

Aditi Chattopadhyay
Curriculum Vitae

Regents' Professor, Arizona State University
Ira A. Fulton Professor of Mechanical and Aerospace Engineering
School for Engineering of Matter, Transport and Energy
Director, Adaptive Intelligent Materials & Systems (AIMS) Center
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Education

Ph.D. Aerospace Engineering, Georgia Institute of Technology, Atlanta, Georgia
M.S. Aerospace Engineering, Georgia Institute of Technology, Atlanta, Georgia
B. Tech (Hons.) Aerospace Engineering, Indian Institute of Technology, Kharagpur, India

Academic Experience

August 2013 - Present	Regents' Professor, Mechanical & Aerospace Engineering, School for Engineering of Matter, Transport and Energy, Arizona State University, Tempe, Arizona
June 2010 – Present	Ira A. Fulton Professor of Mechanical & Aerospace Engineering, School for Engineering of Matter, Transport and Energy, Arizona State University, Tempe, Arizona
August 2006 – Present	Director, Adaptive, Intelligent Materials and Systems (AIMS) Center
August 1997 – June 2010	Professor, School of Mechanical, Aerospace, Chemical and Materials Engineering, Arizona State University, Tempe, Arizona
August 1994 – August 1996	Associate Professor, Mechanical and Aerospace Engineering Department, Arizona State University, Tempe, Arizona
August 1990 – August 1994	Assistant Professor, Mechanical and Aerospace Engineering Department, Arizona State University, Tempe, Arizona
April 1985 – October 1986	Postdoctoral Fellow, School of Aerospace Engineering, Georgia Institute of Technology, Atlanta, Georgia

Industrial Experience

July 1993 – August 1993	Summer Faculty, Computational Aerosciences Branch, NASA Ames Research Center, Moffett Field, California
May 1992 – August 1992	Summer Faculty, Rotorcraft Technology Branch, Aircraft Technology Division, NASA Ames Research Center, Moffett Field, California
May 1991 – August 1991	Summer Faculty, Rotorcraft Technology Branch, Aircraft Technology Division, NASA Ames Research Center, Moffett Field, California
October 1986 – August 1990	Resident Research Scientist, NASA Langley Research Center, Hampton, Virginia
July 1984 – March 1985	Senior Scientist, Structural Sciences Division, National Aeronautical Laboratory, India

Synergistic Activities

Research: Principal Investigator (PI) on numerous grants and collaboration with defense and government laboratories. Current research funded by AFOSR, ARL, ARO, ONR, DOE, ERDC (Engineer Research and Development Center), US Army Corps of Engineers, NASA, NAVAIR, and industry (Alcoa, Boeing, Intel, Northrop Grumman, Raytheon). Led multidisciplinary research projects such as MURI, NASA IVHM grants, Co-PI of NASA University Leadership Initiative (ULI). Currently mentoring 7 doctoral students. Author/co-author of 249 archival journal papers and 386 refereed conference publications in addition to other papers, books chapters, and NASA TMs. Holder of 5 patents and 1 software IP.

Administrative: Collaborated with ARL researchers to establish ARL Extended (Open Campus) at ASU; Founding Director, AIMS Center and Director, AIMS Industry Consortium, ASU.

Education and Outreach: Graduated 46 doctoral students and 27 MS students. Currently advising 7 doctoral students. Advisor to several undergraduate and high school students working on various scholarships, e.g., U.S. Army Educational Opportunity Program (AEOP), Fulton Undergraduate Research Initiative (FURI), Summer University Research Initiative (SURI), NASA Space Grant Fellowship.

Diversity: Actively involved in the promotion of diversity in STEM research areas.

Professional Services: American Institute of Aeronautics and Astronautics (Fellow); American Society of Mechanical Engineers (Fellow); American Society of Composites (Member); American Ceramics Society (Member); SPIE, The Int. Soc. for Optics & Photonics (Member); Int. Society of Structural and Multidisciplinary Optimization (life member).

Editorial Services: Served as the associate editor of *American Institute of Aeronautics and Astronautics Journal*, associate editor of the *American Helicopter Society Journal*, and member editorial board of *Inverse Problems in Engineering*. Currently an editorial board member of the *Digital Engineering and Digital Twin* (2023-present) and the *Journal of Structural Durability and Health Monitoring* (2008 – present).

Selected Honors: Adaptive Structures and Material Systems award, Georgia Institute of Technology Council of Outstanding Young Engineer Award, Distinguished Alumnus Award, Indian Institute of Technology (IIT), Kharagpur, Faculty Achievement Award - Excellence in Research, ASU. Fellow of American Institute of Aeronautics & Astronautics (American Institute of Aeronautics and Astronautics), Fellow of American Society of Mechanical Engineers (American Society of Mechanical Engineers). Several academic, research, and best paper awards.

Principal Areas of Research and Teaching

Research

- Structural & Computational Mechanics: thermomechanical/oxidative damage and degradation of ceramic matrix composites (CMCs), multiscale modeling of heterogeneous and multifunctional materials (composites, nanocomposites, metallic materials); reduced order modeling of high-fidelity simulations. Nonuniform Transformation Field Analysis (NTFA) including plasticity and damage, multiscale wave propagation in composites; high strain rate modeling of polymer matrix composites for high velocity impact, biaxial fatigue of composites, refined shear deformation theories, stability.
- Multifunctional Materials (modeling and synthesis): multifunctional shape memory polymers, self-sensing and self-healing mechanophore (stress-sensitive) based thermoset polymer matrix composites (PMCs), carbon nanotube (CNT) (dispersed and radially grown) integrated composites, CNT bucky paper membranes for sensing, EMI shielding, and fatigue crack retardation in PMCs.
- Systems Health Management (SHM): real time damage detection and damage prognosis under complex loading, ultrasonic wave propagation, multi-dimensional signal processing, on-line/off-line prognosis model. Applications include metallic structures, complex sandwich structures, composite

joints, barely visible impact damage (BVID), printed circuit boards, and in-flight anomaly detection in commercial aircraft and integration to NASA's Next Generation Air Transportation System (NATS).

