

ANNUAL REPORT 2021

AMERICAN SOCIETY OF BIOMECHANICS



asbweb.org

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AT-A-GLANCE

Membership Highlights

ASB had 931 members in 2021 from the three categories of membership offered: Regular (61%); Student (38%); Emeritus (1%).

Financial Highlights

The balance for the operating budget is approximately \$215,000 with nearly \$250,000 in longterm investments. We also accepted a general gift of \$50,000 from Nike, Inc. for diversity and inclusion initiatives.

Awards Highlights

ASB offered dozens of awards to our members totaling over \$47,000 and ranging from the Borelli life-time achievement award to student annual meeting travel awards and small grants for students, early career members, and regional meetings.

Annual Meeting Highlights

For a meeting that was held on Zoom and Spatial Chat, there were 791 registrants from 14 countries with 54% as students, 12 conference sponsors, 10+ hours of networking, affinity, and research group meetings, and 40+ hours of programming across 144 podium presentations, 321 posters (69 of which were in exciting thematic poster sessions), 18 PhD and MS 3-minute thesis competition pitches, 3 tutorials, 2 symposia, 1 workshop, and talks by the Society's top award winners!

THE MISSION OF THE AMERICAN SOCIETY OF BIOMECHANICS (ASB) IS TO FOSTER THE ADVANCEMENT, COMMUNICATION, AND APPLICATION OF BIOMECHANICS TO BENEFIT SOCIETY.

FROM THE PRESIDENT

Greetings and salutations! As the world continues into a second topsy-turvy year due to the COVID-19 pandemic, we persevere and adjust to unexpected perturbations to our work, school, and home life. Similarly, the American Society of Biomechanics and its members have continued to achieve great things.

ASB had another successful virtual 2021 Annual Meeting from August 10-13 that was again hosted by Meeting Chair Young-Hui Chang and crew at Georgia Tech/Emory University and organized by 2021 Program Chair Alena Grabowski (See Annual Meeting Program and Report). Many of you also attended one of the five virtual 2021 Regional Meetings (Midwest, South Central, Great Plains, Rocky Mountain, and Northwest) that were supported with grants provided by the ASB Education Committee (See Education Committee). This year, ASB continued to ramp up our engagement with Podium Conference Specialists, a professional association and conference management company. ASB worked with Podium on the planning and delivery of the 2020 and 2021 Annual Meetings. Going forward, Podium will increase its management of the Annual Meeting and work directly with the Program and Meeting chairs to reduce many of the logistical challenges that past local hosts and their committees had to navigate. Hopefully, you have already noted some of the changes thanks to Podium in Society communications such as the new ASB logo, upgraded website, monthly email news blast, and the content of this Annual Report (See Communications & Newsletter). Podium is helping to move ASB communications and management from our humble grassroots efforts to those appropriate for one of the leading professional societies in our field with continually growing membership and opportunities.

Existing and new award, funding, mentoring, professional development, volunteer, and leadership opportunities for our student and regular members continue to abound (See <u>Awards</u> <u>Highlights</u>). For example, the Student Committee has been busy with many mentoring and professional development activities, and they seek involvement from both students and professionals (See <u>Student Committee</u>). New awards and funding opportunities to increase diversity, equity, and inclusion of ASB members at all levels have been announced (See <u>Council of Fellows</u>, <u>Diversity Committee</u>).

These education, outreach, and diversity initiatives would not be possible without financial support (See <u>Financial Report</u>). A huge thank you to ASB members that contributed donations when you completed your annual membership renewal. The Society is also indebted to Nike Corporation for its support of diversity initiatives, and Dr. Savio Woo and the Asian-American Institute for Research and Education for their support of the Up and Comer Award for the next several years.

