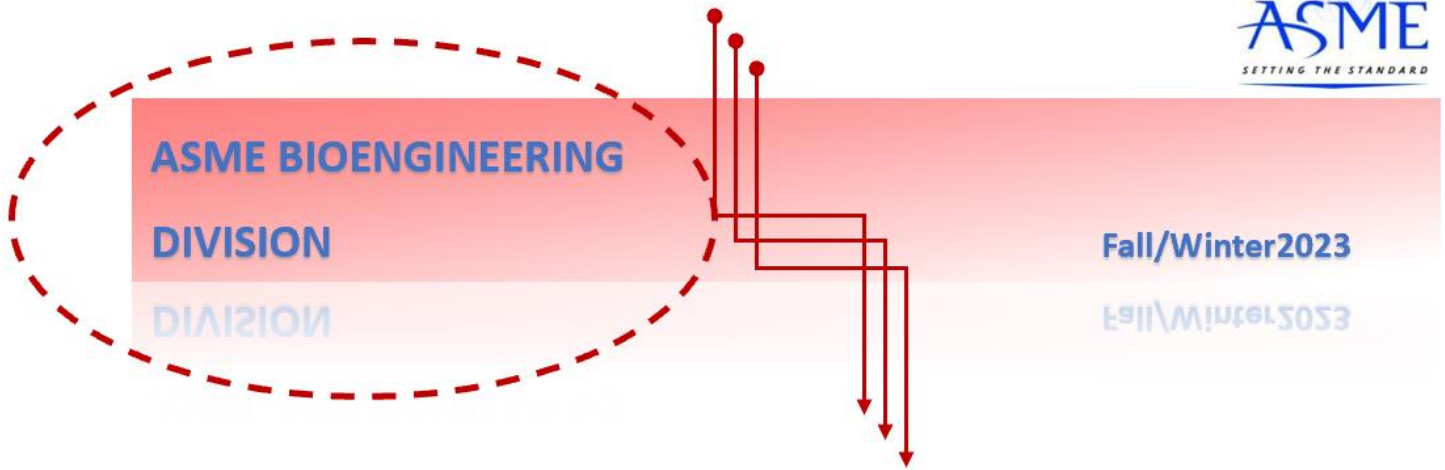


A scanning electron micrograph (SEM) showing a complex, porous biological structure. The structure is composed of numerous thin, interconnected fibers and larger, more solid-looking components. Three distinct, bright red, rounded shapes are highlighted within the structure, likely representing specific cells or components of interest. The overall appearance is that of a highly porous, interconnected network.

**ASME**

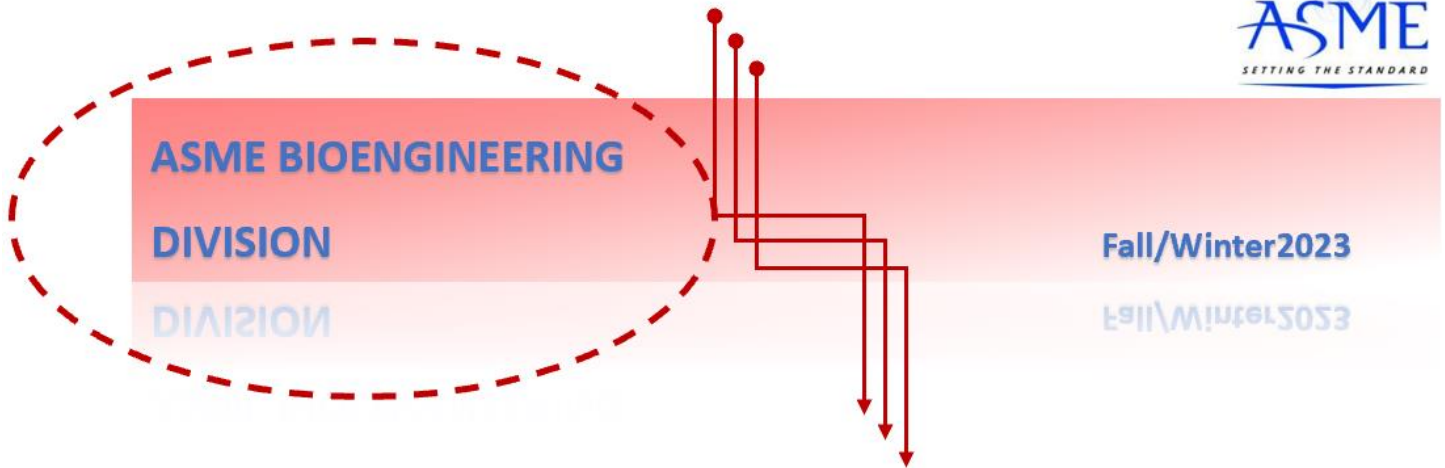
**Fall /Winter 2023**

***Bioengineering Division News***



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## Message from the 2022-23 Chair



[Shannon Stott](#)  
[BED Chair](#)  
2022-2023

What a year it has been! Over the past year, the ASME Bioengineering Division navigated what was undoubtedly a challenging year. Ultimately, I believe that we achieved great things. I am thrilled that we will continue many of the traditions that make our community so strong. I am also excited to think about

new growth within our division, as we expand to develop additional year-round activities to support all our members. To accomplish this, we engaged in difficult conversations, made complex decisions and faced moments of uncertainty. There were times when it would have been easy to make choices that would have divided our community. I am very grateful for everyone that was a part of this process, reminding me of how fortunate I am to be part of this incredible community. It is because of our community's commitment and dedication that we will continue to have 'one bioengineering conference' for many years to come.

Under the leadership of Stavros Thomopoulos (Conference Chair) and Guy Genin (Program Chair), we gathered in Vail, Colorado to explore the theme, "Building Interfaces Across Tissues, Disciplines, and Communities". Throughout our time in the Rockies, the conference showcased outstanding science, and provided the opportunity to discover new methods as well as participate in workshops and events that celebrated the diversity of our community. From a technology pitch competition to axe throwing, there was

something for everyone. Of course, it wouldn't be an SB3C event without a BEDRock performance! It was an honor to present the ASME Medals at the SB3C Banquet (pp 23). We were thrilled to have Ed and Harriet Grood at SB3C, as we awarded the inaugural Edward Grood Interdisciplinary Team Science Medal in Bioengineering to the Spine Research Interdisciplinary Team, led by Dawn Elliott and Robert Mauck. The ASME Bioengineering Division is grateful to all the conference organizers, our technical committees (pp 5-10) and the SB3C Foundation for their outstanding work.

As we approach the 2023 International Mechanical Engineering Conference and Expo (IMECE), I also want to acknowledge the work that the volunteers of the ASME Bioengineering Division does there as well. We are grateful for the many years that Ahmed Al-Jumaily has devoted to supporting our division's continued presence at IMECE. In 2022, over 100 abstracts were accepted from the Bioengineering Division (pp 19)! IMECE 2023 is quickly approaching, and I hope to see some of you in New Orleans (Oct 29-Nov 2).

Our Student Leadership Committee (SLC) is a critical component of our division. Rouzbeh Amini just completed his three-year term as the Student Affairs Committee Chair and Faculty Advisor and we are grateful for his service. Caleb Breggren has been a member of the SLC for many years and just completed his term leading as Chair. During the past year, Caleb and his committee worked to draft the SLC's first Operating Guide, providing a crucial set of governing rules and procedures. In addition to all their work at SB3C (pp 11), the SLC also hosted a virtual webinar in

**Message from the 2022-23 Chair**

February, with attendance spanning 21 different universities and participants of all career stages. I am incredibly proud of our student leaders, and I look forward to seeing their accomplishments under Shelby White's leadership in the next year.

ASME has spent more than 140 years promoting the art and practice of engineering and related science and has an outstanding journal program to support that effort. The ASME Bioengineering Division sponsors two impactful journals: the ASME Journal of Biomechanical Engineering (JBME) and the ASME Journal of Medical Devices (JMD). We are grateful to Tao (Vicky) Nguyen and C. Ross Ethier for providing another two years of service as co-editors in chief for JBME. After eight years at the helm of JMD, we would like to acknowledge and thank Rupak Banerjee and William Durfee for all their service and dedication to the journal. We are pleased to announce that Xiaoming (Shawn) He and Carl Nelson will serve as the new co-editors in chief of JMD.

There are many honors and accomplishments to celebrate this year for our ASME Bioengineering Division Members. We would like to acknowledge all our ASME members who have been elected to Fellow status (pp 21 - 22) and those who have been recognized with ASME medals (pp 23). This year, we had the special honor to see many of our members recognized with additional honors from ASME. Congratulations to Savio L-Y Woo for being recognized with ASME Honorary Membership, an honor awarded for a lifetime of distinguished service to engineering fields. Jennifer Wayne was also honored this year, receiving the ASME Dedicated Service Award. This award honors dedicated voluntary service to ASME, marked by outstanding performance and leadership. I also want to congratulate Parisa Saboori for her receipt of the 2023 ASME Outstanding Student Section Advisor Award and Robert Hauck for receiving the ASME Holley Medal for outstanding and unique acts of an engineering nature, accomplishing a noteworthy and timely public benefit. You can also read Bob's recent article "Adopting a Sustainability Mindset" on page 28.

