MESSAGE FROM THE PRESIDENT

I am honored and excited to be elected President of the Society for Experimental Mechanics. It is most humbling to follow in the footsteps of outstanding mechanicians such as my immediate predecessors and others from our history. These are big shoes to fill! It is said that “the journey of 1000 miles begins with a single step” – so here we go....

Thanks to Pete, our current president, and his team, I inherit a vibrant technical society in good financial shape and poised for future technical challenges and advances. Pete’s leadership has continued to guide SEM through the transition following the loss of our friend and Director, Tom Proulx. He made frequent trips to headquarters in Bethel to interact directly with the staff. Although Tom promised to delay retirement until after my presidential term, his legacy lives on. The last conversation I had with Tom was just a few weeks before he passed when he conveyed excitement about confirming Indianapolis as the location for the 2017 Annual Meeting. Special thanks and appreciation go to Kristin, who has led the Society as Director for the last two-plus years. Jon Rogers also deserves recognition for returning from his “retirement” as Treasurer of the Society to guide the finances of the society.

The contributions and talents of our founders and predecessors have paved the way for what SEM represents today – a vibrant, international technical society that serves the technical community, and the world, in its commitment to the development, application and general use of experimental methods to: (a) better understand the physical phenomena that impede technological progress; and (b) complement analytical and computational approaches to the search for engineering solutions.

It is a special year to assume the role of President of the Society for Experimental Mechanics. I am enthusiastic about leading the Society through 2018, which marks our 75th anniversary. There is some pause for reflection as we enter this milestone year. The founding members of the Society for Experimental Strain and Strain Analysis (SESA) gathered in Detroit in April 1943 to present papers at the Eastern Photoelasticity Conference with the goal to “further the knowledge of stress and strain analysis and related technologies”. I assume they did not envision those related technologies to be things that have become commonplace to us in recent years: digital image correlation, experiments at the micro/nano scale, composite materials, biological materials, and additively manufactured materials for applications (e.g., biological materials and issues, UAV, space shuttle, MEMS devices, etc.) that were not even a dream 75 years ago.

Our society has grown and evolved during the last 74 years due to the curiosity and questioning of our members. A quote by Einstein is relevant, “The important thing is not to stop questioning. Curiosity has its own reason for existing”. The theme for this conference and the upcoming IMAC XXXVI conference this February reflect this: Challenges in Experimental Mechanics, for Annual and for IMAC, It’s Not Just Modal Anymore, ENGINEERING EXTREMES: Unifying Concepts in Shock, Vibration and Nonlinear Mechanics. We continue...
to push the technical envelope and bring new technologies to the forefront. Tomorrow, The Springer/Nature Publishing Young Investigator Lecture is just one example of incorporating new technologies: “Living on the Edge – Emerging Interface Problems in Additive and Advanced Manufacturing, with two keynote presentations on Wednesday. One is entitled “A New World of Opportunities and Technical Challenges”. Three separate symposia will occur this week. One on Mechanics of Biological Systems and Materials, another on Mechanics of Composites and Multifunctional Materials, and still another on Micro- and Nanomechanics.

SEM has advanced due to the commitment and drive of its members. There are numerous examples: initiation of SESA, transition from SESA to SEM, new publications (e.g., Experimental Techniques and Journal of Dynamic Behavior of Materials). Two new Technical Divisions (TD’s) have recently been initiated that grew out of focus groups at IMAC: Nonlinear Structures and Systems, and Substructuring. Two other examples in the last decade are Dynamic Behavior of Materials, and Biological Systems and Materials TD’s.

My goals for this year and to lead SEM into our next 75 years and the frontiers of Experimental Mechanics are summarized below. Some are similar to the goals of my predecessors. These are presented with the understanding that the role of the President, and the Board, is to listen and understand the wishes of the membership.

1. Celebrate the past and embrace the future—This includes assimilating new committees, conference tracks, and sessions that incorporate technologies, techniques and applications that push the frontiers of experimental mechanics. It also includes further documentation of SEM history. Some early history of SESA/SEM was previously documented in Experimentally Speaking and is accessible on our website. Additional documentation of the transition to SEM, from SESA, and the key players involved is needed. This will be accomplished with the assistance of a team that is coordinating activities for the 75th anniversary celebration.

2. Further engage students and young members—This population is the future of our society. One method for generating increased interest in SEM among the student population is to expand and revitalize the student regional conferences that have been held over the years throughout various regions of the US. I will be working with SEMEF and the Board, and other interested members, to re-activate and generate renewed interest in these informal conferences to engage students and provide opportunities for them to learn more about SEM and the benefits of our society.