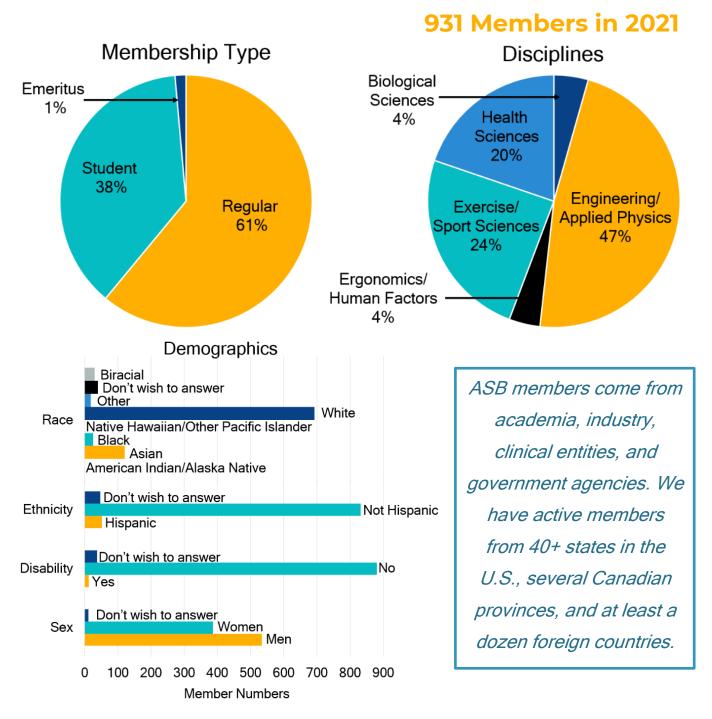
ASB is a volunteer organization. Our members help the Society to achieve its many activities and initiatives (See <u>Membership Report</u>). We have recently been tracking member engagement, which can help with identifying individuals for awards. Thank you to all for your help to make ASB the top-notch biomechanics organization that it is (See <u>ASB Leadership</u>, <u>Staff & Volunteers</u>).

Stay safe, healthy, and happy.

Elizabeth Hsiao-Wecksler, ASB President

MEMBERSHIP REPORT

In 2021, ASB offered Regular, Student, and Emeritus Memberships. Using Membership Toolkit, members are able to renew their membership, buy journal subscriptions, donate to ASB, and sign-up to volunteer on committees. Additionally, we have a system to record those who have volunteered their valuable time and efforts to ASB, which will help both with member engagement and identifying individuals for awards.



FINANCIAL REPORT

We are in a strong financial position with a balance of \$215,000 in our combined operating budgets and nearly \$250,000 in long-term investments. This year, we accepted a generous gift of \$50,000 from Nike Inc. to support efforts to increase diversity of biomechanics as a discipline and increase access to opportunity for under-represented biomechanists. ASB is transitioning to Podium for conference and association management services. This will offload some bookkeeping and bill-paying responsibilities, simplify the transition to a new Treasurer after each election, and allow more focus on strategic priorities of ASB instead of day-to-day operations.

REVENUE		EXPENSES			
Memberships		Marketing & Communications			
	Regular	27,760.00		Website	2,391.97
	Student	5,200.00		E-Communications	236.52
Donations			Promotions & Marketing	75.00	
	Jim Hay Memorial Award	745.00	A	wards	
	Founders Award	725.00		ASB Great Plains	2,000.00
	Goel Award	615.00		Awards & Grants	22,764.71
	Pytel Award	885.00	С	onference*	
	JOB & CB Awards	4,000.00		Honoraria	300.00
	General	100.00		Volunteers	525.11
Journal Subscriptions		Jo	ournal Subscriptions		
	Clinical Biomechanics	2,376.00		Clinical Biomechanics	2,376.00
	Gait & Posture	312.00		Gait & Posture	312.00
	Journal of Biomechanics	2,784.00		Journal of Biomechanics	2,784.00
	J. of Applied Biomechanics (Regular Member)	600.00		J. of Applied Biomechanics (Regular Member)	600.00
	J. of Applied Biomechanics (Student Member)	180.00		J. of Applied Biomechanics (Student Member)	180.00
Other		A	dministrative		
	Newsletter Ads	600.00		Secretariat	44,760.00
	Credit Card Rewards	340.14		Accounting & Legal	5,874.00
То	tal	47,222.14		Software License/Business	2,135.00
ASSETS			Fees/Dues		
	perations Budget	47,469.55		Courier & Postage	64.83
	necking Account	168,747.31		Transaction Fees	2,065.35
Investments 245,466.87		Т	otal	89,444.49	
	Grants (NIKE) 50,000.00				
		\$2	27,400 back to members	s in awards!	
т	TOTAL 529,340.76				
*ASB 2021 revenues/expenses still with Georgia Tech					

ANNUAL MEETING PROGRAM

Symposia

The Evolving Role of Biomechanics for Improving the Health and Performance of Cancer Patients; David Lipps

Personalized Neurorehab: Can Patient-Specific Measures of Motor Learning Inform Intervention?; Alyssa Spomer, Benjamin Conner, Katherine Steele

Keynote Talks

Dr. Čara Wall-Scheffler, Seattle Pacific University Dr. David Hu, Georgia Institute of Technology