The ASME Bioengineering Division continually works to improve communication with our members. In addition

to our division webpage, we are also active [LinkedIn](#) and Saboori for their three years of dedicated service as our Communication Specialists. We are pleased to welcome Yaling Liu into this role. Watch across these various platforms to learn of division activities. If you find that you are having difficulty receiving emails from the division, please reference page 31 or reach out to a member of the Executive Committee for help.

All our activities and more are possible thanks to a dedicated team of volunteers and ASME staff. Supporting me as Chair this year on the Executive Committee are Alison Marsden (Past Chair), Alisa Morss Clyne (Secretary), Spencer Lake (Secretary-Elect), Rafael Davalos (Treasurer), Matthew Fisher (Member Affairs), Rouzbeh Amini (Student Affairs), Robert Hauck (Member at Large), Jessica Oakes (Member at Large), Craig Goergen (Member at Large), Josue Sznitman (Member at Large), Zhenpeng Qin (Communication Specialist), Parisa Saboori (Communication Specialist), and April Tone (ASME Senior Manager of Tech Operations). I would like to express my personal gratitude to Jonathan Vande Geest, Steve Thomopoulos, and the members of the SB3C Foundation for their constant willingness to engage and work with us.

While we celebrate our achievements, I also recognize that there is more work to be done. Challenges will continue to arise, and new opportunities will present themselves. However, I am immensely grateful to all of you for your dedication and patience. It is clear that we are strongest when we are working together. Let us continue in this spirit, promoting the vitality of our division while also welcoming new voices to our community. It has been an honor to serve as the ASME Bioengineering Chair this year. I look forward to continuing to strive for our shared goals of supporting a diverse and vibrant community with the intent to promote positive societal impact through innovation, education, and scientific discovery.

Shannon Stott, Chair  
ASME Bioengineering Division  
2022-2023

@svploeg on [Twitter](#)  
[Volunteer Leadership Directory](#)

## Bioengineering Division Technical Committees

[Get Involved](#) > Technical Divisions

### Technical Divisions and Research Committees

At ASME, members can join one to five Technical Divisions, which are formed around professional and technical interests. Division membership is free and you'll be a part of a professional community dedicated to what matters to you.

#### Technical Divisions and Research Committees

By joining a Technical Division you are given access to a collaborative community of peers, leadership & volunteer opportunities, career development, numerous student activities, technical/research conferences, and the chance to contribute to the publication of technical journals. Find out more about [Technical Divisions](#).

#### [About Technical Divisions and Research Committees](#)

### Biotransport



[Bumsoo Han](#)  
Committee Chair,  
2020-2023

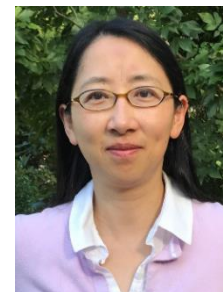
We would like to thank Bumsoo Han, the outgoing Chair, for his service, especially for his effort to form a new collaborative session at SB3C 2023 between BIOT and q-bio community about "Biotransport in Directed Cell Migration". At SB3C 2023, Xiaoming He collaborated with Jianping Fu and organized a workshop, Stem Cell Bioengineering for Modeling Development and Disease focusing on organoids. We would also like to

thank Malisa Sarntinoranont and Joanna Dahl for organizing and hosting quarterly mentoring seminars, which led to a new initiative of matching seminar speakers with seminar hosts in the biotransport/bioheat transfer group to especially promote the junior members' research achievements, started in the Spring 2023. We would like to congratulate Rupak K. Banerjee completing his term as the Editor of the ASME Journal of Medical Devices, Boris

Rubinsky as the recipient of the H.R. Lissner Model, and Rafael Davalos being elected to the National Academy of Inventors. Please follow @BioTScience for the latest news, position, and announcement related to biotransport. Thank Govind Srimathveeravalli, Rebecca Sandlin, and Shannon Tessier for running this channel.

[Bumsoo Han, Ph.D](#)  
Committee Chair  
[Sihong Wang, Ph.D](#)  
Committee Co-Chair

Twitter: [@BioTScience](#)



[Sihong Wang](#)  
Committee Co-  
Chair,  
2022-2023

## Design, Dynamics, & Rehabilitation



[Anita Singh](#)  
Committee Chair  
2020-2023

The Design Dynamics and Rehab (DDR) Technical Committee had another successful gathering with their members at the 2023 SB3C at the Grand Hyatt Resort in Vail, Colorado from June 4-8, 2023. The committee meeting was held on Wed, June 7 at 9:30 am in Cascade D. Members were engaged in the discussion of our ongoing activities, and the future direction of our

committee. This was an open meeting, and everyone interested in DDR topics (Biomechanics of Human Motion, Cardiovascular and Musculoskeletal Device Design, Design of Medical Technologies, Design of Global Health Solutions, Rehabilitation, and Assistive Technologies, and other related topics) were encouraged to attend. We were also excited to share that this year we had two podiums and one poster session. Our NSF-funded Undergraduate Design Chair,

Anita Singh, was held on Tuesday June 6 2023 and undergraduate teams presented their futuristic devices! We wish to extend a sincere thank you to all our DDR members who reviewed abstracts and continued to show their support. Please contact the committee Chairs to join our e-mail list for updates or any questions.



[Antonia Zaferiou](#)  
Committee  
Co-Chair  
2023-2026

Anita Singh, Ph.D

Committee Chair & Undergraduate Design Competition Chair

Antonia Zaferiou

Committee Co-Chair

## Fluid Mechanics



[Alejandro Roldan-Alzate](#)  
Committee Chair  
2022-2025

The Biofluids Technical Committee (TCOM) chairs and theme leaders were again focused this past year on implementing the collective feedback received from members during our annual committee meeting held at SB3C 2023 last June. Several important topics were discussed at the meeting, including uncertainty quantification (UQ), with the idea of increasing the awareness of UQ in imaging as well as experimental

and computational modeling. From these discussions, we were excited to host a UQ workshop titled Integration of Uncertainty Quantification into Experimental and Computational Biofluid Mechanics and hear from leaders in the emerging topic. For SB3C 2023, over 90 abstracts were submitted to biofluid mechanics topic areas for review. We would like to thank the theme leaders and community members for encouraging

submissions. We were excited to organize 9 scientific sessions (54 podium presentations) and feature 35 posters from the biofluid research domain at this year's conference. As done in past years, session co-chairs was feature a diverse group of junior faculty members and trainees to engage with speakers and attendees during each session.

Lastly, we want to thank John LaDisa from Marquette University for his leadership and service as the Biofluids TCOM Chair/co-Chair over the past 4 years. Thanks, John!

We also held our annual TCOM meeting at SB3C 2023. It was great to engage with community members in

[Alejandro Roldan-Alzate, Ph.D.](#)

Fluid Mechanics Committee Chair

[Lucas Timmins](#)

Fluid Mechanics Committee Co-Chair



[Lucas Timmins](#)  
Committee Co-Chair  
2022-2025

## Solid Mechanics



[Kristin Myers](#)  
Committee Chair  
2022-2023

This year we welcome David Pierce (University of Connecticut) as the co-Chair of the Solids Technical Committee. David and I worked with the sub-theme chairs on the programming of the 2023 Summer Biomechanics, Bioengineering, and Biotransport Conference (SB3C). Again, the committee reviewed and organized over half the abstracts submitted to this year's meeting. A special thanks

go to the following sub-theme chairs for managing the abstract review process and program building. The theme leaders are Cardiovascular: Daniela Valdez-Jasso and Jun Liao, Growth and Remodeling: Patrick Alford, Injury: Brittany Coats, Musculoskeletal: Matthew Fisher, Joint and Spine: Beth Winkelstein, Bone: Jacqueline H. Cole, and Other Solid Mechanics: Kristin Miller and Rouzbeh Amini. For the first time, The Other Solid Biomechanics sub-theme had an equal number of podium sessions to Cardiovascular, each having seven sessions at this year's Vail meeting. The Other Solid Biomechanics sub-theme continues to build each year, with sessions covering Ocular, Lung, Lower Abdomen, and Reproductive Biomechanics topics. Additionally, Solid TCOMM members collaborated with other TCOMMS to organize six workshops at the Vail meeting,

including Reimagining Scientific Visualization with Augmented Reality (Manuel Rausch & Mrudang Mather), Bridging Length Scales in Tissue Mechanics with Image-based Methods (Ottman Tertuliana, Callan Leutkemeyer, & Corey Neu), Effective Experimental and Computational Workflows with Applications to Biological Tissues (Luke Matter, Caleb Berggren, & Rouzbeh Amini), FEBio Workshop (Jeff Weiss & Gerard Ateshian), Force-Based Manipulative Therapy for Spine Treatment: What is it and how can engineers help? (Beth Winkelstein, Victor Barocas, & Arin Ellingson), Integration of Uncertainty Quantification into Experimental and Computational Biofluid Mechanics (Alejandro Roldan-Alzate & Lucas Timmons). Thank you to the organizers of these workshops for their service and to all of the Solids TCOMM for another successful SB3C meeting.