- Molecular Dynamics (MD): Quantum mechanics-based hybrid MD; atomistically informed damage evolution laws; interphase/interface mechanics in composites and nano-enhanced composites; coarse grain (CG) modeling.
- Fatigue of metallic and composite structures: biaxial fatigue with in-phase and out of phase loading, overloads and under loads; bending-torsion fatigue with overloads and underloads; ultra-high cycle fatigue, fatigue testing using compressed load spectrum.
- Material characterization and testing – multiscale characterization of material microstructure; high temperature testing of CMCs); characterization and testing of adhesive bonding for space structure applications, nondestructive evaluation, synthesis, and processing of multifunctional and nano-enhanced composites.
- Multidisciplinary design optimization: fixed- and rotary-wing applications; multiobjective optimization, multilevel decomposition, semi-analytical sensitivity analysis techniques.
- AI for Air Traffic Safety Enhancement: Sensing and Control: Machine learning based real-time aircraft safety monitoring, Stochastic post-upset flight dynamics prognosis for aviation safety management, Surrogate models for air traffic management.

Teaching

Mechanics of Composites, Smart Materials and Structures, Structural Optimization, Dynamics & Vibration, Structural Dynamics, Rotary Wing Dynamics, Aerospace Structures

Professional Service

- American Institute of Aeronautics and Astronautics (Fellow)
- American Society of Mechanical Engineers (Fellow)
- American Society of Composites (Member)
- American Ceramics Society (Member)
- Int. Society of Structural and Multidisciplinary Optimization SPIE, The Int. Soc. for Optics & Photonics (Life Member)
- Member American Institute of Aeronautics and Astronautics Adaptive Structures Technical Committee
- Member American Society of Mechanical Engineers Soft Materials Technical Committee
- Previously served on the National Academy of Sciences, National Academy of Engineering/Inst. of Medicine, and National Research Council Panel on Mechanical Sciences and Engineering

Selected Honors and Recognitions

- Fellow, American Institute of Aeronautics and Astronautics
- Fellow American Society of Mechanical Engineers
- Adaptive Structures and Material Systems (American Society of Mechanical Engineers) Award
- Speaker, ASU Advance sponsored by National Science Foundation, 7 Minute Mentor, Arizona State University
- Speaker, KED Talk Series, Knowledge Enterprise Development Research, Arizona State University
- Georgia Institute of Technology, Outstanding Engineering Alumni Award
- Georgia Institute of Technology's Hall of Fame and Council of Outstanding Young Engineering Alumni
- Distinguished Alumnus Award. Indian Institute of Technology, Kharagpur, India
- Distinguished Service Award, American Institute of Aeronautics and Astronautics

- Faculty Achievement Award - Excellence in Research, Arizona State University
- Multidisciplinary University Research Initiative (MURI) Team Lead for “A Multidisciplinary Approach to Health Monitoring and Materials Damage Prognosis for Metallic Aerospace Systems,” Air Force Office of Scientific Research (AFOSR)
- NASA Tech Brief Awards, NASA Glenn Research Center
- NASA Software Release Award for “Strain Rate Dependent Analysis of Polymer Matrix Composites (STRANAL-PMC) Version 2.0” Software
- NASA Langley Research Center Certificate of Appreciation, “Exceptional Performance in the Development of an Integrated Aerodynamic Load/Dynamic Optimization Procedure for Rotorcraft”
- American Institute of Aeronautics and Astronautics Sustained Service Award for “Service and Leadership in the Technical and Publications Arena”
- American Institute of Aeronautics and Astronautics Service Citation Award – Associate Editor *American Institute of Aeronautics and Astronautics Journal*
- American Institute of Aeronautics and Astronautics Certificate of Accomplishment for "Special Efforts in Organizing 2000 Structures, Structural Dynamics and Materials Conference"
- American Helicopter Society International, the Vertical Flight Society Certificate of Appreciation for "Contributing to the Technical Excellence of the Journal of the American Helicopter Society"
- Army Research Office (ARO), Invited lecture for outstanding accomplishments in Structural Mechanics Program
- American Institute of Aeronautics and Astronautics Certificate of Merit for "Promoting Technical and Scientific Excellence," paper title: "Integrated Aerodynamic and Heat Transfer Optimization Procedure for Turbine Blade Design"
- Institute Silver Medal for First Class First Rank in B. Tech in Aeronautical Engineering, Indian Institute of Technology, Kharagpur, India
- Faculty Celebration of Excellence Award, School for Engineering of Matter, Transport and Energy, Arizona State University

