American Society of Biomechanics

Founded 1977



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Newsletter

Volume: 33 - Number: 2, December 2020

From the President

Nicholas Stergiou

As we move through the final days of 2020, I write to thank you for your many messages of support during these challenging times. As your President, I realized how much you deeply care for our scientific home, our society. The pandemic, and everything that has brought, have required us to change in many



different ways. We adapted in terms of our teaching, our research, our service, our annual conference, and our interactions.

At the same time, I have been impressed with the biomechanics spirit as we maintained our commitment to our discipline and our society. While other societies have cancelled their meetings, we persevered. Our virtual conference in Atlanta was a great success and I want to thank everybody involved for their efforts. Our Executive Board has also made great progress in many different initiatives and tasks. Personally, I could not ask for a better Executive Board during these challenging times. Their commitment and professionalism are truly unmatched. As you will read inside, we are working very hard on multiple initiatives for: (1) contracting with a partner for meeting management services and society management, (2) improving our branding, (3) partnering with other organizations to enhance our efforts on policy, (4) modernizing our communications, (5) enhancing our Student Chapters and launching a National Biomechanics Mentoring Network, (6) developing recommendations for degrees and certificates in Biomechanics, and many others. Our relationship with NBD is also strengthened with our co-sponsoring of certain awards.

I want to be honest with you. It has not been easy for me during these times on many levels. However, I find my strength in all of you. My scientific family for more than 30 years.

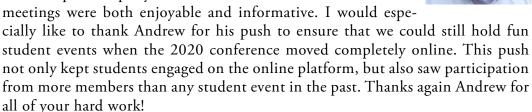
My very best wishes for a safe, healthy, and productive spring semester.



Student's Corner

EA Dooley

Hello everyone, my name is EA Dooley and I am your new Student Representative for ASB. I want to start by thanking Andrew Vigotsky for his service as ASB Student Representative over the past couple years. The student events at the last two meetings were both enjoyable and informative. I would espe-



Having taken over the position of ASB Student Representative in August, I would like to update you on what the students of ASB have been up to. First off (as you may know from the monthly email blasts), we have fully launched the ASB Student Chapters Initiative. The purpose of ASB Student Chapters is to foster connections among ASB-affiliated students and faculty within and across universities. ASB Student Chapters will serve to provide intellectual and professional development among students from a wide range of disciplines that contribute to the field of biomechanics. Networking, collaboration, and discourse throughout the ASB student body is essential to long-term growth of the society as a whole, as future industry and academic leaders will arise from today's students. ASB Student Chapters act to construct a supportive environment where students of all levels and from all disciplines gain valuable leadership skills, forge new friendships, and foster new collaborative opportunities. Currently, we have active chapters at the University of Florida, Montana State University, Valparaiso University, and the University of Virginia. If you are interested in launching a student chapter at your institution, the application and constitution can be found on the ASB website and I am happy to answer any questions you may have via email. We look forward to growing this program!

Beyond this initiative, our mentorship sub-committee has been coming up with ways to help broaden the ASB mentorship experience beyond the annual conference and we are working with the ASB Communications Chair (Tarang Jain) to implement these ideas onto the new ASB website. Stay tuned! Additionally, we are in the process of planning the next ASB meeting in 2021. I will be submitting three events similar to those we had last year: Academic and Industry Roundtable Discussions, as well as a Student night-Out. This year I will also be proposing an event for the Student Chapters to get together and share what they have been up to with each other. If you have any ideas for events that you would like to see for students at upcoming ASB events, please don't hesitate to reach out to me so we can see about making those ideas a reality.

In closing, I hope that all of your semesters are wrapping up nicely. Best of luck to all of the students taking/grading exams! I look forward to serving as your Student Rep and working with all of you moving forward.



ASB Involvement

If you are interested in volunteering, please log in to the membership portal. Visit the 2021 Volunteer form to select roles that interest you so that you can be considered when roles become available. Executive board members or committee chairs will use these lists to identify potential candidates to fill these roles, according to the requirements of the positions. Some roles may be elected by the membership or appointed by the Executive Board.

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Back Copies of the Newsletter

All previous ASB newsletters have been converted into pdf documents and are archived on the ASB website.

<u>In Memoriam: Albert B. Schultz</u>

James Ashton-Miller and Richard Hughes

Albert B. Schultz, PhD, the Vennema Professor of Mechanical Engineering and Applied Mechanics, Professor of Mechanical Engineering and Applied Mechanics, and Professor of Biomedical Engineering in the College of Engineering, and Research Scientist in the Institute of Gerontology at the University of Michigan, passed away in July, 2020.

Professor Schultz, born in Philadelphia, received his BS degree from the University of Rochester in 1955 and his MS and PhD degrees from Yale University in 1959 and 1962, respectively. After a stint as an officer in the U.S. Navv. who had financed his graduate education, he taught mechanical engineering and materials science at the University of Delaware and the University of Illinois at Chicago before joining the College of Engineering faculty at the University of Michigan in 1983, where he founded the Biomechanics Research Laboratory. The university was attractive partly because



it already had an active milieu of biomechanics research in the areas of automotive occupant safety and industrial ergonomics, and Professor Schultz was recruited as a mid-career faculty member to strengthen its educational and research offerings.

Professor Schultz is internationally recognized for his biomechanics research, reported in more than 190 publications, but his first paper in 1964 addressed the high strain rate behavior of aluminum wire under transverse impulsive loading. While in the Department of Materials Science at the University of Illinois at Chicago he met Drs. George Galante and Ron DeWald, both innovative spine surgeons in Chicago, who interested him in the problem of why an apparently healthy rapidly growing human spine ends up undergoing what appears as torsional buckling in adolescent idiopathic scoliosis. Their first papers in the Journal of Biomechanics in 1970 included a first mathematical model of spine behavior under load and the first study of the effect of the Milwaukee brace in correcting a scoliotic deformity. An image from his classic finite element simulation

In Memoriam: Albert B. Schultz

James Ashton-Miller and Richard Hughes

of the scoliotic spine and rib cage was used by IBM to advertise the novel use of their most advanced digital computers around the world in an arresting full page advertisement. In 1972, his first PhD student, Thomas P. Andriacchi, and he published a follow-up paper on spine modeling in idiopathic scoliosis. Tom would go on to initiate and lead innovative gait research at Rush-Presbyterian-St. Lukes Hospital in Chicago for many years before being recruited to Stanford University. At that time Professor Schultz would also publish a paper on the forcedeformation behavior of human ribs with the legendary Swedish orthopedist, Carl Hirsch, who trained generations of innovative spine surgeons around the world. That collaboration led to Professor Schultz working with Hirsch's protégé, Dr. Alf L. Nachemson, one of the most influential spine surgeons of his generation, as well as his young protégé, Dr. Gunnar B.J. Andersson, in Gothenburg, Sweden. At the time Drs Nachemson and Andersson were carrying out seminal work on the loading of the human lumbar spine by making the first measurements of pressure within the lumbar intervertebral discs of human volunteers in different postural and lifting activities. This research was partly financed by Volvo who were headquartered nearby in Gothenburg and interested in designing a more ergonomic automotive seat. In the late 1970s Professor Schultz spent a sabbatical year at the Sahlgrenska Hospital in Gothenburg where he worked directly with Drs. Nachemson and Andersson, and where Dr. Ashton-Miller who, having seen the IBM advertisement in the New York Herald Tribune, invited him up to Oslo, Norway to give a seminar at the University of Oslo which led to their later decades of close collaboration. Dr. Andersson would go on to be recruited to become chair of orthopedics at Rush-Presbyterian-St. Lukes Hospital in Chicago where he would continue to collaborate with Dr. Schultz and his team for many years and become one of the most highly cited authors in spine research. He and Professor Schultz authored a series of seminal papers in the 1980s to measure the biomechanical properties of spine motion segments and then use those data in finite element models to predict the behavior of the lumbar spine under the trunk muscle forces required to stabilize the spine during quasistatic lifting activities. The models are an example of the early use of optimization methods to solve the indeterminacy caused by having more unknown spine and trunk muscle forces than there are equations to solve for them. These models would form the basis for later models on which the OSHA lifting guidelines were based. It is safe to say that Professor Schultz was instrumental in laying the theoretical and experimental foundation on which modern spine biomechanics research is based. He was an important thesis committee member for PhD students Richard Hughes and Maury Nussbaum who built upon his theoretical work.

