

Curriculum Vitae

Professor S. S. Wang

OFFICE ADDRESS, PHONE & E-MAIL: Room N216, Engineering Building
Department of Mechanical Engineering
University of Houston
4800 Calhoun Road
Houston, TX 77204-4792;

Room 152A, Building #3
Composites Engineering and Applications Center (CEAC)
National Wind Energy Center (NWECC)
University of Houston
5000 Gulf Freeway
Houston, TX 77204-0903;

(713)-743-5057 (NWECC/CEAC office) (713)-743-5063 (Fax)
(713)-743-4515 (ME Dept. office) (713)-743-4516 (Fax)
E-mail Address: sswang@uh.edu

PRESENT POSITION: Hugh Roy and Lillie Cranz Cullen Professor,
Department of Mechanical Engineering, and
Materials Science and Engineering Program,
Director (1994-Present),
Composites Engineering and Applications Center (CEAC)
for Petroleum Exploration & Production,
Director (2009-Present)
National Wind Energy Center (NWECC)
University of Houston,
Houston, TX 77204

EDUCATION: Sc. D. (1974), Solid Mechanics and Materials Engineering,
Massachusetts Institute of Technology,
Cambridge, MA 02139

M. S. (1970), Engineering Mechanics,
National Taiwan University,
Taipei, Taiwan, China

B.S. (1968), Engineering Mechanics,
National Cheng-Kung University,

Tainan, Taiwan, China

- EXPERIENCE:** Distinguished University Professor (1990-2010)
Department of Mechanical Engineering, and
Materials Science and Engineering Program
Cullen College of Engineering
University of Houston, Houston, TX 77204
- Distinguished Visiting Professor (2000)
Laboratoire de Mechanique et Technologie,
Ecole Normale Superieure de Cachan/CNRS/Universite Paris 6,
Cachan, France
- Professor (1984-90),
Department of Theoretical & Applied Mechanics, and
Department of Aeronautical & Astronautical Engineering;
Director (1985-90),
National Center for Composite Materials Research;
University of Illinois at Urbana-Champaign,
Urbana, IL 61801
- Associate Professor (1980-84),
Department of Theoretical & Applied Mechanics,
University of Illinois at Urbana-Champaign,
Urbana, IL 61801
- Assistant Professor (1977-80),
Department of Theoretical & Applied Mechanics,
University of Illinois at Urbana-Champaign,
Urbana, IL 61801
- Lecturer and Research Associate (1974-77),
Department of Materials Science and Engineering,
Massachusetts Institute of Technology
Cambridge, MA 02139
- Research Assistant (1971-74),
Department of Mechanical Engineering:
Massachusetts Institute of Technology,
Cambridge, MA 02139
- AWARDS and HONORS** Member, International Scientific Committee,
The 21th International Conference on Composite Materials (ICCM-21),
Xi'an, China, August 20-25, 2017.

Best Paper Award,

American Society for Composites (ASC),
Awarded in the 30th ASC Annual Technical Conference, East Lansing, MI,
September 29, 2015.

Member, International Scientific Committee,
The 20th International Conference on Composite Materials (ICCM-20),
Copenhagen, Denmark, July 19-24, 2015.

International Panelist,
Science Foundation Ireland (SFI), Dublin, Ireland,
for review of Marine Renewable Energy Ireland (MaREI) Research Centre,
University College Cork, Cork, Ireland, November 12-14, 2015.

Keynote Lecturer,
ANTEC 2014 National Conference,
Society of Plastic Engineers (SPE),
Las Vegas, NV, April 29, 2014.

Distinguished Lecturer,
Material Technology Seminar Series,
Center for Technology Innovation, Baker Hughes,
Houston, TX, April 8, 2014.

Distinguished Lecturer,
NIST ACMD Seminar Series,
Applied & Computational Mathematics Division,
National Institute of Standards and Technology,
Gaithersburg, MD, July 12, 2013.

Finalist, PI of 2010 NSF ERC Competition,
National Science Foundation, Washington, D. C.,
(Proposal: “NSF ERC on Offshore Wind Energy”; Partner Universities: U.
Massachusetts-Amherst, Texas A & M Univ., University of Texas-Austin,
University of Puerto Rico, Delft University of Technology, Technical
University of Denmark-Risoe, University of Oldenburg, Germany),
November 3, 2010

Keynote Lecturer
1st Texas Offshore Wind Energy Roundtable (TOWER) Conference,
Houston, TX, October 19, 2010

Keynote Speaker
ASCE Earth & Space 2010 Conference
American Society of Civil Engineers – Aerospace Division Honolulu,
Hawaii, March 14-17, 2010

Keynote Lecturer
Symposium on Gulf of Mexico Deep- and Ultra-deep Water Hydrocarbon E &
P Perspectives,

Universidad Nacional Autonoma de Mexico, Mexico
City, Mexico, February 18, 2008

Distinguished Lecturer
National Science and Engineering Research Council (SERC) &
National University of Singapore
Singapore, November 10, 2008

Plenary Lecturer
International Materials Technology Conference and Exhibition Kuala
Lumpur, Malaysia, August 24, 2008.

Plenary Lecturer
2006 Composites Asia Conference,
Kuala Lumpur, Malaysia, November 15-16, 2006

Plenary Lecturer
National Science Council Forum on Offshore Wind Energy,
Taipei, Taiwan, October 23, 2006,

Keynote Lecturer,
The 10th U.S.-Japan Conference on Composite Materials,
Stanford University, Stanford, CA; September 18, 2002.

Keynote Lecturer,
NACE 9th Middle East Corrosion Conference,
NACE International
Bahrain, February 12, 2001

Distinguished Lecturer
Ecole Thematique: Damage Mechanics of Materials and Structures,
Ecole Normale Superieure de Cachan/CNRS/ Universite Pierre & Marie Curie
(Paris 6),
Cachan, France; September 25-26, 2000.

OTRC Honors Awards
Offshore Technology Research Center (OTRC)
Texas A&M University and University of Texas-Austin,
Houston, TX; November 1, 2000.

Keynote Lecturer
The 3rd International Conference on Composite Materials for Offshore Operations
(CMOO-3),
Houston, TX; October 2000.

Distinguished Alumni Award,
National Cheng-Kung University Alumni Association & Foundation,
Washington, D.C.; April 1999.

Keynote Lecturer,
The 22nd National Theoretical and Applied Mechanics Conference,
Taiwan, China, November 1998.

Keynote Lecturer,
The 3rd International Conference on Materials Engineering for Resources,
Akita, Japan, October 1998.

Atofina Chemicals (Previously, Elf Atochem) Research Award,
1999 and 2002-03.

Total Chemicals Research Awards, 2004-06

Shell Foundation Research Award, 1997, 1998, 1999 and 2000.

Exxon Educational Foundation Award, 1996, 1998 and 1999.

CMOO-2 Award for Outstanding Leadership and Technical Achievement,
The 2nd International Conference on Composite Materials for Offshore Operations,
Houston, TX, October 1997.

DuPont Foundation Faculty Award, 1994-97.

Plenary Lecturer,
ASME Summer Annual Meeting-Symposium on Mechanics of
Composite Materials at Elevated & Cryogenic Temperatures, Columbus,
OH, June 16, 1991.

Distinguished Service Award,
CERL, U.S. Army Corps of Engineers,
June, 1990.

Plenary Lecturer,
The 7th International Conference on Composite Materials (ICCM-7),
Beijing, China, August 1-4, 1989.

Keynote Speaker,
The 7th International Conference on Vehicle Structural Mechanics (ICVSM-VII),
Detroit, MI, April 11-13, 1988.

Lecturer,
Southwest Mechanics Lecture Series at University of Texas, Texas A & M
University, University of Oklahoma & Southwest Research Institute, February
15-19, 1988.

ALCOA Foundation Distinguished Faculty Award,
Pittsburgh, PA, 1987.

Shell Development Company Faculty Award, 1987 & 1988.

General Lecturer,
International Union of Theoretical & Applied Mechanics (IUTAM)
Symposium on Yielding, Damage, and Failure of Anisotropic Solids,
Villard de Lans, Grenoble, France, August 24-28, 1987.

General Lecturer,
International Union of Theoretical & Applied Mechanics (IUTAM) Symposium
on Mechanics of Damage and Fatigue, Technion and Tel Aviv University, Israel,
July 1-4, 1985.

Chrysler Engineering Challenge Award, Detroit, Michigan, 1985-90.

NASA-Virginia Tech Composites Program Distinguished Lectureship,
Virginia Tech & NASA-Langley Research Center,
Blacksburg, VA, October, 1985.

General Lecturer,
The 16th IUTAM International Congress on Theoretical & Applied Mechanics,
Lyngby, Denmark, August 19-24, 1984.

Best Paper Award,
International Cryogenic Materials Conference (ICMC),
Hamburg, Germany, 1983.

Xerox Award for Best Faculty Research,
University of Illinois, 1982.

**PROFESSIONAL ACTIVITIES - EDITORSHIP,
INTERNATIONAL &
NATIONAL COMMITTEES AND SOCIETY SERVICE**

- Editorship:** Co-Editor (2006) (with J.G. Williams and K. H. Lo)
Composite Materials for Offshore Operations-4
University of Houston CEAC Publishing, Houston, TX
- Guest Technical Editor (Theme Issues) (2005-08)
Arabian Journal of Science and Engineering
Dhahran, Saudi Arabia
- Co-Editor (2000-01) (with J.G. Williams and K.H. Lo),
Composite Materials for Offshore Operations-3,
University of Houston CEAC Publishing, Houston, TX (736
Pages.)
- Co-Editor (1997-99) (with J. G. Williams and K.H.Lo),

Composite Materials for Offshore Operations - 2,
ABS Publishing, New York, NY (778 pages).

Co-Editor (1994 - 95) (with D.W. Fittings),
Composite Materials for Offshore Operations -1,
NIST Special Technical Publications No. 887, (388 pages),
U.S. Department of Commerce, Washington, D.C.

Associate Editor (1990 - 95)
ASME Journal of Engineering Materials and Technology
American Society of Mechanical Engineers

Editorial Board (1993 - 99)
Mechanics of Composite Materials and Structures
John Wiley & Sons Publishing

Co-Editor (1985-91)
Journal of Composites Research and Technology,
American Society for Testing and Materials

Co-Editor (1989)
Advances in Composite Materials and Structures, ASME, AMD 82, 1989,
American Society of Mechanical Engineers

Co-Editor (1980)
Advances in Aerospace Structures and Materials, ASME AD 01, 1980
American Society of Mechanical Engineers

**International
and
Governmental
Committee:**

Member, International Scientific Committee, The 21th International
Conference on Composite Materials (ICCM-21), Xi'an, China, August
20-25, 2017.

Coordinator, Theme Sessions on Offshore Structural Analysis and
Applications in the 20th International Conference on Composite
(ICCM-20), Copenhagen, Denmark, July 9-24, 2015.

Panelist , “Challenges of Advanced Materials for Wind Energy”,
Materials Challenges for Energy (Sponsored by Committee of Nanomaterials
for Energy and Committee of Nano-engineering for Energy and Sustainability),
ASME 2013 international Mechanical Engineering Congress,
San Diego, CA, November 15-21, 2013

Panelist, ARPA-E Program Proposal Review Panel
Washington, D.C., August 2012

Panelist, Marine Board of Transportation Research Board, on
Offshore Wind Energy, The National Academics, Washington,

D. C., March 25-26, 2010

International Review Panel, Thematic Strategic Research Program, National Science and Engineering Research Council, Agency for Science and Technology (ASTAR), Singapore, September – December, 2008

International Organizing Committee and Technical Paper Review Committee, The 6th International Materials Conference & Exhibition, Kuala Lumpur, Malaysia, August 24-27, 2008

Panelist, Advances in Wind Turbines, DoE-Sandia-NREL Workshop, Albuquerque, NM, June 2008

Panelist, Critical National Needs in New Technologies-Technology Innovation Program, The Board on Science, Technology and Economic Policy, The National Academies, Washington, D.C., April 24, 2008

Chair, Review Panel for U. S. Air Force Office of Scientific Research (AFOSR) Mechanics Program on Research Proposals (2005 and 2007)

Member, Review Panel for U. S. AFOSR Mechanics Program on Research Proposals, National Research Council (NRC), National Academies (July-December, 2004 and 2006).

National Materials Advisory Board Panel, National Academy of Sciences, DoD Study on Challenges and Opportunities with Advanced Composite Materials (April 2004).

Co-chair and Organizer, International Organizing Committee, The Fourth International Conference on Composite Materials for Offshore Operations (CMOO-4), (2003-05)

International Scientific Committee, ENS Symposium on Recent Advances in Continuum Damage Mechanics in Composites, Cachan, France (1999-2000).

National Panel on Manufacturing & Testing for Performance Assurance, Qualifying New Technologies for Deepwater Oil & Gas Development Workshop, U. S. MMS and OTRC, Washington, D. C., October 2002.