Patents & IPs

1. Dai, L., Chattopadhyay, A., Nofen, E., Zou, J., and Koo, B., “Mechanophore-Grafted Polymers to Form Stress-Responsive Thermoset Network.” U.S. Patent No. 12,258,439. US20200190250A1. 25 March 2025.
2. Chattopadhyay, A., Koo, B., Dai, L., Gunckel R., and Miller, J., “In-Situ Damage Detection System for Mechanophore-embedded Fiber Reinforced Composites.” U.S. Patent. US10908077B2. 02 February 2021.
3. Datta, S., and Chattopadhyay, A., "Carbon Nanotube Membrane Systems and Methods of Synthesis." U.S. Patent. US10717051. 21 July 2020.
4. Chattopadhyay, A., Koo, B., Dai, L., and Gunckel R., “Stress-Responsive Inorganic Material Reinforced Composites via Functionalizing the Inorganic Materials.” U.S. Patent. Web Published 16 July 2020.
5. Rai, Ashwin, and Chattopadhyay, A., “Computational Multiscale Tool for Analysis and Design of Nanocomposite,” Software IP, 2016
6. Chattopadhyay, A., Goldberg, R., and Carney, K., “Strain Rate Dependent Analysis of Polymer Matrix Composites (STRANAL-PMC) Version 2.0” U.S. Patent. US20100299112A1 Web Published 25 November 2010.

Publication List

Refereed Archival Journal Papers

1. Hwang, H., Hamza, M.H., Tetteh, O., & Chattopadhyay, A., “Microstructural Descriptors-Aware Diffusion-Based Model for Stochastic Reconstruction of Composite Microstructures.” *Composite Structures*, 393, 120615, July 2026. DOI: 10.1016/j.compstruct.2026.120615.
2. Roman, J., and Chattopadhyay, A., “In-situ Scanning Electron Microscopy Investigation of Flexural and Interlaminar Failure Mechanisms in Carbon Nanotube-Reinforced Shape Memory Polymer Composites.” *Polymer Composites*, May 2026.
3. Roman, J., and Chattopadhyay, A., “Early Damage Detection in Cinnamoyl-Functionalized Shape Memory Epoxy through Mechanochemical Activation,” *Journal of Polymer Science*, In Press, 2026. DOI: 10.1002/pola.70273.
4. Roman, J., Hamza, M. H., and Chattopadhyay, A., “In Situ Scanning Electron Microscopy Investigation of Flexural and Interlaminar Failure Mechanisms in Carbon Nanotube-Reinforced Shape Memory Polymer Composites,” *Polymer Composites*, May 2026.
5. Nelson, T., Hamza, M. H., Thompson, K., Roman, J., & Chattopadhyay, A., “Stochastic Microstructure Reconstruction and Localized Creep Response of Ceramic Matrix Composites.” *Ceramics International*, April 2026.
6. Mohamed, M., Hamza, M. H., Garvie, A. J. L., Rabbi, M. F., Cotto-Figueroa, D., Asphaug, E., and Chattopadhyay, A., “Mechanical and failure behavior of the viñales (L6) ordinary chondrite: linking microstructure to axial splitting fractures.” *Materialia*, March 2026
7. Hamza, M. H., Schichtel, J. J., & Chattopadhyay, A., “Multiphysics model of thermomechanical oxidative degradation in SiC/SiC ceramic matrix composite microstructures.” *Journal of the European Ceramic Society*, 45(10), 117335, August 2025.
8. Hamza, M. H., Borkowski, L., & Chattopadhyay, A., “Physics-constrained machine learning surrogate model for time-dependent behavior of ceramic matrix composites.” *Composites Part B: Engineering*, 112825, July 2025.
9. Mohamed, M., Hamza, M. H., Garvie, A. J. L., Cotto-Figueroa, D., Asphaug, E., and Chattopadhyay, A., “Microstructural Modeling of the Fragmentation of Ordinary Chondrites.” *Scientific Reports*, May 2025
10. Ranade, R., Hamza, M. H., Borkowski, L., and Chattopadhyay, A., “Analysis of damage mechanisms in fiber-reinforced ceramic matrix composites under thermomechanical loading at intermediate and high temperatures.” *Journal of Composite Materials*, April 2025
11. Tripathi, K., Hamza, M., Morales, M., Henry, T., Hall, A., Chattopadhyay, A., “Electromagnetic Interference Shielding Analysis of Hybrid Buckypaper Reinforced Polymer Matrix Composites: A Quantum Tunnelling Informed Equivalent Circuit Approach” *Applied Sciences*, October 2024
12. Hamza, M., and Chattopadhyay, A., “Multi Deep Learning-Based Stochastic Microstructure Reconstruction and High-fidelity Micromechanics Simulation of Time-dependent Ceramic Matrix Composite Response,” *Composite Structures*, October 2024.
13. Roman, J., Zhao, X., Whitney, C., Venkatesan, K., Dai, L., and Chattopadhyay, A., “High-performance multifunctional shape memory epoxy with hybrid graphene oxide and carbon nanotube reinforcement,” *Journal of Materials Engineering and Performance*, June 2023.
14. Van Fossen, T., Rupp, C., Hunt, T., Schichtel, J., Chattopadhyay, A., and Phan, N., “The fatigue damage squeezing method: A signal compression strategy for accelerated life testing,” *International Journal of Fatigue*, February 2023.