In the late 1980s, a University of Michigan geriatrician interested Professor Schultz in the problem of aging and preserving the mobility of older individuals. There followed a decade of seminal work on the biomechanics of aging with Dr. James Ashton-Miller, Dr. Neil B Alexander and PhD students Darryl Thelen and Carl Luchies among others, using experiments and mathematical models to better understand the effects of advancing age and disease on balance and gait in the elderly, and especially the biomechanics of falls. Highly cited are the series of articles on how aging adversely affects the ability of older individuals to develop torque rapidly, recover balance with a single step, and how humans negotiate

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<u>In Memoriam: Albert B. Schultz</u>

James Ashton-Miller and Richard Hughes

obstacles in their environment. These include the first studies of how psychological and physical factors interact to affect the success of stepping over an obstacle. In one study, he and his colleagues showed how both healthy young and older humans could be made to trip on a flat floor if they suddenly had to change their stepping pattern in order to step over an obstacle (that actually was virtual) with little notice. These studies involved the first use of a ceiling-supported support harness, now standard in gait labs around the world, to guarantee the safety of the volunteers.

Among his many honors Professor Schultz was elected a member of the National Academy of Engineering (NAE), fellow in the American Society of Mechanical Engineers (ASME), and the first engineer to serve as president of the International Society for the Lumbar Spine. He was a cofounder and past-president of the American Society of Biomechanics (ASB). He has received the University of Michigan's Distinguished Faculty Achievement Award, and the NIH Research Career and Javits Neuroscience Investigator Awards, the ASB's Borelli Award and the ASME's H. R. Lissner Award for his outstanding research.

Albert B. Schultz ended his illustrious career at the University of Michigan retiring as professor emeritus in 1999. As with all his decisions, he methodically considered the pros and cons of continuing to work in retirement, or instead to make a clean break in order to make more time for family and other activities. He said he had witnessed too many older colleagues, no longer at the top of their game because of age-related diminished faculties, getting in the way of younger and more able colleagues. In spite of still being one of the most beloved teachers and researchers of his day, he abhorred ever becoming an impediment to others. So he opted for the clean break, saying that he wasn't sure it would work, but wanted to give it a try anyway. To help ensure that he succeeded, he gave away his entire engineering and biomechanics library to grateful students and colleagues. Now he was free to spend more time with his grandchildren and on favorite pastimes like solving puzzles of all sorts, including the daily New York Times Crossword for which he recognized the person who had set the puzzle from the types of clues they used. He was a wonderful and caring mentor to many young faculty members at his own institution, and beyond. Importantly, he taught his students to have the courage to always use simple mathematical models when simple models sufficed to capture a complex behavior, and to only add complexity as needed. One measure of the quality of his mentoring is his remarkable legacy of no fewer than four Past-Presidents of ASB (Andriacchi, Ashton-Miller, Hughes, and Thelen). Ever generous in the giving of his time to others, he reviewed for NIH and NSF panels as well as many other national and international organizations, and was a popular keynote speaker at national and international meetings. He is survived by his wife Susan, and his two sons and a daughter, and their families. Meticulous in everything he ever did, always humble but with a wry sense of humor, a founder of modern biomechanics will be sorely missed. May you rest in peace, Al.

Fondly,

James A. Ashton-Miller, PhD

Richard Hughes, PhD

Secretary/Membership

Katherine Saul

I hope the membership are all doing well as we wrap up this interesting and sometimes difficult year. From my end in ASB, I thank you all for your continued support of the society and contributions to biomechanics.



From the membership side, the membership portal continues to be the home for dues, journal subscriptions, award funds, and the membership directory. Make sure your directory information is up to date so members can find one another! Please sign up to **volunteer** if you'd like to be more involved. You will find the 2021 volunteer form on the portal, and we use these lists to identify potential new committee members or executive board candidates.

Some new developments: While we upgrade our main website, we have moved some important content about awards and ASB programs (such as calls for symposia and student chapters) to the membership portal to maintain access to this important and often time-sensitive information. In an effort to improve our institutional memory and continuity, we developed a new Onboarding document for incoming Executive Board members, highlighting the legal and logistical obligations of serving on the board of a non-profit, summarizing the roles and procedures of the society, and documenting our overall structure and resources. This will also support a move to a more formal annual reporting process that is a natural extension of the work we've been doing with the annual database maintenance to ensure more accurate membership records going forward. Finally, we've been continuing our plans to extend the advocacy efforts of ASB, through pursuing society engagement and membership in national scientific advocacy and public education efforts. This is ongoing, so stay tuned for more information!

As we move into the new year, please remember to update **your membership for 2021**. Membership runs on a calendar year, so don't forget to check your status. Use **My Member Status** to ensure your membership is up to date. You may need to update your personal information before you will see the dues renewal form. Reminder, if you are changing from student level to regular level or are renewing after a lapse in active membership, please do not reapply. Simply select your correct membership level when you pay your dues.

Please feel free to reach out if you have any feedback on the membership portal or if I can assist you in anyway. I hope we all have a brighter 2021!

Membership category: Regular - 56.8%; Student - 41.8%; Emeritus - 1.4% | **Discipline:** Biological sciences - 5.1%; Engineering and Applied Physics - 47.2%; Ergonomics and Human Factors - 4.1%; Exercise and Sports Science - 24.0%; Health Sciences - 19.5% | **Demographics - Sex:** Men - 57.6%; Women - 40.9%; Don't wish to answer - 1.5% | **Ethnicity:** Hispanic - 5.9%; Not Hispanic - 88.7%; Don't wish to answer - 5.3% | **Race:** Am Indian/Alaska Native - 0.4%; Asian - 15.3%; Black - 4.2%; Native Hawaiian/Other Pac Islander - 0.3%; White - 76.3%; Other - 2.4%; Don't wish to answer - 4.4% | **Disability:** Yes - 1.3%; No - 95.3%; Don't wish to answer - 3.4%



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Advertising in the Newsletter

The Editorial Board invites businesses that have products or services of interest to members of the Society to advertise in the ASB Newsletter. Advertising space may also be purchased for job postings or other special announcements.