Co-Chair, International Organizing Committee, The Third International Conference on Composite Materials for Offshore Operations (CMOO-3), Houston, TX (1998-2000)

U.S. Department of Commerce
Advanced Technology Program on Composite Infrastructures, Program Development Committee, Washington, D.C. (1997-99)

The 12th International Conference on Composite Materials (ICCM-XII),
Paper & Program Review Panel, Paris, France, 1998.

Panelist, National Materials Board (National Academy of Sciences)
for Review of AFOSR Programs and Proposals.

International Scientific Committee, IUTAM International Symposium on Strength
Theories: Applications and Development, Xian, China, 1998.

International Advisory Committee, Joint Industry Program on FRP Tubular for
Offshore E & P, DNV, Oslo, Norway, 1998.

US DoC NIST ATP Program on Composite Spoolable Tubing, Advisory Committee,
Member (1995-98).

US DoC NIST ATP Program on Composite Production Risers, Advisory Committee,
Member (1995-98).

MMS and DoC NIST International Workshop on Composite Materials for Offshore
Operations, International Steering Committee (1993-97)

DARPA Advanced Submarine Technology (AST) Program Long-Range Planning
Committee on Advanced Composite Materials (1988-92).

National Research Council on Use of Composite Materials in Load-
Bearing Marine Structures, Panelist (1990).

U. S. National Congress of Theoretical & Applied Mechanics, Symposia
Organizing Committee for the Xth Congress, Member (1989-90).

National Aeronautics & Space Administration - Technology Applications
Program, Advisor (1987-91)

IUTAM Scientific Committee for Symposium on Local Mechanics
Concepts for Composite Materials, Member (1989-92)

IUTAM Scientific Committee for Symposium on Inelastic Deformations of
Composite Materials, Member (1987-90)

European Mechanics of Materials Association, MECMAT International
Committee, Member (1988-90)

Society of Manufacturing Engineering, Advisory Committee- Composites
Division, Member (1982-88)

U.S. Council of Japan-U.S. Conference on Composite Materials, Member
(1980-)

Japan Society for Composite Materials, Advisory Committee and Foreign Member (1982-)

Institute of Aeronautics and Astronautics, National Cheng-Kung University, Tainan, Taiwan, China, Advisory Committee on Aerospace Structures and Materials (1986-)

Institute of Mechanics, National Taiwan University, Advisory Committee, Advisory Committee, Taipei, Taiwan, China (1986-)

PROFESSIONAL SOCIETIES: American Society for Composite Materials, Founding Member, & Member of Scientific Committee
American Institute of Aeronautics & Astronautics,
American Society of Mechanical Engineers - Aerospace Division, Executive Committee, & National Structures and Materials Committee;
Applied Mechanics Division, National Committee on Mechanics of Composite Materials
American Academy of Mechanics
American Society for Testing and Materials - E-9 Committee on Fatigue, D-30 Committee on High-Modulus Fibers & Composites, E-24 Committee on Fracture

PUBLICATIONS: Eight books and over 200 technical articles in books and refereed journals, and more than 100 reports for NASA, ONR, AFML, AFOSR, Army, GRI, API and other federal governmental agencies and industries.
(A list of publications is attached.)

RESEARCH INTERESTS & AREAS OF ACTIVITIES:

- (1). Solid mechanics and material science and engineering, especially on mechanical behavior and mechanics of composite materials & structures, including polymer-, metal-, and ceramic-matrix composites.
- (2). High-temperature mechanics and thermomechanical behavior of advanced composite materials.
- (3). Ballistic material resistance and penetration mechanics of lightweight armor systems.
- (4). Composite structures and materials for deepwater petroleum exploration, production, processing, transportation and storage.
- (5). Advanced materials and structures for renewable energy systems – large offshore and onshore wind turbines, electric energy transmission and storage systems.
- (6). Tribology of advanced composites and polymeric materials for rotating and reciprocal machinery

**TEACHING
ACTIVITIES:**

Courses Offered at University of Illinois at Urbana-Champaign (1977-90):

Mechanical Behavior of Materials
Plasticity, Flow and Fracture of Structural Metals
Nonlinear Fracture Mechanics
Introduction to Composite Materials
Mechanics of Composite Materials
Physics of Deformation and Fracture of Polymers
Micromechanics of Heterogeneous Media Mechanics
and Design of Composite Materials
Advanced Topics on Composite Materials and Structures

Courses Offered at University of Houston (1990- present):

Tribology (MECE 6397/7397)
Composite Materials (MECE 6320)
Micromechanics of Composite Materials (MECE 7320)
Advanced Mechanics of Composite Materials and Structures (MECE 7321)
Damage Mechanics and Failure Theories of Composite Materials (MECE
7322)
Polymeric Materials and Mechanics (MECE 6321) Polymer
Viscoelasticity and Fracture (MECE 6322)
Advanced Fracture Mechanics (MECE 7371)
Selected Topics on Advanced Composites and Polymers (MECE 7397)
Wind Energy I (MECE 7397)

**RESEARCH
ACTIVITIES:**

(1). Graduate Students finished at the University of Houston (1991-Date)

1. L. Hoffmann, "Crack Growth and Fracture in Randomly Oriented Short- Fiber Composites under Monotonic and Cyclic Fatigue Loading," M.S. Thesis, Mechanical Engineering Department, May 1993.
2. Y. S. Yuan, "A Study of MgO Whisker Reinforced BPSCCO HTS Composites: Solid-State Processing, Microstructure and Superconducting Property Relationships," M.S. Thesis, Mechanical Engineering Department, December 1993.
3. A. Skontorp, "Isothermal High-Temperature Oxidation, Aging and Creep of Carbon Fiber Polyimide Composites," Ph.D. Dissertation, Mechanical Engineering Department, May 1995.
4. J. Schon, "Partial Melt Processing and Property Relationships of Bulk MgO Whisker Reinforced (Bi, Pb)₂Sr₂Ca₂Cu₃O_{10-x}," Ph.D. Dissertation, Materials Engineering, December 1995.
5. X. Lu, "Leakage Analysis and Experiments of Threaded Fiber Composite Joints under Combined Internal Pressure, Axial and Makeup Loading," Ph.D. Dissertation, Mechanical Engineering Department, August 1996.
6. H.K. Kung, "High-Temperature Oxidation, Aging and Creep in Carbon Fiber Reinforced Polyimide Composites During Cyclic Thermal Fatigue," Ph.D. Dissertation, Mechanical Engineering Department, August 1996.
7. C. S. Payne, "Accelerated Testing Methods and Failure Modes for Long- Term Leakage Failure of Fiber Reinforced Composite Tubular Subjected to Combined Internal Pressure and Axial Loading," M.S. Thesis, Mechanical Engineering Department, December 1996.
8. S. Srinivasan, "Long-Term Leakage Failure in Filament-Wound Glass Fiber Reinforced Cylindrical Composite Laminate Shells under Combined Internal Pressure and Axial Loading," Ph.D. Dissertation, Mechanical Department, December 1996.
9. S.A. Swan, "Effects of Aging on High-Temperature Fracture of Polyimide Polymers and Composites," M. S. Thesis, Mechanical Engineering Department, January 1998.
10. Z.Q. Gong, "A Theory and Associated Numerical Method for Determination of Probabilistic Strength of Fiber Composite Structures," M.S. Thesis, Mechanical Engineering Department, August 1998.
11. J. Tang, "A Study of Processing, Microstructure and Property

- Relationships of Oxide Ceramics and Their Composites for Fuel Cell Electrolyte and Electrodes,” M.S. Thesis, Materials Engineering, May 1999.
12. Xinjiang Shen, “Damage and Failure Mechanics of Thick-Wall Cylindrical Hybrid Composite laminate Shells,” M.S. Thesis, Mechanical Engineering, August 1999.
 13. Sara Escanero, “Continuum Damage Mechanics Experiments and Analysis and Failure Prediction of Steel-Strip/ Glass-Fiber Composite Laminate Cylindrical Shell with Residual Thermal Stresses,” M.S. Thesis, Mechanical Engineering, July, 2002.
 14. D ylan A. Monaghan, “Effect of Saltwater on Multiaxial Cyclic Fatigue of Carbon/Epoxy Composite Materials”, M.S. Thesis, Mechanical Engineering, August, 2003.
 15. Thomas Gallifet, ”Elevated Temperature Fiber/Matrix Interface of Carbon Fiber/Polyimide (G30-500/PMR15) Composite,” M.S. Thesis, Mechanical Engineering, January 2005.
 16. Feng Wang, “Effect of Multiaxial Stress State and Saltwater on Cyclic Fatigue Damage and Failure of Glass/Epoxy Composite”, Ph.D. Dissertation, Mechanical Engineering, May 2007.
 17. Emrah Gokdag, “Craze Development in High-Impact Polystyrene”, Ph.D. Dissertation, Mechanical Engineering, December 2007.
 18. Luis Maily, “Multiaxial Damage and Strength of Advanced Fiber Composites”, Ph.D. Dissertation, Mechanical Engineering, May, 2009
 19. Hua Li, “Leakage Failure of FRP Pipe Connectors Subject to Combined Bending and Internal Pressure”, M.S. Thesis, Mechanical Engineering, August 2010.
 20. Gang Liu, “Sliding Friction and Wear of Polymers and Composites”, M.S. Thesis, Mechanical Engineering, December 2010.
 21. Yanan Ho, “Reaction Kinetics and Flow Simulation of Vacuum-Assisted Resin Infusion Molding Process for Thick Glass/Polyester Composite,” M.S. Thesis, Mechanical Engineering, May, 2013
 22. Ligu Li, “Interlaminar Fatigue of Thick Section Glass Fabric/Vinyl Ester Composite,” M.S. Thesis, Mechanical Engineering, December, 2013.
 23. Lingling Yin, “Aeroelastic and Hydrodynamic Loads and Structural Dynamics of Large MW-Scale Offshore Wind Turbines in Shallow Water GOM,” Ph.D. Dissertation, Mechanical Engineering, August

2015.

24. HariPriya Sundararaju, “ Large Horizontal-Axis Offshore Wind Turbines,” Ph.D. Dissertation, Mechanical Engineering, May 2016.

(2). Post-Doctoral Fellows and Research Associates Finished & Returned:

Y. Shibuya (Completed Post-Doctoral research in Mechanical Engineering, 1994; Returned to Japan)
H. Suzuki (Completed Post-doctoral Fellowship, Mechanical Engineering, 1996; Returned to Japan.)
A. Skontorp (Completed Post-Doctoral Research Associate research Mechanical Engineering, 1997 ; Returned to Sweden.)
M. S. Wong (Completed Post-doctoral Research Associate research, Mechanical Engineering, 1997; Now with U.S. AFML, Dayton, OH)
M. Karayaka (Completed Post-doctoral Research Associate research, Mechanical Engineering, 1997; Now with Aker Engineering, Houston, TX)
S. Srinivasan (Completed post-doctoral research, Mechanical Engineering, 1998; Now with ABS, Houston, TX.)
E. Duvivier (Completed post-doctoral research, CEAC/Mechanical Engineering in 1999; Returned to France)
H. Wu (Completed post-doctoral research, Mechanical Engineering/TCSUH in 1999; Now with Nordic Superconductivity, Copenhagen, Denmark)
I. Lu (Completed post-doctoral research, 2000; Now with Coflexip Stena Aker Engineering, Houston, TX)
A. Selvarathinam (Completed post-doctoral research in 2001; Now with General Dynamics, Ft. Worth, TX)
M. D. Aydin (Complete post-doctoral research, 2013; Now returned to Technical University of Istanbul, Turkey)

(3). Post-Doctoral Research Associates and Research Scientists Supervised:

Daniel Davis	Research Professor
K. H. Lo	Research Professor
X. H. Chen	Research Scientist
A. Miyase	Research Associate Professor
A. Miravete	Senior Research Scientist
T. P. Yu	Research Scientist
J. G Williams	Senior Research Scientist
B.W. Cole	Senior Research Scientist
L. Mailly	Research Scientist
R. Banik	Research Scientist
X. Chen	Post-doctoral Research Fellow
F. Wei	Visiting Research Professor

(4). Design, Construction, Development, Maintenance and Management of the Following Laboratories for Research and Instructional Uses in Mechanical Engineering Department and CEAC:

