



Experimentally Speaking...

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Message From the President



John Lambros, SEM President, 2019-2020

This is a somewhat unusual issue of Experimentally Speaking in that our summer and fall/winter issues have been combined into one. The summer issue typically contains the opening remarks of the new president that are delivered at the Annual Business Meeting of the SEM, which this year was held on Sunday June 2nd at the Peppermill Resort Spa Casino in Reno, NV. At the end of this note, I have included these remarks as is traditional practice in Experimentally Speaking.

However, in the interim period a lot of activity has been taking place at SEM and I wanted to bring everyone up to speed with developments at SEM headquarters and elsewhere. It is with great sorrow that we all learned of the passing of one the longest serving staff members at SEM headquarters, Sharon Previs. Sharon was a pillar of the SEM headquarters during her 35 years as Office Manager. She will be sorely missed in more ways than one. A tribute to Sharon is included elsewhere in this newsletter.

On a more upbeat note, at the end of the summer SEM annual meeting Nuno Lopes, who also has been a part of the SEM family for quite some time, took on the role of Managing Director of SEM, and Kristin Zimmerman, maintaining the position of Executive Director, will work closely with Nuno on matters of strategic and planning interest to the Society. Those of you familiar with the Society Journals—and, by the way, I encourage everyone to publish as much as possible in our Society's publications of Experimental Mechanics, Experimental Techniques, and Dynamic Behavior of Materials—will be familiar with Nuno's role there. We have now taken on new staff — Kathryn MacAulay and Dan Trombetta — at SEM headquarters to take over some of the

roles vacated by Nuno, including design and handling of our Journals. Please join me in wishing Nuno, Kathy and Dan well in their new roles in SEM.

A number of SEM-sponsored events have taken place since the June Annual meeting or are coming up shortly: The iDICs 2019 Conference and Workshop was held October 14-17, 2019 in Portland, Oregon. This conference, which takes place on a rotating three-year cycle at a location in turn in North America, in Europe, and in Asia, is a forum for all topics that involve DIC technology and is co-sponsored by the International Digital Image Correlation Society (iDICs) and the SEM. The conference was very successful with more than 85 papers being presented. The next iDICs conference will be held October 19-22, 2020, Nantes, France. Of course, coming up in about a month is IMAC XXXVIII which will take place in Houston, TX on February 10-13, 2020. It promises to be a great conference! Its theme is "Space Technologies for Humanity" and features an appropriate keynote presentation by NASA Technical Fellow John P. McManamen, Chief Engineer, Human Exploration and Operation Mission Directorate. A near-record number of 481 presentations are programmed for the event. Finally, one more upcoming event in spring is the 2020 SEM Midwest Student Symposium to be hosted March 7 and 8, 2020, at Iowa State University. The event is organized by students at Iowa State University and supervised by Prof. Sarah Bentil. I encourage students in the Midwest region to submit presentations for the Symposium and anyone interested to attend the 2-day event. Such regional graduate student conferences have been growing over the years and we hope they will continue to form a mainstay for student-led interactions

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at SEM. The activities are supported to a large extent by the SEM Educational Foundation (SEMEF). Those interested in helping out the efforts of SEMEF can find more information at sem.org/semeff and can also donate to the fund.

In closing, and since this is a combined Experimentally Speaking issue spanning June to December, I provide a summary of remarks that I gave at the SEM Business meeting, along with the current officer appointments for the Society.

Remarks from June 2, 2019, Annual business meeting:

When I began preparing these opening remarks, I was a bit unsure of where to start. When I asked our Managing Director Nuno Lopes to give me some idea of the sort of thing that typically is said during this event, he referred me to prior issues of Experimentally Speaking. Well, as helpful as this was, it probably added to my anxiety since now I also knew that whatever I would say would be recorded for posterity. Looking back, two things became apparent: Firstly, I am awed to be following in the steps of such great Experimental Mechanicians as have held this position before. What more could I add to their achievements for, and contributions to, this society? Secondly, as it turns out, these are universal feelings that for the most part everyone in this position in the past has expressed in one way or another. So, I will be no exception and will start by saying that I am indeed deeply honored, and humbled to have received the confidence of the Society members to hold this position for the upcoming year. I certainly never expected this to be the case when I first joined the society as a student in the early 1990s. The Society was even then referred to as “the friendly society” and that it has remained. So first and foremost, I think my primary task would be to keep it so.

This is great time for the Society and a great time to be in the Society. We have seen a constantly increasing interest in Society activities (e.g., attendance and presentations at the Annual conference and in IMAC are continuously on the rise). We have also seen an increase and in our presence in print (with

now 3 society journals). In part because of this increased interest, and also in large part because of the efforts of our prior presidents, including my immediate predecessor Wendy Crone, managing directors (especially, Kristin Zimmerman), and of course our perennial treasurer, Jon Rodgers, the society is also in a great financial position which, for many years was not the case—we have seen unfortunately several times in the past that the “friendly society” does not necessarily translate to the “rich society”. We need to keep strengthening our position and need to make sure that

that may not have been visible before. At a minimum, it allows a broader vision of the Society than what can be obtained in smaller, more specifically focused deliberations. Our society is now in a strong financial position to have some added flexibility to think about things strategically, and this is a great opportunity to develop a Society consensus of how to move forward, which would be in some fashion codified in a strategic plan.