[David Pierce](#)  
Committee Co-Chair  
2023-2024

[Kristin Myers, Ph.D.](#)  
Committee Chair

[David Pierce, Ph.D.](#)  
Committee co-Chair

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## Volunteering at ASME

**Volunteers are the heart of ASME**

ASME relies on thousands of volunteers who devote their time and talents to support the critical work we do

# ASME BIOENGINEERING DIVISION

DIVISION

## Technical Committee Reports

### Tissue & Cellular Engineering



[David T. Corr](#)  
Committee Chair

For the 2023 SB3C meeting, our members reviewed 87 abstracts, including 9 finalists for the PhD paper competition, which represents 25% of the finalist for the PhD paper competition. We would like to thank the theme leaders for engaging with the community and encouraging abstract submissions. This year we had a very strong pool of TCE submissions, allowing us to organize

6 scientific sessions within TCE.

The Tissue & Cellular Engineering (TCE) Committee held their annual meeting on Wednesday June 7th at

8:30-9:20AM at the SB3C meeting, in room Gore CD.

We discussed past initiatives, ongoing activities, and the future direction of our committee in the ASME Bioengineering division. We took this opportunity to recognize the achievements of our members. This meeting was open to all conference attendees.

[David T. Corr, Ph.D](#)  
Committee Chair

[Alix C. Deymier](#)  
Committee Co-Chair



[Alix C. Deymier](#)  
Committee Co-Chair

## Technical and Engineering Communities Sector

The Technical and Engineering Communities (TEC) Sector is comprised of a diverse volunteer community representing technologies and ideas through technology groups, technical divisions, and research committees. TEC engages the extraordinary talents of its members to deliver content through existing and new conferences and events, as well as provide resources and subject matter expertise to create new opportunities, for the spread of engineering knowledge. Through these efforts, members grow and develop personally and professionally.



### TEC Sector Mission & Vision

#### Mission

To advance engineering, deliver technical content, and provide growth opportunities to our diverse community

#### Vision

To be the preeminent technical community that delivers solutions to meet evolving global challenges, by empowering our members

Get involved with the [Technical Divisions and Research Committees](#)

Connect with the TEC Council by visiting the [TEC Sector LinkedIn Group Page](#)

For any general questions regarding TEC Operations, email us at [asmetec@asme.org](mailto:asmetec@asme.org)



## Education Committee



[Victor Lai](#)  
Committee  
Co-Chair  
2022-2025

During our Education Technical Committee annual meeting held last year at SB3C 2022, we focused on ways to increase education abstract submissions to the conference. One key suggestion involved funding for teaching/term faculty to attend the conference, since non-tenure-track faculty typically have limited funding opportunities for professional development travel. Email reminders were also sent out

towards the end of the Fall semester to encourage faculty to think about any new ideas they implemented in their classrooms that could be submitted as conference abstracts. We are happy to report that SB3C 2023 featured 6 podium presentations and 3 poster presentations on Education, and we enjoyed seeing many of you at these presentations.

We are also excited to announce a special section on Education in Biomechanics in the Journal of Biomechanical Engineering! Call for papers are open, and you may find more information regarding this special section [here](#).

During our annual meeting, we also elected new leadership to this Technical Committee. As the former

co-chair of the committee for the past three years, I am honored to be elected as the committee chair for 2022 – 2025. I am also excited to be working with our two newly elected co-chairs, Dr. Chiara Bellini from Northeastern University, and Dr. Zhongping Huang from West Chester University. Both Chiara and Zhongping are passionate about BME education, and bring many fresh ideas that will strengthen and support the work of this committee. Please email us if you have any questions or suggestions or would like to get more involved with the Education Committee!



[Chiara Bellini](#)  
Committee  
Co-Chair  
2022-2025

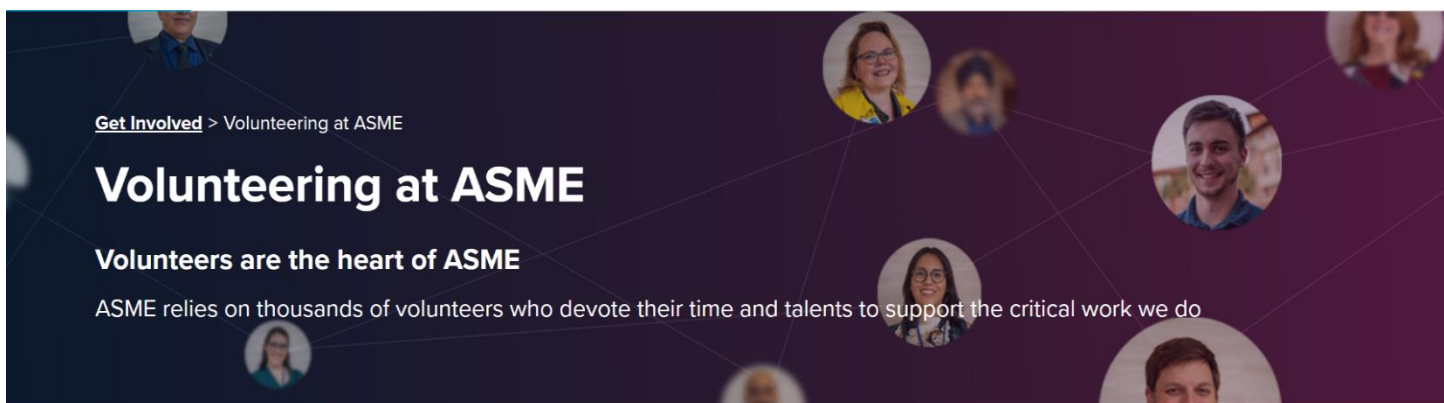


[Zhongping Huang](#)  
Committee  
Co-Chair

[Victor Lai, Ph.D.](#)

Education Committee Chair

[Dr. Chiara Bellini and Dr. Zhongping Huang](#)  
Committee Co-chairs



## Industry Committee



[Ethan Kung](#)  
Committee Chair

Our committee planned three exciting events for the 2023 SB3C Conference in Vail, Colorado. These events focused on highlighting the translational work within our research community and building connections between industry and academia.

First up, we had the Translational Technology Pitch Competition. This special session featured competition finalists giving brief pitches focused on business startup concepts to a panel of academic and industry experts. The panel then provided feedback regarding the technology, regulatory, and business paths forward. All pitches were outstanding, but as it was a competition, we would like to congratulate Govind Srimathveeravalli (1<sup>st</sup> Place) and Lance Frazer (2<sup>nd</sup> Place).

Following the pitch competition, we hosted a Networking Mixer. This mixer offered opportunities for attendees to connect with the finalists, panelists, as well as poster presenters of additional selected submissions of the competition.

Finally, we had the Translational Technologies and Devices technical session. The research highlighted in this session includes work that advances the project towards the next step in translation: pre-clinical

research, clinical research, clinical implementation, and public health stages. The session's main goal was to showcase engineering developments that can translate methods or tools to address problems in the bio-related industry.



[Lin Li](#)  
Committee Co-Chair

Together, these special events aimed to increase the value and attraction of SB3C to industry members (thereby encouraging the much-needed industry attendance and engagement in SB3C) as well as to provide venues for industry-academic connections.

Our committee meetings are open to anyone interested in being involved or staying updated on relevant activities. If you are unable to attend our meetings, you can join the committee by emailing us.

[Dr. Ethan Kung](#)  
Committee chair

[Dr. Lin Li](#)  
Committee co-chair

[Get Involved](#) > Volunteering at ASME

# Volunteering at ASME

**Volunteers are the heart of ASME**

ASME relies on thousands of volunteers who devote their time and talents to support the critical work we do

## Student Affairs and Student Leadership Committee

The student leadership committee (SLC) continues its efforts to engage students at all career stages throughout the year and to provide valuable resources to help them succeed. During the past academic year, SLC hosted a webinar entitled “Making Memorable Conference Presentations” on February 2<sup>nd</sup>, 2023. The webinar guests, Dr. Jane Grande-Allen, a professor at Rice University, and Dr. Ian Sigal, a professor at the University of Pittsburgh, had an engaging discussion with the virtual attendees. They covered a few important areas for members in training including, skills for young students to practice in preparation for a presentation at a conference, common and avoidable mistakes when presenting a conference podium/poster presentation, advice for students giving their *first* talk/poster presentation, strategies as how to include a clear and meaningful take-home message, and best ways to prepare and manage any nerves before/during presentations. This Webinar was attended by members of 21 different universities, including students, postdocs, and faculty.

