



Experimentally Speaking...

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Message From the President



Daniel Rixen, SEM President, 2020-2021

THIS YEAR WAS DEFINITELY not “business as usual”.

2020 started with an exceptionally successful IMAC conference in Houston, with 550 attendees (highest ever!) and well attended short courses. Nobody was then expecting the pandemic wave that would turn upside down the way we work, collaborate and communicate.

We all tried our best to cope with the extra load to reorganize our lives, reinvent our relations with colleagues and co-workers, learn how to fit virtual meetings into a calendar and how to best motivate our students or clients across the tiny lens of our webcams ... We were all expecting it to be over soon, but SEM rapidly realized that its Annual Conference needed to be postponed from June to September. With the remarkable support of the entire staff and Technical Divisions, the conference could swiftly be reshaped into a virtual event. Although the virtual character of the event felt “unusual”, attendance was high and, with about 200 papers in the final program, the conference was successful. The format of the virtual Annual Conference in June 2021 will incorporate lessons learned from Annual 2020 and IMAC 2021.

IMAC 2021 will take place as a virtual event next February, with a focus on the “Next Frontier in Structural Dynamics”. This IMAC will be the first virtual edition ever, which is with no doubt, a big challenge and an exciting opportunity for organizers and attendees alike. The IMAC Advisory Board, under the enthusiastic leadership of David Epp as Chair, and the Conference Director (Mike Mains) are setting up an attractive virtual event. We can build

“This is the time to shape new solutions and invent the way we want to interact in the future, as scientist, engineers, companies and humans.”

on the experience we gathered from recent virtual conferences, exploiting the potential of interactive platforms to make the conference the enjoyable and inspiring place we all cherish. Every participant, whether having attended the last 38 editions or being a newcomer, should feel at home and welcome, presenting their work and interacting with pioneers or beginners, all excited by the same passion for structural dynamics.

I hear that Technical Divisions, in addition to setting up coherent sessions on the latest advances in their field, are also activating their creative ingenuity to hold social events online and use the capabilities offered by online platforms to innovate in their best paper competition. Nearly 300 papers will be presented and, although no short courses will be organized this year, I am looking forward to vivid and exciting discussions. The final program is under preparation. Professor Ruslan Salakhutdinov (Carnegie Mellon University) and Dr. Elliott Wolf (Lineage Logistics) will be our keynotes and the SAGE Publishing Young Engineer Lecture will be given by

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Luke Martin (Naval Surface Warfare Center). Check the [SEM website](#) regularly for the latest updates!

Where do we go from here? Most probably, conferences will never be exactly as before ... Other pandemic situations might pop up in the future and many of us might be willing to attend virtually at least some of the conferences in the future in an effort to save time, limit our environmental footprint or simply reduce costs.

Like in every change, it is hard to modify our habits and certainly nobody wants to debate passionately only over teleconferences. But we do not have to be passive subjects of the change, we can (and should!) shape it to exploit all its potential. Why not think about hybrid forms of conferences, where live sessions are attended in person and simultaneously streamed, allowing, for instance graduate students from developing countries to join. Groups of students from a department could gather at their home University to follow some sessions as part of their curriculum or driven by sheer interest. Why not organize online short courses outside of conference periods, to learn from SEM experts around the world?

Sure, not every new initiative will be successful. But this is the time to shape new solutions and invent the way we want to interact in the future, as scientist, engineers, companies and humans. SEM is the perfect place to grow such new ideas. First, because we have to reinvent ourself if we want to continue being the friendly society, serving the experimental mechanics community in the years to come. Secondly, because SEM is a healthy society with a highly dedicated staff and board that can support implementing the changes.

For this reason, I will invite a panel of members to participate in a special Ad Hoc Committee, with the goal of learning from recent conferences and brainstorming over the nature of future SEM conferences and activities. We will debate over the tools and formats to stimulate scientific communication and interaction, and over the future role of technical divisions. The organization of the SEM office might need to be adapted if necessary, and the requirements to be set for conference locations might need to be redefined (e.g. streaming and teleconference equipment). Let's see what it takes and turn the new opportunities in the next success story of our unique society. If you want to share your ideas, worries or suggestions, I would be very happy to receive your ideas at director@sem.org.