Publications: As I mentioned above, our publications have also grown significantly.

“Strengthening, rather than simply growing, the membership starts with nurturing students who will ultimately become Society members and future leaders.”

things are continuously improving for our members. After all, that’s what it comes down to: having strong and dedicated membership is the basis for every professional society. So, for the next year I would like to concentrate on the following points:

Strengthening the membership: I should point out that simply increasing membership numbers is not a goal in itself—a large society is not necessarily a better or a friendlier society. Of course, membership, i.e., people, is the lifeblood of the society so it cannot be overlooked. Strengthening, rather than simply growing, the membership starts with nurturing students who will ultimately become Society members and future leaders. In turn, strengthening student participation will come from attracting students and therefore I believe, as others in this position have before me have, that a main priority will be to greatly support and increase the SEMEF activities.

Strategic planning: I must admit upfront that I am not a big fan of strategic planning as a specific roadmap to the future. However the process of strategic planning is helpful in uncovering aspects of an organization

We now have three society journals, several successful volumes of IMAC proceedings each year, annual meeting proceedings, special volumes and books, etc. So another focus should be to continuously improve our publications for the changing world of Mechanics. The field of Mechanics has evolved over the years into what currently is termed Mechanics of Materials. The Society itself has also changed: what was once the society for Strain gauges transformed into the society for photoelasticity, now for DIC. Structural Mechanics and Vibrations, and what was the modal analysis conference of IMAC, have evolved to incorporate fields such as Uncertainty Quantification, Risk Assessment and others. This changing landscape should be represented, or really more accurately I should say reflected, in our publications also. Efforts have already been made in this direction (e.g., a new journal, JDBM, was recently formed), Experimental Techniques has recently substantially revised their aims and scope, and Experimental Mechanics is in the process of considering such a major revision.

Mentoring: Here I will draw from my experience within academia. One very

important thing for maintaining the long-term vitality of the Society is mentoring of the younger members. Perhaps this is something that at a Society level may not have been strongly pursued so far, although within the Society we already do several activities which have a mentoring component. We have started a first-time attendee mixer, both at Annual and at IMAC. At annual we have held very well-received panels on junior and mid-career development in academia and mid-career development in industry. These have been so successful at Annual that they now have been extended to IMAC with great success there as well. These types of events are essentially mentoring activities for our younger members. However, another strategic avenue to think about is how to strengthen such mentoring. For example, it would be of great benefit to our younger members, in academia but not only, for the society to forge a lot more relations with funding agencies (federal and otherwise). When I was a student attending SEM conferences, I remember a strong presence of funding agents from many DOD, DOE and other agencies at our conferences. We should encourage that type of participation again.

International participation: Last but not least, SEM is truly an international society. Past presidents have had specific goals of strengthening the international aspects of the society and have greatly succeeded in that. We should continue to encourage and strengthen international participation in SEM and collaborations with other similar international societies worldwide.

To continue with the management of the society, and help our membership in their efforts, I make the following appointments for the 2019-2020 year:

Kristin Zimmerman as Secretary of the Society

Jon Rogers as Treasurer

Daniel Rixen, President-Elect, as Chair of National Meetings Council

Eric Brown, Vice-President Elect, as Chair of Technical Activities Council

Wendy Crone, Immediate Past President, as Chair of Editorial Council

Kathryn Dannemann, Past-President, as Chair of Administrative Council

Jason Blough, At-Large Board Member as Vice-Chair of Technical Activities Council

Michael Todd, At-Large Board Member as Vice-Chair of Editorial Council

Bonnie Antoun, At-Large Board Member as Vice-Chair of Administrative Council

Raman Singh, At-Large Board Member as Vice-Chair of the Research Committee

Javad Baqersad, At-Large Board Member as Executive Board Representative to IMAC Advisory Board

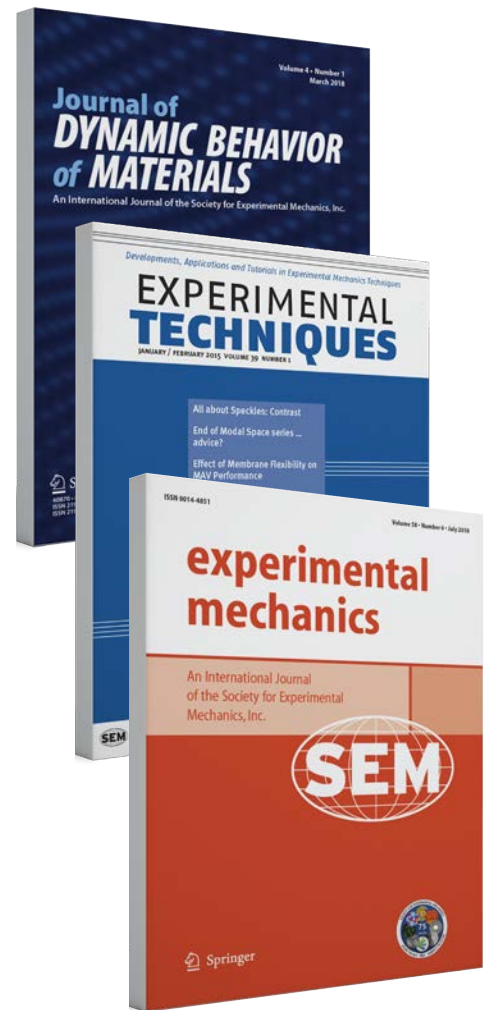
Jim DeClerck, as Vice-Chair of the Applications Committee