SLC also hosted a couple of events during SB<sup>3</sup>C 2023 which was held in Vali, Colorado, including a networking event and axe-throwing melee, and a workshop entitled “Effective Experimental and Computational Workflows with Applications to Biological Tissues.” Finally, SLC has drafted its first bylaws, a crucial set of rules and regulations that govern the internal operations and management of the committee. These well-defined guidelines act as a blueprint for the SLC’s structure, decision-making processes, roles, and responsibilities of members, and the overall conduct of its affairs.

### Meet the Members of the Student Leadership Committee:



Rouzbeh Amini

### Student Affairs Committee Chair and Faculty Advisor (2020-2023)

As the faculty advisor, Dr. Amini oversees and mentors the student leadership committee, communicates important information from the SB<sup>3</sup>C organizing committee, and acts as a liaison between the student leadership, ASME Bioengineering Division, and SB<sup>3</sup>C organizing committee.



Caleb Berggren

#### Chair

Caleb organizes Student Leadership Committee efforts to best serve the ASME-BED student body and works with Dr. Amini to coordinate with the ASME-BED Executive and SB<sup>3</sup>C Planning Committees. He also conducts SLC meetings and advises other SLC chairs with their projects and responsibilities.



Shelby White

#### Co-Chair

Shelby supports the chair and other members of the Student Leadership Committee with their various responsibilities. She also organized and led the documentation of the SLC bylaws.



**Mari Domingo**  
**Secretary**

Mari is responsible for coordinating committee meetings. In addition, she oversees attendance and record keeping for committee related affairs.



**Adam Galloy**

**Social Events Chair**

As the social events chair, Adam plans the ASME BED Student Networking Event to foster community and engagement between students in bioengineering and related fields.

**International Member**



**Ana Vargas/Marco Nino**

**In-Person Networking Chair**

As the In-Person networking Chairs, Ana and Marco provide support for in-person networking events at the



**Shiyin Lim**  
Social Media Chair



**Luke Mattar**  
Student Workshop Chair

As an international member, Shiyin Lim, our Social Media Chair, adds a unique flair to our online presence, showcasing the diversity of our community.

Student Section Leaders:

**Submit your Student Section Update Form**

[Click here to access the Student Section Update form](#)

## Women's Networking Group at SB<sup>3</sup>C

The Women's Networking Group brings together women faculty and industry leaders at the SB<sup>3</sup>C (Summer Biomechanics, Bioengineering and Biotransport Conference) to strategically promote a diverse and inclusive environment within the division. This group has been meeting since 2007 with the purpose to provide mentoring, networking and communication for women involved in the biomechanics field to help further their careers. It also seeks to promote the careers of women by identifying those that are eligible and deserving of awards and fellow status within ASME as well as other professional societies.

In February 2023, a mid-year webinar was hosted which featured Dr. Susan Franks an Associate Professor in Family and Manipulative Medicine at the University of North Texas Health Science Center at Fort Worth. Her talk THE JOURNEY: DISCOVERING YOUR FUNDAMENTAL APPROACH TO UNIVERSAL CHALLENGES guided us through a self awareness exercise. Across cultures, we have in common a universal set of challenges and ways of responding that transcend culture and fall into common themes. These ways of coping infiltrate the varied situations that we deal with on a day-to-day basis and that we have come to rely on in times of crisis. In The Journey, we were taken through a set of universal challenges in a guided imagery exercise to uncover the fundamental nature of our personal coping strategies. Through the shared experience with others, we gained insights that can serve to promote more flexible adaptations to personal challenges.



\*\*\*We are accepting nominations for committee members. If you would like to participate and help mentor and promote women bioengineers please let someone in the committee know.\*\*\*



### Bioengineering Division Women's Networking Group Leadership Team

 Rita Patterson Univ. of North Texas Health Sciences Center	 Jennifer Wayne Virginia Tech	 Michele Grimm Michigan State Univ.	 Tamara Bush Michigan State Univ.	
 Alisa Morse Clyne Univ. of Maryland	 Stephanie Cone Univ. of Wisconsin	 Rebecca Heise VA Commonwealth Univ.	 Ellie Rahbar Wake Forest Univ.	 Hallie Wagner Medtronic

Summer Conference: [www.sb3c.org](http://www.sb3c.org)      LinkedIn: <https://www.linkedin.com/groups/8550818/>  
 ASME Community Group: [https://community.asme.org/bioengineering\\_division/w/wiki/16718.bed-committees.aspx](https://community.asme.org/bioengineering_division/w/wiki/16718.bed-committees.aspx)

## Editor's Note: ASME Journal of Biomechanical Engineering



C. Ross Ethier  
Editor-in-Chief

[The ASME Journal of Biomechanical Engineering](#) continues to thrive. As was the case for many journals, 2022 saw a downturn in submissions, likely due to authors having cleared their queues of manuscripts that “just needed to be written up” during the pandemic. Fortunately, submission numbers have come roaring back in

2023; if we continue on present trends, we will match or exceed the typical annual number of pre-pandemic submissions. The Associate Editors of the journal do the “heavy lifting” to make the review process run smoothly. We sincerely thank all the AEs for their hard work and dedication. This year, the following AEs completed their terms: Kyle Allen, Brittany Coats, Grace O’Connell, Raffaella De Vita, and Liang Zhu. We thank each of them for their service. We welcomed a diverse slate of new AEs: Hannah Dailey, Matthew (Matty) Major, Kharma Foucher, Sandra Loerakker, Jing Du, Rafael Davalos, and Mariana Kersch. Persons at Associate Professor or higher rank, or with equivalent industrial positions/experience, are encouraged to contact Vicky and Ross if they are interested in possibly becoming an Associate Editor for JBME.

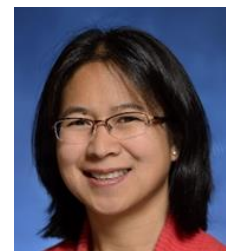
The Journal has the pleasure of awarding every year the Richard Skalac Award for the best paper published in that year. The winner is selected by an independent external committee from a list of Editor’s Choice papers nominated by the Associate Editors. We thank the committee members, Liesbet Geris (chair), Harry van Lenthe, Joel Boerckel, Michelle Oyen, Claire Villette and Himanshu Kaul, for their hard work. The winner of the 2021 and 2022 Skalac Awards, along with the 2021 and 2022 Editor’s Choice papers, will be announced in the 2023 Annual Special Issue.

Darryl Dickerson, our inaugural Diversity Advocate, ran a very successful workshop at SB3C 2022, on “Diversity and Inclusion in Academic Publishing”, sponsored by the journal. Arising from that workshop, he and Sara Roccabianca are jointly organizing a special issue for 2023 on “Inclusive Science and Engineering”. Dr. Dickerson will run another journal-sponsored workshop at SB3C 2023, entitled “Demystifying the Review and

Editing Process,” to which all are invited. Speaking of special issues, in 2022/23, we honored the many contributions of the former Editors-in-Chief, Victor Barocas and Beth Winkelstein, with a special issue, as well as running our normal Annual Special Issue. We also had a special issue on Data-Driven Methods in Biomechanics

(November 2022). Huge thanks to Guest Editors Adrian Buganza Tepole, Jessica Zhang, and Hector Gomez for the Data-Driven special issue, to Ed Sander and Kyle Quinn for acting as guest editors for the “Victor and Beth” special issue, and to Joao Soares for leading the 2023 Annual Special Issue. In 2024, we will run our Annual Special Issue, as well as a special issue on Current Trends in Impact and Injury Biomechanics (Guest editors: Matt Panzer, Barclay Morrison, and Francisco Jose Lopez Valdes) and a Special Section on Education in Biomechanics (Guest Editors: Debanjan Mukherjee and Victor Lai). JBME welcomes proposals for special issues and review articles on emerging topics and on computational and experimental methods in biomechanics and bioengineering. Persons interested in organizing a special issue are encouraged to contact Ross and Vicky.

In addition to the new AEs listed above, we welcomed Hannah Dailey as an Associate Editor with the special mandate to increase the journal’s social media footprint. Dr. Dailey created the @JBMEjournal Twitter account to profile all newly published articles in JBME (#newinJBME), as well as the most highly cited article of the month published 5 years ago (#JBME #ThrowbackThursday). The tweets are being retweeted regularly and garnering hundreds of impressions. We greatly appreciate all her hard work. We are searching for a second Diversity Advocate and a second Communications AE. Those interested in working with the Editorial Board to advance the Journal’s mission in Diversity, Equity, and Inclusion, and to improve the Journal’s reach and impact are encouraged to contact Ross and Vicky. C. Ross Ethier Editor-in-Chief Vicky Nguyen Editor-in-Chief.