15. Hwang, H., Song, J., Kim, H., and Chattopadhyay, A., "Real-time Fatigue Crack Prediction using Self-sensing Buckypaper and Gated Recurrent Unit," *Journal of Mechanical Science and Technology*, February 2023.
16. Borkowski, L., Skinner, T., and Chattopadhyay, A., "Woven Ceramic Matrix Composite Surrogate Model Based on Physics-Informed Recurrent Neural Network," *Composite Structures*, February 2023.
17. Khafagy, K. and Chattopadhyay, A., "High-fidelity micromechanical modeling of the effects of defects on damage and creep behavior in single tow ceramic matrix composite," *Journal of Composite Materials*, December 2022.
18. Khafagy, K., Stoumbos, T., Inoyama, D., Datta, S., and Chattopadhyay, A., "In-situ investigation of temperature-dependent adhesive properties and failure modes in composite bonded joints," *Composite Structures*, November 2022.
19. Schichtel, J., and Chattopadhyay, A., "Modeling the two-way coupling of stress, diffusion, and oxidation in heterogeneous CMC microstructures," *Journal of the European Ceramic Society*, September 2022.
20. Schichtel, J., Datta, S., and Chattopadhyay, A., "Study of Aluminum Alloy 7075-T6 under Ultrasonic Fatigue Loading," *Journal of Aerospace Engineering*, July 2022.
21. Venkatesan, K., Koo, B., Khafagy, K., and Chattopadhyay, A., "Multiscale modeling of carbon nanotube-reinforced polymer with coarse-grain molecular dynamics informed morphology," *Composites Science and Technology*, May 2022.
22. Hamza, M. H., Polichshuk, R., Lee, H., Parker, P., Campbell A., and Chattopadhyay, A., "Aircraft Post-Upset Flight Risk Region Prediction for Aviation Safety Management," *Advanced Engineering Informatics*, April 2022.
23. Rabbi, M.F., Khafagy, K.H., Garvie, L.A.J., Asphaug, E., Cotto-Figueroa, D., and Chattopadhyay, A., "Strength and Failure Characterization of the Gibeon (IVA) Iron Meteorite," *The Minerals, Metals & Materials Series*, February 2022.
24. Borkowski, L., Sorini, C., and Chattopadhyay, A., "Recurrent Neural Network-Based Multiaxial Plasticity Model with Regularization for Physics-Informed Constraints," *Computers & Structures Vol. 258*, January 2022.
25. Rabbi, M. F., Garvie, L., Cotto-Figueroa, D., Asphaug, E., Khafagy, K. H., Datta, S., and Chattopadhyay, A., "Understanding asteroidal failure through laboratory quasi static compression testing and 3D digital image correlation of the Aba Panu (L3) chondrite," *Meteoritics & Planetary Science*, November 2021.
26. Cotto-Figueroa, D., Rabbi, M. F., Garvie, L. A. J., Asphaug, E., Gabriel, T., Khafagy, K. H., and Chattopadhyay, A., "On the Strength of the Viñales (L6) Meteorite: A Test of the Robustness of the Derived Strength Scale-dependence of Ordinary Chondrites," *Bulletin of the AAS*, October 2021.
27. Gunckel, R., Koo, B., Xu, Y., Lin, W., Hall, A., Chattopadhyay, A., and Dai, L., "Stress-Responsive Reinforced Polymer Composites via Functionalization of Glass Fibers," *Industrial & Engineering Chemistry Research*, October 2021.
28. Venkatesan, K.R., and Chattopadhyay, A., "Nonuniform transformation field analysis based reduced-order model of high-fidelity generalized method of cells," *Journal of Composite Structures Vol. 275*, July 2021.
29. Skinner, T., and Chattopadhyay, A., "Multiscale Temperature-dependent Ceramic Matrix Composite Damage Model with Thermal Residual Stresses and Manufacturing-induced Damage," *Composite Structures Vol. 268*, July 2021.
30. Lee, H., Lim, H., Skinner, T., Chattopadhyay, A., and Hall, A., "Automated fatigue damage

detection and classification technique for composite structures using Lamb waves and deep autoencoder,” *Mechanical Systems and Signal Processing*, June 2021.