3. Membership growth—SEM membership levels have remained approximately the same for the last decade. Since the health of the society is dependent on its membership and their commitment and involvement, it is critical that we address this as the number of our 25 and 50-year SEM members increases. Most of us are here today due to a personal invitation or recommendation of a faculty member or colleague. I would challenge all of you to invite a student or colleague, especially a colleague from industry (a dwindling population at Annual Conferences), to attend one of our 2018 conferences. The vision is to maintain our culture as the “friendly” society, and not to expand our membership numbers to the extent that personal interaction and accessibility become limited.

4. Enhance SEM presence and visibility—In our 75-year history, SEM and its members have had a profound impact in making the world a better and safer place. We are proud of the significant contributions of our members and our society. Many outside our technical community are unaware of our contributions and their extent. Documentation and videos planned for the 75th anniversary celebration will serve as a starting point for distribution and dissemination.

Before concluding, I want to recognize the dedication and commitment of all who contribute to the mission of our society. A special thank you to the Headquarters Staff whose tireless assistance may go unnoticed, but without whom none of this could happen. Please take the opportunity this week to thank them and let them know how much their efforts are appreciated, and how vital they are to SEM. Thank you also to the Executive Board members, Committee members and to all members of our society. You are the ambassadors that will further advance our “friendly” society, and impact the world.

My appointments for the 2017-18 year are:
- Kristin Zimmerman, as Secretary
- Jon Rogers, as Treasurer
- Peter Avitabile, Immediate Past President, as Editorial Council
- Wendy Crone, President Elect, as Chair of the National Meetings Council
- John Lambros, as Vice President, as Chair of Technical Activities Council
- Sez Atamturktur (IMAC) At-Large Board Member, as Vice Chair of Technical Activities Council
- Randy Mayes (IMAC) At-Large Board Member of Honors Committee
- Helena Jin, At-Large Board Member as Vice Chair of National Meetings Council
- Horacio Espinosa, At-Large Board Member as Vice Chair of the Research Committee
- Matthew Allan (IMAC) At-Large Board Member, as Executive Board Representative to IMAC Advisory Board
- Babak Moaveni (IMAC), At-Large Board Member, as Vice–Chair of the Applications Committee
- Y.J. (Bill) Chao, At–Large Board Member as Vice–Chair of the Education Committee
- K.T. Ramesh, At Large Board Member as Vice-Chair of the National Meetings Council

It is my honor and pleasure to work with these talented individuals during the upcoming year; I am looking forward to a productive year. Together, we will work to accomplish the proposed goals for this anniversary year and strongly position the society for the next 75 years of advancements. I encourage all members to contact me with comments or suggestions on how SEM can better serve you and our membership.

Thank you.

Kathryn Dannemann
SEM President
MESSAGE FROM THE EXECUTIVE DIRECTOR

With this message, I would like to share with you a few highlights from our 2017 Conference and Exposition on Experimental and Applied Mechanics held at the Hyatt Regency in Indianapolis, Indiana.

The technical program was again an outstanding success with all of the Technical Divisions (TDs) fully engaged. The Tuesday TD lunch was prefaced with a review of the TD Template Pages from the SEM website and received a rousing applause for the Dynamic Behavior of Materials TD. Each TD left the lunch to conduct their meetings and develop the technical program for SEM Annual 2018.

I am extremely grateful to the conference organizers, session organizers, and TD Chairs for putting together a technical program that clearly hit the mark in terms of covering both emergent and emerging areas of the greatest interest to our conference attendees and members. The technical program is the core of our conference. We invite all members and conference attendees to get involved so you can offer ideas for growth and planning future conference technical programs.

Our theme for SEM 2018 is: SEM’s 75th Anniversary – Celebrating Past Accomplishments and Exploring New Frontiers in Experimental Mechanics. Our conference will be held at the Hyatt Regency in Greenville, South Carolina June 4-7, 2018 and we are planning for a special invited plenary lecture as part of the celebration.

Our Executive Board, Councils, Committees and Technical Divisions accomplished a great deal and I look forward to sharing what is in the planning for the 2018 Technical Program as we continue to tap into the new energy that I am feeling amongst our conference attendees and members.

During the Annual Conference our Editors in Chief of our three Journals held their respective Editorial and Advisory Board meetings and continued their efforts on increasing communication across the TDs, journal editors and boards to grow greater coordination and benefit to the membership. We all agreed that we need to find a very streamlined way to publish the work presented at our meetings into one of SEM’s peer reviewed journals. I mentioned this specifically in the thank you email that was sent out to all conference attendees inviting each and every one of you to write a paper for submittal to EM, ET or JDBM based on the work presented at the conference.

Where do we need your help? We are now focusing our website efforts on membership and conference technical programming. Please be aware that the systems that we are putting in place may take a bit of getting used to, but the goal is to streamline all processes with abstract submittal, processing, technical programming, and proceedings publication. The membership system will greatly help with your 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 mechanics community.