Vicky Nguyen  
Editor-in-Chief

## Editor's Note: Journal of Medical Devices



Rupak K. Banerjee  
Co-Editor

Our two-terms (eight years) as Co-Editors of the Journal of Medical Devices (JMED) conclude at the end of this year. First and foremost, we take this opportunity to thank all of the readers, knowledgeable reviewers, diligent associate editors (AEs) and guest editors (GEs), and the editorial staffs of ASME as well as its committees - Bioengineering

Division (BED), Design Engineering Division (DED and Technical Committees on Publication and Communications (TCPC) - for their continued support in moving forward JMED to a greater height.

JMED focuses on applied research related to the development and testing of new medical devices. This journal reports on devices that improve diagnostic procedures, interventional methods, and therapeutic treatments. It provides special coverage of novel devices that allow innovative surgical strategies, methods of drug delivery, and futuristic devices that are intended to reduce the complexity, cost, or adverse results of health care. Significant biomechanical engineering content is linked to devices across all dimensional scales, ranging from cells, tissues, organs to whole body, coupled with pre-clinical and clinical content. JMED publishes full-length research articles, technical briefs, announcements, calls for papers, calendar of events, and letters to the editor. The Design Innovation Paper category reports about novel devices for which there may be less extensive clinical or engineering results.

The March 2023 Issue marked 17 full years of JMED. For 2023, we are delighted to report continued progress, focusing on activities that are expected to further strengthen JMED.

In June of 2023, JMED will publish the Special Section on Tissue Engineering and Regenerative Medicine. Since 2017, JMED has published six special issues on important cutting-edge technology: a) COVID-19 Medical Devices: Prevention, Diagnosis, and Treatment in March of 2022; b) Medical Robotics and Human

Interfaces in March of 2021; c) Medical Devices for Economically Disadvantaged People and Populations in March of 2020; d) 3D Printing of Medical Devices in September of 2019; e) Microscale Medical Devices in December in December of 2018; and f) Cardiovascular Device Development and Safety Assessment using Computational and/or Experimental Approaches in June of 2017.



William Durfee  
Co-Editor

The current 1-year (2021) JMED journal impact factor (JIF) improved by 28%. On a similar note, the 5-year (2016-2021) JIF increased by 17%. Additionally, JMED is observing a positive trend in the number of citations. In 2021 the citation increased by 15%, from 707 to 814. The increase in long-term JIF and number of citations is indicative of the fact that the JMED is heading in the right direction. The increasing trend of the JIF and citations is reflective of the addition of special issues, the removal of Design of Medical Devices conference papers, and the modification of the editorial review process that includes a priori review by one of the co-editors before assignment of manuscript to AEs or GEs. Manuscripts, which do not meet JMED journal criteria are either returned to authors with suggested major changes for resubmission or are rejected using fast track process.

In the last year we have added a new associate editor, which has helped to keep up with the increased submissions and reduced review time, while adding special issues and covering a broader scope of topics. JMED continues to accept nominations for additional associate editors. Please send your nominations to either of the co-editors.

While we sign off as co-editors, we look forward to the continued progress of JMED under new co-editors. It was our great privilege to serve JMED to the best of our capabilities.

Rupak K. Banerjee, Ph.D., University of Cincinnati  
William Durfee, Ph.D., University of Minnesota

## Editor's Note: ASME Journal of Engineering and Science in Medical Diagnostics and Therapy



Ahmed Al-Jumaily  
Editor

**Ahmed Al-Jumaily**, Professor of Biomechanical Engineering (Auckland University of Technology, New Zealand) serves as the Editor-in-Chief of the **ASME Journal of Engineering and Science in Medical Diagnostics and Therapy**.

The [journal](#) seeks to bridge the gap between engineers and non-engineers and translate engineering knowledge into clinical applications in order to accelerate biomedical innovation, trials and commercialization. The Journal publishes original research focused on implementation of engineering and science principles in medical diagnostics, imaging, characterization, and therapy. It spans four primary areas where engineering impacts applied biomedicine: biotechnology in pharmaceuticals; clinical applications of This Special Issue includes original research and review articles in the area of minimally invasive thermal therapies not limited to radiofrequency ablation (RFA), microwave ablation (MWA), cryoablation, LASER ablation, nanoparticle assisted therapies, etc. The focus of the Special Issue will be on understanding the importance of different operating factors affecting the ablation of benign and malignant tumors located in different organs of the human body (or in animal models) and their safe removal. The assessment of

### Topic Areas

- Modeling of tissue-thermal energy interaction during ablation
- Ablation of early-stage tumors
- Ablation of medium (3.5 cm diameter) and large size tumors (>3.5 cm diameter)
- Breast tumors
- Hepatocellular carcinoma
- Tumors in lungs
- Colon cancer

biomaterials; biotechnology in clinical systems; and imaging, diagnostics, and therapeutics. We do encourage colleagues from the BED to join the Editorial Board. The Journal has completed six successful years with 6 volumes and 24 issues including five special issues. The journal has been cited by several indices. Example:

Scopus: <https://www.elsevier.com/search-results?query=ASME%20Journal%20of%20Engineering%20and%20Science%20in%20Medical%20Diagnostics%20and%20Therapy>

Engineering Index: <https://www.elsevier.com/search-results?query=ASME%20Journal%20of%20Engineering%20and%20Science%20in%20Medical%20Diagnostics%20and%20Therapy>

The JESMDT website can be found at:  
<https://journaltool.asme.org/home/JournalDescriptions.cfm?JournalID=32&Journal=JESMDT>

technical safety and feasibility of these methodologies for successful treatment of deep-seated tumors inside the human body will also be an important part of the Special Issue. Articles will include data from clinical, in vivo, in vitro and numerical studies. The main aim of this Special Issue is to update clinical practitioners and researchers with recent research on minimally invasive thermal therapies.

- Kidney cancer
- Contraction of tissue during ablation
- Safety of healthy organs/surrounding tissue
- Advances in minimally invasive thermal therapies

### Publication Target Dates

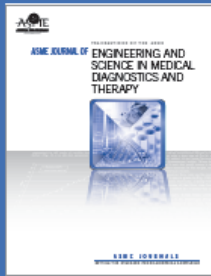
Paper submission deadline May 1, 2023

Initial review completed August 1, 2023

Special Issue publication date November 2023

Submission Instructions





OPEN FOR SUBMISSIONS

# ASME Journal of Engineering and Science in Medical Diagnostics and Therapy

**EDITOR-IN-CHIEF**

**Ahmed Al-Jumaily**

Institute of Biomedical Technologies  
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New Zealand  
[asmejmdt@aut.ac.nz](mailto:asmejmdt@aut.ac.nz)

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(Continued on back)

- TIMELY
- ACCESSIBLE
- HIGH IMPACT

The *ASME Journal of Engineering and Science in Medical Diagnostics and Therapy (JESMDT)* is a unique publishing forum for the international community of engineers, scientists, and medical researchers contributing to innovative and improved healthcare solutions that stand to transform the dynamics of disease prevention, diagnosis, and treatment.

The journal includes original research articles, review articles, case studies, and technical briefs on subjects, methods, processes, and testing that leverage fundamental mechanical engineering research to create new diagnostic and therapeutic applications in hospitals, clinics, and in consumers' hands and homes.

The journal bridges the gap between basic theoretical and analytical research, modeling and computational engineering, and experimental, lab-proven, and clinical research and its biomedical and biotechnology applications, and contributes to T1 translation research objectives to accelerate biomedical innovation, trial, and commercialization.

The journal publishes high quality, peer-reviewed, and advanced engineering research on materials, therapies, technology, systems, methods, and processes in four primary areas where engineering impacts applied biomedicine:

- Biotechnology in Pharmaceuticals
- Clinical Applications of Biomaterials
- Biotechnology in Clinical Systems
- Imaging, Diagnostics, and Therapeutics

**SCOPE**

Includes but is not limited to:

- Clinical Diagnostics, Imaging and Characterization
- Therapeutic Techniques, Equipment and Procedures
- Clinical Applications of Biomaterials, Chemical Processes and Pharmaceuticals
- Micro and Nanotechnology in Medicine
- Cell Physiology and Applied Mechanics
- Computers in Medicine and Biotechnology
- Drug and Gene Delivery Science and Biopharmaceuticals
- Cancer Diagnostics and Treatments
- Electro-mechanical and Chemical Sensors Technology
- Wave Propagations in Medical Applications, including Vibration, Acoustics, Ultrasound and Electrography
- Sports Medicine and Prevention of Impact Injury
- Mechanopharmacology and Mechanobiochemistry
- Clinical System Dynamics and Control
- Engineering and Science in Clinical Applications

Article submission, visit:

[journaltool.asme.org](http://journaltool.asme.org) <<<

(select *ASME Journal of Engineering and Science in Medical Diagnostics and Therapy*)

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**Reuben Kraft**  
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**Mihai Mihaescu,**  
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Medical Diagnostics and Therapy**)

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The ASME Journal of Engineering and Science in Medical Diagnostics and Therapy (JESMDT) complements ASME's new **Alliance of Advanced BioMedical Engineering** (<https://aabme.asme.org/>), a society initiative designed to bring together practitioners in the growing and increasingly indispensable discipline of biomedical engineering. The Alliance is designed to serve as a trusted neutral convener and content provider. It offers a broad range of professional and networking resources to bridge the gap between basic research and applied research.



