



Experimentally Speaking...

<http://sem.org>

Volume 7 | Issue 1

March | 2016

MESSAGE FROM THE PRESIDENT



Guruswami (Ravi) Ravichandran,
SEM President, 2015-2016

The year's activities for SEM started with the IMAC-XXXIV Conference in Orlando, Florida held during January 25-29. The theme of this year's conference was *Dynamics of Multiphysical Systems: From Active Materials to Vibroacoustics*. The conference featured over 500 attendees, 40 exhibitors displaying state-of-the-art equipment and services. A record 323 papers were published in the conference proceedings. A highlight of the conference was the keynote lecture by Kurt Schneider of General Motors on "Importance of a Multi-Discipline, Multi-Physical Approach to Product Engineering." I would like to thank Al Wicks, IMAC Conference Director and Jim DeClerck, IMAC Advisory Board Chair for putting together a highly successful conference and for their continued service to the society.

SEM continues to be outstanding in its service to its members. An important aspect of its operations is the publication of the three society journals, *Experimental Mechanics*, *Experimental Techniques* and *Journal of Dynamic Behavior of Materials*. These journals serve as a leading forum for the global experimental mechanics community for disseminating cutting edge research in the field. I would like you to continue supporting these journals by submitting papers on cutting edge research of your own. Your continued support of these journals will help to attract the best students and scholars to experimental mechanics and ensure future success in our field. A great way to introduce your students to this friendly society is enabling their attendance of Annual/IMAC conferences and presenting papers. This provides them with a wonderful forum to not only learn about cutting edge research but also to

network with their colleagues. I encourage you all to get more involved in the society's activities especially through the Technical Division events, organizing symposia at our conferences and contributing special issues for our journals.

I look forward to seeing many of you at the XIII International Congress and Exposition on Experimental and Applied Mechanics on June 6-9 in Orlando, Florida. The theme for this year's conference is "*Dynamic Behavior: Integrating Experimental Mechanics*." This year's conference also reflects the international flavor of our society and our enduring partnership with the global experimental mechanics community. More than 460 papers are scheduled to be presented at the conference. The highlights of the conference include the William M. Murray lecture by Prof. Horacio Espinosa of Northwestern University, the Journal of Strain Analysis Young Investigator Lecture by Prof. Clive Siviour of the University of Oxford, the plenary lecture by Prof. Yu-Lung Lo of the National Cheng Kung University, and the Annual Student Paper Competition sponsored by Correlated Solutions. In closing, I would like to thank the SEM staff, the Executive Board, and Executive Director Kristin Zimmerman for their support and guidance during my term as President.

G. Ravichandran

Guruswami (Ravi) Ravichandran
SEM President

IN THIS Issue

- 2 From the Executive Director
- 3 State of SEM's journals
- 4 2016 IMAC-XXXIV Conference and Exposition on Structural Dynamics
- 6 IMAC-XXXIV People and Events
- 8 XIII Int'l Congress Courses Offered
- 8 Events Calendar

FROM THE EXECUTIVE DIRECTOR

2016 marks my 28th year of SEM Membership and the beginning of my appointment by the Board as the Executive Director of the SEM. We have learned a lot over the past year and a half. With this message, I would like to share with you a few areas where we are growing well and areas where we could use additional support from the membership.

Thomas Proulx shared the following in his March 2014 Newsletter and it bears repeating:

“Our Society started in 1943 as the Society for Experimental Stress Analysis. According to Prof. William Murray, the Society was formed to fill “...the need for a more formal organization of the Conferences if continuity was to be maintained, and a record of the technical discussions and presentations were to be preserved. In 2014 this still remains the mission of the Society.”

With this quote, we are reminded of the year we started, the year of our 75th Anniversary (2018), and who we are... a member-led Society of likeminded friends, colleagues and those eager to learn and grow. I also find it interesting that out of more than 1,500 members from across the globe, 268 of you have been members for over 25 years and 78 for 50 years or more.