- a. Computational Laboratories for Solid Mechanics and Advanced Materials:
 - Networked High-Speed Workstation Laboratory
 - Computer-Aided Design & Analysis Laboratory
 - Microcomputer Laboratory
- b. Laboratories for Thermomechanical Studies:
 - Multiaxial Material and Structural Testing Laboratory
 - High-Temperature Material Testing Laboratory
 - High-Temperature Thermal Shock/Fatigue & Creep Laboratory
 - High-Temperature Mechanical Fatigue-Creep Interaction Lab
 - Thermal -Mechanical Analysis and Morphology Laboratory
 - Electron Microscopy & Image Analysis Laboratory
- c. Laboratories for Micromechanics and Interface/phase Studies:
 - Micromechanics Laboratory
 - Micro-Measurement/Micromechanics Laboratory
 - Specimen Preparation and Fabrication Laboratory
- d. Laboratories for Durability and Reliability:
 - Erosion-Corrosion Laboratory
 - Long-Term Multiaxial Creep & Environment Laboratory
- e. Optical Fiber Sensor Technology Laboratory
- f. Composite Filamentary Winding Laboratory
- g. Tribology Laboratory for Advanced Composites & Nonmetallics

(5). Design, Development, Construction and Management of National Wind Turbine Research Facility at the National Wind Energy Center (NWEC)

- a. Advanced Offshore Wind Turbine Modeling , Design and Simulation Laboratory
- b. Offshore Wind Turbine Material Research Laboratory
- c. Offshore Wind Turbine Blade Material Processing Laboratory
- d. Wind Turbine Blade Manufacturing Laboratory
- e. Advanced Wind Turbine Fatigue and Structural Testing Laboratory
- f. Scaled Wind Turbine Blade Testing Laboratory

LIST OF PUBLICATIONS

1. Books and Monographs

- (1) S. S. Wang and D. K. Roylance, "Penetration Mechanics of Textile Structures," Chapter 12, in Ballistic Materials and Penetration Mechanics, R C. Laible, Ed., Elsevier Scientific Publishing Co., Amsterdam, Holland (1980) pp. 273-292.
- (2) S. S. Wang and W. J. Renton, (Editors), Advances in Aerospace Structures and Materials, ASME AD-01, American Society of Mechanical Engineers, New York, NY (November, 1981).
- (3) S. S. Wang and E. S.-M. Chim, "Degradation of Fiber-Reinforced Composite Materials at Cryogenic Temperature, Part I - Uniaxial Tensile and Pure Torsional Fatigue," in Advances in Cryogenic Engineering, Vol. 28, R. P. Reed and A. F. Clark, Eds., Plenum Press, New York (1982) pp. 191-200.
- (4) S. S. Wang and E. S.-M. Chim, "Degradation of Fiber-Reinforced Composite Materials at Cryogenic Temperature, Part II - Multiaxial Fatigue," in Advances in Cryogenic Engineering, Vol. 28, R. P. Reed and A. F. Clark, Eds., Plenum Press, New York, NY (1982) pp. 201-210.
- (5) R. J. Stango and S. S. Wang. "Process-Induced Residual Thermal Stresses in Advanced Fiber-Reinforced Composite Laminates," in Polymer Processing: Analysis and Innovation, N. P. Suh and C. L. Tucker III, Eds., ASME PED-5, American Society of Mechanical Engineers, New York, NY (1982) pp. 67-81.
- (6) S. S. Wang, "Fracture Mechanics for Delamination Problems in Composite Materials," in Mechanics of Material Behavior (The D. C. Drucker Anniversary Volume), G. J. Dvorak and R. T. Shield, Eds., Elsevier Scientific Publishing Co., Amsterdam, The Netherlands (1984) pp. 369-383.
- (7) S. S. Wang, "Elasticity Solutions for a Class of Composite Laminate Problems with Stress Singularities," in Mechanics of Composite Materials (Proc. of IUTAM Symposium on Mechanics of Composite Materials, Blacksburg, VA, August, 1982), Z. Hashin and C. T. Herakovich, Eds., Pergamon Press, New York, NY (1983) pp. 259-281.
- (8) D. L. Hunston, A. J. Kinloch and S. S. Wang, "Characterization of the Fracture Behavior in Adhesive Joints," in Advances in Adhesive Joints: Formation, Characterization and Testing, K. L. Mittal, Ed., Plenum Press, New York, NY (1984) pp. 789-807.
- (9) S. S. Wang, "Three-Dimensional Hybrid-Stress Finite Elements Analysis of Composite Laminates with Cracks and Cutouts," in Pressure Vessel Components Design and Analysis, R. C. Gwaltney, Ed., ASME PVP-Vol. 98-2, American Society of Mechanical Engineers, New York, NY (June 1985) pp. 235-246.
- (10) S. S. Wang and Y. D. S. Rajapakse (Editors), Advances in Composite Materials and

Structures, ASME AMD Vol. 82, American Society of Mechanical Engineers, New York, NY (May, 1989).

- (11) S. S. Wang and N. M. Zahlan, "Compressive Stability of Delaminated Short-Fiber Composite Materials," in Materials and Engineering Design: The Next Decade, Chapter 7, B. F. Dyson and D. H. Hayhurst, Eds., The Institute of Metals, London, U.K. (1989) pp. 221-237.
- (12) S. S. Wang and D. W. Fitting (Editors), Composite Materials for Offshore Operations, U.S. Department of Commerce NIST Special Publication No. 887, U.S. Department of Commerce, Washington, D.C. (1995) (388 pages.)
- (13) B. W. Cole, K. H. Lo, J. G. Williams and S. S. Wang, "Advanced Composites Offshore: Current Status and a Proposed R & D Program," in Composite Materials for Offshore Operations, S. S. Wang and D. W. Fitting, Eds., U.S. Department of Commerce NIST Special Publication No. 877, U.S. Department of Commerce, Washington, D. C. (1995) pp. 4-15.
- (14) J.S. Schon and S. S. Wang, "Partial Melt Processing of Bulk MgO Whisker Reinforced $(\text{Bi,Pb})_2\text{Sr}_2\text{Cu}_3\text{O}_{10}$ Superconductor," Proceedings of the 10th Anniversary HTS Workshop on Physics, Materials and Applications, B. Batlogg, W.K. Chu, C.W. Chu, D. Gubser and A.K. Muller, Eds., Houston, TX (March 1996) pp. 205-208.
- (15) G.Z. Zhang, M.S. Wong and S. S. Wang, "Strain Tolerance of Superconducting Properties and Cryogenic Mechanical Behavior of Bulk MgO Whisker Reinforced HTS BPSCCO Composite," Proceedings of the 10th Anniversary HTS Workshop on Physics, Materials and Applications, B. Batlogg, W.K. Chu, C.W. Chu, D. Gubser and A.K. Muller, Eds., Houston, TX (March 1996) pp. 635-637.
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- (100). S. S. Wang and X. Chen, "*Progressive Damage and Leakage Failure Mechanics of Coil Lock Joints in Strip-Steel Laminate Composite Pipe Subject to Combined Axial Loading and Internal Pressure*," *Technical Report CEAC-TR-04-0101*, Composites Engineering and Applications Center, University of Houston, Houston, TX , 2004
- (101). D. Monaghan and S. S. Wang, "*Effect of Saltwater on Multiaxial Cyclic Fatigue of Carbon Fiber/Epoxy Composite Materials*," *Technical Report CEAC-TR-04-0103*, Composites Engineering and Applications Center, University of Houston, Houston, TX, 2004.
- (102).T. P. Yu and S. S. Wang, "*Ultra-Deepwater Composite Risers: Structure-Fluid Interactions with Vortex-Induced Vibration*," *Technical Report CEAC-TR-04-0105*, Composites Engineering and Applications Center, University of Houston, Houston, TX, 2004.
- (103). S. S. Wang, X. Chen and T. P. Yu, "Advanced Analytical Models and Design Methodology Development for Ultra-Deepwater Composite Risers," *Technical Report CEAC-TR-04-0106*, Composites Engineering and Applications Center, University of Houston, Houston, TX, 2004.
- (104). X. Chen and S. S. Wang, "*Long-Term Reliability Analysis and Risk Assessment of Ultra-Deepwater Composite Risers*," *Technical Report CEAC-TR-04-0107*, Composites Engineering and Applications Center, University of Houston, Houston, TX, 2004.

- (105) E. Gokdag and S. S. Wang, “Craze Development in High Impact Polystyrene (HIPS)”, *Technical Report CEAC-TR-08-0101*, Composites Engineering and Applications Center, University of Houston, Houston, TX, 2008.
- (106) S. S. Wang, L. Mailly, A. Miyase and T. P. Yu, “Reliability and Accelerated Life Testing for Packaging Components of Aero-derivative Gas Turbines,” *Technical Report CEAC-TR-08-0103*, Composites Engineering and Applications Center, University of Houston, TX, 2008.
- (107) S. S. Wang, “Advanced Composites for Aero-Derivative Gas Turbines – A Preliminary Assessment”, *Technical Report to GE Energy*, August 2008.

NATIONAL AND INTERNATIONAL CONFERENCES

1. Organizer of National and International Conferences

- ASME Aerospace Structures and Materials Conference in 1981 ASME Winter Annual Meeting, Washington, DC, November 18-20, 1981, (Co-organizer: Dr. W. J. Renton).
- Second Japan-U.S. Conference on Composite Materials, NASA-Langley, VA, June, 1983 (Member of Organizing Committee, 1981-83).
- 24th AIAA/ASME/ASCE/AHS Structures, Structural Dynamics and Materials Conference, Lake Tahoe, NV, May 9-11, 1983, (Member of Organizing Committee, 1981-83).
- 21st Annual Meeting of Society of Engineering Sciences-Session on Mechanics of Composite Materials, Oct. 15-17, 1984, Blacksburg, VA, 1984.
- 3rd Japan-U.S. Conference on Composite Materials, Science University of Tokyo, Tokyo, Japan, June 22-25, 1986, (Member of Organizing Committee, 1984-86).
- 1986 ASME Winter Annual Meeting, Symposium on Advances in Fiber Composite Materials and Structures (sponsored by ASME Applied Mechanics Division, Aerospace Division, and Materials Division), Anaheim, CA, November, 1986.
- International Conference on Fracture and Fatigue Mechanics, Shanghai, China, April 21-24, 1987, (Member of International Organizing Committee).
- 4th Japan-U.S. Conference on Composite Materials, June 27-29, 1988, Washington DC (Member of Organizing Committee; Member of Paper Selection Committee).
- 1988 NCCMR Workshop on Mechanics and Design of Composite Materials, University of Illinois, Urbana, IL, May 23-25, 1988.
- DARPA Workshop on Fundamentals of Thick-Section Composite Materials and Structures Research, Reston, VA, December 13-14, 1988 (Co-organizer: Dr. C. Bersch).
- IUTAM Symposium on Inelastic Deformation of Composite Materials, Troy, New York, May 29-June 1, 1990, (Member of International Scientific Committee).
- 1989 MECAMAT International Conference on Mechanics and Mechanisms of Damage in Composites and Multimaterials, St.-Etienne, France, November 15-17, 1989 (Member of International Committee).
- 5th Japan-U.S. Conference on Composite Materials, Tokyo, Japan, June 24-27, 1990, (Member of Organizing Committee, 1988-).
- XIth U.S. National Congress of Theoretical and Applied Mechanics, Symposium on Failure of Composite Materials, May 21-25, 1990, (Co-organizer: G. Springer), Phoenix,

AZ.

- IUTAM Symposium on Local Mechanics Concepts for Composite Materials, Blacksburg, VA, October, 1991, (Member of International Scientific Committee).
- Workshop on Composite Materials for Off-Shore Structures and Production Engineering, Houston, TX, October 14-15, 1991.
- 6th Japan-U.S. Conference on Composite Materials, Orlando FL, June 22-25, 1992, (Member of U.S. Organization Council).
- First International Workshop on Composite Materials for Offshore Operations, Houston, TX, October 26-28, 1993 (Conference Organizer).
- The Second International Conference on Composite Materials for Offshore Operations (CMOO-2), Houston, TX, October 28-30, 1997 (Conference Organizer and General Chairman).
- U.S. Department of Commerce NIST ATP Workshop on Composite Infrastructures, Gaithersburg, MD, June 23-24, 1998 (Co-organizer and co-chair).
- US MMS/CEAC Workshop on Composites Offshore, New Orleans, LA, April 21, 1999 (Workshop Director and Lecturer).
- The Third International Conference on Composite Materials for Offshore Operations (CMOO-3), Houston, TX, October 31-November 2, 2000 (Conference Co-Chair).
- The Fourth International Conference on Composite Materials for Offshore Operations (CMOO-4), Houston, TX, October 4-6, 2005. (Conference Chairman).