Jeff Helm, as Vice-Chair of the Education Committee

Samantha Daly, as Vice-Chair of the National Meetings Council ■

Thank you

John Lambros



SEM JOURNALS

The Society's three peer-reviewed journals provide a platform for the sharing of research and ideas. The hard work and dedication of individuals serving as editor-in-chief, technical editors and supporting staff continue to build upon their successful foundations. SEM encourages you to submit high-quality manuscripts and spread the word to colleagues. Log in to sem.org as a member to access the journals electronically as part of your membership benefits. Visit sem.org/journals to submit.

From The Directors

With this message, we would like to share with you a few highlights from our 2019 Conference and Exposition on Experimental and Applied Mechanics held at the Peppermill Resort in Reno, Nevada.

The conference was successful due largely to the outstanding technical program with special symposia, sessions, and keynotes. We even had the opportunity to celebrate professor Cesar Sciammarella's 95th (our oldest member) birthday, complete with a celebratory cake.

Our Executive Board, Councils, Committees and Technical Divisions (TDs) accomplished a great deal and offered many new ideas for focus groups, symposia and other new and exciting conference elements as we all worked together to build the 2020 technical program and conference activities. We continue to tap the new energy from our conference attendees and members, which is critical to growing the membership and conference success.

During the Annual Conference the Editors in Chief (EIC) of our three journals held their respective Editorial and Advisory Board meetings and continued their efforts to increase communication across the TD's journal editors and boards to grow greater coordination and benefit to the membership. We need to better understand where and why our conference attendees are publishing their work in order to promote member submissions to Experimental Mechanics (EM), Experimental Techniques (ET) or the Journal of Dynamic Behavior of Materials (JDBM). We have updated and refined the aims and scope of ET and are doing so for EM to make both more relevant to the membership and research represented by our TDs.

We met and worked with our new journals contact at Springer/Nature Publishing, Ms. Anita Lekhwani. Anita will be working very closely with the EICs to be sure that the publishing processes (author submission, editorial, online first, website, marketing, transfer desk, etc.) are efficient and effective. Another highlight of the journal



Attendees and exhibitors interacting during the Welcome Reception at 2019 Annual Conference and Exposition in Reno, Nevada.

meetings was the election of Dr. Bonnie Antoun from Sandia National Laboratories who will become EIC of Experimental Techniques in June 2020. We also have Dr Jennifer Jordan from Los Alamos National Laboratory who will be transitioning into the role of EIC for the Journal of Dynamic Behavior of Materials in January 2020. We recognize the significant contributions of our Journal EIC, editors and reviewers and are extremely grateful to their service to the Society, and the experimental mechanics community.

Where do we continue to need your help? We are focusing our website efforts on membership communications and conference technical programming. The web events platform helps with coordination of your conference registration with your membership profiles. We will continue to need your input, your guidance, and especially your patience and support to be sure sem.org is your 'go-to' website for all things regarding SEM and the experimental mechanics community. The information in your member profile is

how we communicate with you in between conferences so please update as soon as possible to be sure that your profiles are current.

We want to acknowledge the SEM staff for their tireless work in putting together two outstanding conferences this year, for being there to answer the numerous emails from the conference attendees and members in preparation for the conferences, and for all of the other things that they do, day-in and day-out to continue SEM's strong growth trajectory. We invite you to send an email to Jen, Shari, Kathryn and Dan 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.

See you in Houston, TX in February or in Orlando, FL, in June 2020! ■

Kristin Zimmerman, Executive Director
Nuno Lopes, Managing Director



A TRIBUTE TO SHARON R. PREVIS

January 27, 1944 – November 26, 2019

It is with a heavy heart that I write about the passing of SEM's office manager, Sharon Previs. Sharon had worked for SEM for 37 years. I knew Sharon for over 25 years and have had the distinct pleasure of working with her for the past six years. Sharon was my go-to person based on both her institutional knowledge of SEM, and her absolute ability to drop what she was doing to assist with whatever issue I needed help with.

Many of you are aware of the circumstances moving me into the role of Executive Director of SEM upon the passing of Tom Proulx. Sharon was there to hold my hand, teach me what I needed to know about the business of SEM that included all of the things that are done behind the scenes that enabled us to run the successful business that we are today. Items like healthcare renewals, pension planning, personnel policy updates, payroll, deliveries, mail, bill paying and bookkeeping. Sharon was SEM's bookkeeper for most of her tenure with SEM, working closely with SEM's CPA to be sure that our quarterly and annual reporting was complete and accurate. SEM has special reporting requirements based on the fact that we are a non-profit, 501c3 organization.



Sharon taught me the business of SEM while the other staff members, Nuno, Jen and Shari, taught me the operational aspects of the business, such as the inner workings of our conferences, our journals, our proceedings/publications and our membership. Nuno, Jen and Shari still teach me today as we continue to learn and grow.