I cannot close this letter without letting you know that SEM is coping financially quite well with the pandemic situation. Over many years, SEM has been organizing conferences that were highly successful. The journals of SEM have become well established and

respected in our community. Thanks to all the hard work over the past years, SEM could build a financial pillow that now allows us to look with confidence into the future, keeping our office united and fully operational to prepare for the future. This has been made possible thanks to our wonderful staff, the daily guidance of our executive director (Kristin Zimmerman) and managing director (Nuno Lopes), the commitment of the members of the board over the years and, last but not least, the sharp eye and fine nose of Jon Rogers, our treasurer.

I look forward to seeing you at conferences in 2021 and reading your latest groundbreaking work in one of our [journals](#). I wish you and your beloved an inspiring time at the end of this special year, and at the beginning of a unique new year where we can reinvent our world, hopefully for the best! ■



Daniel Rixen

From the Directors

WITH THIS MESSAGE, we would like to share with you a few highlights from our 2020 Annual Virtual Conference held September 14-17, 2020 and what is being planned for 2021.

The most significant highlights from our first virtual Annual conference were: a very successful Michael Sutton International Student Paper Competition ([see this year's winners](#)), a strong technical program and scheduled Q&A sessions with the presenters, excellent plenary lectures with Janice Barton (SEM's first female to give the prestigious Murray Lecture) and Jacob Notbohm as our Springer Young Investigator Lecturer. There were also group meet-ups after the tracks completed their scheduled presentations that involved those that gave keynote presentations to launch the track and many other interested conference participants. We all know that our friendly society thrives on the ability to see each other and work together, face-to-face. The COVID-19 global pandemic did not allow our SEM family to gather face-to-face for Annual 2020. With this message, we are informing our global family members that SEM puts your safety first and will therefore be conducting virtual conferences for IMAC and Annual in 2021. We will again be using the Whova platform with an add on platform that will enable us to conduct live Q&A sessions, meet-ups and breaks.

The decision to make IMAC 2021 virtual was made in October allowing authors who had submitted an abstract to confirm with SEM if they still wished to participate in a virtual technical program/conference. The response was strong so SEM, especially Jen Tingets and the IMAC Advisory Board leadership, are actively in the planning phase for IMAC 2021 scheduled for February 8-11, 2021. Session organizers are currently working with Jen on the technical program, which at this time consists of three parallel sessions and scheduled breaks for gathering and sharing. The conference exhibitors will participate in the technical program and will also be able to share

product information and videos. Detailed information on format can be found at sem.org/imacauthor.

Those of you who typically attend Annual noticed that we included the following statement in the Annual 2021 conference 'Call for Papers' "SEM will be organizing ONLY virtual conferences until the global

"excellent plenary lectures with Janice Barton being SEM's first female to give the prestigious Murray Lecture"

COVID-19 pandemic is safely under control (following WHO and CDC guidelines concerning travel, and face-to-face conferences). This will allow you to continue to share your research virtually until we can once again meet face to face. Please monitor sem.org and our social media platforms for updates.". The response to the call was very strong. Therefore, we anticipate a technical program with many more papers than Annual 2020. We are also reviewing a proposal for a virtual short course.

We will be conducting our IMAC Technical Division meetings in late January. Stay tuned for further updates from SEM. We will conduct the meetings similar to how we conducted our Annual Technical Division meetings in June. Each TD leader will host a video call in order to put together their technical programs and activities for 2022. SEM will place a schedule of the meetings on the website so those wishing to participate need only to visit the website for details.

The business meetings for IMAC will be conducted using the GoTo meeting platform hosted by SEM. At this time,

we have scheduled the closed Executive Board meeting on February 4th, 10am-3pm ET. The closed IMAC Advisory Board meeting and the open Technical Program Planning meeting directly following are in the process of being scheduled for the end of the conference week. Meeting notices will be sent out with read ahead materials before the meeting.

Many of you are not privy to the financial status of SEM that is shared quarterly with members of the Executive Board and the Finance Committee, so we are very pleased to share that SEM is still financially sound and has made all necessary adjustments to be sure that we continue to operate successfully while fully supporting the needs of our member-led society.