31. Singh, A., Datta, S., Chattopadhyay, A., and Phan, N., "Effects of overload mode-mixity on fatigue damage behavior and governing micromechanisms in AA7075 under biaxial fatigue loading," *International Journal of Fatigue*, April 2021.
32. Lee, H., Koo, B., Chattopadhyay, A., Kumar Neerukatti, R., and Liu, K.C., "Damage Detection Technique Using Ultrasonic Guided Waves and Outlier Detection: Application to Interface Delamination Diagnosis of Integrated Circuit Package," *Mechanical Systems and Signal Processing*, March 2021.
33. Slizoberg, Y., Kroger, M., Henry, T., Datta, S., Lawrence, B., Hall, A., and Chattopadhyay, A., "Computational Design of Shape Memory Polymer Nanocomposites," *Polymer*, Vol. 217, March 2021.
34. Lim, H., Lee, H., Skinner, T., Chattopadhyay, A., and Hall, A., "Fatigue damage detection and growth monitoring for composite structure using coda wave interferometry," *Structural Control and Health Monitoring*, February 2021.
35. Schichtel, J., Datta, S., and Chattopadhyay, A., "Study of variability and failure in al 7075-t6 under ultrasonic fatigue," *Intl. Journal of Fatigue*, February 2021.
36. Khafagy, K., Sorini, C., Skinner, T., and Chattopadhyay, A., "Modeling Creep Behavior in Ceramic Matrix Composites," *Ceramic International*, January 2021.
37. Venkatesan, K.R., and Chattopadhyay, A., "Computational multiscale analysis of the mechanical behavior of radially grown carbon nanotube architecture," *Journal of Aerospace Engineering*. Vol. 13, Issue 6, November 2020.
38. Khafagy, K., Datta, A., and Chattopadhyay, A., "Multiscale Characterization and Representation of Variability in Ceramic Matrix Composites," *Journal of Composite Materials*, November 2020.
39. Datta, S., Henry, T., Slizoberg, Y., Lawrence, B., Chattopadhyay, A., and Hall, A., "Carbon nanotube enhanced shape memory epoxy for improved mechanical properties and electroactive shape recovery," *Polymer*, October 2020.
40. Cotto-Figueroa, D., Rabbi, F., Garvie, L. A., Asphaug, E., Datta, S., and Chattopadhyay, A. "On the Strength of the Abba Panu (L3) Meteorite: Implications for NEO Hazard Mitigation," *Bulletin of the AAS*, 52(6), October 2020.
41. Venkatesan, K., and Chattopadhyay, A., "Computational analysis of failure mechanisms in composite sandwich space structures subject to cyclic thermal loading," *Composite Structures*, October 2020.
42. Gunkel, R., Koo, B., Xu, Y., Pauley, B., Hall, A., Chattopadhyay, A., and Dai L., "Grafted Cinnamoyl-based Mechanophores for Self-Sensing and Photochemical Healing Capabilities in Epoxy," *American Chemical Society Applied Polymer Materials*, August 2020.
43. Balusu, K., Skinner, T., and Chattopadhyay, A., "An efficient implementation of the high-fidelity generalized method of cells for complex microstructures," *Comput. Mater. Sci.*, August 2020.
44. Lee, H., Lim, H. J., and Chattopadhyay, A., "Data-Driven System Health Monitoring Technique Using Autoencoder for the Safety Management of Commercial Aircraft," *Neural Computing and Applications*, July 2020.
45. Li, G., Lee, H., Chattopadhyay, A., Kumar Neerukatti, R., and Liu, K. C. "Detection of Sealant Delamination in Integrated Circuit Package Using Nondestructive Evaluation," *American Society of Mechanical Engineers. J. Electron. Packag.* March 2021; 143(1): 011002, June 2020.
46. Skinner, T., Rai, A., Chattopadhyay A. "Multiscale ceramic matrix composite thermomechanical damage model with fracture mechanics and internal state variables," *Composite Structures*, vol.

236, 15 March 2020.

47. Schichtel, J., and Chattopadhyay, A., "Modeling thermoset polymers using an improved molecular dynamics crosslinking methodology," *Computational Materials Science*, vol. 174, March 2020.
48. Sorini, C., Aditi Chattopadhyay, A., and Goldberg Robert K., "An improved plastically dilatant unified viscoplastic constitutive formulation for multiscale analysis of polymer matrix composites under high strain rate loading," *Composites Part B: Engineering*, vol. 184, 1 March 2020.
49. Lee, H., Li, G., Rai, A., and Chattopadhyay, A., "Real-time Anomaly Detection Framework using a Support Vector Regression for the Safety Monitoring of Commercial Aircraft," *Advanced Engineering Informatics*, March 2020.
50. Singh, Abhay K., Datta, S., Chattopadhyay, A., and Phan, N., "Characterization of Crack Propagation Behavior in Al-7075 Under in-plane Biaxial Fatigue Loading with Shear Overloads," *International Journal of Fatigue*, February 2020.
51. Schichtel, J., and Chattopadhyay, A., "An atomistic study of damage and localized anisotropic mechanical property evolution in thermoset polymers," *International Journal of Mechanical Sciences*, January 2020.
52. Bunget, G., Henley, S., Glass, C., Rogers, J., Webster, M., Farinholt, K., Friedersdorf, F., Pepi, M., Ghoshal, A., Datta, S., and Chattopadhyay, A. "Decomposition Method to Detect Fatigue Damage Precursors in Thin Components through Nonlinear Ultrasonic with Collinear Mixing Contributions," *American Society of Mechanical Engineers J Nondestructive Evaluation*, January 2020.
53. Schichtel, J., and Chattopadhyay, A., "Modeling Thermoset Polymers using an Improved Molecular Dynamics Crosslinking Methodology," *Computational Materials Science*, December 2019.
54. Li, G., Lee, H., Rai, A., and Chattopadhyay, A., "Analysis of Operational and Mechanical Anomalies in Scheduled Commercial Flights using a Logarithmic Multivariate Gaussian Model," *Transportation Research Part C: Emerging Technologies*: 20-39, November 2019.
55. Koo, B., Miller, J., Gunckel, R., Hall, A., Dai, L., and Chattopadhyay, A., "In Situ Damage Precursor Detection in Fiber Reinforced Composites Using Anthracene-based Mechanophore," *Journal of Smart Materials and Structures*, October 2019.
56. Skinner, T., Datta, S., Chattopadhyay, A., and Hall, A., "Fatigue Damage Behavior in Carbon Fiber Polymer Composites Under Biaxial Loading," *Composites Part B*, October 2019.
57. Singh, A., Datta, S., Chattopadhyay, A., Riddick, J., and Hall, A., "Fatigue Crack Initiation and Propagation Behavior in Al - 7075 Alloy under In-Phase Bending-Torsion Loading," *International Journal of Fatigue*, May 2019.
58. Yekani Fard, M., Raji, B., Woodward, J., and Chattopadhyay, A., "Characterization of Interlaminar Fracture Modes I, II, and I-II of Carbon/Epoxy Composites Including In-service Related Bonding Quality Conditions," *Polymer Testing*, May 2019.
59. Xu, Y., Chen, D., Zhu, W., Li, G., and Chattopadhyay, A. "Delamination Identification of Laminated Composite Plates using Measured Mode Shapes," *Smart Structures and Systems* 23, No. 2: 195-205, February 2019.
60. Subramanian, N., Venkatesan, K., and Chattopadhyay, A., "Atomistically Informed Multiscale Modeling of Radially Grown Nanocomposite Using a Continuum Damage Mechanics Approach," *Carbon*, February 2019.
61. Li, G., Datta, S., Chattopadhyay, A., Iyyer, N. and Phan, N., "An Online-Offline Prognosis Model for Fatigue Life Prediction under Biaxial Cyclic Loading with Overloads," *Fatigue & Fracture of Engineering Materials & Structures*, January 2019.
62. Li, G., and Chattopadhyay, A. (2018), "Reference-free Damage Localization in Time-Space