Saying Sharon will be missed, simply does not capture the significance of her loss to SEM as a business and its membership. SEM loved Sharon and Sharon loved SEM. Sharon was always there for SEM, even if it interfered with weekend activities. She always made herself available and during conferences was the one that stayed back at SEM headquarters in Bethel, Connecticut to keep the business functioning.

Sharon gave her heart and soul to SEM and we will be forever grateful.

God rest her soul! ■

Kristin

State of the Journals

EXPERIMENTAL MECHANICS

In 2019, *Experimental Mechanics* published 97 original papers in nine Issues, four of which were Special Issues. The first Special Issue was co-edited by Professors Yong Zhu and Taher Saif, and Dr. Frank DelRio with title Recent Advances in Micro, Nano, and Cell Mechanics, the second Special Issue, co-edited by Professors Ghatu Subhash, Samantha Daly, and Christian Franck was published in honor of Professor Guruswami (Ravi) Ravichandran on the occasion of his 60th Birthday, the third Special Issue with title Mechanics of Additively Manufactured Materials was co-edited by Drs. Jennifer Jordan and Helena Jin, and Professor Weinong (Wayne) Chen, and the last Special Issue was co-edited by Professors Christian Franck and Jonathan Reichner on the subject Experimental Advances in Mechanobiology. The remaining Issues contained novel works, among others, on Digital Image (DIC) and Digital Volume Correlation (DVC), micro-computed tomography, mechanics of 3D printed materials, thermomechanics, high strain rate experiments, and optical, electron and probe microscopy based experimental methods for the study of a broad range of engineering and novel materials. All papers are available online at <http://link.springer.com/journal/volumesAndIssues/11340>.

Starting in 2019, each Issue of *Experimental Mechanics* features a full cover image of a select paper to showcase the unique and pioneering works published in the journal. The 2018 impact factor (reported in 2019) of *Experimental Mechanics* was 2.256, thanks to the efforts of our Editorial Board and the quality of papers submitted by all authors. The Editorial and International Boards of *Experimental Mechanics* invite all SEM members to submit your outstanding research to *Experimental Mechanics* and help further propel the reputation of our Society and continue the lasting contributions of *Experimental Mechanics*.

I would like to thank everyone who contributed to the success of *Experimental*



Mechanics in 2019, 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, Paul Reynolds, John Shaw, Raman Singh, Clive Siviour, Junlan Wang, Huimin Xie, Satoru Yoneyama, Alan Zehnder, Yong Zhu, EM's Managing Editors Nuno Lopes and Kathy MacAulay, and Diane Jeffers for her support with the logistics of the journal.

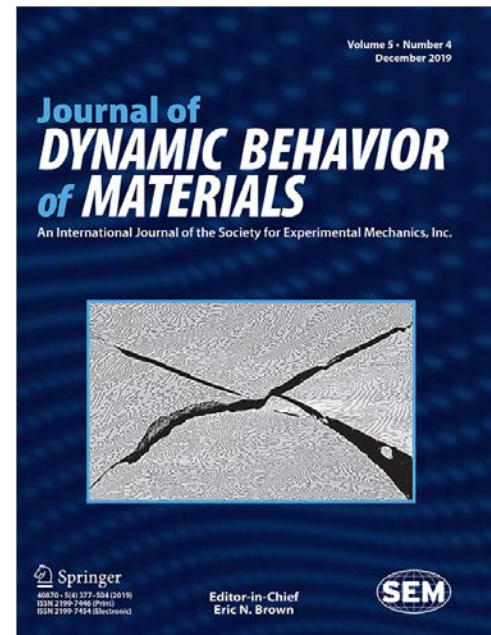
I look forward to a yet more productive and successful year 2020! ■

Ioannis Chasiotis

Editor-in-chief, *Experimental Mechanics*

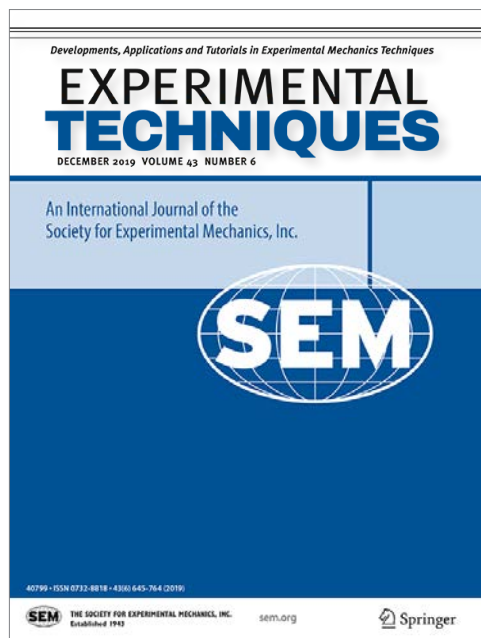
JOURNAL OF DYNAMIC BEHAVIOR OF MATERIALS

I am pleased to share that 2019 was another very successful year for the



Journal of Dynamic Behavior of Materials. We published 44 outstanding papers, including a Special Issue on Temperature Dependence of Material Behaviour at High Strain-Rate Edited by Martina Scapin, Patricia Verleysen, Mikko Hokka, and Nadia Bahloul of Politecnico Di Torino in Italy, Ghent University in Belgium, Tampere University in Finland, and Université de Strasbourg in France respectively. All papers can be found at <https://link.springer.com/journal/40870> or as a free member benefit through the Society for *Experimental Mechanics* website (SEM.org). We continue to be highly international with manuscripts published with authors from Australia, Belgium, Canada, Finland, France, Germany, India, Iran, Italy, Malta, Morocco, Norway, Poland, Russia, Spain, Switzerland, Turkey, United Kingdom, and the United States of America. Thanks to robust submissions of high-quality papers we continue to publishing full outstanding issues while maintaining our ability to offer timely reviews and prompt publication.