Our conferences are key to the success of SEM. Both the IMAC and Annual Conferences have grown to 500+ attendees that are participating by presenting papers, sharing ideas, exhibiting state of the art equipment, and preparing their presentations for publication in one of SEM’s three peer-reviewed journals. Our Conference Proceedings have grown to a consistent ten volumes per meeting and the number of downloadable abstracts available via our website continue to grow. We are clearly doing some things right in terms of our conferences and we want to continue to enable emerging Technical Divisions (TDs) to blossom and grow, while pruning back those emergent TDs that are no longer as relevant as they used to be. I cannot thank enough the tireless work done by our Technical Program organizers, TD Chairs, Track Chairs, and Session Chairs for the outstanding programs put together over the past few years. Our Conference success rests in large part on the success of the Technical Program.

SEM is defined by its ability to remain agile, focused and open to all experimental mechanicians who have an insatiable thirst to learn and grow as experts in their field of study. Our relatively small conference size enables our agility...allowing us to keep our finger on the pulse of what is next, create a focus group or TD to represent a new area, and carve out our niche in that new area. A niche that sends the message to our meeting participants that the SEM IMAC, Annual and Fall conferences are the ones to attend. This, I believe is one of the keys to what defines us and gives strength to the meaning of the “friendly society.”

On the issue of Fall Meetings, SEM has agreed to co-sponsor, with the International Digital Image Correlation Society, a standing Fall meeting. The first meeting of the co-sponsorship is November 7-10, 2016 in Philadelphia, PA. Please look to our website for the Call for Papers and additional information. We have SEM members, Michael Sutton and Phillip Reu to thank for spearheading this activity.

Publication is another area of growth for the Society with our three journals, Experimental Mechanics, Experimental Techniques and the Journal of Dynamic Behavior of Materials. In addition to these publications, SEM publishes Proceedings for each of its conferences and all are published by Springer. This means that our meeting attendees and members have a streamlined means for publishing their work in one of three SEM peer-reviewed journals even if the work presented at the conference has been published in the Conference Proceedings. Again, archiving, and publishing the work of our conference attendees and our members is core to accomplishing our mission as a Society.

We are also working on the completion of the SEM Handbook of Structural Mechanics. We have Pete Avitabile and Randy Allemang to thank, as well as the many contributors to what I know will be an outstanding publication for the Society.

Where do we need help? We need to listen to and grow our membership, which has stabilized in growth for the past few years. I believe that the membership equation has two key variables; (1) the sharing with and recruitment of likeminded researchers,

“friends” to attend our small, focused, conferences that target emerging more than emergent areas of research. Once a person has participated in one of our conferences, we typically hook them in forever, and (2) continuing to provide a streamlined means for publishing current cutting edge research and applications work in one of our Journals and our Conference Proceedings. What other variables am I missing?

We have reinvigorated our Membership Committee, Chaired by past President Nancy Sottos. Please get involved by planning to attend our Membership Committee meeting in Orlando in June. You will have the chance to voice your opinions and ideas, which we welcome! And don’t forget, your membership in SEM unlocks access to over 17 mechanics related journals from Springer, etc. at no additional cost to you!

We are in the middle of the development process for a completely new web platform for the Society. A new website presence, with the ability to listen better and communicate with our membership is key to growing and maintaining our membership. Please continue to be patient with us as we enter into our beta phase this summer, and our launch phase this fall. We will need your input, your guidance, your patience and your support to be sure it is your ‘go-to’ website for all things regarding SEM and the mechanics community.