2. Chairman of National or International Conferences and Meeting Sessions

- 1980 ASME Century Emerging Technology Conferences; Session Aero-5 - "Emerging Technologies in Structures," August 14, 1980, San Francisco, CA.
- 1st Japan-U.S. Conference on Composite Materials; Session 12 - "Thermal and Environmental Problems in Composite Materials," January 13, 1981, Tokyo, Japan.
- 1981 International Cryogenic Engineering Conference and the International Cryogenic Materials Conference (ICEC/ICMC); Session DA - "Nonmetallic and Composite Materials," August 11, 1981, San Diego, CA.
- ASME Structures and Materials Conference in 1981 ASME Winter Annual Meeting; Session Aero-1 - "Composite Materials-Fracture, Fatigue and Viscoelastic Behavior," November 18, 1981, Washington, DC.
- International Symposium on Engineering Science, Session II-A-1 (Co-Chairman: Prof. C.W. Bert), December 29-31, 1981, Taiwan, Republic of China.
- Fourth International Conference on Composite Materials (ICCM-IV); Session 4A - Interfacial Stresses and Delamination, October 27, 1982, Tokyo, Japan.
- ASTM National Symposium on Effects of Defects in Composite Materials, Session I, December 13, 1982, San Francisco, CA.
- 2nd Japan-U.S. Conference on Composite Materials; Session I - Strength and Fracture-I (Co-Chairman: Prof. H. Fukada), June 6-8, 1993, Hampton, VA.
- ASTM National Symposium on High Modulus Fiber Composites in Ground Transportation and High Volume Applications; Session I - Fatigue and Fracture Behavior, November 7, 1983, Pittsburgh, PA.
- 1983 ASME Winter Annual Meeting; Applied Mechanics Division Session 7 - Symposium

- on Mechanics of Damage in Composites II, November 16, 1983, Boston, MA.
- 21st Society of Engineering Science Annual Meeting, Session 15 PM1 - Mechanics of Composite Materials, October 15, 1984, Virginia Polytechnic Institute and State University, Blacksburg, VA.
- 1985 Joint ASME/ASCE Mechanics Conference; Symposium on Fracture of Fibrous Composites (sponsored by ASME Applied Mechanics), Session AMM.1, June 24, 1985, Albuquerque, NM.
- 3rd Japan-U.S. Conference on Composite Materials; Session 5 - Vibration and Impact (Co-Chairman: Prof. T. Tanimoto), Science University of Tokyo, Tokyo, Japan, June 23, 1986.
- 1986 ASME Winter Annual Meeting, Symposium on Advances in Composite Materials and Structures, Session ACMS 1 - Mechanics of Fiber Composite Materials (Co-Chairman: Prof. G. J. Dvorak), Anaheim, CA, December 10, 1986.
- 1986 ASME Winter Annual Meeting, Symposium on Advances in Composite Materials and Structures, Session ACMS 4 - Mechanical Behavior and NDE of Fiber Composite Materials (Co-Chairman: Professor K. L. Reifsneider), Anaheim, CA, December 11, 1986.
- 4th International Conference on Numerical Methods in Fracture Mechanics, Session 5A on Fracture of Composite Materials, San Antonio, TX, March 23-27, 1987.
- 4th Japan-U.S. Conference on Composite Materials; Session 4 - Micromechanics and Interface Effects, June 27-29, 1988, Washington, DC.
- 1988 ASME Applied Mechanics and Engineering Sciences Joint Conference; Symposium on Constitutive Equations and Life Prediction Models for High-Temperature Applications, Session 1: Composites I (Co-Chairman: E. Krempl), University of California, Berkeley, CA, June 20-22, 1988.
- 1988 ASME Applied Mechanics and Engineering Science Joint Conference; Symposium on Mechanics of Composite Materials, Session 3: Ceramic Composites, University of California, Berkeley, CA, June 20-22, 1988.
- American Society for Composites Third Annual Technical Conference; Symposium IV-Session A: Composite Mechanics (Co-Chairman, J. Whitney), Seattle, WA, September 25-29, 1988.
- American Society for Composites Third Annual Technical Conference; Symposium IV-Session B: Composite Mechanics (Co-Chairman, J. Lees), Seattle, WA, September 25-29, 1988.
- Third DARPA/DOE/ONT Symposium on Thick-Section Composites in Compression, Session 1: Failure Mechanics and Mechanisms (Panelist), Knoxville, TN, July 11- 13, 1989.
- 1989 ASME Winter Annual Meeting, Symposium on Micromechanics and Inhomogeneity, Session 2: Micromechanics and Dislocations (Co-Chairman: D. C. Drucker), San Francisco, CA, December 10-15, 1989.
- XIth U.S. National Congress of Theoretical and Applied Mechanics, Symposium on Failure of Composite Materials (Co-Chairman, G. Springer), Tucson, AZ, May 21- 25, 1990.
- The 8th International Conference on Composite Materials; Session 27: Fracture (Co-Chairman, John Whitcomb), Honolulu, HI, July 16, 1991.
- Workshop on Composite Materials for Off-Shore Structures and Petroleum Production Engineering; Session 1: Overview of Off-Shore Systems and Production Engineering and Composite Technology in Petroleum Industry, Houston, TX, October 14, 1991.
- Sixth Japan-U.S. Conference on Composite Materials, Session 6B: Micromechanics, Orlando, FL, June 22-24, 1992.

1993 ASME/ASCE/SES Annual Summer Meeting, Symposium on Mechanics of Composite Materials and Structures-Nonlinear Effects; Session 5 on Mechanics of Failure, Charlottesville, VA, June 6-9, 1993.

First International Workshop on Composite Materials for Offshore Operations (Conference Chairman), Houston, TX, October 26-28, 1993.

1994 ASME OMAE Conference; Symposium on Advanced Composites in Offshore (Symposium Co-Chairman, J. Fischer), Houston, TX, March 1, 1994.

Second International Workshop on Composite Materials for Offshore Operations (Conference Chairman), Houston, TX, October 28-31, 1996.

Gordon Research Conference on Composite Materials, Session 8: Emerging New Applications (Discussions Leader & Session Chairman), Ventura, CA, January 10- 14, 1994.

The Ninth Technical Conference of American Society for Composites, Session 10C: (Co-Chairman: R. L. Sierakowski), Newark, DE, September 20-22, 1994.

1995 ASME/ASCE/SES Annual Summer Meeting, Symposium on Composite Materials, Session 4-4: Design and Analysis of Composites (Co-Chairman: S. White), UCLA, Los Angeles, CA, June 28-30, 1995.

Tenth International Conference on Composite Materials (ICCM-10, Session 6: High Temperature Mechanics, Whistler, British Columbia, Canada, August 14-18, 1995.

The 3rd International Conference on Materials Engineering for Resources, (Session 1- KB), Akita, Japan, October 26-28, 1998.

The 3rd International Conference on Materials Engineering for Resources, (Advisory Board, Poster Sessions), Akita, Japan, October 26-28, 1998.

ENS Symposium on Recent Advances in Continuum Damage Mechanics for Composite Materials; Co-chair, Session on Multi-Scale Approaches and Size Effects, Cachan, France, September 20-22, 2000.

APEC Workshop on Assessing and Maintaining the Integrity of Offshore Oil and Gas Facilities; Chair, Session on Technology and Case Studies, Beijing, China, October 9-11, 2000.

Atofina Elf Symposium on Pipeline and Downhole Innovations for the Oil and Gas Industry; Chair, Session I on Advanced Design and Test Methodologies, Calgary, Canada, April 4, 2001.

The 14th U.S. National Congress of Theoretical and Applied Mechanics, Co-Chair, Session W4F on Analysis and Durability of Composites, Blacksburg, VA, June 23- 28, 2002.

The 14th U.S. National Congress of Theoretical and Applied Mechanics, Co-Chair, Session T3I on Viscoelasticity in Composites, Blacksburg, VA, June 23-28, 2002.

The 4th International Conference on Composite Materials for Offshore Operations (CMOO-4), Houston, TX, October 4-6, 2005

The ASME Applied Mechanics and Materials Conference McMAT 2007, University of Texas at Austin, June 5, 2007, Chair, Session 13-2-3 on Rate Sensitive Testing, in Symposium on Mechanics of Time Dependent Composites, (Co-chair: G. Voyiadjis)

The 28th Technical Conference, American Society for Composites, Session Chair, Session on Multifunctional Composites, State College, PA, September 9-11, 2013

The 20th International Conference on Composite Materials (ICCM20), Member,
 International Scientific Committee and Coordinator, Sessions on Offshore
 Structural Analysis and Applications, Copenhagen, Denmark, July 9-24, 2015

INVITED SEMINAR, COLLOQUIUM AND CONFERENCE SPEAKER:

Massachusetts Institute of Technology, Cambridge, MA	(Spring 1974)
GM Research Center, Warren, MI	(Spring 1976)
Carnegie-Mellon University, Pittsburgh, PA	(Spring 1976)
Virginia Polytechnic Institute, Blacksburg, VA	(Spring 1976)
Rutgers University, Piscataway, NJ	(Spring 1976)
NASA-Lewis Research Center, Cleveland, OH	(Spring 1976)
University of Illinois at Chicago Circle, Chicago, IL	(Fall 1977)
Naval Research Laboratory, Washington, DC	(Fall 1977)
Duke University-NSF Workshop, Durham, NC	(Fall 1978)
Washington University, St. Louis, MO	(Spring 1978)
Owens-Corning Fiberglass Research Center, Granville, OH	(Spring 1978)
NASA-Lewis Research Center, Cleveland, OH	(Spring 1978)
University of Florida, Gainesville, FL	(Fall 1979)
Naval Research Laboratory, Washington, DC	(Fall 1979)
General Dynamics - Fort Worth Division, Fort Worth, TX	(Fall 1980)
DoE - NBS Workshop Materials at Low Temperatures, Vail, CO	(Fall 1980)
Texas A & M University, College Station, TX	(Fall 1980)
Naval Research Laboratory, Washington, DC	(Fall 1980)
Fermi National Laboratory, Batavia, IL	(Fall 1980)
Westinghouse Research & Development Center, Pittsburgh, PA (Materials Science Lecture Series)	(Jan. 26, 1981)
Navy Fracture Mechanics Workshop, Annapolis, MD	(Feb. 18-19, 1981)
DoD/NASA Workshop on Service-Life Prediction of Adhesive Bonded Joints and Structures, Dayton, OH	(April 23-24, 1981)
United Technologies Research Center, East Hartford, CT (Scholar Seminar Series)	(June 23, 1981)
Owens-Corning Fiberglass Corporation, Granville, OH (Technical Center Research Seminar)	(Oct. 26, 1981)
ASTM D30.02 (High Modulus Composites) and E24.04.09 (Fracture) Joint Subcommittee Meeting, Williamsburg, VA	(March 11, 1982)
University of Delaware, Newark, DE (Mechanical and Aerospace Engineering Departmental Colloquium)	(March 12, 1982)
University of Illinois Polymer Symposium, Urbana, IL	(May 1, 1982)
IUTAM Symposium on Mechanics of Composite Materials, Blacksburg, VA	(Aug. 16, 1982)
International Symposium on Adhesive Joints, Kansas City, MO	(Sept. 12, 1982)
ASME Polymer Processing Symposium, Washington, DC	(Sept. 14, 1982)
Owens-Corning Fiberglass Corporation, Technical Center	

Granville, OH	(Dec. 6, 1982)
Gordon Research Conference on Composite Materials, Santa Barbara, CA	(Jan. 17, 1983)
Drucker Symposium on Mechanics of Material Behavior, University of Illinois, Urbana, IL	(June 6-7, 1983)
University of Pennsylvania, Philadelphia, PA (Mech. Eng. and Applied Mechanics Department Colloquium)	(April 11, 1984)
Drexel University, Philadelphia, PA (Mechanical Engineering Department Colloquium)	(April 12, 1984)
16th IUTAM International Congress on Theoretical and Applied Mechanics (invited General Lecturer), Copenhagen, Denmark	(Aug.19-24, 1984)
DuPont Co., Experimental Station, Wilmington, DE	(Feb. 3, 1984)
Owens-Corning Fiberglas, Technical Center, Granville, OH	(March 13, 1984)
National Bureau of Standards, Gaithersburg, MD (Polymers and Composites Colloquium)	(July 31, 1984)
International Symposium on Composites: Materials and Engineering; University of Delaware, Newark, DE	(Sept. 24, 1984)
DoD/NASA Tenth Annual Mechanics of Composites Review Meeting, Dayton, OH	(Oct. 15, 1984)
Distinguished Lecturer, NASA-Virginia Tech Composites Program, Virginia Polytechnic Institute and State University, Blacksburg, VA	(Feb. 27, 1985)
Hercules, Inc., Aerospace Division, Magna, UT	(April 1-2, 1985)
IUTAM Symposium on Mechanics of Damage and Fatigue, Technion, Haifa and Tel Aviv University, Israel	(July 1-4, 1985)
DuPont Experimental Station, Wilmington, DE	(June 5-6, 1985)
ONR Workshop on Constitutive Equations and Damage Mechanics of Materials, Washington, DC	(Oct. 1-2, 1985)
DoD/NASA Eleventh Annual Mechanics of Composites Review meeting, Dayton, OH	(Oct. 22-24, 1985)
Northwestern University, Theoretical and Applied Mechanics Colloquium, Evanston, IL	(Nov. 15, 1985)
Ashland Chemical Co. - Research Center, Columbus, OH Title: "Deformation, Fatigue and Fracture of Short- Fiber SMC Composites"	(Nov. 4, 1985)
Northwestern University, Colloquia on Modern Topics in Theoretical and Applied Mechanics, Evanston, IL Title: "Mechanics of Delamination in Fiber Composite Laminates"	(Nov. 15, 1985)
GM Allison Gas Turbine-Engineering Center, Advanced Engine Structures and Materials Seminar, Title: "Research on Analytical and Test Methods of Metal- Matrix Composites for High-Performance Turbine Engines"	(March 7, 1986)
Shell Development Company Westhollow Research Center, Materials Science and Engineering Seminar Series, Houston, TX Title: "Compressive Failure of Advanced Fiber Composite Materials: Theory and Experiment"	(June 13, 1986)