The current advertising rates are as follows:

1/4 page - \$100

1/2 page – \$200

full page – \$400

If you are interested in learning more about advertising in the ASB newsletter, please email Dan Gales:

DGales@lockhaven.edu



ASB Executive Board 2020-21

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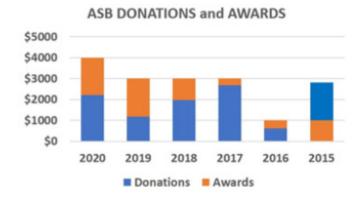
Treasurer Jill Higginson

Especially at this time of year, we give gifts to let our loved ones know we are thinking of them, we value the contributions of team members, or we wish to reward others' efforts for a job well done.



Each year, the American Society of Biomechanics solicits donations for the Jim Hay Memorial Award, Goel Award for Translational Research in Biomechanics, Founders' Award, and Jean Landa Pytel Award for Diversity Mentorship in Biomechanics. Each award recipient is acknowledged at the ASB Annual Meeting and receives a commemorative plaque and a check for \$1000 for a total of \$4000 in these four awards alone to distinguished members of our professional society.

In 2020, ASB membership provided \$2,210 in donations toward these awards (Hay: \$555, Goel: \$295, Founders: \$585, Pytel: \$775). Unlike the other awards, the Goel Award was established with an initial investment and a second major contribution which will support this award for another 10+ years. However, the others should be replenished annually. The last time donations exceeded award levels was in 2015!



Award amounts exceed donations since 2016! The Hay Award was established in 2004, Goel and Founders were added in 2017, and the Pytel Award is new in 2020 for a total of \$4000 distributed annually for these four awards. (Note: Donations as of 12/1/2020.)

Thankfully, the ASB operating budget is healthy and sitting comfortably around \$150,000 with our long-term investments at the highest value in years (\$242,000). This allows us to continue providing a variety of awards to our membership (totaling \$42,500 this year) even when donations are limited. Furthermore, we appreciate the continued sponsorship of Elsevier for the Journal of Biomechanics Award and Clinical Biomechanics Award given at the Annual Meeting.

This season, please consider making a donation (through the membership portal) to let your talented colleagues know that you are thinking of them, you value their contributions, and you want to reward their efforts!

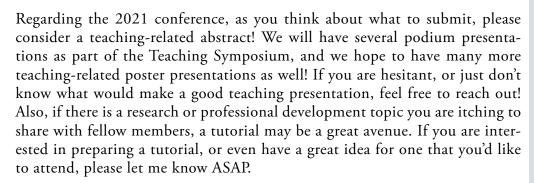
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Education Committee

Louis DiBerardino

Happy holidays from the Education Committee! If you are anything like me, the concept of time has become very confounded thanks to COVID-19. It may seem like we just wrapped on our very successful first virtual ASB conference, but now it's time to think about the next one. For 2021, the

Education Committee will be planning the Teaching Symposium and selecting tutorials very shortly. We are also busy selecting regional meetings, soliciting Graduate Student Grant-in-Aid proposals, as well as beginning a few new initiatives.

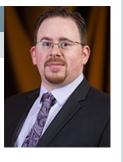


For a more local and student-centered experience, the ASB supports several regional meetings each year. We supported a record number of regional meetings last year, and all but one were unfortunately postponed. Currently, we have received two new applications, and are expecting 4-5 meetings from last year to still be rescheduled. As details of in-person vs. virtual attendance are up in the air, please check the ASB website to find a meeting near you.

Once the newsletter is published, we will have just passed the ASB Graduate Student Grant-in-Aid (GIA) application deadline (January 15 each year). The Education Committee will be busy reviewing proposals to award up to \$2,000 for several graduate student research projects! If you are interested in applying for a GIA award next year, more information can be found here.

I was recently tasked with a new charge for the Education Committee: exploring the possibility of ASB offering credentialing and certificate services for biomechanics programs and individuals. At this point we are in the research phase, and I would like to ask if anyone has any experience with professional credentialing or certification programs, please reach out. I'd love to talk to you about your experiences and/or knowledge of them!

Finally, I will leave you with a reminder to check out the ASB Teaching Repository for 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 consider uploading at least one "snippet" this year. The Teaching Repository can be accessed here.



ASB Executive Board 2020-21

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Michelle Sabick

Greetings ASB members! I am happy to provide an update on some projects that I have been working on this year. A couple of years ago, ASB Past-President Brian Umberger initiated a pilot project to create a new position on the executive board of awards chair. The position was desperately needed, and that



pilot has gone amazingly well, with Missy Morrow doing a wonderful job of organizing and standardizing the awards processes. One of my tasks for this year is to propose bylaws changes to formalize the position. I hope to introduce those proposed changes later this winter and have them ratified by the membership in time for our annual meeting next summer.

In addition, I have also been helping facilitate the negotiation of a contract with a professional management company to support the Society's functions and help organize our conferences. This is part of the effort to professionalize the management of our society overall. We have identified a great partner and are working diligently to solidify our arrangement in a way that is cost effective and will provide additional value to our members and to the executive board. In the coming months, look for a fresh new website, more modern communications plan, and updated branding for the society. As a part of that, we will be unveiling a new logo design that gives a nod to the history of the organization and also provides a better indication of who we are and what we do.

My primary role as past-president is overseeing the ASB Fellow selection process. I am pleased to report that we have a diverse set of accomplished nominees for ASB Fellow this year. Over the next few weeks, I may be reaching out to some of you to serve on evaluation committees as part of the Fellow selection process. Please consider donating a bit of your time to ASB to participate in this important activity.

Best wishes for a healthy and restful holiday season. We certainly all need it.



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Awards Chair

Melissa (Missy) Morrow

If 2020 had a bright spot, it was surely the ASB Awards! The 2020 Annual Meeting Award talks were equally inspiring and impressive. New to 2020 was the inaugural Jean Landa Pytel Award for Diversity Mentorship in Biomechanics awarded to Jill McNitt-Gray, the 3-Minute Thesis Competition, and a

Travel Award in recognition of Bob Gregor's service to the ASB. A HUGE thank you to all the Awards Committee members, nominators, nominees, and winners!

I'm well into my second year in this role, and I am moving forward on some changes and initiatives for my term as Awards Chair. First, I am happy to announce a name change to the ASB Young Scientist Post-Doctoral and Pre-doctoral Awards that was approved by the ASB Executive Board. The motivation for these changes was to better represent the career stage of the award winners. The new name for Post-doctoral award is the ASB Early Career Achievement Award, and the new name for the Pre-doctoral award is the ASB Pre-doctoral Award. Starting in 2021, the new award names will be used. Second, I am developing a new award submission process to standardize data entry and document uploading. The new process will be detailed on awards section of the ASB website and announced in the monthly email updates. Third, and mostly importantly, I am working to reduce barriers to award submission and expanding Awards Committee participation. I have been meeting with different groups within and beyond ASB to gather input. Please reach out to me at ASBAwards@asbweb.org if you have ideas you want to share.

A brief description for each award is provided below, but please refer to the awards section of the ASB website for detailed instructions of how to apply. Questions about how to apply for any award can be directed to ASBAwards@asbweb.org.

I encourage you all to consider submitting a nomination of a phenomenal Biomechanist in your life to one of our many awards!