We want to acknowledge the SEM staff for their tireless work in learning how to: design our first virtual Conference in September, for creating new ideas to consider for our upcoming virtual IMAC and Annual 2021, and balance the challenges of working from home while managing their households. Our goal will be to continue providing our SEM community a valuable, learning and sharing experience through our conferences, our journals/publications, our student symposia activities and through our membership platforms that allow all to stay connected between conferences. We invite you to send an email to Jen, Shari, Kathryn, Dan and Nicole to acknowledge the work that they do on your behalf and on behalf of SEM. Thank You!!

We look forward to your questions and comments so please don't hesitate to email or call.

Happy and Safe Holidays to all! ■

Kristin Zimmerman, Executive Director
Nuno Lopes, Managing Director

IMAC-XXXIX Message from the Organizers



Michael Mains



David Epp

Dear IMAC community,

None of us are happy with the circumstances that the COVID-19 global pandemic has given us. We certainly are looking forward to the day when we can meet again in person. Until then, we have difficult decisions and hard work in front of us. We are certainly glad that the researchers and frontline healthcare workers are not giving up and that we as a human race continue to persevere.



What can we do? We believe the healthy thing to do is to participate in the first ever virtual IMAC conference. Will it go as smoothly as we like? Probably not! Will we learn as much as we do at an in-person IMAC? We think that is totally up to us as individuals and as a community. Let's continue to push forward, research, broaden the knowledge of our structural dynamics field and share what we have learned with our community. SEM and IMAC have meant so much to us over our careers, we have all given much to this community, but we think we can all agree that we have received so much more. Let us all step up to make a virtual IMAC that best it can be and continue to expand the boundaries of what can be done in the field of structural dynamics!

We have incorporated lessons learned to develop a virtual conference format that we think will give everyone the best chance to present their work and encourage the discussions and interactions that we all love about IMAC. Each author will be asked to write a paper as usual, but this year we will also be asking for a prerecorded 10-15 minute presentation and a 1-2 slide overview. The prerecorded videos will be available at least a week or two before the conference begins for everyone to start watching them at their leisure. During the conference proper, we will have live virtual hour long sessions where up to six authors will summarize their work with the 1-2 summary slides and answer questions live from the audience. This session format, along with the interactive features such as live meet ups in the Whova app are all designed to encourage as much collaboration as possible.

We are looking forward to see you all at IMAC XXXIX February 8-11, 2021!

Regards,

Michael Mains, IMAC Conference Director
David Epp, IMAC Advisory Board Chair

IMAC-XXXIX Virtual

NEXT FRONTIER IN STRUCTURAL DYNAMICS

Overview

The 2021 IMAC-XXXIX will be held in a virtual format. This format will include on-demand lectures and presentations, synchronous question and answer sessions facilitated by SEM through the Whova platform and opportunities for discussion/interaction as well as informal meet-ups.

As with our typical conference, all authors/presenters will have access to each others submissions. Virtual attendees will have access to recorded presentations preceding the conference dates and Q&A periods will be held during the week of February 8-11, 2021.

Whova

Whova has been selected as the platform for distribution of the technical program and recorded presentations. It includes a web and mobile application which will allow participants to see videos directly in the app or web and ask questions of author(s) and presenter(s).

Details

To participate, all presenting author(s) must register and prepare a recording of your presentation(s). Technical presentations at the virtual IMAC-XXXIX conference will consist of:

- Pre-recorded video presentation (10-15 minutes) – Available for viewing at any time beginning shortly prior to the conference.
- Live 2-3 minute summary presentation followed by a live 5 minute Q&A – scheduled into “sessions” over the dates of the conference, much like our in-person events, and facilitated by session chairs. We require you to submit 1-2 presentation slides which will be shown during your live summary presentation.

Technical presentations requirements:

You must submit BOTH a video presentation and summary slides, in addition to a Download/Publish contribution (please see below). You may choose one of the options below for your pre-recorded video presentation:

- A. Presentation slides with audio voice-over
- B. Video recording of yourself presenting your work
- C. Combination of A and B

Presentation recordings should adhere to the following guidelines:

- **.mp4 video format**
- **Time limit on recording**
 - o Technical session presentations limited to 15 minutes
 - o Session Keynote Lectures limited to 30 minutes

First slide of the recording must include:

- o Submission number
- o Submission title
- o Author name(s)
- o Conference title “IMAC-XXXIX”

Filename must be Submission number_First 3 letters of your last name (1234_Pro.mp4)

For best results, please ensure you speak clearly and have no background noise that could be distracting. For option B., video recordings should show yourself and your presentation so that figures and text are legible when viewed.