As a final note, I want to extend a special thank you to the staff of SEM 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 as a team to be sure SEM continues on its strong growth trajectory. I invite you to send an email to Jen, Shari, Joni, Nuno, Kathy and Sharon to acknowledge the work that they do on your behalf and on behalf of SEM. Thank You!!

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

See you in Greenville, SC in June 2018!

Kristin Zimmerman,
Executive Director
2017 SEM ANNUAL CONFERENCE AND EXPOSITION AWARDS

CONFERENCE AND EXPOSITION ON EXPERIMENTAL AND APPLIED MECHANICS
Challenges in Experimental Mechanics
June 12–15, 2017
Hyatt Regency Indianapolis, Indianapolis, IN USA

William M. Murray Lecturer–Kenneth Liechti with Peter Avitabile (SEM President)

Springer/Nature Young Investigator Lecturer–Christian Franck with Peter Avitabile (SEM President)

S. Nemat-Nasser Medal Awardee–Igor Emri with Peter Avitabile (SEM President)
Peter Avitabile (SEM President) with D.R. Harking Awardees—Clive Siviour and Kalin Dragnevski

Elaine Brewer Accepting the F. Zandman Award on Behalf of her Father Rich Pryputniewicz with Peter Avitabile (SEM President)

SEM Fellow and A.J. Durelli Awardee—Eric Brown with Peter Avitabile (SEM President)

P.S. Theocaris Awardee—Jon Lambros with Peter Avitabile (SEM President)

SEM Fellow—Jon Rogers with Peter Avitabile (SEM President)

M.M. Frocht Awardee—Alberto Carpinteri with Peter Avitabile (SEM President)

F.G. Tatnall Awardee—Mike Sutton with Peter Avitabile (SEM President)

3rd Place Student Paper Competition—Simon Sternini with Peter Avitabile (SEM President)

2nd Place Student Paper Competition—Mohak Patel with Peter Avitabile (SEM President)

1st Place Student Paper Competition—Claire Teresi with Peter Avitabile (SEM President)

Residual Stress TD Best Paper Awardee—Scott Grutzik with Peter Avitabile (SEM President)
2017 ANNUAL CONFERENCE AND EXPOSITION PEOPLE AND EVENTS
THANK YOU
2017 ANNUAL SPONORS

SPECIALISED IMAGING

Photron

Capacitec

LaVision

TELOPS

correlated SOLUTIONS
EVENTS CALENDAR

2017

12TH INTERNATIONAL CONFERENCE ON ADVANCES IN EXPERIMENTAL MECHANICS
AUGUST 29 – AUGUST 31
University of Sheffield, Western Bank
Sheffield, S10 2TN United Kingdom
www.bssm.org/conf2017

THE 1ST INTERNATIONAL AEROSPACE SYMPOSIUM ON ACOUSTIC FATIGUE (IASAF)
SEPTEMBER 11 – SEPTEMBER 13
University of Strathclyde
Glasgow, United Kingdom
www.strath.ac.uk/engineering/acousticfatigue

5TH INTERNATIONAL SYMPOSIUM ON SENSOR SCIENCE
SEPTEMBER 27 – SEPTEMBER 29
AXA Convention Centre
Barcelona, Spain
www.sciforum.net/conference/i3s2017Barcelona

6TH RESIDUAL STRESS SUMMIT
OCTOBER 24 – OCTOBER 26
Dayton, OH, USA
www.rssummit.org

12TH INTERNATIONAL SYMPOSIUM ON ADVANCED SCIENCE AND TECHNOLOGY IN EXPERIMENTAL MECHANICS
NOVEMBER 1 – NOVEMBER 4
The Kanazawa Theatre “Kanazawa Kagekiza”
Kanazawa City, Japan
www.jsem.jp/ISEM12

iDICS 2017 CONFERENCE & WORKSHOP
NOVEMBER 6 – NOVEMBER 9
Barcelona, Spain
www.idics.org

2018

IMAC-XXXVI
FEBRUARY 12 – FEBRUARY 15
Rosen Plaza Hotel
Orlando, FL
www.sem.org/imac-conference-xxxvi

PHOTOMECHANICS 2018
MARCH 20 – MARCH 22
Hôtel Mercure Compans Cafarelli
Toulouse, France
photomech2018.sciencesconf.org

2018 SEM ANNUAL
JUNE 4 – JUNE 7
Hyatt Regency Greenville
Greenville, SC
www.sem.org/annual-conference

18TH U.S. NATIONAL CONGRESS FOR THEORETICAL AND APPLIED MECHANICS
JUNE 4 – JUNE 9
Hyatt Regency O’Hare
Rosemont, IL
sites.northwestern.edu/usnctam2018