## IMECE® International Mechanical Engineering Congress & Exposition®

# Program

### Track 6: Biomedical & Biotechnology Engineering



**Yi (Jason) Hua**  
University of Mississippi  
University, MS  
Track Chair



**Yuan Feng**  
Shanghai Jiao Tong University  
Shanghai, China  
Track Co-Chair



**Linxia Gu**  
Florida Tech  
Melbourne, FL  
Track Co-Chair



**Ahmed Al-Jumaily**  
Auckland University of Technology  
Auckland, New Zealand  
Track Co-Chair

This track focuses on the implementation of various engineering principles in the conception, design, development, analysis and operation of biomedical and biotechnological systems and applications. Authors and presenters are invited to participate in this track to expand international cooperation, develop understanding of bioengineering principles and methodology and promote efforts in implementing engineering principles to biomedical and biotechnological systems. There were 181 abstracts submitted and 108 were accepted and presented at the congress, in which 80 full papers were published in the proceedings. The proposed topics were 16, in which 11 topics with different sessions were finalized in the Track. The Track was organized by Linxia Gu Florida Institute of Technology, Martin Tanaka Western Carolina University, Reuben Kraft Pennsylvania State University, and Ahmed Al-Jumaily Auckland University of Technology. The topics with organizers are summarised below:

#### Track 5: Biomedical and Biotechnology Plenary

**Organizer:** Ahmed Al-Jumaily, Auckland University of Technology

##### 5-1: Injury and Damage Biomechanics (5 sessions)

**Organizer:** Reuben Kraft      Amit Bagchi      Karim Muci

##### 5-2: Vibration and Acoustics in Biomedical Applications (1 session)

**Organizer:** Ahmed Al-Jumaily      Toshihiko Shiraishi      Takashi Saito      Yuan Feng

**5-3: Biomedical Imaging, Therapy and Tissue Characterization (1 session)**

Organizer: Xiaoning Jiang      Ramjee Repaka      Mohammad Al-Rawi

**5-4: Biomaterials and Tissue: Modelling, Synthesis, Fabrication and Characterization (2 session)**

Organizer: Seyed Allameh      Anil Saigal      Karen Chang Yan      Hai-Chao Han

**5-5: Biomedical Devices (2 sessions)**

Organizer: Julie Z. Hao Yingtao Liu      Lulu Wang

**5-6: Dynamics and Control of Biomechanical Systems (1 sessions)**

Organizer: Dumitru Caruntu      Bogdan Epureanu      Davide Piovesan

**5-7: Symposium on Clinical Applications of Bioengineering (0 sessions)**

Organizer: Douglas Dow      Karen Chang Yan      Kalyani Nair

**5-8: Biotransport (Fluid, Heat and Mass) (1 sessions)**

Organizer: Cahit A Evrensel      Ramjee Repaka      X. Gary Tan

**5-9: Computational Modeling in Biomedical Applications (3 sessions)**

Organizer: Yi (Jason) Hua      Shawn Duan      Ramjee Repaka      Mohammad Al-Rawi

**5-10: Musculoskeletal and Sports Biomechanics (2 sessions)**

Organizer: Peyman Honarmandi      Anne Schmitz      Asheesh Lanba

**5-11: Sensors and Actuators (2 sessions)**

Organizer: Lulu Wang      Liandong Yu      Haojie Xia

**5-12: Robotics, Rehabilitation (2 sessions)**

Organizer: Ping Zhao      Bin Zi      Peyman Honarmandi

**5-13: Bio Artificial Intelligence (0 sessions)**

Organizer: Asheesh Lanba      Parisa Saboori      Pezhman Hassanpour

**5-14: Biotechnology and General Applications (1 sessions)**

Organizer: Maurizio Manzo

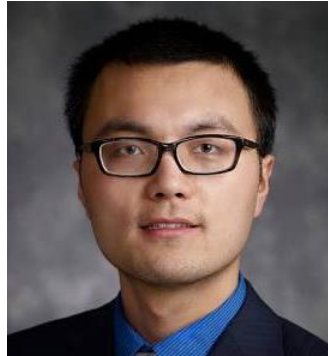
**5-15: General Biomedical and Biotechnology (3 sessions)**

Organizer: Maurizio Manzo

**ASME Fellows 2022-2023**



**Grace D O'Connell**  
University of California,  
Berkeley



**Zhenpeng Qin**  
University of Texas at Dallas



**Kenneth Fischer**  
The University of Kansas



**Zong-Ming Li**  
The University of Arizona



**Lijie Grace Zhang**  
The George Washington  
University



**Marc Horner**  
Ansys



**Steven Anton**  
Tennessee Tech University



**Sheldon Wang**  
Midwestern State University



**Dong Sun**  
City University of Hong Kong

## ASME Fellows 2022-2023



**Goldie Nejat**  
University of Toronto



**Eric Freeman**  
University of Georgia



**Bruce Tai**  
Texas A&M University



**Parsaoran Hutapea**  
Temple University



**Chetan Nikhare**  
Pennsylvania State University



**Guru Madhavan**  
University at Albany



**Pablo Zavattieri**  
Purdue University



**Subha Kumpaty**  
Milwaukee School Of  
Engineering

**Fellow**  
**Nomination**  
**Application**

## ASME Bioengineering Division Awards

### Y.C. Fung Early Career Award 2023



Jessica M. Oakes  
Associate Professor  
Northeastern University

### H.R. Lissner Medal 2023



Boris Rubinsky  
Professor  
UC Berkeley

### Van C. Mow Medal 2023



Alison L. Marsden  
Professor  
Stanford University

### Robert M. Nerem Education and Mentorship Medal 2023



Victor H. Barocas  
Professor  
University of  
Minnesota Twin Cities

### Savio L-Y. Woo Translational Biomechanics Medal 2023



Tamara Reid Bush  
Professor  
Michigan University

### Savio L-Y. Woo Translational Biomechanics Medal 2023



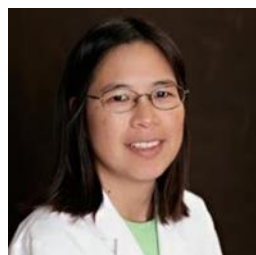
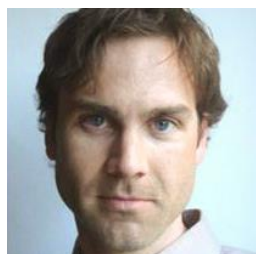
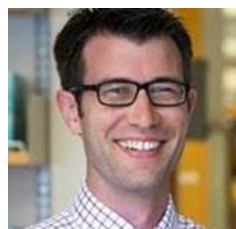
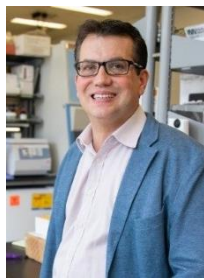
Dr. Dawn Elliott



Dr. Robert Mauck

The Spine Research Interdisciplinary Team: Edward Vresilovic, Harvey Smith, Neil Malhotra, Thomas Schaer, Lachlan Smith, Sarah Gullbrand, John Peloquin, Nandan Nerukar, Grace O'Connell, Daniel Cortes, John Martin

**Associate Editors – Thank you!**



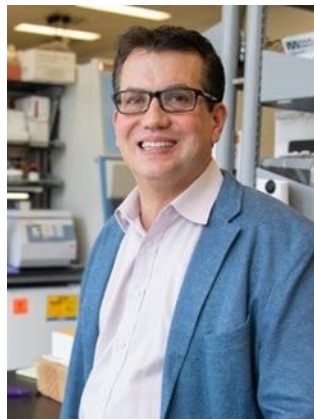
Thank you!



## Welcome New Associate Editors!



Dailey, Hannah (Lehigh)



Davalos, Rafael (Virginia Tech)



Du, Jing (Penn State)



Foucher, Kharma (UI Chicago)



Kersh, Mariana (Illinois at UC)



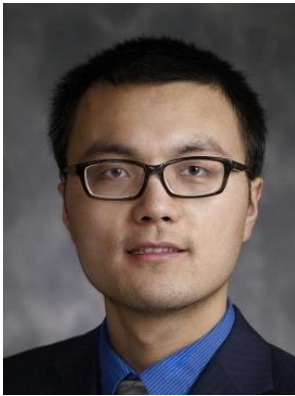
Loerakker, Sandra (Eindhoven)



Major, Matthew (Northwestern)

# Welcome Aboard!

## ASME Bioengineering Division Leadership Communication and Outreach



[Zhenpeng "ZP" Qin](#)  
Communication & Outreach Specialist

Effective communication media, mainstream news outlets, as well as local and university news outlets. I believe that the best communication strategy integrates these channels to maximize the impact. As not everyone is on Twitter or watching news on TV, integrating these strategies will reach the broadest audience. I will work with the executive board and leaders of the field (ASME

Medal winners, TCOM chairs, journal editors, Bioengineering Division Executive Committee) to develop a vision for communication and outreach. I will build an effective communication and outreach team to implement the vision."