Summary slides:

1. .ppt or .pptx or .pdf file format
2. Filename must be Submission number_First 3 letters of your last name (1234_Pro.ppt)



[**CLICK HERE TO REGISTER FOR THE CONFERENCE**](#)

Question & Answer Sessions

Scheduled Q&A sessions will be 60 minutes in duration. Author(s) will present their 1-2 summary slides for up to 3 minutes and have 5 minutes of interactive question and answer with fellow authors and attendees. Virtual attendees will also have the ability to submit questions ahead of time by posting them on the Whova platform for each scheduled submission. The technical program schedule will be posted on the app where you may also interact with fellow participants.

The platform will be available on, or around, January 25, 2021 for all those participating in the Virtual Conference. It will provide a venue for live discussion and interaction. We look forward to “seeing” you there. ■

State of the Journals

EXPERIMENTAL MECHANICS

Ioannis Chassiotis, University of Illinois, Urbana-Champaign, Editor in Chief

IN 2020, EXPERIMENTAL Mechanics (EM) published 90 original papers in nine issues, containing novel research, among other topics, on digital image and digital volume correlation, micro-computed tomography, mechanics of 3D printed materials, thermomechanics, high strain rate mechanics, residual stress analysis, optical, electron and probe microscopy based experimental methods for the study of a broad range of engineering and novel materials, etc. Each issue featured a full cover image from a select paper to showcase the pioneering works published in the journal. All the papers and the journal covers are available at: <http://link.springer.com/journal/volumesAndIssues/11340>.

Three special issues were in process or were completed in 2020. The first special issue on “Advances in Cardiovascular Biomechanics”, co-edited by Professors Susan Lessner and Jonathan Wenk, is comprised of 22 papers and will be published in January 2021. The second special issue, currently in progress, is co-edited by Dr. Frank DelRio, and Professors Alison Dunn, Brandon Krick, and Kenneth Liechti and titled “Tribology of Advanced Materials”, and the third special issue on “Optics and Photomechanics” is co-edited by Professors Xinglong Gong, Huimin Xie and Wei Qiu.

The 2019 impact factor of EM (reported in June 2020) reached the new high of 2.496, thanks to the efforts of our Editorial Board and the quality of papers submitted by our authors. I would like to thank everyone who contributed to the success of EM in 2020, including the authors and reviewers, the Guest Editors, the Technical Editors Antonio Baldi, Janice Barton, Vijay Chalivendra, Weinong Chen, Samantha Daly, Adrian DeWald, Matthew Enloe, Christian Franck, Michel Grédiac, Francois Hild, Jamie Kimberley, Francesco Lanza di Scalea, Hongbing Lu, Michael Mello, Jonathan Reichner, John Shaw, Raman Singh, Junlan Wang, Huimin Xie, Satoru Yoneyama, Alan Zehnder, Yong Zhu, Krishna Jonnalagadda, and Frank DelRio, EM’s Managing Director Nuno Lopes and Managing Editor Kathy MacAulay, SEM’s Executive Director Kristin Zimmerman, and Diane Jeffers of the University of Illinois for her support with the logistics of the journal. On behalf of the Editorial and International Advisory Boards of EM, I would like to invite all SEM members to submit your outstanding research papers to EM.



Finally, it is with great pleasure to announce that Professor Alan Zehnder from Cornell University will be the new editor-in-chief of EM, starting his term in January 2021. Alan has served for several terms as a Technical Editor of EM and brings fresh ideas to the journal to help to propel EM to new highs. I would like to take this opportunity to thank from the bottom of my heart all the Technical Editors, the International Advisory Board members, the authors and reviewers of EM, and the leadership, staff, and members of the Society for Experimental Mechanics for their generous support in the five years that I served as the editor-in-chief of EM.

I look forward to a healthy, and even more productive and successful New Year 2021!

With my very best wishes to all of you to stay healthy and safe.