The journal publishes experimental and



theoretical studies of metals, polymers, glasses, composites, granular materials, explosives, biological materials, geological materials, phase transitions, and structural response. The journal includes application and development of techniques including split Hopkinson pressure bar, Kolsky bar, plate impact with light gas guns and powder guns, Taylor anvil, spectroscopy and pyrometry-based shock temperature measurements, optical and x-ray imaging methods, interferometry and velocimetry techniques, dynamic fracture, laser based dynamic drivers, penetration and ballistics, Equation of State and Spall Failure.

Thank you to everyone who continue to make of the Journal of Dynamic Behavior of Materials a success including the authors without whom the journal would not have been possible, the Associate Technical Editors: Minta C. Akin, Nadia Bahloul, Nicola Bonora, Neil K. Bourne, Daniel T. Casem, Ellen K. Cerreta, Trevor Cloete, Duane Cronin, Veronica Eliasson, Pascal Forquin, Jennifer L. Jordan, Leslie Lamberson, James M LeBlanc, Yulong Li, Paulo A. Rigg, Bo Song, Parameswaran

Venkitanarayanan, Tracy Vogler, and the Advisory Board members: Arun Shukla (Chair), Dana M. Dattelbaum, William L. Fourney, Yogendra Gupta, K. T. Ramesh, Naresh Thadhani, and Hareesh Tippur, and SEM Staff particularly Nuno Lopes.

As the Editor-in-Chief who started JDBM with SEM, I have to say that it is amazing to me that we are at the end of our first 5 years and how much progress we have made as a journal. The end of 2019 concludes my fifth and final year as Editor-in-Chief. I am excited to be leaving the journal in the capable hands of Dr. Jennifer L. Jordan as the next JDBM Editor-in-Chief, as elected by the SEM Board. I look forward to 2019 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>. ■

Eric N. Brown

Editor-in-chief, Journal of Dynamic Behavior of Materials

EXPERIMENTAL TECHNIQUES

In 2019, *Experimental Techniques* (ET) published 60 manuscripts across six issues. While this may be similar to previous years, the number of submissions to *Experimental Techniques* continues to increase steadily. We couldn't continue to do what we do without the hard work and effort of all our Technical Editors. I would like to thank those whose hard work is absolutely key to the success of the peer review process and of the journal as a whole: Masoud Allahkarami, Matt Allen, Bonnie Antoun, Sez Atamturktur, Javad Baqersad, Juan Caicedo, Alfredo Cigada, Cosme Furlong, Jeff Helm, Luciano Lamberti, Ricardo Mejia-Alvarez, Brian Owens, Wei-Chung Wang, Xing Zhang and Kristin B. Zimmerman.

Along with the committed work of our Technical Editors, I'd like to thank the International Advisory Board for its

strategic oversight and guidance: Kristin B. Zimmerman (Chair), Jonathan D. Rogers, José Freire, Paul Reynolds, Nancy Sottos, Jeff Helm, Raman Singh and Wei-Chung Wang. It is with this dedicated team of individuals that we continue to grow *Experimental Techniques*.

After many discussions at IMAC on the topic of updating the journal's aims and scope, I am happy to report that this is now a reality. The update was done in order to be more relevant and open to our IMAC conference attendees and authors, whose focus is largely in the area of structural dynamics. We would like to encourage more submissions from the IMAC community, and we will monitor closely to see if this is achieved. We will also be pursuing an after IMAC issue of ET. Please take a look at the new ET and consider submitting a paper. We aim to provide a thorough yet fair and quick review process before publication.

Out of interest in pursuing topical issues, we have several Special Issues planned for 2020 including: New Frontiers and Innovative Methods for Hybrid Simulation and Computer Vision and Scanning Laser Vibrometry Methods. If you would like to be a guest editor and have a topical issue proposal, please contact journals@sem.org and we will be happy to help.

Lastly, but certainly not least, it is my pleasure to announce my successor as Editor-in-chief, beginning June of 2020, Bonnie Antoun. Bonnie, from Sandia National Laboratories, brings her expertise and experience as both a long-time member of SEM and Technical Editor to ET. Her diligence and enthusiasm will serve her well in this transition. Please join me in welcoming her to her new role. ■

Paul Reynolds

Editor-in-chief, *Experimental Techniques*

2019 Annual Conference

June 3-6, 2019 at the
The Peppermill Resort in Reno, NV

Highlights and awards of our 2019 Annual Conference and Exposition led by Wendy Crone, SEM President 2018–2019.

