Call for Papers

The AIAA Structural Dynamics Technical Committee is sponsoring a special session on

Modeling Joints/Interfaces in Structural Systems Experiencing Dynamic Loading Conditions

AIAA SciTech 2022

January 3-7, 2022
San Diego, CA

Joints/interfaces are critical aspects and constantly represented in structural systems that experience dynamic loading conditions. Accurate modeling of these joints is paramount to capture the dynamical characteristics of the system of interest. It has been estimated that joints/interfaces can account for over half of the energy dissipation in a system. In addition, the interfaces contribute to the overall stiffness and load carrying capability of structural systems. Finally, the joints/interfaces are typical areas of concern for structural reliability analysis from the dynamic loading.

This session explores modeling aspects of joints/interfaces. This is a wide area of discussion ranging from bolted joints in missile systems to loaded bearings in rotocraft. The goal of this session is to bring leading researchers in the area of joint/interface modeling to present their work to educate and engage the aeronautics and astronautics community.

Extended abstracts of no less than 1,000 words are due June 1, 2021
Final manuscript due December 2, 2021

Detailed abstract preparation instructions and policies can be found at
https://scitech.aiaa.org/callforpapers
Make sure to select the "Special Session on Modeling Joints/Interfaces in Dynamics" topic option under the "Structural Dynamics" technical discipline when prompted during submission.

For more information contact the following organizer:
Dr. Michael Ross
Sandia National Laboratories
mross@sandia.gov

Call for Papers

The AIAA Structures Technical Committee and the Structural Dynamics Technical Committee are jointly sponsoring a special session in honor of

Mr. H. Stanley Greenberg

AIAA SciTech 2022

January 3-7, 2022
San Diego, CA

Mr. H. Stanley Greenberg, who passed away in December of 2020, was active for over 45 years in the field of aerospace structures, design and analysis. From 1996 to 2014 he was consultant to Kistler Aerospace, the Boeing Co., and Northrop Grumman on Reusable Launch Vehicles. He was at Rockwell International's Space Systems Division (SSD) from 1962 to 1996 serving in the Structures department focusing on space design, composite materials, testing, performance, and then later as a mentor and teacher of structural mechanics. At Rockwell, he led the Space Shuttle Orbiter Crew Compartment subsystem and the proposal for the Space Station Freedom Work Package 2 Integrated Truss. As Program Manager in 1994 he won 3 Major Technology Development Contracts in NASA/MSFC's NRA program for a Single Stage Reusable Launch Vehicle. He directed the study of integrated metallic tank structure-cryogenic insulation-TPS for an AMLS for NASA/LaRC. In 1991 he was a candidate for Director of Large Space Structures at NASA/LaRC. He managed three large space structures technology development contracts for NASA/MSFC culminating in the successful automatic deployment and retraction of a 45-foot long 10 bay truss. He supported the Shuttle Orbiter Crew Compartment concept development and then supervised the structural analysis for its structural design, fabrication and qualification testing. Prior to Shuttle he was involved in numerous optimization studies applied to the structures of the Saturn S-II stage such as 1) Modified S-II, 2) S-II Simplification, and 3) 6 Engine S-II.

Over the past 26 years, Stan has presented the course "Design and Analysis of Launch Vehicle Structures" to well over 600 Engineers including Rockwell's SSD, the Boeing Co., Northrop Grumman, the Engineering Faculties of the University of Oklahoma and Mississippi State University, NASA/MSFC, NASA/LaRC, NASA/JSC, NASA/JPL, as well as through several University extension programs.

Please consider honoring him by submitting an abstract to this Special Session.

Potential topics could include, but are not limited to:

- Launch Vehicle Design and Analysis
- Reusable tank composite development
- Equivalency Techniques for Preliminary Design of Complex Aerospace Structures
- Large Space Systems Technology and Development Related to Antenna and Platform Systems.
- Structural Developments in Single Stage to Orbit Vehicle Designs
- Structural Design Optimization of Large Space Structures

Extended abstracts of no less than 1,000 words are due June 1, 2021
Final manuscript due December 2, 2021

Detailed abstract preparation instructions and policies can be found at
https://scitech.aiaa.org/callforpapers
Make sure to select the "Special Session in Honor of H. Stanley Greenberg" topic option under the "Structures" technical discipline when prompted during submission.

For more information contact one of the following organizers:

Mr. Kenneth R. Hamm, Jr
NASA Engineering and Safety Center
Kenneth.R.Hamm@nasa.gov

Mr. Joel W. Sills
NASA Engineering and Safety Center
Joel.W.Sills@nasa.gov

Call for Papers

The AIAA Structural Dynamics Technical Committee is sponsoring a special session on

Machine Learning for Structural Dynamics and Computational Sciences

AIAA SciTech 2022
January 3-7, 2022
San Diego, CA

Physics-based and data-driven machine learning methods are an emerging paradigm in computational Science and Aerospace Engineering. This session focuses on Machine Learning's predictive applications in Structural Dynamics, Aeroelasticity, and other related fields.

Extended abstracts of no less than 1,000 words are due June 1, 2021
Final manuscript due December 2, 2021

Detailed abstract preparation instructions and policies can be found at
https://scitech.aiaa.org/callforpapers
Make sure to select the "Special Session: Machine Learning for Structural Dynamics and Computational Science" topic option under the "Structural Dynamics" technical discipline when prompted during submission.

For more information contact the following organizer:
Dr. Zahra Sotoudeh
Cal Poly Pomona
zsotoudeh@cpp.edu

Call for Papers

The AIAA Structural Dynamics, the Fluid Dynamics, the AMT, the APA technical committees are sponsoring a special session on

Collaborative Experimental-Computational Efforts in High-Speed FSI

AIAA SciTech 2022

January 3-7, 2022
San Diego, CA

This special session will highlight recent collaborative computational-experimental efforts in high-speed fluid-thermal-structural interactions. This session is jointly sponsored by the Aerodynamic Measurement Technology, Applied Aerodynamics, Fluid Dynamics and Structural Dynamics Technical Committees (AMT-APA-FD-SD).

Extended abstracts of no less than 1,000 words are due June 1, 2021
Final manuscript due December 2, 2021

Detailed abstract preparation instructions and policies can be found at
https://scitech.aiaa.org/callforpapers
Make sure to select the "Collaborative Experimental-Computational Efforts in High-Speed FSI" topic option under the "Structural Dynamics" technical discipline when prompted during submission.

For more information contact the following organizer:
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ATA Engineering
eric.blades@ata-e.com