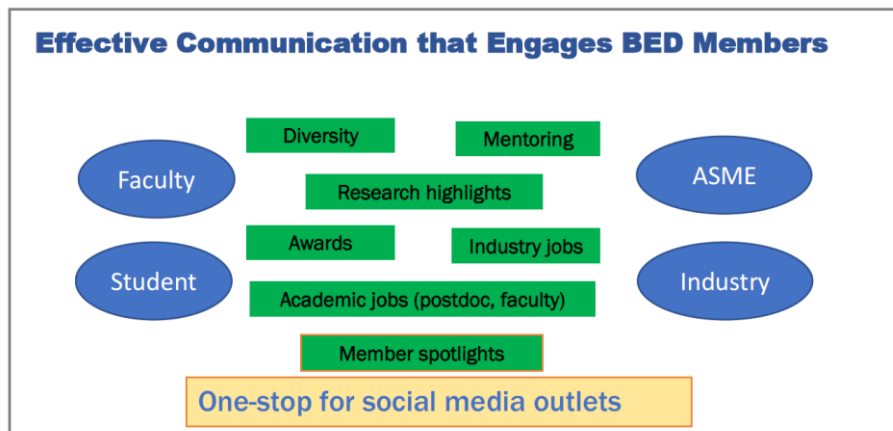
Zhenpeng "ZP" Qin  
Associate Professor  
University of Texas at Dallas  
[@ZhenpengQin on Twitter](#)

"As the Communications and Outreach Specialist in Bioengineering Division at ASME, I will improve its presence within ASME and bioengineering in general, by proving access to everyday information that bioengineers need to stay current with their profession. I believe that it should have an attractive and fresh presence by presenting materials that change on a regular basis, to encourage users to return to the various online locations, and thereby keep them engaged, while also providing solid information that is useful and often difficult to find elsewhere."

Parisa Saboori  
Professor and Chirpseron  
Manhattan College  
[@SabooriParisa on Twitter](#)



[Parisa Saboori](#)  
Communication & Outreach Specialist



# ASME BIOENGINEERING DIVISION

ASME Outreach

## One-stop for social media outlets

LinkedIn



American Society of Mechanical Engineers - Bioengineering Division

Listed group



ASME Bioengineering Division Women's Networking Group

Listed group

Twitter

ASME-BED\_Students  
523 Tweets



ASME-BED\_Students

@asmebedstudents Follows you

American Society of Mechanical Engineers - Bioengineering Division Student Leadership Committee

Joined July 2013

354 Following 350 Followers

ASME BED  
1,385 Tweets



ASME BIOENGINEERING DIVISION

Edit profile

ASME BED

@asme\_bed

Mechanical Engineers in Biomed. Biotransport, Design, Dynamics & Rehabilitation, Education, Fluid Mechanics, Tissue & Cellular Engineering, Solid Mechanics.

[tinyurl.com/mtn68uzw](https://tinyurl.com/mtn68uzw) Joined October 2020

502 Following 682 Followers

SB3C Organizers  
1,934 Tweets



SB3C Organizers

@SB3Corg Follows you

Summer Biomechanics, Bioengineering & Biotransport Conference #SB3C2023: June 4 - 8, 2023. Building Interfaces Across Tissues, Disciplines, and Communities

[sb3c.org](https://sb3c.org) Joined June 2015

1,346 Following 1,361 Followers



[American Society of Mechanical Engineers- Bioengineering Division](#)

[SB3C Women's Networking Group](#)



[@ASME\\_BED](#)  
 [@asmebedstudents](#)  
 [@SB3Corg](#)

## ASME Sustainability

TECH BUZZ // WORKFORCE BY BOB HAUCK



## ADOPTING A SUSTAINABILITY MINDSET

Before engineers can **change the world**, what must change first is engineering itself. **ASME is leading the way.**

**N**early everyone I encounter accepts that sustainability is an all-hands-on-deck imperative. But not everyone appreciates the extent to which it is fundamentally an engineering challenge.

While fostering a broad-based sustainability culture is absolutely the right thing to do, the truth is that saving the planet requires much more than riding your bike to work and recycling your pizza box. Yes, let's all do those things. But let's also understand that, compared to industrial scale polluters and resource consumers, the cumulative impact of individual action is relatively small.

Achieving true sustainability requires an examination of our values, a shift in the way we think, and changes to how we act. The attitude of "I'm just doing what the spec says" doesn't cut it anymore. Engineers must accept personal responsibility for their work, understanding the deeper footprint and entire lifecycle of our solutions.

In other words, before engineers can change the world, what must change first is engineering itself.

Changing the way engineers are educated, employed, and evaluated is critical to developing the multidisciplinary, environmentally focused, socially conscious technical workforce the world needs to achieve true sustainability.

Last year, in my capacity as co-chair of ASME's Engineering Global Development Committee, I had the privilege of participating in the EGD Stakeholder Summit, one outcome of which was a whitepaper entitled, "Engineering Workforce Advancing Sustainable Development." Among other things, the whitepaper identified six cultural shifts required to

achieve what it calls "engineering sustainable development."

This space doesn't permit a full exploration of those shifts; for that, you'll need to refer to the whitepaper. But the key takeaways are these: First, engineers must take an interdisciplinary and multi-stakeholder approach, with the understanding that every engineered solution is part of a dynamic and interconnected system, having potentially wide social and environmental impacts.

The report also urges the profession to prioritize diversity and inclusion, for the simple reason that "a homogenous field is a limited field." Better solutions inevitably result from more varied perspectives at the table.

Also required is a perception shift that challenges the notion that engineering is neutral. It's not. "Values shape technology," the report states, suggesting that design is a series of choices, and choices are informed by bias, conscious or not. Yet another reason why a more inclusive engineering process will produce more responsive—and responsible—outcomes.

The final insight I'll mention may be the most important: the need to "broaden engineering goals to include environmental and social outcomes." An engineered solution that solves one problem while exacerbating another is not sustainable. The old metrics of technical performance, efficiency, and profitability are necessary but not sufficient. To these we must add the broader impacts a solution will have on the environment, on communities, and on individuals. If an engineered system or product advantages one group of people at the expense of another, then it fails the sustainability test.

Fortunately, this is not news to the engineering students I teach, and the early-career professionals I meet in my work with ASME's EGD programs. What's more, many of my former colleagues in senior engineering management roles are also championing these values.

There is a growing awareness across the engineering community that mechanical engineers must adopt a sustainability mindset, must in fact become sustainability engineers. This is already happening. Our task now is to accelerate this transformation.

ASME members can take pride in our Engineering Global Development initiatives, funded in part by the ASME Foundation. These include the one-million-member Engineering for Change (E4C) digital platform; our E4C Research Fellowships; and the ISHOW and IDEA Lab accelerators, which help social entrepreneurs bring sustainable innovations to market.

ASME's Board of Governors recently adopted a statement on climate action that firmly and officially establishes the Society as a change-agent in the drive toward sustainable engineering. The statement implicitly acknowledges that mechanical engineers bear a disproportionate share of the responsibility for achieving sustainability. It's a charge a growing number of us are both happy and well suited to fulfill. **ME**

**BOB HAUCK** co-chaired ASME's Engineering Global Development Committee. He is the retired chief mechanical engineer at GE Healthcare, and currently serves as an adjunct lecturer at MIT. To learn more about the ASME Foundation's sustainability initiatives, visit [www.asmefoundation.org](http://www.asmefoundation.org)

## ASME BED Executive Committee Positions

**Chairperson.** The Chairperson will have served as Secretary prior to succeeding to the Chair and will serve for one year. Following their term as Chairperson, they will hold the position of Past-Chairperson. As chair of the Executive Committee, the chairperson will oversee committee operations, run regular meetings, and interface with ASME, the ASME Foundation, and ASME Journal Editors and Technical Committee Chairs. The Chairperson will serve as chair of the Executive Committee; voting member.

**Secretary.** The Secretary will have served as Secretary-elect for one year prior to taking office and will serve for one year. The Secretary will become Chairperson during the year following tenure as Secretary. The Secretary will set the schedule and keep the minutes of the Executive Committee meetings and will be the corresponding secretary for the Division. They will also maintain Division records; voting member.

**Secretary-elect.** The secretary-elect will serve as a voting member prior to becoming Secretary and will serve for one year. The Secretary-elect will be responsible for compiling a list of Division officers and committee members and updating committee operating manuals; voting member.

**Past Chairperson.** The Past Chairperson will have served as Chairperson the previous year and will serve for one year. The Past Chairperson will interface with ASME, the ASME Foundation, and oversee the election of new Executive Committee members. The Past Chairperson provides historical context for the Executive Committee, while also holding an understanding of operating procedures; voting member.