EXPERIMENTAL TECHNIQUES

Bonnie Antoun, Sandia National Laboratories, Editor in Chief

IN 2020, EXPERIMENTAL Techniques published 60 papers in six issues, including a special issue on New Frontiers and Innovative Methods for Hybrid Simulation, co-edited by Professors Shirley Dyke and Oreste Bursi. All papers can be found at <https://link.springer.com/journal/40799/volumes-and-issues>.

There is another special issue nearing completion and the number and quality of manuscript submissions has been strong throughout the year, even with the enduring COVID-19 pandemic.

I would like to sincerely thank everyone who contributed to the success of Experimental Techniques in 2020, especially Professor Paul Reynolds who served the journal as Editor-in-Chief so well for the past five years and provided thoughtful and expert guidance in transitioning the role in June. We have added several new Technical Editors this year to handle the large volume of manuscripts we receive. I am extremely grateful for all the hard and important work the Technical Editors do for the journal: Masoud Allahkarami, Matt Allen, Javad Baqersad, Allison Beese, Yuanchang Chen, Alfredo Cigada, Aaron Forster, Cosme Furlong, Jeff Helm, Luciano Lamberti, Zhu Mao, Ricardo Mejia-Alavarez, Brian Owens, Paul Reynolds, Wei-Chung Wang, Caroline Winters, Yongfeng Zu, Xing Zhang and Kristin Zimmerman. We also have a few new International Advisory



Board members that joined our esteemed group and appreciate all their support, guidance and ideas: Kristin Zimmerman (Chair), Jonathan D. Rogers, José Freire, Nancy Sottos, Jeff Helm, Raman Singh, Wei-Chung Wang, Sven Bossuyt, and Wayne Chen. Thank you also to SEM staff for their support of the journal, particularly Nuno Lopes and Kathryn MacAulay.

We are pleased to be noticing an increase in manuscript submissions from the IMAC community, something Paul was working hard on for the past few years by updating the journal's aims and scope with the Editorial Board and soliciting interest and authors at the conferences. We want to continue that trend and strongly encourage all SEM members to submit their work to *Experimental Techniques* at <https://www.editorialmanager.com/exte/default.aspx>.

We are highly motivated to continue to publish one or more Special Issues each year. Please contact me directly or journals@sem.org if you have a topic you would like to propose and we will be very happy to help get the process started. We would also like SEM members to consider submitting review articles in their areas of expertise. Review articles are extremely valuable to our readers and will also help further increase our Impact Factor, which we are excited to report increased to 1.058 for 2019 (reported in June 2020).

JOURNAL OF DYNAMIC BEHAVIOUR OF MATERIALS

Jennifer Jordan, Los Alamos National Laboratory,
Editor in Chief

I AM PLEASED TO SHARE that 2020 was another successful year for the Journal of Dynamic Behavior of Materials. We published over 40 outstanding papers in four issues, concluding our year with the special issue Impact Matters: On the Contribution of Professor KT Ramesh to Dynamic Behavior in Honor of His 60th Birthday guest edited by Leslie Lamberson and Emily Retzlaff. All papers can be found at <https://www.springer.com/journal/40870>.

Thank you to everyone who continues to make the Journal of Dynamic Behavior of Materials a success, including the authors without whom the journal would not have been possible. I would like to thank Tracy Vogler, whose term on the Editorial Board will

end in December 2020, for his service. We're welcoming Justin Wilkerson from Texas A&M to the Editorial Board starting in January 2021! I would also like to send a warm thank you to the entire Editorial Board: Minta Akin, Nadia Bahloul, Nicola Bonora, Daniel Casem, Duane Cronin, Daniel Eakins, Veronica Eliasson, Juan Escobedo-Diaz, Pascal Forquin, Leslie Lamberson, Yulong Li, James LeBlanc, Xu Nie, Paulo Rigg, Parameswaran Venkitanarayanan, David Williamson, and Clarissa Yablinsky.

For the International Advisory Board, we welcomed Eric Brown as the new Chair in January 2020. We'd like to thank Dana Dattelbaum, Bill Fournery, Yogi Gupta, and Naresh Thadhani for their service on the International Advisory Board. In 2020, we welcomed Neil Bourne, Stefan Hiermaier, Su Peiris, Vikas Prakash, and Tracy Vogler to the International Advisory Board. I would also like to send a warm thank you to KT Ramesh and Hareesh Tippur, who are continuing on the International Advisory Board.