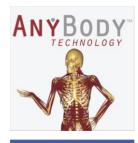
Podium Session	Primary Moderator
Locomotion 1	Jessica Allen
Locomotion 2	James Finley
Posture and Balance	Peter Fino
Locomotor Stability	Jeremy Crenshaw
Sports Performance/Injury Prevention	Lisa MacFadden
Prosthetics and Orthotics	Dustin Crouch
Wearable Sensors	Allison Gruber
Disease and Rehabilitation	Jocelyn Hafer
Orthopaedics	Josh Baxter
Modeling & Simulation	Anne Silverman
Pediatrics	Erin M. Mannen
Head, Arms, Trunk (HAT)	Anita Vasavada

Thematic Poster Session	
Control/Design of Devices	Josh Caputo
Pitching	Glen Fleisig
Ankle/Foot Stiffness	Janet Zhang
Military Performance	Gregory Freisinger
Exoskeletons	Courtney Haynes
Multitasking - effects of cognitive loading	Chris Arellano
Upper Extremity Function & Reaching	Jen Nichols
Applied Animal Models	Monica Daley
InVivo muscle function	Greg Sawicki
Foot Mechanics/Footwear	Dustin Bruening
Modeling Native Hip Mechanics	Michael Harris
Clinical Applications of worn sensors	Mike Hahn



Premium Sponsors











2021 ANNUAL MEETING AWARDS

Borelli Award Glenn Fleisig, PhD, American Sports Medicine Institute

Jim Hay Memorial Award Peter Weyand, PhD, Southern Methodist University

Founders' Award Karen Troy, PhD, Worcester Polytechnical Institute

Jean Landa Pytel Award for Diversity Mentorship in Biomechanics Jianhua (Jerry) Wu, PhD, Georgia State University

ASB Early Career Achievement Award Erin Mannen, PhD, Boise State University

ASB Pre-Doctoral Achievement Award Katie Knaus, PhD, University of Virginia

Junior Faculty Research Award Brittany Heintz Walters, PhD, Seattle University

THANK YOU!

The completion of the awards review and granting process each year relies on generous volunteers. Each year over 30 ASB members from students to Fellows assist in the review and scoring of the award applications.

2021 Travel Awards

Tasnuva Alam Yadrianna Acosta-Soio Olaoluwa Akinsola Caitlin Banks **Obinna Fidelis** Nathan Holland Tessa Hulburt Nicholas Hunt Natasha Ivanochko Pegah Jamali Haneol Kim Sachini Kodithuwakku Arachchige Maria Prado Emma San Martin Kayla Seymore Nicole Stark Adam Weiner-Aponte Whitney Wolff **Brandon Yates**

Journal of Biomechanics Award Winner

Exploring the functional boundaries and metabolism of triceps surae force-length relations during walking **Callum J. Funk**, R. Krupenevich, G. Sawicki, J. Franz UNC Chapel Hill and NC State University, and Georgia Tech

Clinical Biomechanics Award Winner Redistribution of muscular work by children with cerebral palsy walking in crouch Ana Ebrahimi, M. Schwartz, J. Martin, T. Novacheck, D. Thelen UW-Madison, Gillette Children's Specialty Healthcare

President's Award SHH! Quiet Running Promotes Sustained Reduction in Ground Reaction Force Kevin Dames, D. Rothstein, L. True, J. Augustine SUNY Cortland & New Mexico State University

3 Minute Thesis Masters Award Winners <u>Winner</u>: Janelle Kaneda, Stanford University <u>Honorable Mention</u>: Gaspard Diotalevi, Université de Sherbrooke <u>People's Choice</u>: Gabriella Small, University of Texas at Austin