Awards that honor an individual for their contributions to the field of biomechanics:

The Borelli Award

This is the most prestigious honor given by the ASB. The award is named after Giovanni Alfonso Borelli, a mid-17th century Professor of Mathematics from Naples, Italy. He is considered by many to be the father of modern biomechanics. Borelli's major novel contribution, the treatise "On the Movement of Animals," puts forth numerous propositions on the movements and displacements of the limbs of man and animals. The award recognizes outstanding career accomplishment and is awarded annually to an investigator who has conducted exemplary research in any area of biomechanics.



Giovanni Borelli (1608-1679)

Recent winners of the award are: 2020 Stephen Messier 2019 Irene Davis 2018 Roger Enoka



2020 Award Summary

Borelli Award

Steve Messier, Wake Forest University

Jim Hay Memorial Award

Antonie (Ton) van den Bogert, Cleveland State University

Founders' Award

Tamara Reid Bush, Michigan State University

Goel Award For Translational Research in Biomechanics

Shorya Awtar, University of Michigan

Jean Landa Pytel Award

Jill McNitt-Gray , University of Southern California

ASB Pre-doctoral Award (formerly the Young Scientist Pre-Doctoral Award)

Joshua Leonardis, University of Michigan

ASB Early Career Achievement Award (Formerly the Young Scientist Post-Doctoral Award

Eni Halilaj, Carnegie Mellon University



2020 Award Summary

ASB Fellows

Wendy Murray, Northwestern University Stacie Ringleb, Old Dominion University Kristin Zhao, Mayo Clinic

Clinical Biomechanics Award

Nicholas Kreter, et al. University of Utah

Journal of Biomechanics Award

Katherine Knaus and Silvia Blemker, University of Virginia

President's Award

Cesar Castano and Helen Huang, University of Central Florida

Junior Faculty Research Award

Michael Harris, Washington University

Research Travel Grant

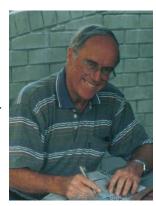
Jessica Allen, West Virginia University

Awards Chair, cont.

Melissa (Missy) Morrow

Jim Hay Memorial Award

The award was established in 2004 through the support of the Hay family and additional donors to recognize research in the area of sports and exercise science biomechanics. Jim Hay (1936-2002) was a longtime faculty member at the University of Iowa, one of the original Founders of ASB, and the third and fourth President of the Society. The Jim Hay Memorial Award recognizes originality, quality, and depth of biomechanics research that address fundamental research questions relevant to extraordinary demands imposed in sport and exercise.



Recent winners of the award are: 2020 Antonie (Ton) von den Bogert 2019 Paavo Komi (in memorium) 2018 Rodger Kram

Founders' Award

The Founder's Award, newly created in 2016, is given to recognize "scientific accomplishment in biomechanics and excellence in mentoring" and is open to investigators of all disciplines within ASB.

Recent winners of the award are: 2020 Tamara Reid Bush 2019 Sylvia Blemker 2018 Dan Ferris

Goel Award for Translational Research in Biomechanics

The Goel Award, newly created in 2016, recognizes outstanding accomplishments in translational biomechanics research, entrepreneurship, and societal benefit. The award is named after Dr. Vijay Goel, the Borelli Award winner in 2014, and is given annually to an ASB member. The Award was initiated by Dr. Goel's loving and devoted family. The Goel Award selection is based on originality, quality and depth of the candidate's research, and the commercial and societal benefits emanating from this research.



Recent winners of the award are: 2020 Shorya Awtar 2019 Scott Delp 2018 Kenton Kaufman

Jean Landa Pytel Award for Diversity Mentorship in Biomechanics

The Pytel award, newly created in 2019, recognizes the long-term impact of mentoring on both the careers of individual scientists, including women and individuals from other traditionally under-represented backgrounds in ASB, and the ultimate betterment of our society as a whole. The award is named after Dr. Jean Landa Pytel (1947-2018) who was one of the founding members of the American Society of Biomechanics (ASB) who actively advocated for women and

Awards Chair, cont.

Melissa (Missy) Morrow

encouraged others to find their own path in biomechanics and become involved in ASB leadership. Nominees should be ASB members who emulate the qualities of Jean Landa Pytel, have made a demonstrable difference in the career paths of their mentees, and, by doing so, have contributed to the advancement of the ASB's Diversity Mission.



Inaugural winner: 2020 Jill McNitt-Gray

ASB Pre-doctoral Award (formerly the Young Scientist Pre-Doctoral Award)

This award recognizes early achievements by a promising scientist prior to the award of their PhD. Selection is based upon the scientific quality of the submitted materials.

Recent winners of the award are: 2020 Joshua Leonardis 2019 Erika Pliner 2018 Jack Martin

ASB Early Career Achievement Award (formerly the Young Scientist Post-Doctoral Award)

This award recognizes early career achievements by a promising scientist who is within five years of receiving their PhD. Selection is based upon the scientific quality of the submitted material. Extensions to the five-year timeframe may be granted due to medical concerns, disability, family care responsibilities, natural disasters, and active-duty military service, determined on a case-by-case basis at the sole discretion of the ASB Executive Board. Contact the ASB Awards Chair with any questions.

Recent winners of the award are: 2020 Eni Hililaj 2019 Wouter Hoogkamer 2018 Jennifer Nichols

ASB Fellows:

The Past-President works closely with the ASB Fellows and Executive Board throughout the Fellows nomination and election process. In 2011, ASB created the status of Fellow to recognize professional achievement and service of the top members of the Society and to encourage continued service to the Society in leadership roles. To be considered for Fellow status, an applicant must have been a member of the Society in good standing for at least ten years, have a consistent and significant record of service to and participation in ASB, is expected to remain active in ASB, and has made significant research and scientific contributions in biomechanics.

Awards that honor the quality of a given research project:

Clinical Biomechanics Award

This award recognizes outstanding new biomechanics research targeting a contemporary clinical problem, and is sponsored by Elsevier Science, Ltd., publishers Page 12



2020 Award Summary

Travel Awards

- Nicole Arnold
 Michigan State University
- Sarah Brinkerhoff Auburn University
- Michael Christensen
 University of Delaware
- Tanetta L. Curenton
 Cleveland State University
- Brian Diefenbach
 East Carolina University
- Myrriah Laine Dyreson Concordia University St. Paul
- Farahnaz Fallahtafti University of Nebraska Omaha
- Malaka (Graci) Finco U of N Texas Health Science Cen
- Reed Gurchiek
 University of Vermont
- Erica Hedrick
 University of Nebraska at
 Omaha
- Allison Hoffee
 Montana State University
- Kristen Jakubowski
 Northwestern University
- Jonaz Moreno Jaramillo University of Massachusetts
- Sujata Khandare Pennsylvania State University
- Archana Lamsal Michigan State University
- Sarah Catherine Moudy
 U of N Texas Health Science Cen

ASB Newsletter



2020 Award Summary

Travel Awards

- Kenechukwu Okoye
 The Ohio State University
- Joshua Pataky
- Penn State University
- Alexander Peebles
 Virginia Tech
- Richard Pimentel University of North Carolina
- Anahita Qashqai
 U of Wisconsin-Milwaukee
- Zachary Ripic
 University of Miami
- Kazandra Rodriguez
 University of Michigan
- Sumire Sato
 University of Massachusetts
- Alyssa Schnorenberg
 U of Wisconsin-Milwaukee
- Whitney Wolff
 University of Michigan

Awards Chair, cont.