- Third Japan-U.S. Conference on Composite Materials,
Tokyo, Japan
Title: "Shear Buckling and Postbuckling Analyses of
Delaminations in Fiber Composites" (June 23-25, 1986)
- Third Japan-U.S. Conference on Composite Materials,
Tokyo, Japan
Title: "Interlaminar Creep and Fracture of Thermoplastic-
Matrix Composites at Elevated Temperatures" (June 23-25, 1986)
- Sophia University, Mechanical Engineering Department
Colloquia, Tokyo, Japan
Title: "Advances of Modern Fiber Composite Materials" (June 26, 1986)
- The University of Tokyo, Institute of Aeronautics and Astro-
nautics Colloquia, Tokyo, Japan
Title: "Recent Advances in Damage Mechanics of Fiber
Composite Materials" (June 27, 1986)
- CONOCO, Inc. - Production Research and Development Center,
Materials Science Seminar Series, Ponca City, OK
Title: "Research on Thick-Section Composite Materials
and Structures" (July 28, 1986)
- ONR Workshop on Stability and Postbuckling Behavior of Shell Structures,
Newport, RI
Title: "Postbuckling and Other Instability-Related
Failure of Fiber Composite Materials" (Aug. 4-7, 1986)
- DoD Conference on Nondestructive Testing and Evaluation of
Advanced Materials and Composites, Colorado Springs, CO
Title: "Mechanisms and Mechanics of Damage and Fracture
in Advanced Composites" (Aug. 19-21, 1986)
- McDonnell Aircraft Company, Engineering Technology Department,
Structures and Materials Seminar Series, St. Louis, MO
Title: "Mechanics and Mechanisms of Damage and
Failure in Fiber Composite Materials" (Aug. 27, 1986)
- DuPont de Nemours Co. - Experimental Station, Wilmington, DE
Title: "Anelastic Creep Deformation and Rupture in
Thermoplastic-Matrix Fiber Composite Materials" (Sept. 19, 1986)
- DuPont de Nemours Co. - Experimental Station, Wilmington, DE
Title: "Design Applications - Buckling, Postbuckling, and
Delamination Stability Considerations in
Composite Structural Design" (Sept. 19, 1986)
- AMOCO Corporate Research Center, Materials Science Seminar
Series, Naperville, IL
Title: "High Temperature Creep Deformation and Fracture of
Advanced Thermoplastic-Matrix Fiber Composite
Materials" (Sept. 29, 1986)
- ASTM Symposium on Test Methods and Design Allowables for Fiber
Composites, Phoenix, AZ
Title: "Determination of Shear Constitutive Properties of Fiber
Composite Materials: Critical Analysis and
Experiment" (Nov. 3-4, 1986)

- ASME 1986 Winter Annual Meeting, Symposium on Advances in Composite Materials and Structures, Anaheim, CA
Title: "Structural and Material Instability of Unidirectional Composites Subjected to Shear and Compression" (Dec. 10-12, 1986)
- ASME 1986 Winter Annual Meeting, Symposium on Advances in Composite Materials and Structures, Anaheim, CA Title: "Postbuckling and Delamination Growth in Fiber Composite Laminates" (Dec. 10-12, 1986)
- U.S. Army Materials Technology Laboratory, Watertown, MA
Title: "Research at the National Center for Composite Materials Research" (Jan. 21, 1987)
- 4th DoD/NASA/Industry Review of High-Temperature Thermoplastic-Matrix Composites, San Diego, CA
Title: "Overview of the National Center for Composite Materials Research"
Title: "Anelastic Deformation and Fracture of Thermoplastic-Matrix Composites at Elevated Temperatures" (March 9, 1987)
- Naval Air Development Center, Warminster, PA
Title: "Composite Materials and Structures Research at the National Center for Composite Materials Research" (March 10, 1987)
- ONR/DARPA Workshop on Interface Science, Leesburg, VA
Title: "Composites Interphase/Interface-Mechanics Aspects" (March 11, 1987)
- ALCOA Technical Center, ALCOA, Alcoa Center, PA ALCOA Laboratories Technical Seminar Series, Title: "Compressive Failure in Fiber Composite Materials" (March 20, 1987)
- David Taylor Naval Research and Development Center, Caderock, MD
Title: "Materials, Structural and Damage Instabilities of Fiber Composite Materials" (May 22, 1987)
- ONR University Research Initiative Programs Review, Washington, DC
Title: "Research at the National Center for Composite Materials Research" (June 18, 1987)
- SDIO/IST Workshop on High-Temperature Metal-Matrix and Ceramic-Matrix Composites, Woods Hole, MA
Title: "High-Temperature Mechanics and Materials Science Studies on Metal-Matrix and Ceramic-Matrix Composites" (June 23-25, 1987) 1987
- Annual National Meeting of Society for Advancement of Materials and Processing Engineering, Washington DC
Title: "Micromechanics of Fracture in Structural Adhesive Joints" (June 29-30, 1987)
- IUTAM/ICM Symposium on Yielding, Damage and Failure of Anisotropic Solids, Grenoble, France
Title: "Material, Structural and Damage Instabilities and

- Their Interactions in Strongly Anisotropic,
Fiber Composites” (Aug. 24-28, 1987)
- 1987 ASM International Conference on Advanced Composites, Detroit,
MI
Title: “Two-Dimensional Stress Analysis of Bolted Composite
Joints”
Title: “Analytical Representation and Anisotropic Behavior
of Viscoelastic Data for Advanced
Composite Materials” (Sept. 15-17, 1987)
- ONR Workshop on Advanced Computational Mechanics,
University of California at Santa Barbara, Santa Barbara,
CA
Title: “Computational Mechanics for Fiber Composite
Materials and Structures” (Sept. 29 - Oct. 1, 1987)
- The 12th DoD/NASA Mechanics of Composites Review
Meeting, Bal Harbour, FL
Title: “Elevated-Temperature Deformation and Failure
of Thermoplastic-Matrix Composites” (Oct. 16-17, 1987)
- The First Annual Review of the National Center for Composite Materials
Research, University of Illinois at Urbana- Champaign, Urbana,
IL
Title: “Advanced Computational Mechanics for Fiber
Composite Materials and Structures” (Nov. 9-10, 1987)
- DuPont Experimental Station, DuPont de Nemours Co.,
Wilmington, DE
Title: “Anelastic Deformation and Fracture of Thermo-
plastic-Matrix Composites”
Title: “High-Temperature Creep Buckling Failure of
Thermoplastic-Matrix Composites” (Nov. 20, 1987)
- Chrysler Engineering Center, The Chrysler Corporation,
Detroit, MI
Title: “Advanced Metal-Matrix Composites for Automotive
Engine Structures and Components” (Dec. 4, 1987)
- 1987 ASME Winter Annual Meeting, Boston, MA
Session AM - 2C, Symposium on Applied Mechanics Problems
in Composites Manufacturing and Processing Title:
“Viscoelastic Analysis of Post-Curing Processing
Stresses in Advanced Composites” (Dec. 14, 1987)
- 1987 ASME Winter Annual Meeting, Boston, MA
Session AM - 8B, Symposium on Behavior of Composites in
Severe Thermal Environment
Title: “Viscoelastic Shear Behavior of Thermoplastic-
Matrix Composites at Elevated Temperatures” (Dec. 15, 1987)
- Allison Gas Turbine Engineering Center, General Motors Corp.,
Indianapolis, IN
Title: “High-Temperature Fatigue and Fracture of
SCS6/Ti-6AL-4V Composites” (Dec. 21, 1987)
- DARPA Workshop on Advanced Metal-Matrix and Ceramic-

- Matrix Composites, Santa Barbara, CA
 Title: "High-Temperature Mechanics of Advanced Metal-Matrix and Ceramic-Matrix Composites" (Jan. 6-15, 1988)
- Southwest Mechanics Lectures Series given at
 University of Oklahoma (Feb. 15, 1988)
 University of Texas (Feb. 16, 1988)
 Texas A & M University (Feb. 17, 1988)
 Southwest Research Institute (Feb. 18, 1988)
- 1988 Annual Adhesion Science Society Meeting, Charleston, SC
 Title: "Nonlinear Crack Growth and Fracture in Adhesively Bonded Composite Structural Joints" (Feb. 22-24, 1988)
- 1988 Gas Research Institute Workshop on Fracture of Polymeric Materials, Case-Western Reserve University, Cleveland, OH
 Title: "Theory and Experiment on Creep Crack Growth in Polyethylene Materials" (March 17, 1988)
- Keynote Speaker at the Seventh International Conference of Vehicle Structural Mechanics, Detroit, MI
 Title: "Challenges in the Analysis and Design on Composite Materials and Structures for the Automotive Industry" (April 11, 1988)
- Ford Motor Scientific Research Laboratories, Dearborn, MI
 Title: "Composite Materials and Structures Research for Automotive Propulsion and Structures" (April 12, 1988)
- Phillips Petroleum R & D Center, Distinguished Lecturer, Materials Science Seminar Series, Bartlesville, OK
 Title: "Elevated-Temperature Deformation and Failure of High-Performance Thermoplastic Composites" (April 13, 1988)
- University of Maryland, Aerospace Engineering Department Seminar, College Park, MD
 Title: "The Mechanics of Delamination in Composite Materials" (April 15, 1988)
- 29th AIAA/ASME/ASCE/AHS Structures, Structural Dynamics and Materials Conference, Williamsburg, VA
 Title: "A New 3D Multilayered Hybrid Element and Its Applications to Fiber Composite Laminate Plate and Shell Buckling Problems"
 Title: "An Analysis of Delamination in Composite Laminates under Bending" (April 18-19, 1988)
- Shell Development Co. Westhollow Research Center, Houston, TX
 Materials Science and Engineering Seminar Series,
 Title: "Elevated-Temperature Creep and Creep Fracture of Thermoplastic Matrix Composites" (April 27, 1988)
- National Center for Composite Materials Research Workshop on Mechanics and Design of Composite Materials, Urbana, IL
 Title: "Mechanics of Fiber Composite Laminates" (May 23-25, 1988)
- SDIO/IST Workshop on Metal and Ceramic Matrix Composites, Woods Hole, MA
 Title: "High-Temperature Mechanics and Thermomechanical

- Behavior of Metal-Matrix and Ceramic-Matrix Composites” (June 13-14, 1988)
 California Institute of Technology, Department of Aeronautics Seminar, Pasadena, CA
 Title: “Challenges in Research on Aerospace Composite Materials and Structures” (June 17, 1988)
- 1988 Joint ASME Applied Mechanics and Engineering Science Conference, University of California, Berkeley, CA
 (1) Symposium on Mechanics of Composite Materials, Session 1 - Mechanics of Heterogeneous Media
 Title: “Thermoelastic Constitutive Equations of Whisker Reinforced Ceramic Composites Subjected to Large-Temperature Changes”
 (2) Symposium on Constitutive Equations and Life Prediction for High-Temperature Applications, Session 1 - Composites
 Title: “High-Temperature Inelastic Behavior of Metal-Matrix Composites, Part I - Experiments”
 Title: “High-Temperature Inelastic Behavior of Metal-Matrix Composites, Part II - Theoretical Modeling”
 (3) Symposium on the Mechanics of Composite Materials, Session 4 - Fracture of Composites
 Title: “Nonlinear Fracture Mechanics of Fiber Composite Materials” (June 20-22, 1988)
- The 4th Japan-U.S. Conference on Composite Materials, Washington, DC
 Title: “Elevated-Temperature Transverse Creep of FP/A1-2Li Metal-Matrix Composite”
 Title: Compressive Fatigue Damage and Associated Property Changes of Fiber Reinforced Aluminum Matrix Composite”
 Title: “High-Temperature Creep Buckling of Thermoplastic Matrix Fiber Composites under Biaxial Loading” (June 27-29, 1988)
- 1988 American Chemical Society Annual Meeting, Los Angeles, CA
 Title: “Anelastic Deformation and Fracture of a Thermoplastic Matrix Composite” (Aug. 26-29, 1988)
- The 2nd Annual Review of the National Center for Composite Materials Research (NCCMR), Urbana, IL
 Title: “The National Center for Composite Materials Research - A Status Report”
 Title: Research on Mechanics of Composite Materials and Structures at NCCMR - An Overview” (Oct. 17-19, 1988)
- University of Texas at Austin, Aerospace Engineering Department, Structural Mechanics Colloquia, Austin, TX
 Title: “Mechanics of Compressive Failure in Fiber Composites” (Nov. 3, 1988)
- U.S. Air Force Materials Laboratory Workshop on Metal-Matrix Composites (MMC) Modeling and Analysis, Orlando, FL
 Title: “High-Temperature Mechanics Modeling and Analyses of Metal-Matrix Composite Materials” (Nov. 17-18, 1988)
- State University of New York at Stony Brook, Department of