3 Minute Thesis Doctoral Award Winners <u>Winner</u>: Justin Scott, Michigan State University <u>Honorable Mention</u>: Micah Garcia, The University of Toledo <u>People's Choice</u>: Kayla Pariser, University of Delaware, Eva Maddox, Old Dominion The 45th Annual American Society of Biomechanics was held online in a virtual platform August 10-13, 2021 (non-programmatic details hosted/organized by the Georgia Institute of Technology). We totaled 791 registrants via CVent, including 767 attendee (member/ nonmember and student member/nonmember) registrations, and 24 sponsor registrations (which represents industry sponsors and their booth staff). Of these 767 attendees, 387 (53.7%) were students and 566 (73.8%) were ASB members. Total expenses have yet to be determined based on some unresolved, ongoing legal issues, but are estimated to be between \$97,600-\$102,600 once all outstanding obligations are resolved*. Total income for the 2021 meeting was \$127,870.00. Total profit is estimated to be between \$25,270-\$30,270 to ASB once obligations have been resolved*. Per person cost to register was between \$50/person and \$250/person depending on registration type (member/non-member, student status, early registration). There were 12 exhibitors on site at the virtual meeting. NACOB 2022 organizers were provided free advertising space throughout the conference (SpatialChat virtual poster rooms, banner ads on CrowdCompass). In total, we received \$26,450 in direct exhibitor and sponsor support and an additional \$13,000 from a NIH NIBIB R13 conference grant, for a total of \$39,450 in outside support of the meeting. Diversity programming alone was supported by \$3400 with a mix of society and external funding sources, speaking to our emphasis, commitment, and success in promoting diversity initiatives within ASB. Notably, we used some of this external support to purchase NAVEX Ethics Point Reporting Software, which will be available year-round to help promote a safe environment at ASB events.



Virtual 45th Meeting of the American Society of Biomechanics

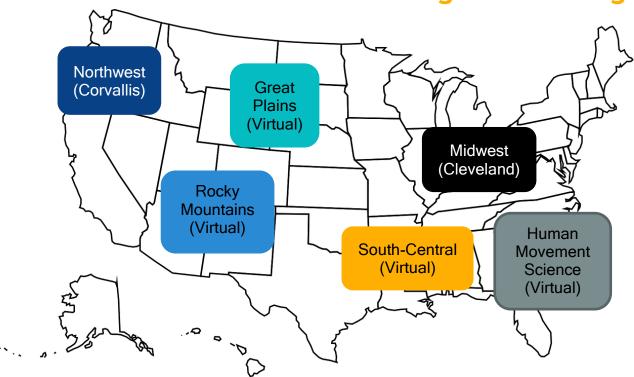


*ASB is currently under negotiations for settlement with a vendor for the cancelled in-person 2020 and 2021 Annual Meetings in Atlanta, which may add to the total cost of the 2021 conference. We are also waiting for a final invoice from Podium Conference Services, which are included as an estimated cost in this report.

EDUCATION COMMITTEE

Regional Meetings

ASB regional conferences are student centered gatherings which provide opportunities for graduate students, mentors, and researchers to network and build collaborations as well as to practice scientific communication in a supportive environment. It is intended that these be inexpensive for students but be carefully organized to provide an interactive experience of considerable value for participants.



2021 Grant-in-Aid Award Winners

Elizabeth Bell, University of Maryland Margaret Coats, Thomas -Northwestern University John Davis, IV, Indiana University Kellie Halloran, University of Illinois David Ortiz-Weissberg, University of Southern California

Grant-in-Aid supports students pursuing biomechanics research by offering research funding.

ASB Teaching Repository

The ASB Teaching Repository can provide you with ideas for new classroom projects, labs, demos, and more—and to share your own. Our Teaching Repository continues to grow, but only because of contributions by people like you. Please <u>create an account</u> to access and contribute!

2021 Regional Meetings

DIVERSITY COMMITTEE

Diversity, equity, and inclusion continue to be important goals for ASB, and the Diversity Committee organized several activities and took several actions to advance these goals in 2021. Building on the 2020 Code of Conduct, the Diversity Committee added an Investigations Policy, an Honors & Awards Policy, and a Disclosure Policy. In support of these policies, we created an anonymous reporting system powered by EthicsPoint for reporting and tracking adverse treatment and for submitting disclosures.

At the virtual 2021 annual meeting, sixteen Diversity "Travel" Awards supported ASB student and early-career members with complimentary registration to the 2021 meeting and complimentary memberships for 2022. We held a Diversity panel on "Advocating for Change in Your Environment" and a Women in Science session on "How the Pandemic Has Affected Career Trajectories in Academia, esp. Women, and Strategies to Help and Advocate," both of which had great attendance and fruitful discussions. Thanks go to Greg Sawicki and Young-Hui Chang at Georgia Tech for securing NIH R13 (HD103330-01) Support for Scientific Conference grant that supported these awards and programming!

Discussions with Nike, Inc. around how to increase the diversity of the biomechanics field led to a \$50,000 donation to ASB, which we have used to create new Biomechanics Summer Undergraduate Research Experience (B-SURE) and GRAnts for Diversity and Equity (GRADE) initiatives. B-SURE's goal is to reduce the financial and networking barriers that prevent undergraduate students, especially those from under-served groups, to access the important opportunity of a summer research internship. GRADE's goal is to support programs or projects by biomechanics organizations that target under-served groups but are not eligible for funding from other sources such as NIH, NSF, or universities.