Wendy presented various awards in recognition of outstanding achievements and honors. The conference attracted 475+ attendees, with 162 of those being first time attendees and 143 students.

Our sincerest congratulations to all who received awards and to the attendees for making this a successful annual conference.



Kyung-Suk Kim—William M. Murray Medal Awardee with Wendy Crone—SEM President



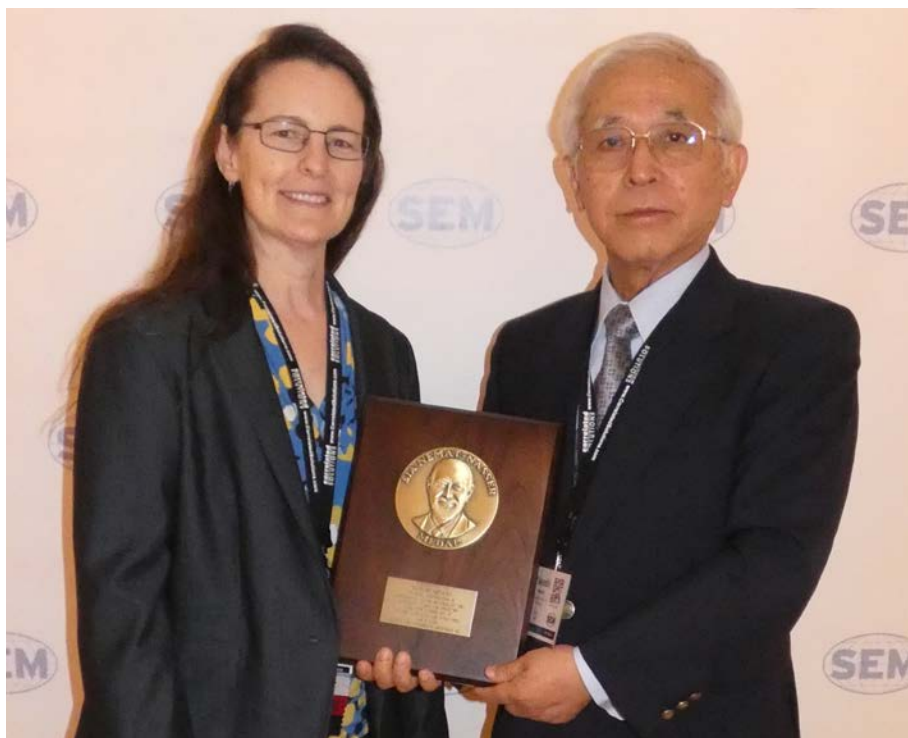
Jason R. Foley—Springer/Nature Publishing Young Investigator Lecturer



Francois Hemez—F.G. Tatnall Awardee



From left-to-right: Eann A. Patterson—B.J. Lazan Awardee, Michael A. Sutton—P.S. Theocaris Awardee, Alan T. Zehnder—newly inducted SEM Fellow, Tusi Weerasooriya—newly inducted SEM Fellow, Jamie Kimberley—J.W. Dally Young Investigator, Venkitanarayanan Parameswaran—F. Zandman Awardee and John Considine—G.A. Brewer Awardee.



Wendy Crone—SEM President with Yasushi Miyano—S. Nemat-Nasser Medal Awardee



Wendy Crone—SEM President with Pascal Lava—A.J. Durelli Awardee



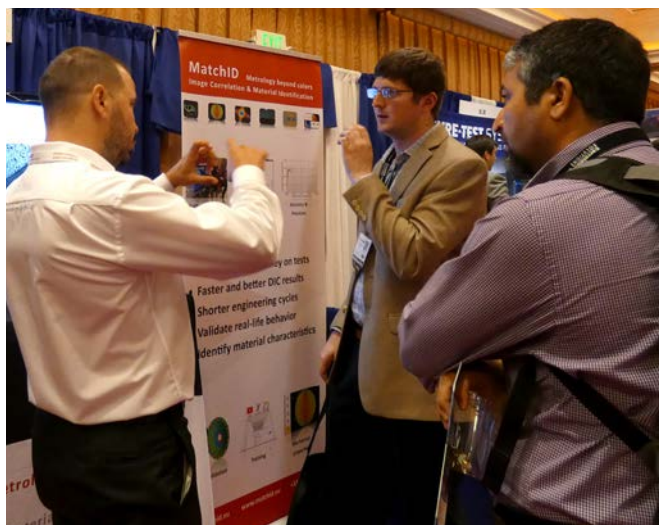
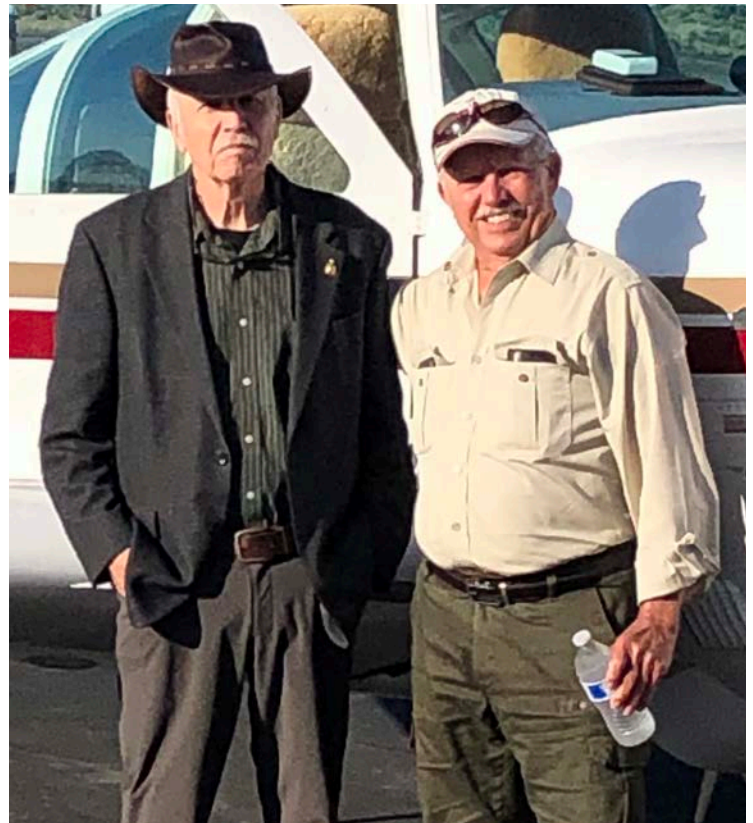
Wendy Crone—SEM President with Amos Gilat—newly inducted SEM Fellow