- Mechanical Engineering Colloquia, Stony Brook, NY
 Title: "Coupled Material Damage and Structural Instability of Fiber Composites" (Nov. 21, 1988)
- 1988 ASME Winter Annual Meeting, Symposium on High-Temperature Composites, Session AM-6C Thermoplastic Matrix Composites, Chicago, IL
 Title: "Elevated Temperature Transverse Fracture of Thermoplastic Matrix Composite Materials" (Nov. 27 - Dec. 2, 1988)
- DuPont Experimental Station, Wilmington, DE
 Title: "An Overview of Research at the National Center for Composite Materials Research (NCCMR)"
 Title: "Thick-Section Composite Mechanics and Structures" (Dec. 2, 1988)
- University of Colorado, Mechanical Engineering Department Seminar Series, Boulder, CO
 Title: "The Mechanics of Delamination in Fiber Composite Laminates" (Dec. 9, 1988)
- DARPA Workshop on Advanced Composite Materials and Structures for Deep Submersibles, Reston, VA
 Title: "Fundamentals of Thick-Section Composite Materials and Structures" (Dec. 13-14, 1988)
- Gordon Research Conference on Composite Materials, Ventura, CA
 Title: "High-Temperature Deformation and Crack Growth in Thermoplastic-Matrix Composites" (Jan. 9-13, 1989)
- Shell Development Co., Westhollow Research Center, Houston, TX
 Title: "Compressive Failure Mechanisms and Micromechanics of Composite Materials" (Jan. 10, 1991)
- ASME Summer Annual Conference, Symposium on Mechanics of Composite Materials at Cryogenic and Elevated Temperatures, Columbus, OH
 Title: "High-Temperature Mechanics of Fiber Composite Materials" (June 17, 1991)
- 8th International Conference on Composite Materials (ICCM VIII), Honolulu, HI
 Title: "Effect of Shear Nonlinearity on Buckling and Post Buckling Optimization of Fiber Composite Laminate Shells" (July 14-18, 1991)
- AMOCO Chemical Co. Research Center, Naperville, IL
 Title: "Durability and Life Prediction of Xycon Hybrid Matrix Composite Materials" (Aug. 29, 1991)
- DuPont Experimental Station, Wilmington, DE
 Title: "High-Temperature Thermomechanics and Thermo-mechanical Behavior of Fiber Composites" (Sept. 20, 1991)
- American Society for Composites, 6th Annual Technical Conference, Troy, NY
 Title: "Biaxial Cyclic Fatigue Crack Growth in Thermoplastic Composite Materials" (Oct. 7-8, 1991)
- Workshop on Composite Materials for Offshore Structures and Petroleum Production Engineering, Houston, TX

- Title: "Composite Materials and Structures for Deep Submersibles" (Oct. 14-15, 1991)
 IUTAM Symposium on Local Mechanics Concepts for Composite Materials, Blacksburg, VA
 Title: "Effect of Nonlinear Shear on Delamination Energy Release Rates in Fiber Composite Laminates" (Oct. 28-30, 1991)
 Texas A & M University, Joint Mechanical Engineering Department and Center for Composites Materials Seminar, College Station, TX
 Title: "High-Temperature Thermomechanical Behavior and Mechanics of Advanced Composite Materials" (Nov. 14, 1991)
 Exxon Production Research Company, Distinguished Lecture Series, Houston, TX
 Title: "Micromechanics of Composite Heterogeneous Materials" (Jan. 14, 1992)
 Gordon Research Conference on Composites, Ventura, CA
 Title: "Advanced Composite Materials for Petroleum Offshore Exploration and Production Operations" (Jan. 10-14, 1994)
 1994 ASME Offshore Mechanics and Arctic Engineering Conference, Houston, TX
 Title: "Recent Development of Composite Materials for Petroleum Offshore E & P Operations" (March 1-3, 1994)
 Exxon Research and Engineering Company, Materials Science Lecture Series, Anandale, NJ
 Title: "High-Temperature Aging, Oxidation and Creep of Polymers and Polymeric Composites" (Oct. 27, 1994)
 International Conference on Offshore Composites Applications for Petroleum E & P Operations, Aberdeen Scotland, U.K. Title: "Recent Developments of Advanced Composites for Offshore Petroleum E & P in the United States" (Dec. 7-8, 1994)
- University of Delaware Mechanical Engineering Department Seminar Series, Newark, DE, March 10, 1995.
 Title: "*Multiaxial Damage and Failure of Fiber Composite Tubular Subjected to Combined Internal Pressure, Axial, Torsional and Bending Loading.*"
- ASTM 6th Conference on Composite Materials Design, Denver, CO, May 16-17, 1995.
 Title: "*Life Prediction Methodology Development for Fiber Composite Tubular under Combined Cyclic Axial loading and Internal Pressure.*"
- Special Plenary Lecture, International Conference on Durability Analysis of Composite Systems, Brussels, Belgium, July 16-21, 1995.
 Title: "*High-Temperature Durability of Carbon Fiber/ Polyimide Matrix Composites: Thermal Oxidation, Chemical and Physical Aging, and Thermomechanical Creep and Damage.*"
- US Air Force Materials Research Laboratories, Wright-Patterson AFB, OH, July 26-27, 1995.
 Title: "*High-Temperature Mechanics of Polymer Composites.*"

“3D Anisotropic Elasticity Solutions for Composite Laminates with Cutouts.”

NASA Langley Research Center, Materials Division Seminar Series, Hampton, VA, October 25, 1995.

Title: *“High-Temperature Durability and Damage Tolerance of Carbon Fiber Polyimide Matrix Composites.”*

Washington State University Department of Mechanical Engineering Seminar Series, Pullman, WA, February, 1996

Title: *“High-Temperature Mechanics and Thermomechanical Behavior of Polymer Composites.”*

Texas A & M University, Offshore Technology Center, College Station, TX, May 3, 1996. Title: *“Long-Term Durability of Offshore Composites.”*

National Institute of Standards and Technology Symposium on Manufacturing Large Composite Structures, Ann Arbor, MI, April 16-17, 1996.

Title: *“Composite Production Risers.”*

“Spoolable Composite Tubing.”

“Composite Drill Pipe.”

DoE Idaho National Engineering Laboratory Colloquia, Idaho Fall, ID, September 19, 1996.

Title: *“Multiaxial Fatigue Damage and Failure of Large Composite Structures.”*

American Petroleum Institute, Houston, TX, October 17, 1996.

Title: *“Long-Term Multiaxial Failure Strength of Fiber Composite Tubing.”*

ABB International Workshop on Composites Offshore, Houston, TX, December 2, 1996. Title: *“Recent Developments of Composites Technology for Deepwater Offshore Operations.”*

Keynote Lecture, The 3rd International Conference on Materials Engineering for Resources, Akita, Japan, October 26-28, 1998

Title: *“Composite Materials for Offshore Petroleum Exploration and Production.”*

Keynote Lecture, The 22nd National Conference on Theoretical and Applied Mechanics, Tainan, Taiwan, China, December 19-20, 1998;

Title: *“High-Temperature Mechanics and Thermomechanical Behavior of Polymer Matrix Composites.”*

Plenary Lecture, U.S. Department of Commerce NIST Advanced Technology Program Workshop on Composites in Civil Applications, Gaithersburg, MD, June 17-18, 1998; Title: *“Advanced Design Technology and Reliability Engineering for Composite Structures in Offshore E & P.”*

Keynote Lecture, 1998 SACMA Fall National Conference, San Antonio, TX, October 20- 21, 1998;

Title: *“Opportunities for Advanced Composites in Offshore Oil and Gas Exploration and*

Production.”

1998 Offshore Technology Conference, Houston, TX, May 4 - 7, 1998;
Title: “*Composite Production Risers - Manufacturing Development and Qualification Test.*”

1998 Offshore Technology Conference, Houston, TX, May 4 - 7, 1998;
Title: “*Composite Production Riser Dynamics and Its Effects on Tensioners, Stress Joints and Size of Deepwater Tension Leg Platforms.*”

1998 Offshore Technology Conference, Houston, TX, May 4 - 7, 1998;
Title: “*Composite Production Riser Reliability Assessment: The Influence on Probabilistic Fiber Composite Strength.*”

1998 Offshore Technology Conference, Houston, TX, May 4 - 7, 1998;
Title: “*Design and Testing of Threaded Fiber Composite Joints.*”

Owens Corning Science and Technology Center, Granville, OH, February 26, 1999.
Title: “*Curing-Reaction Induced Residual Stresses in Thick-Wall Hybrid Cylindrical Composite Laminate Shells.*”

University Houston, Mechanical Engineering Department Seminar Series, Houston, TX, March 11, 1999.
Title: “*High-Temperature Mechanics and Thermo-mechanical Behavior of Polymeric Matrix Composite Materials.*”

US MMS/CEAC Workshop on Composites Offshore, New Orleans, LA, April 21, 1999. Title: “*Reliability Assessment and Risk Analysis of Offshore Composite Structures.*”

EXXON Corporation Offshore Engineering Department, Houston, TX, April 1, 1999. Title: “*Advanced Composite Materials and Structures for Deepwater Offshore E & P Operations.*”

The 1999 Offshore Technology Conference, Houston, TX, May 3-8, 1999.
Title: “*Advanced Design Methodology for Deepwater Synthetic Moorings.*”

Toray Industries Research and Technology Center, Tokyo, Japan, June 7, 1999.
Title: “*Advanced Composite Materials for Offshore Exploration and Production Operations.*”

Smith Fiberglass Engineering Center, Little Rock, AK.
Title: “*Leakage Failure Prediction Methodologies for High Pressure FRP Pipe.*”

ASME OMAE 18th International Conference on Offshore Mechanics and Arctic Engineering, St. John's, Canada, July 12, 1999.
Title: “*Long-Term Cyclic Fatigue Strength Prediction Methodology for Fiber Composite Laminates under Multiaxial Loading.*”

Elf Atochem R & D Center, King of Prussia, PA, August 19, 1999.

Title: *“Elasto-Plastic Collapse Modeling of Thermoplastic Polymer Liners in Confined Conditions.”*

Exxon Production Research Company Offshore Engineering Department, August 27, 1999.

Title: *“CEAC Programs on Advanced Composite Materials and Structures for Deepwater Production Operations.”*

CEAC Materials and Design Engineering Workshop, Houston, TX, August 24, 1999.

Title: *“CEAC Program on Offshore Composite Materials and Design Engineering.”*

Saudi Aramco Engineering R & D Center, Dhahran, Saudi Arabia, September 21, 1999. Title:

“Light-Weight, Corrosion-Resistant Composite Materials for petroleum Exploration and Production Systems.”

NACE Corrosion 2000 Conference, Orlando, FL, April, 2000.

Title: *“Effect of Tightness on Thermoplastic Polymer Liner Collapse Resistance.”*

Toray Composites America, Toray Composites Science and Technology Seminar, Mirayama, Japan, May 17, 2000.

Title: *“Advance Fiber Composites for Offshore Deepwater production Systems.”*

U.S. Department of Energy, Office of Fossil Energy Program, OTRS Workshop Series: Offshore Technology Roadmap for the Ultra-Deepwater Gulf of Mexico, New Orleans, LA, August 3, 2000.

Title: *“Advanced Composite Materials for Deepwater Offshore Exploration and Production Operations.”*

U.S. Minerals Management Service, MMS Deepwater Technology Seminar Series, August 16, 2000.

Title: *“Composite Risers in Deepwater Operations: Reliability and Vortex-Induced Vibrations (VIV).”*

ENS Symposium on Recent Advances in Continuum Damage Mechanics of Composite Materials, Cachan, France, September 20-22, 2000.

Title: *High-Temperature Mechanics and Thermomechanical Behavior of Polymer- Matrix Composites with Oxidation, Aging and Damage.*

Ecole Normale Supérieure de Cachan/Université Pierre & Marie Curie (Paris 6)/CNRS, Ecole Thématique: Damage Mechanics Of Materials and Structures, Cachan, France, September 25-26, 2000.

Title: *“Coupling Damage Mechanics with Chemistry.”*

Elf Atochem, Thermoplastic Polymer Science and Engineering Seminar, King of Prussia, PA, October 5, 2000.