Melissa (Missy) Morrow

of Clinical Biomechanics. The awardee will be expected to present their work at the meeting, and submit their work for publication in Clinical Biomechanics. Finalists for the award will be selected from submitted abstracts for ASB 2021.

Journal of Biomechanics Award

This award recognizes substantive and conceptually novel mechanics approaches explaining how biological systems function. It is sponsored by Elsevier Science, Ltd., publishers of the Journal of Biomechanics. The awardee will be expected to present their work at the ASB annual meeting, and submit their work for publication in the Journal of Biomechanics. The award will be selected from submitted abstracts for the ASB 2021.

President's Award

This award recognizes outstanding research presented as a poster at the annual meeting. The award is judged solely by the President. All posters are eligible.

Competitive Grant Awards:

Opportunities for Faculty Members

ASB Junior Faculty Research Award (JRFA)

The purpose of this program is to support early career ASB regular members pursuing biomechanics research by offering a source of research funding. The grant is distributed on a competitive basis and is intended to offset the costs directly associated with conducting research.

Recent winners of the award are:

2020 Michael Harris

2019 Robert Catena

2018 Natalie Holt

Travel Awards

Student Travel Awards are offered to help students attend the ASB annual meeting. When the meeting is in-person, each winner receives an award of \$250. The award for a virtual meeting format will be determined after the abstract submission deadline.

Diversity Travel awards are offered to support attendance of individuals from diverse backgrounds at the annual meeting. These awards are intended to offset the cost of attendance and a portion of the costs of travel to the annual meeting.

Research Travel Grant

Research Travel grants are offered to foster collaborative research and interaction among scientists by helping to offset the cost of travel to a host institution. All ASB regular members are eligible to apply. Travel and lodging costs are covered. Budget requests may be up to \$1,000. Matching funds from the candidate's or host's institution are desirable, but not required.

Meeting Chair

Young-Hui Chang

As I look back at my article from the December 2019 ASB newsletter, I have to shake my head at my overflowing optimism as we headed into the buzzsaw that was to be 2020. "Planning for the 44th annual ASB conference is well underway...", I wrote, not knowing what devastation our society, the nation, and the

world was about to experience in only a few short weeks. I want to return to my naïve 2019 self, tap him on the shoulder, and say, 'not so fast!', or 'don't get too attached to those plans', or 'buy Zoom stock now!'

Well, here I am again at the tail end of this turbulent year, but this time with (hopefully) some important insight to guide me. After much consideration about how we might plan for the ASB2021 conference, our committee kept coming back to the fact that 2021 looks to become as uncertain a conference season as 2020 was. Despite the promise of vaccines on the horizon, there still remains the possibility of continued COVID outbreaks, tightening of institutional travel budgets, and government restrictions on large gatherings. And, so, we have had to make the difficult decision to once again hold the 45th annual meeting as a 100% virtual conference, to be held from August 10-13, 2021.

Although we were a little late in announcing the virtual format, by early 2021 we will be back to our typical conference timeline. In January, you will be able to find abstract submission and conference registration information on the meeting website. Also, please follow us on Twitter (@ASB2021_ATL) for rapid updates (#vASB2021).

The virtual conference format will have similarities to the 2020 event, but there will also be important differences as we strive to improve upon the experience. I know 'Zoom fatigue' is real and many of us are craving to get back to in-person conferencing. I also miss seeing old friends and colleagues, forging new relationships, and learning the latest greatest science. Unfortunately, as a nation and as a society, we are just not there yet. We must continue weathering this storm until the time is right for ASB to return to in-person conferences in terms of both medical and fiscal health. Believe it or not, we are actually still sorting through the legal mess resulting from the forced cancellation of our 2020 conference.

But, before things start to seem too bleak, I will mention some silver linings I have found since the last meeting. According to the more than 240 ASB2020 feedback surveys we received, 98.4% of you were either 'satisfied' or 'strongly satisfied' with the Zoom podium sessions. I guess there is something to be said for having a clear, unobstructed view of presenter slides, after all! 90.3% of you were also satisfied or better with the CrowdCompass app/online event guide. And, 88.4% of you liked the Slack-based discussions. 88% of you were also satisfied or better with the SpatialChat social lounges. Lest I begin beaming with optimism again, there are areas for improvement and we are working on solutions based on your feedback. Most importantly, better than 97% of ASB2020 attendees were satisfied with the overall scientific program. Even under the strange circumstances, I think those are very good numbers for conference satisfaction. Many folks I spoke with personally mentioned that they would love to see certain aspects of the virtual format remain even for in-person conferences. Therein lies



2021 Annual meeting website

Twitter: @ ASB2021 ATL

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2021 Annual meeting website

Twitter: @ ASB2021_ATL

Meeting Chair, cont.

Young-Hui Chang

an important lesson for us. I think the ASB annual conference will emerge from this pandemic forever changed in important areas that will improve the conference experience going forward.

As we slowly emerge from the gloomy days of 2020, hold out hope for light at the end of the tunnel in 2021. Let us leave 2020 behind us (good riddance!) and look forward to some great biomechanics science and engineering at ASB2021.

Abstracts are due March 15! You've got plenty of time to get your data analyzed, write that abstract, upgrade your internet bandwidth, and hunt down some epic virtual Zoom backgrounds. On behalf of the Georgia Tech conference organizing committee 2.0 (Aaron Young, Boris Prilutsky, Greg Sawicki, Lena Ting, Owen Beck, Young-Hui Chang), we look forward to seeing you all again in August for ASB2021! Until then, stay safe and well in 2021.

UPDATE on ASB2020 abstract publication. Due to an ongoing contractual dispute with one of our 2020 conference venues, we will not be able to pay the fees to publish the ASB2020 abstracts in the Journal of Biomechanics as once planned. All 2020 accepted abstracts will be archived in a searchable online database on the ASB website.



novel electronics inc.

www.novelusa.com novelinc@novelusa.com

Volume 33, Number 2







National Biomechanics Day and the American Society of Biomechanics

Hello to all our ASB Friends and Colleagues,

National Biomechanics Day has had wonderful support throughout the United States and in 26 other countries since 2016. There have been 392 registered NBD events reaching over 29,000 high school students. Many universities have participated through the dynamic leadership of many ASB members but also many of our sponsors such as Delsys, Nike, and the American Sports Medicine Institute held NBD events. We have shared many great photos of your events over the years (click for a billion photos) and today we share these two videos from Qualisys in 2019 and High Point University in 2020 for your enjoyment.

NBD 2020 was nearly entirely hampered by the Coronavirus pandemic as were nearly all events worldwide and the pandemic will continue to affect our lives and activities in 2021. We are adapting to our socially distant lives by promoting virtual NBDs this upcoming year. Please look for new announcements through the coming months. We are promoting Biomechanics-STEM & STEAM outreach through the creation of all things e! e-videos, e-biomechanics tutorials, e-lab tours, e-breakthrough science!!! We are especially excited about new collaborations that are forming among seemingly distant labs and through which biomechanics STE(A)M materials will be shared and shown to high schoolers. Please consider creating Biomechanics materials such as short videos like, "Wow, 3D motion capture is cool," or, "Whoa, muscle ultrasound is weird!" and using these to teach high schoolers about Biomechanics. Another exciting avenue we are developing is the creating of an e-library of Biomechanics that can be accessed by Biomechanists and high schoolers worldwide. Yes, there is Biomechanics magic to be created and enjoyed through NBD in 2021.