In late 2021, we sent a survey to ASB members asking about the effects of the COVID-19 pandemic on your biomechanics work and careers. This survey will inform an official ASB Statement on the "Impacts of the COVID-19 Pandemic on the Biomechanics Community".

ASB Affinity Groups

Black Biomechanists Association

Latinx in Biomechanix nt'l Women in Biomechanics Early Career Faculty

Postdocs

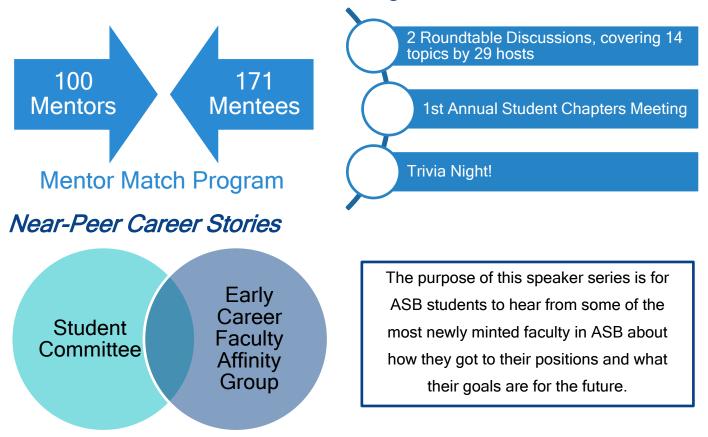
STUDENT COMMITTEE

9 ASB Student Chapters

Student Chapters We are continuing to add student chapters across the country to bring students of different disciplines together at their institutions. If you are interested in starting a student chapter, check out: asbweb.org/studentchapters/



Students at the 2021 Annual Meeting



COUNCIL OF FELLOWS

ASB Fellows

ASB created the status of Fellow to recognize professional achievement and service of the top members of ASB and to encourage continued service to ASB in a leadership role.

2021 Fellows

Silvia Blemker, University of Virginia Robin Queen, Virginia Tech Zong Ming Li, University of Arizona Michael Madigan, Virginia Tech Glenn Fleisig, ASMI

MEANING OF FELLOW STATUS

 RECOGNIZE EXCEPTIONAL SCIENTIFIC AND PROFESSIONAL ACHIEVEMENT IN BIOMECHANICS
RECOGNIZE EXCEPTIONAL SERVICE TO ASB
ENCOURAGE CONTINUED SERVICE TO THE SOCIETY IN A LEADERSHIP ROLE.

Up and Comer Awards

This award is intended to foster mentoring and networking of post-doctoral trainees and early career faculty with ASB Fellows of similar research interests. To encourage diversity and inclusion in biomechanics, applicants must identify as being from an underrepresented group with preference given to applicants from historically black colleges and universities and/or minority serving institutions.

2021 Up and Comer Award Winners

Diba Mani, University of Florida – Fellow mentor Paul DeVita Brooke Odle, Hope College – Fellow mentor Darryl Thelen Hugo Giambini, The University of Texas at San Antonio – Fellow mentor James Ashton-Miller

Ongoing Activities

The Council of Fellows (COF) has been working with a variety of groups on additional mentoring and networking activities. The COF has been actively engaged with the Early Career Faculty Affinity Group, with productive developments on multiple fronts. Fellows joined four of the group's monthly virtual socials and facilitated mentorship discussions in small groups. We have been working with the ASB Student Representative on multiple initiatives. Mid-career mentoring project ideas are also being explored.

COMMUNICATIONS & NEWSLETTER

Communications Committee

Website

The ASB Executive Board worked closely with Podium to ensure that the new ASB website is active, current, and accurate. Some of the highlights of the updated website:

- 1. We added new sections on Corporate Partnerships, B-SURE program, GRADE Initiative
- 2. We added new information under Memberships, Awards, and several new programs

Twitter

The ASB Communications team has been using Twitter as the primary social media platform! Be sure to follow ASB using the twitter handle: @AmSocBiomech

Branding and Identity

This year, we adopted a new logo with consistent colors and font, that was clean and easy to read, and includes elements that represent kinematics and kinetics.