Title: *“Nonlinear Elasto-Plastic Collapse Modeling of Plasticized Thermoplastic Polymers.”*

APEC Workshop on Assessing and Maintaining the Integrity of Existing Offshore Oil and

Gas Facilities, Beijing, China, October 9-11, 2000.

Title: *“Advanced Composites for Long-Term Structural Integrity and Repair of Offshore Facilities.”*

Offshore Technology Center, Texas A & M University and University of Texas-Austin, OTRC Honors Award Lecture, Houston, TX, November 1, 2000.

Title: *“Critical Research Issues, Challenges and Perspectives for Offshore Composite Materials and Structures.”*

Atofina Elf Symposium on Pipeline and Downhole Innovations for the Oil and Gas Industry, Calgary, Canada, April 4, 2001;

Title: *“Nonlinear Plastic Collapse Modeling of Thermoplastic Liners.”*

The 9th NACE International Middle East Corrosion Conference, NACE International, Bahrain, February 14, 2001;

Title: *“Recent Advances in Composite Materials for Petroleum Exploration and Production.” (Invited Keynote Lecturer).*

Aramco, Advanced Materials and Corrosion Technology Annual Colloquium, Dhahran, Saudi Arabia, February 17, 2001.

Title: *“Leakage Resistance and Structural Integrity of Steel Strip Laminate Composite Pipe and its Joint under Combined Axial Loading, Internal Pressure and Makeup Turns.”*

U.S. Minerals Management Service, Deepwater Technology Seminar Series, New Orleans, LA, May 22, 2001.

Title: *“Reliability Analysis and Risk Assessment of Deepwater Composite Risers.”*

Toray Industries, Composites Science and Technology Seminar Series, Tokyo, Japan, March 12, 2001.

Title: *“Advanced Composite Materials and Structures for Petroleum Exploration and Production Operations.”*

Chevron Petroleum Technology Center, Annual Technology Review, San Ramon, CA, June 13-14, 2001.

Title: *“Vortex-Induced Vibrations (VIV) of Composite Risers: Effects of Material Systems and Composite Laminate Lay-up.”*

Institute of Aerospace Studies, University of Toronto, Graduate Seminar, Toronto, Canada, July 30, 2001.

Title: *“Long-Term High-Temperature Viscoelastic Creep in Carbon/Polyimide Composites with Chemical and Physical Aging.”*

DoE Fossil Energy Program, Drilling, Completion and Stimulation Technology (DCST) Review, Houston, TX, November 13, 2001.

Title: *“Durability and Environmental Effects of Composite Materials for Petroleum Exploration.”*

American Bureau of Shipping (ABS), *Two-Day Short Course*; Course Director and Lecturer, Houston, TX; December 5 and 6, 2002.

Title: *Introduction to Composite Materials, and Their Applications to Offshore Engineering and Ship Structures.*

Symposium on Viscoelasticity in Composites, *The 14th U.S. National Congress of Theoretical and Applied Mechanics*, Blacksburg, VA, June 25, 2002.

Title: *High-Temperature Mechanics of Thermal Oxidation, Degradation and Damage in Polymer-Matrix Composites (Invited Paper.)*

Symposium on Time-Dependent Failure Phenomena, *The 14th U.S. National Congress of Theoretical and Applied Mechanics*, Blacksburg, VA, June 26, 2002.

Title: *Long-Term Reliability Analysis of Fiber Composite Structures with Applications to Deepwater Offshore Engineering (Invited paper).*

Symposium on Mechanics of Fibrous Composites, *The 14th U.S. National Congress of Theoretical and Applied Mechanics*, Blacksburg, VA, June 25, 2002.

Title: *Vortex-Induced Vibrations of Deepwater Composite Risers (Invited Paper).*

The 10th U.S. – Japan Conference on Composite Materials, Stanford University, Stanford, CA, September 18, 2002.

Title: *Advanced Composites for Deepwater Offshore Exploration and Production Operations – Past, Present and Future (Keynote Lecture.)*

Ameron International- Materials Seminar, January 17, 2002; Houston, TX. Title:

High Temperature Failure Envelopes and Design Safety Factors for SSL Composite Laminates under Combined Axial Loading and Internal Pressure.

ABS Distinguished Lecture Series; May 30, 2002, Houston, TX.

Title: *Advanced Composites Technology for Offshore Engineering and Ship Structures: Past, Present and Future.”*

The 18th American Composite Society Annual Meeting, October 19-22, 2003, Gainesville, FL.

Title: High-Temperature Mechanics Modeling and Experiments of Thermal Oxidation, Degradation and Damage Evolution in Carbon Fiber/Polyimide Composites, (Invited paper).

DARPA/US Air Force Research Laboratories High-Temperature Polymer Matrix Composites (HTPMC) Durability Workshop, February 2-3, 2004, Sacramento, CA.

Title: High-Temperature Durability of Carbon Fiber /Polyimide Composites, (Invited Paper).

National Institute of Justice Review Meeting, US Department of Justice, March 17, 2004. *Title: Ballistic-Resistance Materials and Penetration Mechanics of Light Weight Armor*

2004 ASME International Mechanical Engineering Congress, November 13-19, 2004, Anaheim, CA.

Title: Computational Micromechanics for High-Temperature Constitutive Equations of Polymer Matrix Composites with Oxidation Reaction, Damage and Degradation (Invited paper)

National Institute of Standards and Technology Advanced Technology Program, January 8th, 2004, Gaithersburg, MD.

Title: Damage Evolution and Failure Prediction of Steel-Strip Laminate Composites

National Materials Advisory Board, National Academy of Sciences, April 5, 2004, Washington, D.C.

Title: Advanced Composite Materials for Deepwater Offshore Operations

ChevronTexaco Research and Technology Company, June 22, 2004, San Ramon, CA.

Title: Long-Term Multiaxial Degradation and Life Prediction of Advanced Composites in Seawater Environment

Total Chemicals, Technology Center Seminar Series, July 21, 2004, Houston, TX.

Title: Continuum Damage Mechanics (CDM) Approach to Craze Damage Development and Plastic Deformation in High-Impact Polystyrene Polymers

Dow Chemicals Research and Development Center, October 28, 2004, Houston, TX. *Title:*

Advanced Composites for Offshore Wind Energy Production

GE Energy, December 9, 2004, Houston, TX.

Title: *Failure Prediction and Reliability Analysis of Advanced Composites for High-Performance Turbine Engines*

The 4th International Conference on Composite Materials for Offshore Operations, October 4-6, 2005.

Title: "Long-Term Multiaxial Degradation and Failure of Advanced Fiber Composites in Saltwater Environment," *(Invited)*.

The 4th International Conference on Composite Materials for Offshore Operations, October 4-6, 2005.

Title: "Effect of Saltwater on Multiaxial Cyclic Fatigue of Carbon Fiber/Epoxy Composite Materials", *(Invited)*.

The 4th International Conference on Composite Materials for Offshore Operations, October 4-6, 2005.

Title: "Failure Modes, Strength Envelopes and Safety Factors for Allowable Stress Design of Steel-Strip Laminate Composite Pipe at Room and Elevated Temperatures" *(Invited)*.

The 4th International Conference on Composite Materials for Offshore Operations, October 4-6, 2005.

Title: "Long-Term Reliability Analysis and Risk Assessment of Ultra-Deepwater Composite Risers", *(Invited)*.

The 4th International Conference on Composite Materials for Offshore Operations, October 4-6, 2005.

Title: "Ultra-Deepwater Composite Riser Structure-Fluid Interaction with Vortex- Induced Vibration," *(Invited)*.

2005 TREIA Conference, Forum on Offshore Wind Energy, November 15, 2005.

Title: "Offshore Wind Energy Technology: Challenges and Future Development" S. S. Wang *(Invited)*.

U.S. Department of Energy, Washington, D.C., March 8, 2005

Title: "Research on Offshore Wind Energy Production Technology"

Total Chemicals Technology Center, Houston, "Damage Mechanics for Crazing Development and Plasticity in High Impact Polystyrene", April 22, 2005.

Texas General Land Office and State Energy Conservation Office, Austin, TX, "Development of Offshore Wind Energy along Texas Coast", June 23,, 2005.

National Institute of Standards and Technology, Gaithersburg, MD, "Ballistic Resistance and Penetration Mechanics of Soft Body Armor", July 19, 2005.

General Electric Power Systems, Houston, TX, "Accelerated Life Testing Methodology for Aero-Derivative Engines", August 4, 2005.

International Workshop on Fracture of Materials-Moving Forwards,
“*A Thermodynamic Approach to Long-Term Deformation and Damage for Polymeric Materials in Hygrothermal Environment*”,
Sydney, Australia, January 23, 2006 (Invited Paper).

9th International Congress on Fatigue,
“*Multiaxial Cyclic Fatigue of Fiber Composites: Mechanism Based Fatigue Life Theory and Experiment*”,
Atlanta, Georgia, May 15, 2006.

National Science Council Forum on Offshore Wind Energy,
“*Offshore Wind Energy: An Overview*”, Taipei, Taiwan, October 23, 2006
[Plenary Lecture].

2006 Composites Asia Conference, “*Advanced Composites for Offshore Oil and Gas Exploration and Production Operations*”,
Kuala Lumpur, Malaysia, November 15-16, 2006S. [Plenary Lecture.]

Texas General Land Office and State Energy Conservation Office,
“*Offshore Wind Energy - Production Technology*”,
Austin, TX, March 31, 2006.

National Institute of Standards and Technology,
“*Ballistic Material Resistance and Penetration Mechanics of Light Weight Body Armor*”
Gaithersburg, MD, April 17, 2006.

Total Chemicals Technical Center,
“*High-Temperature Plastic Deformation and Damage Mechanisms in High Impact Polystyrene*”,
La Porte, TX, July, 13, 2006.

Total Chemicals Technical Center
“*Plastic Yielding and Craze Morphology in ICP Copolymers*”,
La Porte, TX, July 13, 2006,

FMC Subsea Technology Center
“*Composite Umbilical Cables for Subsea Operations*”,
Kongsberg, Norway, August 16, 2006.

DoE National Renewable Energy Laboratory
“*Texas Offshore Wind Energy Consortium and Programs*”
Golden, CO, August 29, 2006.

General Electric-Energy Technical Center,
“*Accelerated Life Testing Methodology for Packaging Components of Aero-Derivative Gas Turbines*”,

Houston, TX, September 29, 2006

Texas General Land Office,

“Development of a National Large Wind Turbine Research and Test Facility”, Austin, TX, October 18, 2006.

S. S. Wang, *“Offshore Wind Energy Technology and Research”*, Academic Sinica, Taipei, Taiwan, January 5, 2007. (Invited Lecture).

S. S. Wang, *“Plastic Deformation and Craze Formation in High-Impact Polystyrene and IPC Copolymer”*, Total Chemical Technology Center, Houston, TX, February 28, 2008. (Invited Lecture).

S.S. Wang, *“Dynamic Response and Vibration of VBV in Aero-derivative Gas Turbine Systems”*, GE Energy Technical Center, March 14, 2007. (Invited).

S. S. Wang, *“Development of a National Large Wind Turbine Research and Test Facility”*, DoE National Renewal Energy Laboratory (NREL), Golden, CO, April 12, 2007.

S. S. Wang, *“Development of a National Large Wind Turbine Test Facility in Texas”*, Texas ETF Commission, Austin, TX May 31, 2007. (Invited).

S. S. Wang, *“ Damage Mechanics for Multiaxial Fatigue of Fiber Composite Materials: Theory and Experiments”*, *Symposium on Mechanics of Time Dependent Composites, ASME Applied Mechanics and Materials Conference McMAT 2007*, University of Texas at Austin, Austin, TX, June 3-7, 2007. (Invited Lecture).

S. S. Wang, *“Wind Energy Technology and Lone Star Wind Energy Alliance”*, The 71th Annual Meeting of Texas Society of Professional Engineers (TSPE), Houston, TX, June 14th, 2007. (Invited Keynote Lecture).

S. S. Wang, *“Wind Energy”*, The Houston World Affairs Conference, Houston, TX, June 13, 2007. (Invited Keynote Speaker).

S. S. Wang, *“Multiaxial Strength and Stiffness Degradation of Glass/Epoxy Composite”*, The 22nd Annual Technical Conference, American Society for Composites, University of Washington, Seattle, WA, September 17, 2007 (Invited Lecture).

S. S. Wang, *“Offshore Wind Energy Production and Technology Challenges”*, National Institute of Technology and Standards, November 3, 2007. (Invited Lecture).

S. S. Wang, *“Offshore Wind Energy and Large Wind Turbine Technology”*, BP Alternative Energy Conference, Houston and London, November 6, 2007. (Invited).

S. S. Wang, *“Large Wind Turbine Research and Testing,”* BP Alternative Energy Inc., Houston, TX, February 1, 2008. (Invited).