**Member-in Charge of Member Affairs.** The Member-in-Charge of Member Affairs will serve for three years and will be in charge of: developing membership by recruiting new members; promoting diversity of our members; identifying member needs and interests; encouraging nominations for new ASME Fellows. The Member-in-Charge of Member Affairs will be responsible for communicating these activities to the Executive Committee. The Member-in-charge of Member affairs will work with Members-at-Large to stimulate interest in bioengineering within the student chapters of ASME and on developing tutorials and

workshops in methods of engineering research and practice of use to the membership; voting member.

**Treasurer.** The Treasurer will serve as a voting member and will serve for three years. The Treasurer will monitor the finances of the Division; recommend methods to maintain or improve the financial position of the Division; initiate means by which funds may be raised for the support of the Division; report to the Executive Committee regularly on the financial position and activities of the Division; and communicate with ASME on all budget-related items, including budget projections; voting member.

**Member-in-Charge of Student Affairs.** The Member-in-Charge of Student Affairs will serve as a voting member and will serve for three years. The Member-in-Charge of Student Affairs will: promote student membership; conduct outreach to local ASME student chapters; and encourage mentorship of student members. The Member-in-Charge of Student Affairs will also serve as an advisor to the Student Leadership Committee. The Member-in-Charge of Student Affairs will be responsible for communicating these activities to the Executive Committee; voting member.

**Members at Large.** Each Member-at-Large will be a voting member and will serve for three years. The Members-at-Large will fulfill responsibilities not falling under the purview of other members of the Executive Committee, such as leading new initiatives; voting members.

**Communication and Outreach Specialist(s).** Each Communication and Outreach Specialist will be a non-voting member and will serve for two years. They will fulfill responsibilities related to communication of the Division materials and announcements through social media platforms and electronic communications. This will include the generation of the annual newsletter; voting members.

**Chair of the Student Leadership Committee.** The Chair is a non-voting member and is elected by ASME Bioengineering Division Students through their own electoral process and serves for one annual term. This member will provide updates on student activities, promote student membership, and advocate for student needs; non-voting member.

## New ASME BED Executive Committee Members 2023

**Secretary-Elect**



**Guy M. Genin**

**Treasurer**



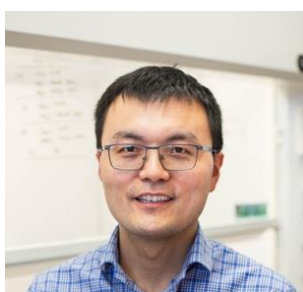
**Parisa Saboori**

**Member-at-Large (Industry)**



**Bob Hauck**

**Member in Charge of  
Student Affairs**



**Zhenpeng Qin**

**DEI Committee Chairperson**



**Ellie Rahbar**

**Communications Specialist**



**Yaling Liu**

## Important Reminders

Nominate yourself or colleagues to be an ASME Fellow

Deadlines: March 1, June 1, September 1 and December 1

Details here: <https://www.asme.org/about-asme/honors-awards/fellows>

Nominate colleagues for ASME Awards (Lissner, Fung, Mow, Woo, Nerem, Grood)

Deadline: September 1

Details here: <https://www.asme.org/get-involved/technical-divisions/technical-divisions-community-pages/bioengineering-division#honors-and-awards>

Consider volunteering for the BED Executive Committee (next election in spring 2024)

Reach out to Matt Fisher ([mbfisher@ncsu.edu](mailto:mbfisher@ncsu.edu)) with any questions

## Be sure to 'Opt-In' for emails from the Bioengineering Division

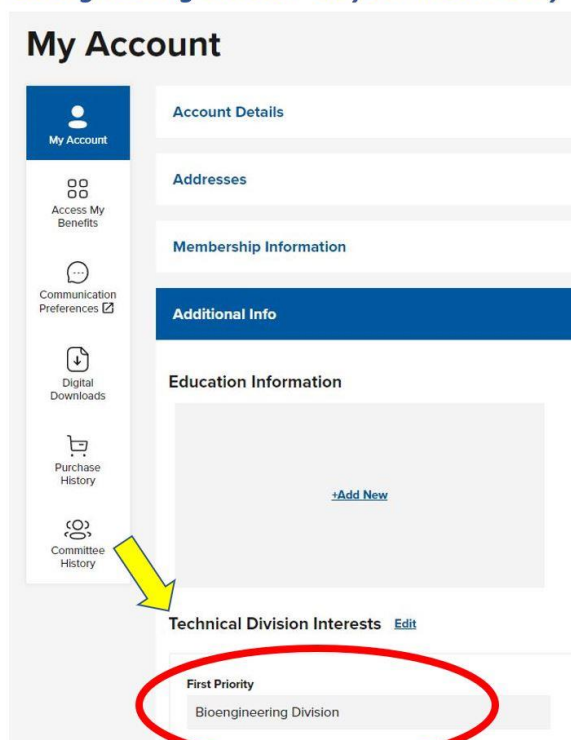
Log into your member account at ASME.org or click on the QR Code below.

Under My Account -> Additional Information -> Technical Division Interests -> First Priority: Bioengineering Division

In addition, please be sure that you have selected to 'opt in' for emails from the Division. This is done through My Account -> Communication Preferences -> "ASME Sections and Technical Divisions Communications". You will need to save your selections, while also confirming through email.

We will be sending communications regarding the upcoming ASME Bioengineering Executive Committee elections via the ASME portal. As such, we want to make sure all members receive this info. While we will also share information here and on twitter, secure ballots will be sent using the ASME portal.

### Select "Bioengineering Division" as your First Priority



### My ASME Preferences

Please check the box next to each type of email communication you would like to receive. Leave emails for communications left unchecked.

[Subscribe to All](#) [Clear All](#) [Reset](#)

ASME Sections and Technical Divisions Communications

Local section and technical division interest information and updates

Sections - Professional Members ⓘ

Sections - Student Members ⓘ

Technical Divisions ⓘ

Volunteer Committees ⓘ

You can update your preferences or unsubscribe at any time by visiting the [My ASME Preferences](#) page.

Declaration of Consent

By checking the boxes below, I consent to ASME collecting, processing, reviewing, and using (including for research and development) my personal data (including my name, email address, phone number, and other contact information) relating to me in connection with the processing activities described above.

I also consent to the transfer of any such data outside of the country in which I am currently located for the purposes described above, even where the country or territory to which the data is transferred is not a member country of ASME.

I understand that this consent is voluntary and can be revoked at any time.

[Save Preferences](#)



### FINAL STEP:

Confirm the email verification link. Without completing this step, your selections will not be confirmed.

## ASME Bioengineering Division Roster 2022-2023

### EXECUTIVE COMMITTEE

#### Chair

Shannon Stott

#### Past Chair

Alison Marsden

#### Secretary

Alisa Morss Clyne

#### Secretary-Elect

Spencer P. Lake

#### Treasurer

Rafael Davalos

#### Member in Charge of Member Affairs

Matthew Fisher

#### Members at Large

Craig Goergen

Bob Hauck

Jessica Oakes

Josue Sznitman

#### Communications & Outreach

Parisa Saboori

Zhenpeng Qin

#### Student Relations

Rouzbeh Amini

#### Staff Contact

April Tone

#### Student Leadership Team

Caleb Berggren (Chair)

Shelby White (Vice Chair)

Zach Davis (Communications)

#### Bioengineering Division Women's Networking Group

Rita M. Patterson J

Jennifer Wayne, Co-Chair

### TECHNICAL COMMITTEE CHAIRS

#### Biotransport

Bumsoo Han

Sihong Wang

#### Design and Rehabilitation

Anita Singh

Antonia Zaferiou

#### Education

Victor Lai

Zhongping Huang

Chiara Bellini

#### Fluid Mechanics

Alejandro Roldan-Alzate

Lucas Timmins

#### Tissue and Cellular Engineering

David Corr

Alix Deymier

#### Solid Mechanics

Kristin Myers

David Pierce

#### Industry

Ethan Kung

Lin Li

#### Honors & Awards

Michele Grimm

### BIOENGINEERING DIVISION JOURNAL EDITORS

#### Journal of Biomechanical Engineering Editors

Vicky Nguyen

C. Ross Ethier

#### Journal of Medical Devices Co- Editors

Rupak Banerjee

William K Durfee

### AWARDS COMMITTEE CHAIRS

#### Lissner Award Committee Chair

Gerard Ateshian

#### Mow Award Committee Chair

Steve Thomopoulos

#### Woo Award Committee Chair

Rita Patterson

#### Fung Early Career Award Committee Chair

Grace O'Connell

#### Nerem Award Committee Chair

Sara E. Wilson

#### Grood Award Committee Chair

Michele Grimm

Newsletter Editor: Parisa Saboori

I acknowledge contributions from ASME Bioengineering Division Executive Committee Chair and Secretary, Shannon Stott and Alisa Morss Clyne, Special thanks to April Tone for proofreading the newsletter and providing ASME resources.