Domain for Structural Health Monitoring of X-COR Sandwich Composites," *Journal of Intelligent Material Systems and Structures*, 30(3), 371-385, November 2018.

63. Datta, S., Neerukatti, R. K., and Chattopadhyay, A., "Buckypaper Embedded Self-sensing Composite for Real-time Fatigue Damage Diagnosis and Prognosis," *Carbon*, Vol. 139, 353-360, June 2018.
64. Rai, A., and Chattopadhyay, A., "Multifidelity Multiscale Modeling of Nanocomposites for Microstructure and Macroscale Analysis," *Composite Structures*, Vol. 200, 204-216, May 2018.
65. Li, G. and Chattopadhyay, A., "Multi-dimensional Signal Processing and Mode Tracking Approach for Guided Wave Based Damage Localization in X-COR Sandwich Composite," *Mechanical Systems and Signal Processing*, 109C, 134-149, April 2018.
66. Subramanian, N., Koo, Bonsung., Venkatesan, K. R., and Chattopadhyay, A., "Computational Analysis for the Interface Mechanics of Carbon Fibers with Radially-Grown Carbon Nanotubes," *Carbon*, 123-133, March 2018.
67. Datta, S., Iyyer, N., Phan N., and Chattopadhyay, A., "Fatigue Crack Propagation under Biaxial Fatigue Loading With Single Overloads," *International Journal of Fatigue*, January 2018.
68. Subramanian, N., Koo, B., and Chattopadhyay, A., "Molecular Dynamics-Based Multiscale Damage Initiation Model for CNT/Epoxy Nanopolymers," *Journal of Materials Science*, 53(4), 2604-2617, October 2017.
69. Li, G., Neerukatti, R. K., and Chattopadhyay, A. "Ultrasonic Guided Wave Propagation in Composites Including Damage Using High-Fidelity Local Interaction Simulation," *Journal of Intelligent Material Systems and Structures*, 1045389X17730659, September 2017.
70. Neerukatti, R.K., Chattopadhyay, A., Iyyer, N., and Phan, N. "A Hybrid Prognosis Model for Predicting Fatigue Crack Propagation under Biaxial In-Phase and Out-Of-Phase Loading," *Structural Health Monitoring*, 1475921717725019, August 2017.
71. Neerukatti, R.K., Datta, S., Chattopadhyay, A., Iyyer, N., and Phan, N., "Fatigue Crack Propagation under In-Phase and Out-of-Phase Biaxial Loading," *Fatigue Fract. Eng. Mater. Struct.*, August 2017.
72. Rai, A., Subramanian, N., and Chattopadhyay, A., "Investigation of Damage Mechanisms in CNT Nanocomposites Using Multiscale Analysis," *International Journal of Solids and Structures*, August 2017.
73. Gunckel, R., Nofen, E., Hansen-Staggs, J., Babcock, S., Koo, B., Chattopadhyay, A., and Dai, L. "Early Damage Detection of Epoxy via Poly (Vinyl Cinnamate) Mechanophore Using Fourier Transform Infrared Spectroscopy," *Materials Research Express*, 4(7), 075014, July 2017.
74. Koo, B., Nofen, E., Chattopadhyay, A., and Dai, L. "Dimeric Anthracene-based Mechanophore for Damage Precursor Detection in Epoxy-based Thermoset Polymer Matrix: Characterization and Atomistic Modeling," *Computational Materials Science*, 133, 167-174, June 2017.
75. Subramanian, N., Rai, A., and Chattopadhyay, A., "Atomistically Derived Cohesive Behavior of Interphases in Carbon Fiber Reinforced CNT Nanocomposites," *Carbon*, 117, 55-64. June 2017.
76. Johnston, J. P., Koo, B., Subramanian, N., and Chattopadhyay, A. "Modeling the Molecular Structure Of The Carbon Fiber/Polymer Interphase for Multiscale Analysis Of Composites," *Composites Part B: Engineering*, 111, 27-36, February 2017.
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12. Chattopadhyay, A., Kim, J-S. and Liu, Q., "Aeromechanical Stability Analysis and Control of Smart Composite Rotor Blades," Computational Methods for Smart Structures and Materials II, Eds. C. A. Brebbia and A. Samartin. WIT Press. 107-117, 2000.
13. Chattopadhyay, A., Li, J. and Gu, H., "A Thermo-Piezoelectric-Mechanical Coupled Theory for the Analysis of Smart Composites Under Thermal Load," Tenth International Conference on Adaptive Structures, Eds. N. Hagood, Kluwer. Academic Publishing. 234-244, 1999.
14. Chattopadhyay, A., Radu, A. G. and Dragomir-Daescu, D., "Dynamic Buckling of Composite Laminates Using a Higher Order Theory," Modeling and Simulation Based Engineering, Vol. I, Eds. S.N. Atluri and P.E. O'Dongue. Tech Science Press, Palmdale, CA. 619-623, 1999.
15. Chattopadhyay, A. and Gu, H., "An Experimental Investigation of Delamination Buckling and Postbuckling of Composite Laminates," 14th Army Symposium on Solid Mechanics, Eds. K. Iyer and S. C. Chou. 634-641, 1996.
16. Chattopadhyay, A. and Seeley, C. E., "Development of a Hybrid Optimization Technique with Application to Buckling of Cylindrical Shells," Structural and Multidisciplinary Optimization, Eds. N. Olhoff and G. Rozvany. Elsevier Science Inc. 557-562, 1995.
17. Chattopadhyay, A. and Ferreira, J. M., "Structural Optimization and Design Sensitivity of Composite Cylindrical Shells for Energy Absorption," 13th Army Symposium on Solid Mechanics, Eds. S. C. Chou, F. D. Bartlett Jr., T. W. Wright, and K. Iyer. 311-325, 1993.
18. Chattopadhyay, A., and McCarthy, T. R., "Multiobjective Design Optimization of Helicopter Rotor Blades with Multidisciplinary Couplings," Optimization of Structural Systems and Industrial Applications, Eds. S. Hernandez and C. A. Brebbia. Computational Mechanics Publications. 451-462, 1991.