Submit a Nomination

Do you have a colleague you'd like to nominate? The Honors Committee meets each year at the SEM Annual Conference (generally held the first week in June) to determine award recipients for the following year.

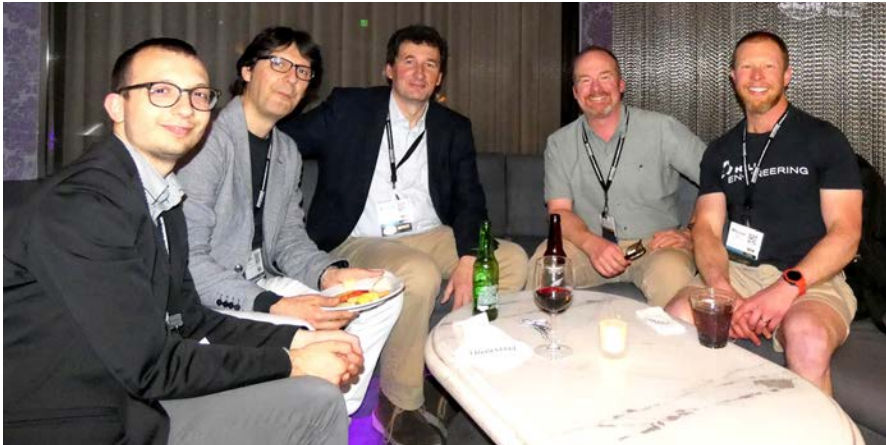
The committee will consider all Nominations received by April 15 of that year. A nomination received is kept for active consideration for three years

Go to sem.org/awards to submit a nomination!



MEMORIES OF THE
2019 ANNUAL
CONFERENCE
JUNE 3-6, 2019 | RENO, NEVADA USA





2020 SEM Executive Board Nominees

The SEM Nominating Committee has announced the following updates for the 2020–2021 SEM Executive Board. Biographies for each member appear in this article. Once elected, these members will join current Board members whose terms extend to 2021.



Daniel Rixen



Eric N. Brown



James De Clerck



Janice Dulieu-Barton



Brandon Dilworth



D. Gregory Tipton



Kendra Van Buren



Junlan Wang

President Daniel Rixen

Daniel Rixen, born in 1967, received his engineering degree in Electromechanics and doctoral degree in Applied Sciences from the University of Liège (Belgium), at the Laboratoire de Techniques Aéronautiques et Spatiales (LTAS). He also holds a master degree in Aerospace Vehicle Design from the College of Aeronautics in Cranfield (UK). After a post-doctoral stay at the University of Colorado (Center for Aerospace Structures), he was appointed in 2000 professor and chair of Engineering Dynamics at the Delft University of Technology (The Netherlands). Since 2012, he leads the chair of Applied Mechanics at the Technical University of Munich (Germany).

His research focuses on the dynamics of mechanical systems and covers the fields of numerical methods, experimental techniques, multiphysics and mechatronics. A significant part of his research involves partitioning problems in order to apply parallel computing, model reduction techniques or experimental substructuring. He regularly collaborates with industry to apply theoretical developments to real-life applications (automotive, aerospace, wind energy, ...). Since 2012, his research field also includes robotics and humanoids.

President-Elect 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-NNSA, 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.

Vice-President James De Clerck

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.