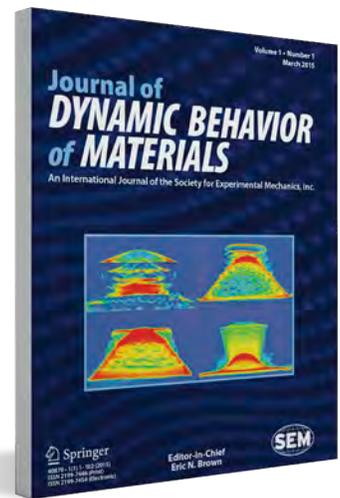
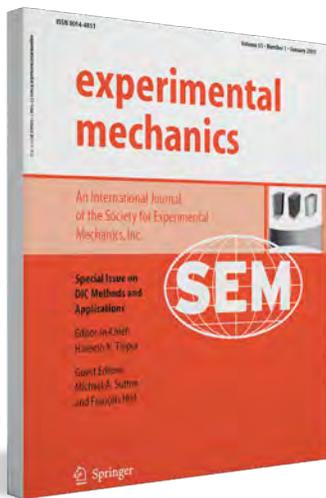
I look forward to your questions or comments so please don’t hesitate to email or call.

To those that attended IMAC, I want to personally thank you for a tremendously successful and fun Conference. And I look forward to seeing you in Garden Grove California in 2017. We guarantee an exciting meeting as we celebrate IMAC 35.

To those planning on attending the International Congress in Orlando in June - I look forward to seeing you, engaging with you and I invite you as you register for the conference to check the box to either renew your membership, or become a new member of SEM!

Kristin Zimmerman,
Executive Director

STATE OF SEM'S JOURNALS



As of January 2016, all three of the Society for Experimental Mechanics' journals are being published by Springer and on Springer's Editorial Manager submission platform. This platform provides all parties involved in the process a seamless and unified process from submission to publication.

This transition, to a unified platform, is one of the many changes and improvements SEM is making to enable authors a simpler and more effective way to publish ground-breaking and innovative research.

EXPERIMENTAL MECHANICS

New at the helm of our flagship journal, Ioannis Chasiotis, from the University of Illinois at Urbana-Champaign, has embraced the long journey in carrying the progress made by Hareesh Tippur. EM is off to a great start to 2016 with a special issue on Quantitative Visualization of Dynamic Material Behavior guest edited by Leslie Lamberson, Victoria Eliasson and Tust Weerasooriya.

EM continues to span research in solid and fluid mechanics to fields at the intersection of disciplines such as physics, chemistry, and biology. We look to carry on EM's success with your continued support and submissions.

EXPERIMENTAL TECHNIQUES

As with its sister journals, Experimental Techniques has a new Editor-in-Chief, Paul Reynolds from the University of Exeter in the United Kingdom. Prof. Reynolds has taken on the task of ushering the transition of ET from its previous publisher to Springer. This has not been an easy task, but progress has been made to put ET on forward-looking, sustainable path.

Look to the very near future where Springer will be publishing two large volumes of Experimental Techniques articles. The journal's new home online will be www.springer.com/materials/characterization+evaluation/journal/40799.

We look forward to this new path forward and your continued support and submissions.

Now having this platform as SEM's vehicle to author publication, we certainly welcome your voice in how you view the process and any suggestions you may have to make it work better for you.

We welcome your comments at director@sem1.com.

We also welcome your continued support in submitting your work to all three SEM journals.

DYNAMIC BEHAVIOR OF MATERIALS

The society's newest journal has had a racing start. Driven forward by Editor-in-Chief, Eric N. Brown, this journal has given author's some of the fastest submission to publishing turnarounds. This achievement is due, in no small part, to the dedication of Dr. Brown and his team of Associate Technical Editors.

With a year under its belt, JDBM starts off 2016 with a special issue on Dynamic Behavior of Low Impedance Materials guest edited by Jennifer L. Jordan, Clive R. Siviour and Bo Song.

JDBM aspires to cement itself as the go to specialized peer reviewed archival journal for work in the field of dynamic behavior of materials, both within the SEM community and the broader international field. To this aspiration, we know JDBM is off to a great start with strong consistent issues and outstanding technical content and we hope to get your continued support and submissions.