Other Publications

Refereed Reports

1. Sorini, C., Chattopadhyay, A., Goldberg, R.K., and Kohlman, L., "Development of a Subcell Based Modeling Approach for Modeling the Architecturally Dependent Impact Response of Triaxially Braided Polymer Matrix Composites," *NASA TM-2016-219116*, July 2016.
2. Swann, C., and Chattopadhyay, A., "A Stochastic Approach to Optimum Sensor Placement," Poster: 5th International Workshop Structural Health Monitoring, Stanford University, CA. September 13-15, 2005.
3. Das, S. and Chattopadhyay, A., "Structural Health Monitoring of Composites using Acoustic Methods," Abstract and Poster presentation, Integrated Systems Health Management Conference, Air Force Research Laboratory, Cincinnati, Ohio, August 2005.
4. Swann, C. and Chattopadhyay, A., "A Stochastic Approach to Optimum Sensor Placement For Damage Detection," Abstract and Poster presentation, Integrated Systems Health Management Conference, Air Force Research Laboratory, Cincinnati, Ohio, August 2005.
5. Chattopadhyay, A. and Zhu, L., "Implementation of Improved Transverse Shear Calculations and Higher Order Laminate Theory into Strain Rate Dependent Analysis of Polymer Matrix Composites," *NASA TM-2004-213420*, April 2004
6. Chattopadhyay, A. and McCarthy, T. R., "A New Higher-Order Composite Theory for Analysis and Design of High-Speed Tilt Rotor Blades," *NASA CR-196703*, October 1996.
7. Chattopadhyay, A. and Chiu, Y. D., "An Enhanced Integrated Aerodynamic Load/Dynamic Optimization Procedure for Helicopter Rotor Blades," *NASA CR-4326*, October 1990.
8. Chattopadhyay, A., "Performance of an Optimized Rotor Blade at Off-Design Flight Conditions," *NASA CR-4288*, 1990.
9. Chattopadhyay, A., et al., "Integrated Multidisciplinary Optimization of Rotorcraft A Plan for Development," Eds. Adelman, H. and Mantay, W., *NASA TM-101617, AVSCOM TM-89-B-004*, May 1989.
10. Chattopadhyay, A., Walsh, J. L. and Riley, M. F., "Integrated Aerodynamic/Dynamic Optimization of Helicopter Rotor Blades," *NASA TM-101553*, February 1989.
11. Chattopadhyay, A. and Walsh, J. L., "Structural Optimization of Rotor Blades with Integrated Dynamics and Aerodynamics," *NASA TM-101512*, October 1988.
12. Chattopadhyay, A. and Walsh, J. L., "Minimum Weight Design of Rotorcraft Blades with Multiple Frequency and Stress Constraints," *NASA TM-100569*, March 1988.
13. Zhu, L., Kim, H. S., Chattopadhyay, A. and Goldberg, R., "Implementation of Improved Transverse Shear Calculations and Higher Order Laminate Theory into Strain Rate Dependent Analyses of Polymer Matrix Composites," *NASA TM-2004-213420*, December 2004.

