

Preface

The 30th Annual Technical Conference of the American Society for Composites (ASC) was held at the Kellogg Hotel & Conference Center on the campus of the Michigan State University, East Lansing, Michigan from September 28 to 30, 2015.

The conference provided a communication forum for the composite community to present the latest developments, and to discuss the challenges and the future outlook of the field of composite materials and structures. A total of 235 technical papers were presented in 65 sessions. The conference also featured three plenary talks and four keynote presentations.

The plenary speakers and their presentations were Dave Bank, the R&D Fellow at Dow Automotive, on *light weight composites development: turning fast curing chemistries into high performance automotive components*; Ramesh Talreja, the Tenneco Professor of Engineering at the Department of Aerospace Engineering, Texas A&M University, on *multi-scale modeling of damage and failure in composite materials*; and David W. Trop, Chief Engineer, BCA Structures - Product Development and Technology, the Boeing Company, on *challenges and opportunities in application of advanced composites to large aircraft structures*.

A special symposium was organized to honor Dr. Larry Drzal, a Distinguished Professor at Michigan State University and the Director of the Michigan Center of Excellence for the Institute for Advanced Composites Manufacturing Innovation (IACMI).

The success of this conference is the results of broad support and hard work of many individuals, particularly the session organizers, members of the advisory committee, and the local organizing committee. The names of these individuals are provided on the next page.

Finally, we would like to thank the encouragement and financial support from the Department of Mechanical Engineering, the College of Engineering, the Office of Vice President for Research and Graduate Studies, the conference support from the Kellogg Center, and the website support from the Division of the Engineering Computing Services at Michigan State University.

Conference Chairs
Xirnan (Sharon) Xiao
Alfred Loos
Dahsin Liu

Michigan State University
East Lansing, Michigan
September, 2015

The technical sessions were organized by the following individuals:

Armor and Protection	Gaurav Nilakantan and Weiyi Lu.
Automotive Composites	Nick Gianaris and Liangkai Ma
Biocomposites	Zhangli Peng and Miki Banu
Bonded Joints	Endel Irave and Bhawesh Kumar
Composites Education	Rani Sullivan
Crashworthiness	Venkat Aitharaju and Chiara Bisagni
Damage Modeling	Chian-Fong Yen and Bazle Haque
Durability and Damage Tolerance	David Mollenhauer, Evan Pineda, and Kishore Pochiraju
Effects of Defects	Caihua Cao
Foam Cores and Sandwich Composites	Nikhil Gupta and Jeffrey Cipolla
Impact & Dynamic Response	Robert Goldberg and Hyonny Kim
Micromechanics	Wenbin Yu and Sam Huang,
Molecular Modeling	Adnan, Ashfaq and Sanjib Chowdhury
Multifunctional Composites	Gaurav Nilakantan and Jandro Abot
Multiscale Modeling	Wenbin Yu and Ray Fertig
Multi-material Joining	Mahmood Haq and Kelly Williams
NAFEMS - Computational Methods	Roger Assaker and Ronald Krueger
Nanocomposites	Xiaosong Huang and Gregory Odegard
NDT and Health Monitoring	Mahmood Haq and Gerges Dib
ONR session	Dayakar Penumadu
Prediction and Characterization of Damage Inception and Evolution	David Mollenhauer, Evan Pineda, and Kishore Pochiraju
Processing	Dan Houston, Mehdi Hojjati, and Abhishek Dutta
Temperature Effects	Pavana Prabhakar
Testing and Characterization	Charles Bakis
Textile Composites	Mark Pankow
Structural Response	KT Tan
Wind Energy	Vipul Ranatunga and Olesya Zhupanska
Honorary Session for Prof. Lawrence Drzal For Lifetime Achievements	Mike Rich

Advisory Committee

Erian Armanios, Charles Bakis, Steven Donaldson, Robert Goldberg, Nikhil Gupta, Hyonny Kim, Thomas Lacy, David Mollenhauer, Kishore Pochiraju, Vipul Ranatunga, Bhavani Sankar, Gregory Schoeppner, Rani Sullivan, Erik Thostenson, and Olesya Zhupanska.

Local Organizing Committee

Libby Berger, Alex Diaz, Larry Drzal, Craig Gunn, Eryi Hu, Lynne Krogsrud, Mike Rich, and Jeff Robacki.