Looking back on my first year as Editor-in-Chief, I don't think I could have predicted the course 2020 would take and how it might impact the Journal of Dynamic Behavior of Materials. I'm very thankful that Eric Brown left the journal in a healthy place so that we could weather some of the challenges that we've had this year. Overall, we're still doing very well, and have been accepted to Clarivate's Emerging Sources Citation Index, which is the first step in acceptance to the Science Citation Index-Expanded (SCIE) and being allocated an official Impact Factor. We do seem to have had a decrease in paper submissions and have had difficulties finding reviewers, as everyone has had other focuses this year. We are working to partner with SEM's Dynamic Behavior of Materials Technical Division to provide a path for publication in conjunction with the Annual Meeting.

We are highly motivated to continue to publish one or more special issues each year. Please contact me directly or journals@sem.org if you have a topic you would like to propose and we will be very happy to help get the process started. We would also like SEM members to consider submitting review articles in their areas of expertise.

I look forward to 2021 bringing many new advances in the field of dynamic behavior of materials and exciting work published in the Journal of Dynamic Behavior of Materials. Please submit your work in the field at <https://www.editorialmanager.com/jdbm/default.aspx>! ■

To sign up for future journals table of contents (TOC Alerts), click the respective link below:

[Experimental Mechanics TOC Alert](#)

[Experimental Techniques TOC Alert](#)

[Journal of Dynamic Behavior of Materials TOC Alert](#)



Member News



Gary L. Cloud, SEM Past President, Elected Honorary Member

WE OFFER OUR SINCERE congratulations to Professor Gary L. Cloud in becoming an Honorary Member of the Society. Honorary Members are approved by the Executive Board in accordance with Article IV, Section 4 of the Constitution which states, "An Honorary Member is an individual of widely recognized eminence in the field

of experimental mechanics who is elected for life by unanimous secret ballot of the Executive Board upon written proposal by at least 25 Individual Members. Receipt of the proposal shall precede the election by at least 30 days. An Honorary Member shall have the same rights and privileges as an Individual Member. The number of living Honorary Members shall not exceed ten at any given time."

University Distinguished Professor Gary L. Cloud is a recognized leader in the field of experimental mechanics. Professor Cloud's research interests involve bringing together optical and electronic techniques to solve interesting problems in geomechanics,

biomechanics, composites, fracture mechanics, fastening, and nondestructive evaluation. His book, *Optical Methods of Engineering Analysis* was published by Cambridge University Press in 1995 and is now revised and in its second printing (1998).

Reference contributions include chapters in the *Handbook of Experimental Mechanics* (2008) and the *Marks Mechanical Engineering Handbook* (2007). He has delivered many oral presentations to technical and lay groups. More than 50 research contracts have been completed under his direction. Dr. Cloud has served as a consultant to approximately 60 firms and agencies in product design, measurements, and liability. He holds 2 patents and has another patent application in process with specialties in the area of Optical Metrology. He was elected as SEM Fellow in 2001, and has made a significant contribution to SEM through his *Back to Basics – Optical Methods* series published in *Experimental Techniques*.

Honorary Awards listing can be found [here](#). ■



Janice Barton - First Female Murray Lecturer

THE WILLIAM M. MURRAY LECTURE was initiated in 1952 as the SEM's prestige lecture. It is presented each year as a continuing honour to Dr. William MacGregor Murray, first SEM president and long-time secretary-treasurer. Professor Barton is the first woman to receive this honour in its 68-year history. Professor Barton will present

her Murray Lecture at the SEM Annual Conference, which will be hosted virtually in September 2020.

Professor Barton said: "I have been attending SEM conferences since 1993 as I finished my PhD, and have attended many Murray

Lectures given by eminent leaders in the field of experimental mechanics, so it is a great honour to have my contributions recognised by being invited to be 2020 Murray Lecturer by the SEM nominations committee. The last time a UK person was invited was almost 30 years ago in 1991, and I will be the first woman to receive this honour. It is fantastic that my research is being held in such high esteem and I hope that many more female Murray Lecturers will follow in the years to come."