NBD has become part of the Biomechanics firmament and is now able to GIVE BACK to the field and our students. We have enacted several <u>Grant Programs</u> to support underserved populations. We are starting with Black Biomechanists, Women in Biomechanics, The Brazilian Biomechanics Experience, and Australian National Biomechanics Day. The <u>American</u>, <u>International</u>, <u>Brazilian</u>, and <u>Australian and New Zealand</u> Societies of Biomechanics are collaborating with us on the these programs and we hope to receive applications from around the world for them. The <u>Black Biomechanists Association</u> is also promoting the first program. The grants benefit graduate students in Biomechanics and high school students learning about our science. Please look into these programs to see if they can benefit you and others.

Thank you very much for your continued support. Please contact me if you have any questions or thoughts about NBD at NBD.National.Biomechanics.Day@gmail.com.

Paul DeVita, PhD, Director, National Biomechanics Day



National Biomechanics Day Goes International

NBD Nations

Armenia

Australia

Belgium

Brazil

Canada

Chile

Colombia

Czech Republic

Egypt

France

Germany

Hong Kong

Iran

Iraq

Ireland

Malaysia

Mexico

New Zealand

The Netherlands

Pakistan

Portugal

Saudi Arabia

Singapore

South Africa

Spain

Taiwan

United Kingdom

United States

NBD celebrates Biomechanics

with 28 Nations

29,279 High school students

951 High school teachers

And a BIG IMPACT

JOIN NBD 2021!!!







The Biomechanics Initiative and the American Society of Biomechanics present the

Black Biomechanists Outreach Through National Biomechanics Day Award Program

The Biomechanics Initiative, the official sponsor of National Biomechanics Day, and the American Society of Biomechanics will empower individuals at universities to create their own NBD event centered on promoting Biomechanics in the Black community.

Competitive application process: The application will be limited to four pages including:

- (1) Applicant's name and affiliation. If a student, add applicant's mentor, please.
- (2) Personal statement: why are you interested in hosting an NBD event aimed at diversifying biomechanics?
- (3) University people involved: list participating faculty and students (please add your collaborators' names; can be changed later)
- (4) Target population: school or community group with predominantly black students/participants (minimum 15 students/participants)
- (5) Description of NBD event: briefly describe your planned activities
- (6) Recruitment plan: how will you attract/inform your target group?
- (7) Budget: list items and costs
- (8) Additional information you think is pertinent to your situation

Eligibility requirements: "early career" individuals including graduate students, post-docs, assistant professors who don't necessarily have disposable funds to host their own NBD events. Our preference is to fund only one application per institution.

Please submit application in one pdf file to: NBD.National.Biomechanics.Day@gmail.com . You may also submit preliminary questions to this address.

(Continued next page)

Five awards will be distributed, each with:

- (1) \$1,000 to support NBD event expenses (e.g. producing promotional materials, lab supplies for instruments, school/community group travel costs, food, other (note: funds cannot be used for stipends). Award funds will be sent to appropriate university office.
- (2) Recognition through social media, professional societies, The Biomechanics Initiative, and ASB websites.
- (3) One student registration for ASB 2021.
- (4) Participate in Outreach Education session with presentations at ASB 2021 (depends on ASB 2021 program and abstract submissions).

Notes:

- (1) Application deadline Jan 31, 2021. Award Decision: Feb 15, 2021.
- (2) NBD will provide guidance and assistance on how to develop and host these events. (See NBD Guidelines document through this link:

NBD Suggestions and Ideas

on the home page of <u>The Biomechanics Initiative</u> website.

(3) **Virtual events are acceptable as NBD entries** in the light of extended pandemic requirements including social distancing and participant limits to organized events.

Examples of virtual events could include but are not limited to:

- a) A video tour of your Biomechanics Lab with demonstrations of various instruments and procedures. For example, show 3D motion capture and then the results of the analysis on V3D.
- b) Describe a series of Biomechanics experiments that high school students can do at home or in school. For example, many students have phones with accelerometers and other sensors and video cameras that can be used to measure human or animal movements. Perhaps these can then be analyzed with Kinovea or similar software.
- (4) We bring this announcement to the attention of members of the <u>Black Biomechanists</u> <u>Association</u> (click the link) and hope you can submit applications.



Program Chair

Alena Grabowski

I'm very excited to promote the ASB 2021 scientific program and look forward to virtually seeing everyone in August. I've assembled and have been meeting with a fantastic program committee to develop an interactive program that is focused on delivering high-quality scientific presentations and facilitating

2021 Annual meeting website

Twitter: @ ASB2021_ATL

discussions. The program will be aimed at promoting diverse perspectives within biomechanics. Below are a few highlights from the upcoming program:

- Keynotes from: Dr. David Hu, who has expertise in comparative biomechanics and locomotion and has earned an Ig Nobel for his research, and Dr. Cara Wall-Scheffler, who has expertise in the fields biomechanics, locomotor energetics, telemetry physiology, paleontology, archaeozoology, and behavioral ecology and studies how women in particular have a rare (among mammals) ability to work both efficiently (energy per unit mass) and economically (total energy) when carrying loads.
- Interactive podium and poster sessions
- The 3-min thesis competition
- Professional development sessions
- Symposia
- Award sessions
- Tutorials

Please look for the call for abstracts and for volunteer abstract reviewers, which will be posted within the ASB email blast and on the ASB website in January.

- Abstracts will be a 1-page format.
- The abstract template will be available when the call for abstracts is announced in early Jan.
- The abstract submission deadline will be Monday March 15, 2021 at 5pm MDT and will not be extended.

The ASB conference will be held virtually Aug. 10-13, 2021. We look forward to an exciting program and to sharing biomechanics research!



Virtual 45th Meeting of the American Society of Biomechanics

ASB2021

August 10-13, 2021

Page 22 ASB Newsletter



Find us on Facebook or Follow us on Twitter

Facebook: American_Society_of_
Biomechanics

Twitter: @Am-SocBiomech

Communications Committee Tarang Jain

What a year this has been! This year has been challenging for all of us. I hope that you and your loved ones are managing to remain safe and healthy through the pandemic. Since the CO-VID-19 emergency was declared in March, the ASB executive board has been working hard to advance its mission and support members through these unprecedented circumstances. In



2020 we had to stretch our imagination, adapt, and learn to navigate the virtual world to stay connected to our members and the community. With the advent of newly approved vaccines for COVID-19, I am optimistic that this grim pandemic will soon end and we will be able to travel and attend in-person professional gatherings without fear of catching this deadly disease.

We are in a process of making some big changes on the ASB web presence. The Internet is an ever-changing, ever-evolving place and our old ASB website needed an upgrade to keep up with the new demands. For the past couple of months, ASB Communications team has been working with a vendor team to release an updated version of the ASB website with many awesome new features. We will also be unveiling an ASB logo redesign to complement our new site with a modern look. We anticipate having a fully functional ASB website shortly after the New Year. Let us know via email if you notice anything odd with the website.

We continue to maintain a strong presence on our facebook and twitter platforms and are always happy to promote biomechanics related events. If you have ideas or suggestions on how ASB can better reach out or serve its members, please get in touch with me via email. I am excited that ASB will continue to hold/support its regular events (National Biomechanics Day, ASB regional meetings, ASB Annual conference, etc) in 2021. Stay tuned for all of the exciting plans.