Members-at-Large

Janice Dulieu-Barton

Janice Dulieu-Barton was appointed in May 2019 as a full Professor of Experimental Mechanics in the Bristol Composites Institute at the University of Bristol in the UK. Prior to this she worked at the University of Southampton for 20 years in the School of Engineering. She received her PhD from the University of Manchester in 1993 where she started her research on the topic now known as 'Thermoelastic stress analysis'. She has published around 320 papers with 120 in archival journals, edited 11 conference proceedings and produced 8 book chapters. Janice's expertise is in imaging for data rich materials characterisations and assessments of structural performance, with a focus on lightweight structural design particularly composite structures. She has won numerous grants that have allowed her to develop novel approaches in experimental mechanics, with a special focus on the development of infra-red imaging. Janice has been a member of SEM since 1994, she was awarded a fellowship of SEM in 2016 and received her silver certificate for 25 years of membership in 2019. She was chairman of the fellows committee and the Thermomechanics and Infra-red Imaging TD, as well as an Associate Editor of Experimental Mechanics. Janice has been very active in the European Experimental Mechanics community, notably chairing the British Society for Strain Measurement and serving on their National Council for 14 years, chairing and organising many conferences and technical seminars, including the 16th International Conference on Experimental Mechanics in Cambridge, attended by over 500 delegates. Janice is also active in training and mentoring early career researchers; she has supervised over 30 successful PhDs and her 5-day annual workshop on Experimental Mechanics for postgraduate students has run annually for the past 10 years and attracts around 25-30 delegates internationally.

Brandon Dilworth

Brandon Dilworth is currently an Assistant Group Leader in the Mechanical Engineering Group at MIT Lincoln Laboratory. Brandon holds a BS (2004) in Mechanical Engineering with a Minor in

Acoustics from Kettering University and MS (2006) and Ph.D. (2009) degrees in Mechanical Engineering from Michigan Technological University. Brandon started as a Technical Staff member at MIT Lincoln Laboratory in 2009, working as a design and structural dynamics test engineer supporting several optical-mechanical prototype programs. As both staff and a Group Leader, Brandon has helped to advance the Laboratory's capabilities in structural dynamic testing and analysis.

Dr. Gregory Tipton

Dr. Gregory Tipton is a Distinguished Member of the Research and Development Staff at Sandia National Laboratories in Albuquerque, New Mexico. He's been at Sandia since 1994 and has held a variety of positions in both the systems engineering and engineering mechanics organizations. Since 2000 he has worked in the Engineering Sciences Center conducting research in the areas of computational mechanics, structural dynamics, and experimental model validation. His current work focuses on the design and qualification of flight systems, including the computational simulation of aerodynamic loads and resulting structural dynamic response, as well as the development of new ground test techniques to mimic flight conditions. Testing techniques that combine multiple environments are a focus of Greg's research, including various combinations of acceleration, shock, vibration, and temperature. He has a PhD in mechanical engineering from the University of New Mexico.

Kendra Van Buren

Kendra Van Buren has been a staff member in the Computational Physics Division at Los Alamos National Laboratory (LANL) since 2015. She completed her Ph.D in Civil Engineering at Clemson University in 2012 before going to LANL as a post-doctoral research associate in the Engineering Institute. During her post-doc, she contributed to international collaborations by spending one month as a visiting researcher at the Engineering Institute-Korea in Chongbuk, South Korea and seven months at the Université de Franche-Comté in Besançon, France. Her research contributes to verification, validation

and uncertainty quantification research efforts for the Advanced Simulation Computing program. Kendra has been active participant at IMAC, most recently serving as the historian for the Model Validation and Uncertainty Quantification (MVUQ) technical division. She received a FY14 U.S. Department of Energy Defense Programs Award of Excellence for her contributions to Physical Uncertainty Bounds (PUBs). In 2015, Kendra was one of two postdoctoral research associates at LANL (out of approximately 450) to receive a Postdoctoral Distinguished Performance Award. In FY18, Kendra was awarded an Early Career Research project from LANL's competitive Laboratory Directed Research and Development (LDRD) program. She currently serves on the Scientific Advisory Council for LANL's Information Science and Technology Institute (ISTI) and she was the Assistant Chair for LANL's 2019 LDRD Information Science and Technology Science Advisory Panel.

Junlan Wang

Junlan Wang is a Professor of Mechanical Engineering at the University of Washington. She received her B.S. (1994) and M.S. (1997) in Mechanics and Mechanical Engineering from the University of Science and Technology of China, and Ph.D. (2002) in Theoretical and Applied Mechanics from the University of Illinois at Urbana-Champaign. After a year of postdoctoral research at Brown University, she joined the Mechanical Engineering department of University of California, Riverside in 2003 as an Assistant Professor (later promoted to Associate Professor) and moved to UW in December 2008.

Her research focuses on mechanics of thin films/multilayers, biological and bioinspired materials, high strain rate phenomena, and additively manufactured materials. She has received several awards on research and teaching, including an NSF CAREER Award (2008), SEM Hetenyi (2004) and Durelli (2016) Awards, ASEE Beer and Johnston Outstanding New Mechanics Educator Award (2007), and Bourns College of Engineering Teaching Excellence Award (2007). ■

Upcoming Events

2020

IMAC-XXXVIII

February 10–13, 2020
Hyatt Regency Houston
Houston, TX USA

2020 SEM XIV International Congress

June 8-11, 2020
Rozen Plaza Hotel
Orlando, FL USA

iDICs Conference

October 19-22, 2020
La Cité Nantes Events Center
Nantes, France

2021

IMAC-XXXIX

February 8–11, 2021
Rozen Plaza Hotel
Orlando, FL USA

2021 SEM Annual

June 14-17, 2021
Hyatt Regency Albuquerque
Albuquerque, NM USA