Newsletter Editor

We renovated the Newsletter to better fit the needs of our Society, both in terms of communication and documentation. Some content from the Newsletter has shifted to the website itself, like the detailed descriptions of awards. Other time-sensitive information will be in monthly e-blasts. We switched from the page turning format of a paper version to an online format. We welcome your ideas, comments, and kudos as we continue the renovations in the coming editions.

ASB LEADERSHIP, STAFF, & VOLUNTEERS

Executive Board

ASB Executive Board 2020-2021 - 45th Annual Meeting (2021) - Atlanta, GA (VIRTUAL)

Nick Stergiou Elizabeth T. Hsiao-Wecksler Michelle B. Sabick Katherine R. Saul Jill S. Higginson Alena M. Grabowski Jason R. Franz Young-Hui Chang Louis A. DiBerardino Tarang K. Jain William R. Ledoux Evan Dooley Ajit M. Chaudhari Melissa M. Morrow

ASB Executive Board 2021-2022 - 46th Annual Meeting/North American Congress on Biomechanics (2022) - Ottawa, Canada

President President-Elect Past President Secretary/Membership Chair Treasurer Treasurer-Elect Program Chair Program Chair-Elect Meeting Chair(s) Education Committee Chair Communications Committee Chair Newsletter Editor Student Representative Diversity Chair	Elizabeth T. Hsiao-Wecksler Rakié Cham Nick Stergiou Anahid Ebrahimi Jill S. Higginson Maria Pasquale Jason R. Franz Ross H. Miller - Louis A. DiBerardino Srikant Vallabhajosula Cara L. Lewis Evan Dooley Ajit M. Chaudhari
•	2

Council of Fellows

Chair	Mary Rodgers
Vice Chair	Joan Bechtold
Secretary	Don Anderson

Staff

Cendrine De Vis, Podium Conferences Michelle Smith, Podium Conferences Hunter Fraser, Podium Conferences

ASB 2020-2021 Committee Volunteers

Awards committee

Missy Morrow (Chair) Nick Stergiou Michelle Sabick Liz Hsiao-Wecksler Robin Queen Rumit Singh Kate Spitzley Brooke Odle Claire Milner Silvia Blemker Clark Dickerson Joanie Bechtold Don Anderson Matt McCullough Jennifer Nichols Wouter Hoogkamer Josh Leonardis FJ Goodwin Stephanie Cone Tammv Bush Eni Halilaj **Kim Bigelow** Sarah Shultz Dan Ferris Steve Messier David Lipps

Communications Committee

Tarang Jain (Chair) William Ledoux (Newsletter) Robert Catena (Past Chair)

Diversity committee

Ajit Chaudhari (Chair) Ana Ebrahimi Diba Mani Christopher Wilburn Robin Queen Lindsey Trejo Alyssa Olivas Matt McCullough Alexa Johnson Deanna Schmidt Jordyn Schroeder Jill McNitt-Gray Joan Bechtold Susan Diekrager Nelson Glover

Education committee

Louis DiBerardino (Chair) Allison Altman-Singles Katie Bieryla **Dustin Bruening** Moataz Eltoukhy Lex Gidley Craig Goehler **Michael Harris** Leif Hasselquist Jacob Hinkel-Lipsker Amelia Lanier Anne Martin Scott Monfort Sara Mvers Michele Oliver Kazandra Rodriguez K. Alex Shorter Rumit Singh Kakar Jeremiah Tate Sarah Trager Ridge Rachel Vitali He Henry Wang Clint Wutzke

Student committee

Evan Dooley (Student Rep) Jenny Leestma Kristen Jakubowski Andrew Vigotsky Lindsey Trejo Jazmin Cruz Daisey Vega Patrick Fischer Rachel Hybart Sarah Barron Carter McCullough Ridhi Sahani Todd Leutzinger Oliver Silverson Jonaz Moreno Jaramillo Morgan Dalman Tristan Miller Corbin Rasmussen Ross Bracanti Sandra Molo Andrew Behrens Cody Reed Erica Hedrick Sumire Sato Allie Hoffee Andy Shelton

Nominating committee

Michelle Sabick (Chair) Julia Choi Erika Nelson-Wong

2021 Program planning committee

Alena Grabowski (Chair) Craig McGowan Jason Franz Jessica Goetz Amy Lenz Elisa Arch Rumit Singh

2021 Meeting Committee

Young-Hui Chang (Chair) Greg Sawicki Owen Beck Boris Prilutsky Lena Ting Aaron Young Jenny Leestma Chase Rock Angela Luo Katherine Yang

THANK YOU!