2016 IMAC-XXXIV CONFERENCE AND EXPOSITION ON STRUCTURAL DYNAMICS

JANUARY 25–28, 2016 AT THE ROSEN PLAZA HOTEL, ORLANDO, FLORIDA USA

HIGHLIGHTS AND AWARDS OF IMAC-XXXIV IN ORLANDO, FLORIDA

IMAC Conference Director, Al Wicks, conducted the Awards Luncheon ceremony, presenting various awards in recognition of outstanding achievements in structural dynamics and service to SEM/IMAC.

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

With a theme of *Dynamics of Multiphysical Systems: From Active Materials to Vibroacoustics*, the conference attracted over 530 attendees and more than 40 exhibitors.



Al Wicks—IMAC Conference Director with Kurt Schneider—keynote speaker from General Motors



Michael Todd—D.J. DeMichele awardee with Al Wicks—IMAC Conference Director



Bahram Khalighi—D.R. Harting awardee with AI Wicks—IMAC Conference Director



Jason Armand—D.J. DeMichele Scholarship winner with AI Wicks—IMAC Conference Director



AI Wicks—IMAC Conference Director presenting Michael Lally—The Modal Shop his SEM Silver Certificate of Membership



AI Wicks—IMAC Conference Director presenting Raj Singhal—David Florida Lab, Canadian Space Agency his SEM Silver Certificate of Membership

IMAC-XXXIV PEOPLE AND EVENTS

Attendees mingling and interacting with exhibitors during receptions and show hours.



IMAC-XXXIV





2016



530 Number of attendees at IMAC-XXXIV.



XIII INT'L CONGRESS COURSES OFFERED

**CONFERENCE JUNE 6–9, 2016
HILTON ORLANDO LAKE BUENA VISTA @ WALT DISNEY WORLD RESORT**

SUNDAY, JUNE 5, 2016 | 8:00 A.M.–6:00 P.M.

COURSE

Course 101:
Dynamic Behavior of
Brittle Materials:
Experimental Approaches
and Modeling

Course 102:
Infra-red Thermography in
Experimental Mechanics:
Using Temperature
Measurement to Evaluate
Stresses, Strains and
Damage Evolutions

INSTRUCTORS

Pascal Forquin–
Grenoble Alpes University, France

Prof. Janice Dulieu-Barton–
University of Southampton, UK;
Dr. Rachael Waugh–University of
Southampton, UK;
and Assoc. Prof. Xavier Balandraud–
French Institute for Advanced
Mechanics (IFMA)

SUNDAY, JUNE 5, 2016 | 1:00 P.M.–6:00 P.M.

COURSE

Course 103:
Modern Techniques
for Residual Stress
Measurements

INSTRUCTORS

Gary Schajer–University of British
Columbia, Canada;
Antonio Baldi–University of
Cagliari, Italy;
Theo Rickert–American
Stress Technologies, USA

To register for 2016 SEM XIII International Congress and any of the above courses, please go to <http://www.sem.org/CONF-AC-TOP.asp>.

EVENTS CALENDAR

2016

INTERNATIONAL DIC SOCIETY 2016 CONFERENCE AND WORKSHOP/ SEM FALL CONFERENCE

EXTENDING THE FRONTIERS: TRAINING THE NEXT GENERATION:
STANDARDIZING FOR INDUSTRY: IMPROVING OUR PRACTICE

NOVEMBER 7–10, 2016

DOUBLETREE BY HILTON HOTEL

Philadelphia Center City
237 South Broad Street
Philadelphia, PA USA

<http://www.sem.org/CONF-FALL-TOP.asp>

2017

IMAC-XXXV

STRUCTURAL DYNAMICS CHALLENGES
IN NEXT GENERATION AEROSPACE SYSTEMS

JANUARY 30–FEBRUARY 2, 2017

HYATT REGENCY ORANGE COUNTY

11999 Harbor Boulevard
Garden Grove, California, USA, 92840
(714) 750-1234
orangecounty.hyatt.com

2017 SEM ANNUAL

JUNE 12–15, 2017

HYATT REGENCY INDIANAPOLIS

Indianapolis, IN, USA

To explore these events and others SEM and its partners are planning, please go to <http://sem.org/Events.asp> for more information.