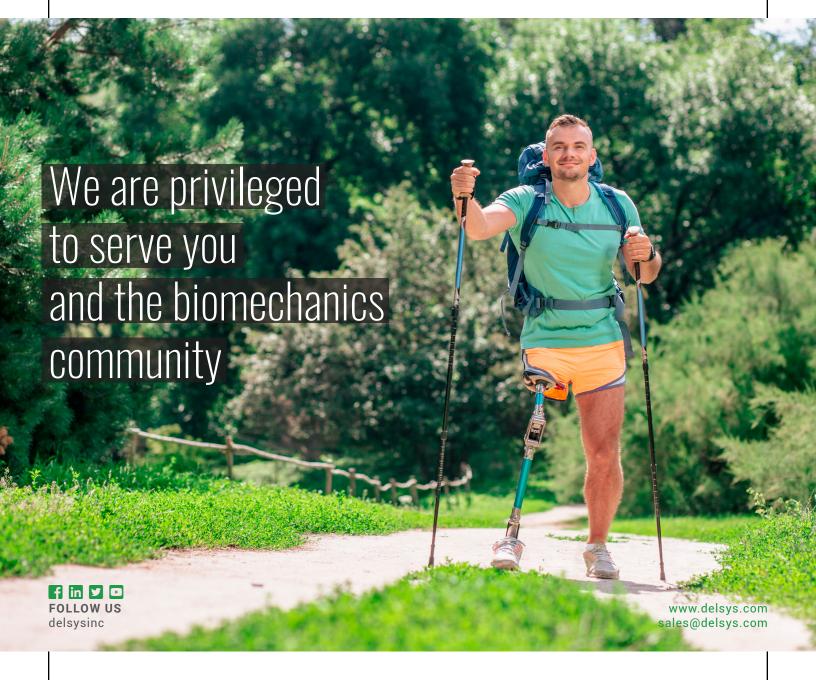
This has been an extraordinarily challenging year, but I would like to thank you for your incredible support to ASB. Next annual conference will be my last meeting as the Communications Committee Chair. Therefore, it would be great to identify someone who would be willing to take on the website once I am done. Please contact me via email if you want to get involved. As always, I am appreciative of the people behind the scenes who have helped to run things smoothly and make ASB stronger.

"That which can be asserted without evidence, can be dismissed without evidence."

- Christopher Hitchens

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TRIGNO LITE

Portable & low cost research-grade EMG system







TRIGNO MAIZE

16-ch HDsEMG sensor for mapping muscle patterns

ColorMap Software





TRIGNO GALILEO

Grid array sensor for extracting motor unit data



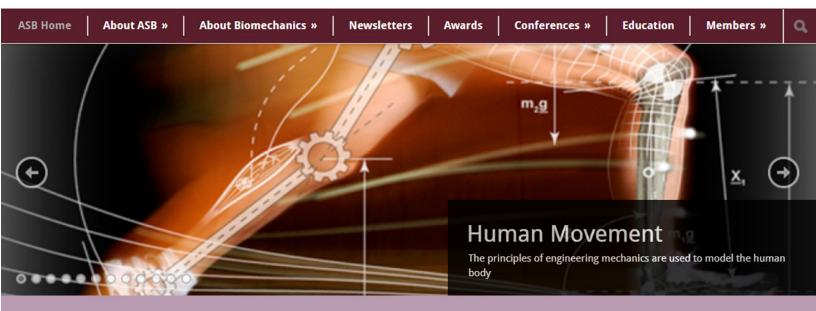
■ NeuroMap Software

Celebrating the 21st century's breakthrough science

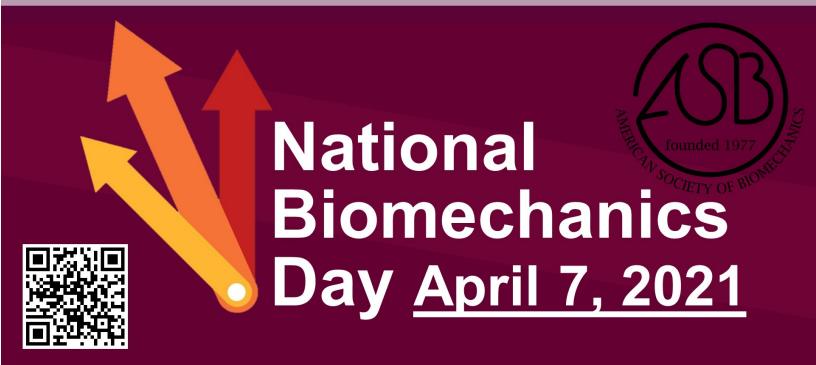


Stay Connected





...Supports National Biomechanics Day



President-elect

Elizabeth Hsiao-Wecksler

What's up ASB!!! Thank you for the honor of being elected to this position. I am excited about my future in the presidential line, and I hope to serve you well. After a long hiatus since being the Program Chair for the 2012 Annual Meeting, it has been great getting back onto the ASB Executive Board. Of course





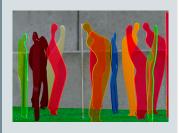
much has changed since then because our society continues to grow in membership, programming, and attendance at the Annual Meeting, and activities throughout the year.

Typically, the President-Elect spends the year soliciting proposals for upcoming Annual Meeting sites; however, due to the hard work of my predecessors and the topsy-turvy world due to COVID-19, the venues and hosts for the meetings through 2023 have already been identified: 2021 virtually by Georgia Tech in Atlanta (again), 2022 as part of the North American Congress on Biomechanics (NACOB) in Ottawa, and 2023 by the University of Tennessee in Knoxville.

A huge THANK YOU to Young-Hui Chang and his Atlanta team (Aaron Young, Boris Prilutsky, Greg Sawicki, Lena Ting, and Owen Beck) for quickly converting the 2020 Meeting to a VERY successful virtual event and for stepping up to host two back-to-back ASB Annual Meetings. (I think Young-Hui just has too much fun being on the ASB Executive Board and doesn't want to miss out!)

A main platform for my presidential campaign was to promote "additional Strategic Plan activities, practices, and policies that increase and support the currently low racial, ethnic, and ability-status diversity of meeting attendees/presenters, ASB members, and test participants in biomechanics research studies to better represent the diversity of the American population". Apparently, I was riding the same wave as a number of ambitious ASB members who were ready for action. As Ajit Chaudhari notes in his Diversity Chair article, three new diversity affinity groups started in 2020 (Black Biomechanists Association, Latinx in Biomechanix, and International Womxn in Biomechanics). Check out the contact information for each group in Ajit's article.

As an academic researcher, I know that funding agencies are particularly keen to support projects that are collaborative, interdisciplinary, and promote diversity. ASB members spread across different disciplines in a variety of institution types (academic, clinical, military, industry, and government), and many members use informal networking during the Annual Meeting to establish new relationships. Perhaps more formal pathways and opportunities within ASB, such as shared databases of contacts, targeted mixer events, and working with the diversity groups, could be developed to support further networking and collaborative projects. Such opportunities may be especially helpful for junior or less gregarious researchers or people exploring new areas. If you have ideas or want to be involved on this topic or others, feel free to reach out to me via email. Have a great winter and spring!