To read the full article from the University of Bristol, UK please [click here](#). ■

2021 SEM Executive Board Nominees

The SEM Nominating Committee has announced the following updates for the 2021–2022 SEM Executive Board. Biographies for each member appear in this article. Once elected, these members will join current Board members whose terms extend to 2022.



President **Eric N. Brown**

Dr. Eric N. Brown is the Division Leader for the Explosive Science and Shock Physics Division at Los Alamos National Laboratory where he oversees the premier research program on energetic materials and dynamic material response in support of National Security.

His research has spanned fracture and damage of complex heterogeneous polymers and polymer composites for energetic, reactive, and structural applications including crystalline phase transitions, plasticity, dynamic loading conditions, and self-healing materials. He is the founding Editor-in-Chief of the Journal of Dynamic Behavior of Materials and been named Fellow of the Society for Experimental Mechanics. He has received awards for his technical achievements in solid mechanics and materials science from the ASC, DOE-NNNSA, LANL, MRS, SEM, TMS and the University of Illinois. He has served on several committees in SEM including Board of Directors as Member-at-Large, Research Committee, Technical Activities Council, Biological Systems and Materials Technical Division, and SEMEF. He has organized and chaired sessions for the Dynamic Behavior of Materials, Composites, and Biological Systems, and Materials Technical Divisions. He served three terms as an Associate Technical Editor of Experimental Mechanics. Eric was a Director's Postdoctoral Fellow and Technical Staff Member in the Materials Science and Technology Division at Los Alamos National Laboratory, Technical Advisor for the Joint DoD/DOE Munitions Technology Program in the Office of the Under Secretary of Defense, and managed the Neutron Science and Technology Group in the Los Alamos National Laboratory Physics Division. Eric received a B.S. in Mechanical Engineering in 1998 and a Ph.D. in Theoretical and Applied Mechanics in 2003, both from the University of Illinois at Urbana-Champaign.



President-Elect **James DeClerck**

Dr. James De Clerck is a Professor of Practice in the Mechanical Engineering – Engineering Mechanics Department at Michigan Technological University. He earned BS, MS and PhD degrees from Michigan Tech, receiving his Ph.D. in Engineering Mechanics in 1991.

Prior to joining the Michigan Tech faculty in 2009, Jim was a Project Design Engineer at the General Motors Noise and Vibration Center where he worked on improving vehicle noise and vibration performance at every stage of the vehicle development process.

Jim led the development and implementation of new vibration analysis and testing technology. He also developed techniques for establishing design performance requirements and for validating analytical model predictions.

In addition to advising the Michigan Tech Formula SAE Team, Jim teaches classes on Model Based Design, Dynamics, System Dynamics Senior Capstone Design, Analytical and Experimental Modal Analysis, Machine Design, and Analytical Vibro-Acoustics classes. Jim's areas of expertise include noise and vibration, structural dynamics, design, modal analysis, model validation, inverse methods applied to design, and advanced measurement techniques.



Vice-President **Raman Singh**

Dr. Raman P. Singh serves as the Associate Dean for Engineering at OSU-Tulsa and as the Head of the School of Materials Science and Engineering in the College of Engineering, Architecture and Technology at Oklahoma State University (OSU). He also serves as the

Director of the Helmerich Advanced Technology Research Center on the OSU-Tulsa campus and is appointed as the Helmerich Family Endowed Chair Professor of Engineering.

Raman holds M.S. and Ph.D. degrees in Mechanical Engineering and Applied Mechanics from the University of Rhode Island, and a B.Tech. degree in Mechanical Engineering from the Indian Institute of Technology–Kanpur, India. Prior to joining OSU in 2006 he was a faculty member at the State University of New York at Stony Brook, and before that a post-doctoral scholar at the California Institute of Technology.

Raman's academic interests are in student mentorship, development, and retention with a focus on new pedagogical methods. His research interests are in the mechanics of advanced materials, with an emphasis on the investigation of modern engineered materials and development of new techniques for mechanical characterization at highly localized length scales. His research has been funded by the National Science Foundation, NASA, the Oklahoma Center for the Advancement of Science & Technology, the Oklahoma Transportation Commission, the US Army Research Office, the Department of Energy, and industry. He has authored or co-authored several archival journal publications and conference proceedings and holds two patents. He is an active member of the Society of Experimental Mechanics (SEM)

2021 SEM Executive Board Nominees *continued from pg.9*

and serves as an Associate Technical Editor for Experimental Mechanics. He is also a member of the Materials Research Society and the American Society of Mechanical Engineers. Besides academia, Raman enjoys travel, backpacking, photography, and spending time with his two daughters.