S. S. Wang, *“Deepwater Petroleum Exploration and Production: Technology Challenges”*,

Symposium on GoM Deep and Ultra-deep Water Hydrocarbon E & P Perspectives," Universidad Nacional Autonoma de Mexico, Mexico City, Mexico, February 18-19, 2008. (Invited).

S. S. Wang, "Strength and toughness of Adhesive Bonded Joints", Dow Chemical Research Center, Freeport, TX, May 22, 2008. (Invited).

S. S. Wang, "Progressive Failure and Multi-axial Strength Envelopes for Coil-Lock Joints of SSL Composite Pipe Systems," Ameron International, Houston, TX, June 5, 2008. (Invited).

S. S. Wang, "Reliability and Life Prediction of Variable-Bleeding-Valve Systems in LMS100 Aero-Derivative Gas Turbines," GE Energy Aero-Derivative Gas Turbine Technical Center, Houston, TX July 14, 2008 (Invited).

S. S. Wang, "Advances in Composites Offshore", International Materials Technology Conference and Exhibition, Kuala Lumpur, Malaysia, August 24, 2008.

S. S. Wang, "Texas-NREL National Large Wind Turbine Research and Test Facilities", GE Wind Energy, Greenville, SC, October 27, 2008. (Invited).

S. S. Wang, "Advanced Composites in Offshore Petroleum Exploration and Production Operations: Past, Present and Future", 2008 SERC Lecture, National University of Singapore, Singapore, November 10, 2008. (Invited).

S. S. Wang, "Offshore Wind Energy in the U.S.: Challenges and Opportunities," *ASCE Earth and Space 2010 Conference*, The Aerospace Division, ASCE, Honolulu, Hawaii, March 16, 2010 (Invited Keynote Lecture).

S. S. Wang, "Leakage Failure of FRP Pipe Connectors under Combined Bending and internal Pressure", Department of Mechanical Engineering Seminar Series, University of Alberta, Edmonton, Alberta, Canada, April 19, 2010

S. S. Wang, "Offshore Wind Energy Technology: Materials and Structures", Research Center, Exxon Mobil Chemicals Inc., Baytown, TX, May 13, 2010.

S. S. Wang, "Overview of Offshore Wind Energy Operations and Outlooks in the U.S.," *1st Texas Offshore Wind Energy Roundtable (TOWER) Conference*, October 19, 2010, Houston, TX (Invited Keynote Lecture)

S. S. Wang, "Structures and Materials in Wind Turbines," *Workshop for University Collaboration on Wind Energy*, Cornell University, December 6-7, 2010, Ithaca, New York (Invited Keynote Lecture)

S. S. Wang, "Overview of National Wind Energy Center," and "Development of National Wind Turbine Blade Research Facility at NWECC," *DoE Wind Energy Program Site Visit and Review*, University of Houston, November 9, 2010, Houston, TX

S. S. Wang, "NSF Engineering Research Center for Offshore Wind Energy," *NSF ERC Finalists Award Selection Meeting*, National Science Foundation, November 2, 2010, Washington, D. C.

“Advanced Technology Demonstration Project: Offshore Energy Translation Systems and Related Support Structures,” DoE Offshore Energy Program, US DoE, December 9, 2010, Houston, TX (with Herman Schellstade).

S. S. Wang, “Leakage Failure Modes and Mechanics for Composite Pipe Joints under Combined Pressure and Bending,” Technical Research Center, Ameron International, Los Angeles, CA, April 29, 2011 (Invited Lecture).

S. S. Wang, “Design and Material Challenges of Deepwater Flexible Composite Risers”, DeepFlex Technical Center, Houston, TX, May 20, 2011 (Invited Lecture)

S. S. Wang, “Recent Advances on Morphology and Microstructure Development of PTFE/PEEK Composites for Tribology”, Dover Energy, Houston, TX, June 11, 2011. (Invited Lecture)

S. S. Wang, “Advanced Composites for Deepwater Offshore Petroleum Exploration and Production Operations,” *Symposium on Composite Materials for Offshore Petroleum E & P Operations*, Tongji University, Shanghai, China, October 10, 2011 (Invited Keynote Lecture)

S. S. Wang, “Mechanics, Materials and Structures in Offshore Energy Production Engineering,” *Special Engineering Seminar*, College of Engineering, Hohai University, Nanjing, China, October 11, 2011 (Honor Lecturer)

S. S. Wang, “Advanced Composite Manufacturing Technology for Offshore Oil and Gas Production Systems,” Shanghai Aerospace and Automotive Engineering (SAAE) Application and Industry Center, Shanghai, China, October 12, 2011 (Invited Lecture)

S. S. Wang, “Integrity of FRP Pipeline Connectors under Combined Internal Pressure and Bending,” *Pipeline Integrity Summit Conference, UK IQPC*, Houston, TX, December, 13-14, 2011 (Invited Keynote Lecture)

S. S. Wang, “Advanced Composites for Deepwater Offshore Exploration & Production Operation”, GE Oil & Gas Division, Hydril Tech Center, Houston, TX, May 16, 2012

S. S. Wang, “Challenges and Opportunities of Advanced Composites for Offshore Petroleum Production Engineering,” SINOPEC-UH Meeting, Houston, TX, June 5, 2012

S. S. Wang, “Vacuum-Assisted Resin Infusion Processing of Thick-Section Composite Laminates for Wind Rotor Blades”, in Session on Manufacturing IV, The 27th Annual Technical Conference of American Society for Composites, Arlington, TX, October 2, 2012

S. S. Wang, “Design and Siting Considerations of Large Efficient Offshore Wind Turbines in the Gulf of Mexico Region”, in Session on Green (Renewable) Energy and Systems (III), 2012 International Conference on Renewable Energy and Applications (ICREA 2012), Nagasaki, Japan, November 12, 2012

S. S. Wang, “Design, Fabrication and Testing Considerations for Large Offshore Wind Turbine Blades”, in Session on Advanced Composites Design and Testing, 2012 JEC International Conference, Boston, MA, November 8, 2012

- S. S. Wang, "Tribology for PEEK-based Advanced Composites for Reciprocal Machinery", Cook Compression (Dover Energy) Technical Center, Stafford, TX, November 30, 2012
- S. S. Wang, "Research and Development on Offshore Wind Energy Systems at NWEA," Texas Wind Energy Leadership Meeting, Dallas, TX, December 10, 2012
- S. S. Wang, "Advanced Materials, Manufacturing and Design Integration for Large Offshore Wind Turbine Blades," ACMD Seminar Series, Applied & Computational Mathematics Division, National Institute of Standards and Technology, Gaithersburg, MD, July 12, 2013
- S. S. Wang, "Reaction Kinetics and Flow Simulation of Vacuum-Assisted Infusion-Molding Process for Thick Glass/Polyester Composites," The 28th Annual Technical Conference of American Society for Composites, State College, PA, September 10, 2013
- S. S. Wang, "Interlaminar Properties and Failure Strength of Thick-Section, Vacuum-Assisted Infusion-Molded Composites," The 28th Annual Technical Conference of American Society for Composites, State College, PA, September 11, 2013
- S. S. Wang, "Elevated Temperature Dynamic-Mechanical Behavior of PTFE/PEEK Composites," The 28th Annual Technical Conference of American Society for Composites, State College, PA, September 9, 2013
- S. S. Wang, "Advanced Composites for Deepwater Exploration and Production Operation," BP Upstream Technology, Houston, TX, October 1, 2013
- S. S. Wang, "Challenges of Advanced Materials for Wind Energy", *Materials Challenges for Energy* (Sponsored by Committee of Nanomaterials for Energy and Committee of Nano-engineering for Energy and Sustainability), ASME 2013 international Mechanical Engineering Congress, San Diego, CA, November 15-21, 2013
- S.S. Wang, "Tribology of PTFE/PEEK Composites for Modern Machinery", Technical Center, Dover Energy-Cook Compression, Stafford, TX, November 30, 2013
- S. S. Wang, "Advanced Polymer Composites for Deepwater E & P – CEAC Research Programs and Activities", Research and Technology Seminar Series, Baker Hughes Center for Technology Innovation, April 8, 2014, Houston, TX
- S. S. Wang, "Leakage Integrity of FRP Pipe Joints under Combined Bending and Pressure: Connectors and Size Effects," Keynote Lecture, ANTEC 2014 National Conference, Society of Plastic Engineers, April 29, 2014, Las Vegas, NV
- S. S. Wang, "Tribology of PEEK/PTFE Composites for Rotating and Reciprocal Machinery," Materials Division, Dover Energy/Cook Compression, May 5, 2014, Houston, TX

S. S. Wang, "Structural Dynamics and Load Analysis of Large Offshore Wind Turbines in Western Gulf of Mexico Shallow Water," Paper No. OMAE2014-24258, ASME 33rd International Conference on Ocean, Offshore and Arctic Engineering, American Society of Mechanical Engineers, June 8, 2014, San Francisco, CA.

S. S. Wang, "Structural Integrity of large Composite offshore Wind Turbine Rotor Blades," The 29 ASC Annual Technical Conference, American Society for Composites, September 8, 2014, La Jolla, CA.

S. S. Wang, "Multi-axial Yielding, Plastic Flow and Failure of PTFE/PEEK Composites," The 29th ASC Annual Technical Conference, American Society for Composites, September 10, 2014, La Jolla, CA.

S. S. Wang, "Strength and Failure Modes of Thick Adhesive-Bonded Joints of Glass Fabric/Vinyl Ester Composite Laminates", The 29 Annual Technical Conference, American Society for Composites, September 9, 2014, La Jolla, CA.

S. S. Wang, "Matrix-Dominated Deformation and Failure of VARIM Glass Fabric/Vinyl Ester Composites: In-plane Transverse and Interlaminar Damage Modes and Strengths," The 29 ASC Annual Technical Conference, American Society for Composites, September 9, 2014, La Jolla, CA.

S. S. Wang, "Elevated Temperature Thermal Expansion Coefficients of PEEK/PTFE Composite: Experiment and Modeling," The 29 ASC Annual Technical Conference, American Society for Composites, September 8, 2014, La Jolla, CA.

S. S. Wang, "Advanced Carbon Fiber/Thermoplastic Composites for High-Temperature High Pressure Environment in Deepwater Offshore E & P," BP America Technical Center, Houston, TX January 29, 2015

S. S. Wang, "Tribology of PTFE/PEEK Composites," Technical Center, Cook Compression, Dover Energy, Knoxville, TN, April 9, 2015

T. S. Wang, "Effect of Pile-Soil Interaction on Structural Dynamics of Large Megawatt-scale Offshore Wind Turbines in Shallow-water Western Gulf of Mexico," *ASME 34th International Conference on Ocean, Offshore and Arctic Engineering*, Memorial University of Newfoundland, St. John's, NL, Canada, May 31-June5, 2015

S. S. Wang, "Advanced Composites Research for Lightweight Automotive Structural Systems," *US Car-USAMP Program Seminar*, Detroit, MI, August 13, 2015

S. S. Wang, "Stiffness and Strength Models for Rigid PVC Structural Foams," *The 30th Annual Technical Conference on Composite Materials, American Society for Composites 2015*, Michigan State University, East Lansing, MI., September 28-30, 2015.

S. S. Wang, "Permeability of Glass Fabric Reinforced Vinyl Ester Composite," *The 30th Annual Technical Conference on Composite Materials, American Society for Composites 2015*, Michigan State University, East Lansing, MI., September 28-30, 2015.

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Society for Composites 2015, Michigan State University, East Lansing, MI., September 28-30, 2015.

S. S. Wang Bill W. Cole, Akira Miyase, Tung-Pei Yu, King Him Lo and Su Su Wang, "Failure Modes and Strength of Composite Box Beam Structures," *The 30th Annual Technical Conference on Composite Materials, American Society for Composites 2015*, Michigan State University, East Lansing, MI., September 28-30, 2015

S. S. Wang, "Wear of PTFE/CF/Gr /PEEK Composites in Sliding Contact," Technical Center, Cook Compression, February 17, 2016, Houston, TX

S. S. Wang, "Failure Strength and Modes in Thick Adhesive-Bonded Laminate Composite Joints," NASA Langley Research Center, September 16, 2016, Langley, VA

S. S. Wang, "Tribological Behavior of PTFE/PEEK Composite," The 31st Annual Technical Conference on Composite Materials, American Society for Composites, Williamsburg, VA., September 19-22, 2016.

S. S. Wang, "Effects of Density and Cell Rise Ratio on Compressive Stiffness and Strength of PVC Structural Foam," The 31st Annual Technical Conference on Composite Materials, American Society for Composites, Williamsburg, VA., September 19-22, 2016.

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S. S. Wang, "Failure Initiation and Crack Growth in Thick Adhesive-Bonded Composite Joints," The 31st Annual Technical Conference on Composite Materials, American Society for Composites, Williamsburg, VA., September 19-22, 2016.

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