Diversity Committee Ajit Chaudhari

2020 continued to be a busy year for the Diversity Committee as we transitioned to new leadership and expanded our size to address ASB's increased focus on eliminating barriers caused by discrimination both within ASB and within our home institutions. The ASB Executive Board released a Statement on Sys-



temic Racism in June 2020, in which we commit our Society and our members to break down systemic barriers and insist on substantive change within our Society and at our own institutions. This statement followed on the heels of the ASB Code of Conduct, which focuses on creating a just and inclusive environment for all attendees of ASB events. The ASB has also become a member of the Societies Consortium on Sexual Harassment in STEMM, through which we hope to find resources and like-minded societies to support full implementation of the Code of Conduct and achieve a fully inclusive environment. Many of you attended our Diversity Event at the 2020 Virtual Meeting, and we have been poring over the many ideas generated during our discussion to identify the highest-priority and highest-potential opportunities for action. The Society has begun moving on several of these ideas with leadership from our affinity groups and regional meetings (see below), while we take a small bit of time to prioritize our actions in order to truly make an impact.

I'd like to welcome the returning and new members of the Diversity Committee: Alexa Johnson, University of Michigan; Alyssa Olivas, University of Texas at El Paso; Ana Ebrahimi, University of Wisconsin-Madison; Becky Zifchock, United States Military Academy; Christopher Wilburn, Auburn University; Deanna Schmidt Asakawa, California State University at San Marcos; Diba Mani, University of Florida; Frances Sheehan Gavelli, National Institutes of Health; Jill McNitt Gray, University of Southern California; Joan Bechtold, University of Minnesota; Jordyn Schroeder, Georgia Institute of Technology; Lindsey Trejo, Georgia Institute of Technology; Mary Foltz, University of Minnesota; Matt McCullough, North Carolina A&T State University; Matty Major, Northwestern University; Robin Queen, Virginia Institute of Technology; Srikant Vallabhajosula, Elon University; Susan Diekrager, novel electronics inc.

These members represent almost all dimensions of the ASB, from students to Fellows and across many different types of institutions from all over the country. We have now formed several sub-committees to help us make progress in many areas, and we look forward to providing further updates as we move forward.

In other news, the ASB East Coast Regional Meeting took place from October 4-11, 2020 with a focus on "Taking Action in Biomechanics." It was absolutely packed with programming to help us all better understand the opportunities to better support Black & Indigenous People of Color (BIPOC) in biomechanics. If you missed it, videos of almost all of the sessions have been posted so check it out!

I'd also like to give a shout out to our wonderful, vibrant recently formed affinity groups: Black Biomechanists Association (twitter: @BlackBiomechs, IG: blackbiomechs, email: blackbiomechanics@gmail.com), Latinx in Biomechanix (twitter: @LatinxBiomech, IG: LatinxBiomech, email: latinxbiomech@gmail.com), and International Womxn in Biomechanics (twitter:@IntWomxnBiomech,

Umbrellas are for Tourists

William Ledoux

Some of us involved with ASB communications have been reflecting upon the future form and factor of our newsletter. It has been since 2010 when the previous newsletter editor (and subsequent Communications Chair and ASB President) Michelle Sabick under took a wholesale revision of the newsletter,



resulting in the current pdf magazine format and color scheme. During my time as newsletter editor, we have added numerous features, including: grant-in-aid reports, annual meeting collages, and an article from the President-elect (2013); an article from the Diversity Chair, summary articles on ASB awards—both a review of the award qualifications and a summary of the annual winners, a two-page spread of things to do at the annual meeting, a summary the ASB regional meetings and travel awards (2014); obituaries of renowned biomechanists (2015); articles from ASB fellows, advertisements for National Biomechanics Day, snippets from the ASB archives, and a contempory discussion "What do you think about this?" (2016); and a summary of the Jr. Faculty research award and highlights from the ASB Facebook page (2017). All of this new content lead to a much larger newsletter—56(!) pages in the summer of 2017. More recently, we have made a concerted effort to focus some of the content and have been in 26-28 page range the last few years. However, we have recently examined how many people were reading the newsletter. Over the last 4 issues, approximately 65% of ASB members opened the email announcing the newsletter, but only 24% were clicking on the link to the newsletter itself. Clearly, the newsletter is not serving its purpose if less than a quarter of our members are reading it. So I've had several meetings with other ASB executive board members and with the professional management company that the ASB is now working with, and there was consensus that we need to change our newsletter. Nothing has been finalized yet, but expect a web-based newsletter that will likely come as a single email with multiple links to articles, perhaps with some snippets. One concern is that this new format makes the archiving of the newsletter difficult, but that is an issue that can be resolved. So for now, please enjoy the last ASB newsletter in this format and look forward to a new design and feel starting with the summer 2021 issue.







Diversity Committee, cont. Ajit Chaudhari

IG:@IntWomxnBiomech, email: intlwomxninbiomech@gmail.com). They have organized many virtual discussions and social events, and continue to do so every week it seems. Follow them on Twitter & Instagram or join their Slack channels to keep up on everything they are doing.

As always, if you'd like to provide any suggestions to our committee, we welcome hearing them at the ASB-Diversity Slack channel or via email.

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Back Copies of the Newsletter

All previous ASB newsletters have been converted into pdf documents and are archived on the ASB website.

NOTE:

For other listings of international conferences, please visit either the ISB's website or Biomch-L.

Events Calendar

Dan Gales

Orthopaedic Research Society Annual Meeting 2021

February 12-16, 2021

Virtual

Abstract deadline: past

www.ors.org/2021annualmeeting

American Physical Therapy Association Combined Sections Meeting

February 1-28, 2021

Virtual

Abstract deadline: past www.apta.org/CSM

5th Annual National Biomechanics Day

April 7, 2021 thebiomechanicsinitiative.org

i-FAB 2021 - International Foot and Ankle Biomechanics Meeting

April 11-14, 2021 Abstract deadline: past www.i-fab2021.com

Sixteenth International Symposium on the 3-D Analysis of Human Movement

May 24-28, 2021

Abstract deadline: January 29, 2021

https://www.regcytes.extension.iastate.edu/3dahm/

American College of Sports Medicine 2020

June 1-5, 2021

Virtual

Abstract deadline: past www.acsm.org/annual-meeting/annual-home

Gait and Clinical Movement Analysis Society

June 8-9, 2021 Virtual Abstract deadline: past na.eventscloud. com/website/17841



European Society of Biomechanics

July 11-14, 2021

Virtual

Abstract deadline: January 31, 2021 esbiomech.org/conference/esb2021

Society for Modeling and Simulation International

July 19-22, 2021 Fairfax, Virginia, USA, Hybrid Abstract deadline: March 1, 2021

scs.org/annsim/

XXVIII Congress of the International Society of Biomechanics

July 25-29, 2021 Stockholm, Sweden

Abstract deadline: January 31, 2021

isb2021.com

45th Meeting of the American Society of Biomechanics

August 10-13, 2021

Virtual

Abstract deadline: March 15, 2021 asb2021.me.gatech.edu/call-for-abstracts

39th Annual International Society of Biomechanics in Sports

September 3-7, 2021 Canberra, Australia Abstract deadline: TBD isbs.org/conferences/conferences-2/29-isbs2020





Virtual 45th Meeting of the American Society of Biomechanics

ASB2(0); August 10-13, 2021

Spreading the goodness of biomechanics one click at a time...



www.asb2021.me.gatech.edu

