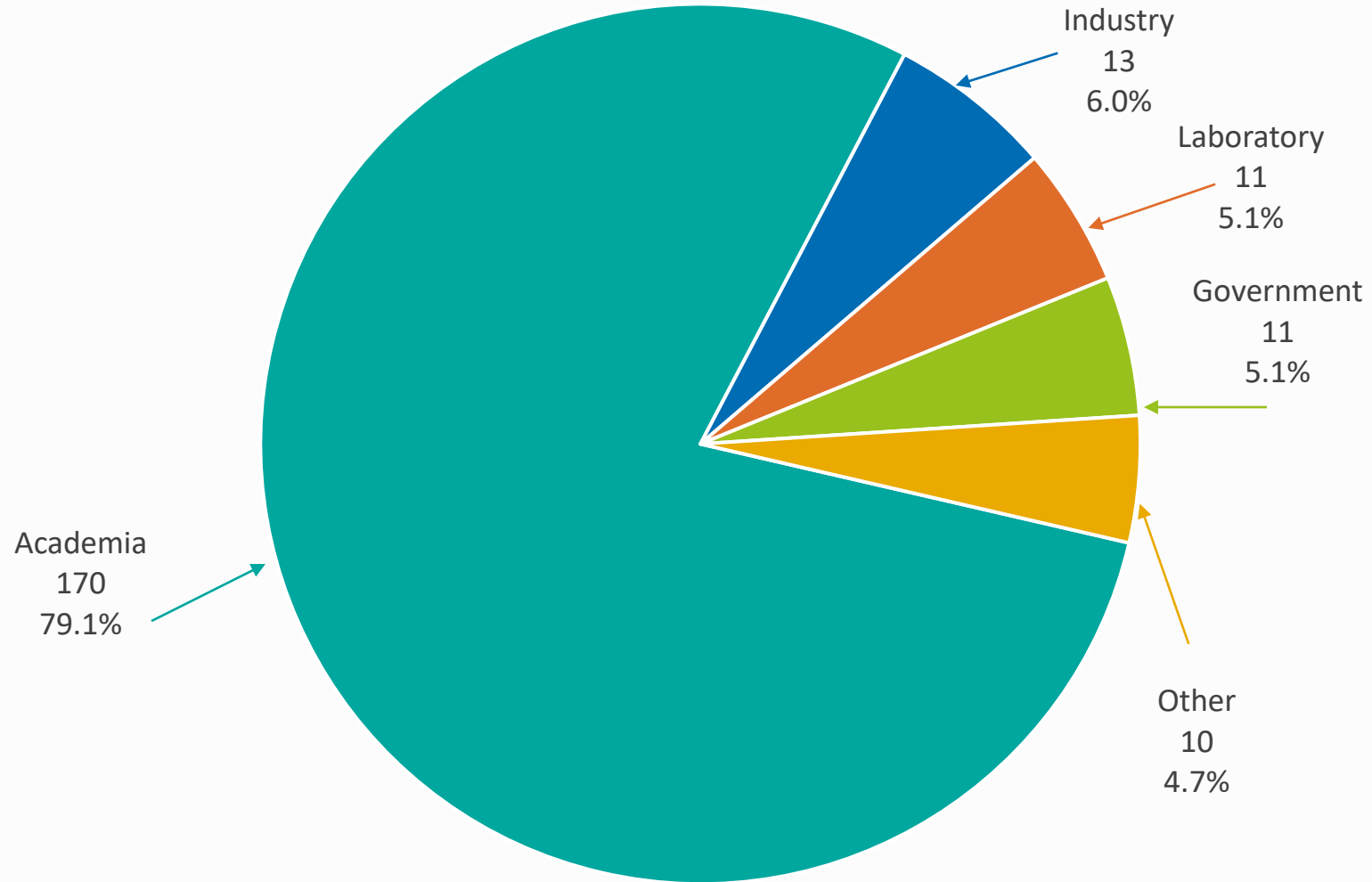
## Nonstudents



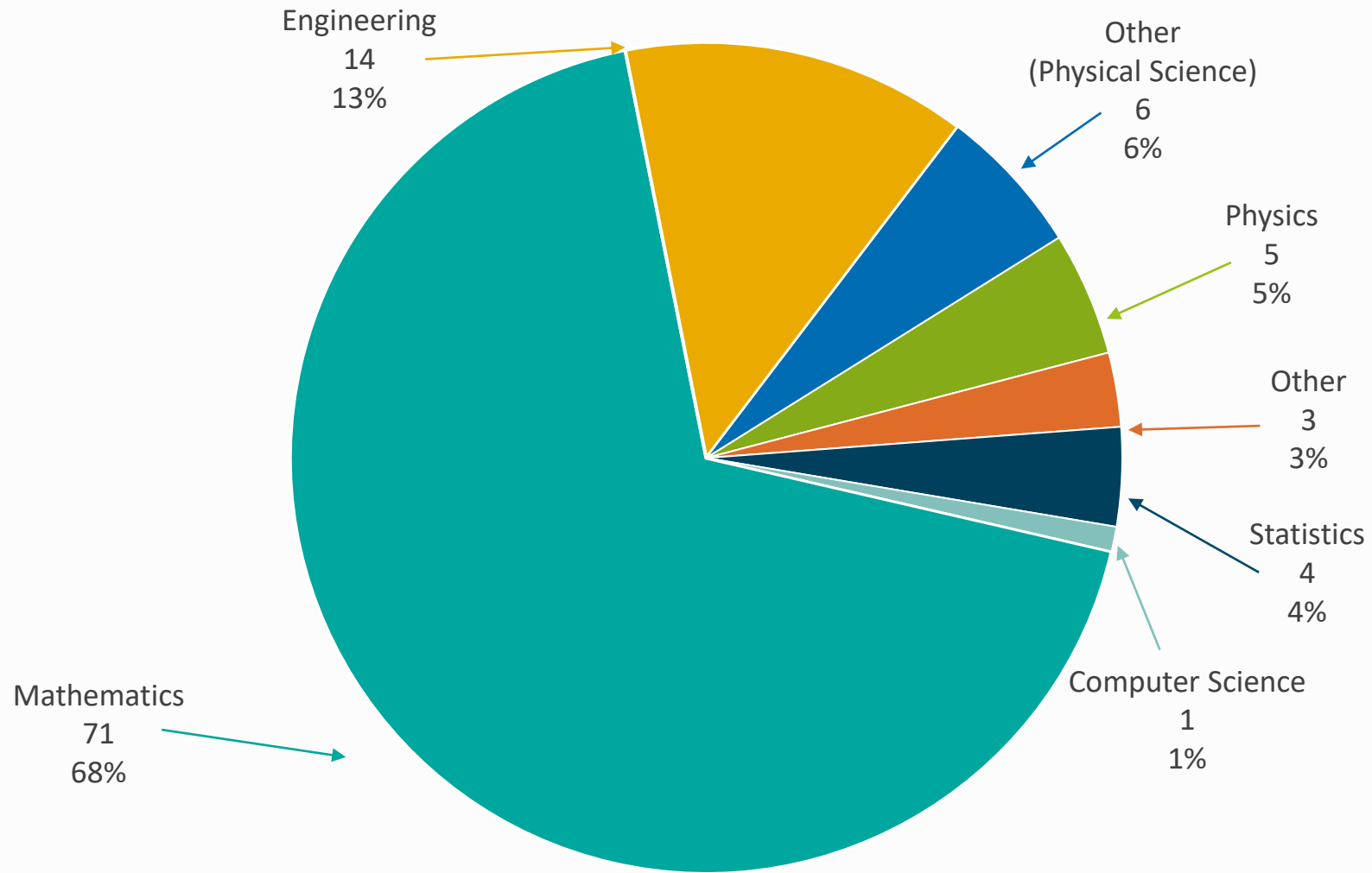
## Students



# SIAG/MPE Membership by Employer Type



# SIAG/MPE Membership by Department Type



# Other Business

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# Contacts

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hernandez@im.unam.mx

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