Member-at-Large Jacob Dodson

Jacob Dodson is senior research mechanical engineer and research team lead at the Munitions Directorate, Air Force Research Laboratory at Eglin Air Force Base, Florida. He has been at AFRL since starting in 2012. Jacob Dodson earned B.S. degrees in Mechanical Engineering and Mathematics (2007) from Virginia Commonwealth University, a M.S. in Mathematics (2010) and a Ph.D. degree in Mechanical Engineering (2012) from Virginia Tech. He leads a research team which focuses on structural dynamics of electronics packages in high-rate extreme environments. Dr. Dodson's research interests include shock survivable sensors, high-rate dynamics, structural health monitoring, prognostics and real-time decision making. He was awarded the SEM 2018 Sage Publishing Young Engineer Lecture award for early-career contributions to experimental mechanics. He is a member of the advisory committee for several technical groups including the Shock and Vibration Symposium and is a registered Professional Engineer.



Member-at-Large David Epp

David Epp is currently the Reactor Facility Development manager at Sandia National Laboratory. He received his B.S., M.S. and Ph.D. degree in Mechanical Engineering from University of Oklahoma in 1997, 2001 and 2002, respectively with a focus on dynamics and controls. David joined Sandia in 2002 and has held a variety of positions as a staff member, including a test engineer, experimental facility owner, principle investigator, and project leader. David's Sandia career started with modal and structural dynamic testing and includes applications such as MEMS, satellites, and other Sandia missions. David was promoted to manager of the Structural Dynamics and Radiography/NDE department in 2012 and has since held several management positions including a two year rotation in Washington DC.



Member-at-Large Leslie Lamberson

Leslie Lamberson is an Associate Professor in Mechanical Engineering with affiliation in Materials Science at the Colorado School of Mines. Her area of expertise is in mechanics of materials under extreme conditions. She earned her B.S. in Aerospace Engineering and B.A. in Dance Performance from the University of Michigan, her M.S. in Aerospace Engineering from the Georgia Institute of Technology, and her Ph.D. in Aeronautics from the California Institute of Technology. Prior to her faculty position, Dr. Lamberson was a postdoctoral research scholar with K.T. Ramesh in the Center for Advanced Metallic and Ceramic Systems at the Johns Hopkins University. A former Lockheed Martin "Skunk Works" engineer, in 2013 Leslie was a NASA Glenn Faculty Fellow in the Materials and Structures under Extreme Conditions Division. She is the recipient of an ONR Young Investigator Award in 2017, an NSF CAREER award in 2018, and is currently an Associate Editor for the journal Strain and Technical Editor for Journal of Dynamic Behavior of Materials.



Member-at-Large M. Taher A. Saif

Professor Saif received his BS and MS degrees in Civil Engineering from Bangladesh University of Engineering and Technology, and Washington State University respectively. He received his PhD degree in Theoretical and Applied Mechanics from Cornell University. He conducted his post doctoral research on Micro Electro Mechanical Systems at the National NanoFabrication Facility and Electrical Engineering, Cornell University. He is a Fellow of the American Society of Mechanical Engineers. His current research includes mechanics of neurons and cardiac cells, development of biological machines, tumor micro environment, and electro-thermo-mechanical behavior of nano scale metals and semiconductors. He showed, for the first time, using embryonic fruit flies, that motor neurons generate tensile force within two hours of synaptogenesis. This force is essential in clustering neurotransmitter vesicles at the pre-synaptic terminal. Hence, the force may play a critical role in memory and learning in animals. ■

Upcoming Events

2021

IMAC-XXXIX Virtual | February 8–11, 2021

2021 SEM Annual Virtual | June 14-17, 2021

iDICs Conference | Oct 25-27, 2021

La Cité Nantes Events Center
Nantes, France

2022

IMAC-XL | February 7–10, 2022

Rozen Plaza Hotel
Orlando, FL USA

2022 SEM Annual | June 13-16, 2022

Omni William Penn Pittsburgh
Pittsburgh, PA USA