Invited Papers

1. Chattopadhyay, A., “Machine learning methods for PHM” Keynote Lecture, Asia Pacific Conference of the PHM Society, Jeju, Republic of Korea, September 8-12, 2021.
2. Chattopadhyay, A., Ikram, J., and Papandreou-Suppappola, A., “Unsupervised Mode Extraction and Group Velocity Estimation for Ultrasonic Guided Waves Propagating in Dispersive Material,” Invited paper, 54th Asilomar Conference on Signals, Systems & Computers, November 1-4, 2020.
3. Chattopadhyay, A., “Multi-mechanical Interactions During Extreme Environment Fatigue Loading,” Invited Paper, The Minerals, Metals & Materials Society (TMS) Annual Meeting & Exhibition, San Diego, California, February 23 – 27, 2020.
4. Chattopadhyay, A., and Datta, S., “Effects of Overloads and Underloads on Biaxial Fatigue Crack Propagation in AI 7075-T651 Alloy,” Invited Paper, 14th International Conference on Fracture, Rhodes, Greece, June 18-23, 2017.
5. Chattopadhyay, A., “A Multidisciplinary Approach to Structural Health Monitoring and Prognosis,” Keynote Lecture, American Society of Mechanical Engineers 2011 Conference on Smart Materials, Adaptive Structures and Intelligent Systems (SMASIS), Scottsdale, AZ, September 21, 2011.
6. Datta, S., Chattopadhyay, A., Iyyer, N., Phan, N., “Effects of Overloads and Underloads on Biaxial Fatigue Crack Propagation in AI 7075-T651 Alloy,” Invited paper, 14th International Conference on Fracture, Rhodes, Greece, June 18-23, 2017.
7. Coelho, C.K. and Chattopadhyay, A., “A Hierarchical Classification Scheme for Computationally Efficient Damage Classification,” Proceedings of the IMechE, Part G, November 2008.
8. Chattopadhyay, A., Papandreou-Suppappola, A., Rajadas, John, “An Integrated Vehicle Health Management Approach to Heterogeneous Structural Systems,” Aviation Safety Program Technical Conference, McLean, Virginia, November 2009.
9. Chakraborty, D., Zhou, W., Simon, D., Kovvali, N., Papandreou-Suppappola, A., Cochran, D. and Chattopadhyay, A., “Time-Frequency Methods For Structural Health Monitoring,” Invited paper, Structural Health Monitoring session, 49th Structures, Structural Dynamics and Materials Conference (SDM), April 2008.
10. Chattopadhyay, A., and Coelho, C., “Structural Health Monitoring using Kernel Methods: Detection and Prognosis,” Keynote lecture, 2nd World Congress on Engineering Asset Management and 4th International Conference on Condition Monitoring (WCEAM/CM 2007), Harrogate, UK, June 2007.
11. Deenadayalu, C. and Chattopadhyay, A., “The Use of Response Surface Modeling to Characterize Damage,” Keynote Lecture, 13th International Congress on Sound and Vibration, Vienna, Austria, July 2006.
12. Zhu, L., Chattopadhyay, A., and Goldberg, Robert K., “Failure Analysis in High Velocity Impact of Composites,” Invited paper, ACUN-5 International Composites Conference: Advanced, Infrastructure, Natural and Nanocomposites, Sydney, July 2006.
13. Chattopadhyay, A., Das, S., Papandreou-Suppappola, A. and Zhou, X., “On the use of the Matching Pursuit Decomposition Signal Processing Technique for Structural Health Monitoring,” Keynote Lecture, 3rd International Conference on Condition Monitoring Cambridge, UK, June 2006.
14. Chattopadhyay, A., Das, S. and Papandreous-Suppappola, A., “Structural Health Monitoring of Composites using Wave Based Technique and Novel Signal Processing,” Keynote Lecture, Int. Conference on Computational Experimental Engineering and Sciences (ICCES’05), Chennai, India, December 2005.
15. Das, S. and Chattopadhyay, A., “Structural Health Monitoring of Composites using Acoustic

- Methods,” Abstract and Poster presentation, Integrated Systems Health Management Conference, Air Force Research Laboratory, Cincinnati, Ohio, August 2005.
16. Chattopadhyay, A., Das, S. and Papandreu-Suppappola, A., “Structural Health Monitoring of Composites using Wave Based Technique and Novel Signal Processing,” **Keynote Lecture**, Condition Monitoring 2005, Cambridge, UK, July 2005.
 17. Chattopadhyay, A. and Zhu, X., “An Analytical/Experimental Approach for Damage Detection in Heterogeneous Media using Self-sensing Piezoelectric Transducers,” Keynote Lecture, *Proc.*, Int. Conference on Theoretical, Applied, Computational and Experimental Mechanics, Kharagpur, India, December 2004.
 18. Chattopadhyay, A. and Das, S., “Optimal Sensor Placement in Structural Health Monitoring,” Keynote Lecture, Int. Conference on Computational Experimental Engineering and Sciences (ICCES’04), Madeira, Portugal, July 2004.
 19. Chattopadhyay, A., “Health Monitoring of Composite Structure,” Invited paper, 4th Int. Conference on Computational & Experimental Engineering and Sciences, Madeira, Portugal, July 2004.
 20. Chattopadhyay, A., “Characterization of Damage in Composite Structures Using Smart Material,” Invited paper, 3rd Int. Conference on Computational & Experimental Engineering and Sciences, Corfu, Greece, July 2003.
 21. Chattopadhyay, A., Thornburgh, R. P. and Ghoshal, A., “Transient Analysis of Smart Structures Using a Coupled Piezoelectric-Mechanical Theory,” Invited paper, IUTAM Symposium on Dynamics of Advanced Materials and Smart Structures, Yonezawa, Japan, May 2002.
 22. Chattopadhyay, A., “Research in Adaptive Structures – Modeling and Optimization,” Invited paper, SPIE Far East and Pacific Rim Symposium on Smart Materials, Structures and MEMS, Bangalore, India, December 1996.
 23. Chattopadhyay, A., Narayan, J. R. and Pagaldipti, N., “Sonic Boom Minimization of High Speed Aircraft Using Multiobjective Optimization and Semi-Analytical Sensitivity Analysis,” Invited paper, *Proc.*, 3rd ECCOMAS Computational Fluid Dynamics Conference, Mini Symposium on Sonic Boom, Paris, France, September 1996.
 24. Chattopadhyay, A. and Seeley, C. E., “Development of a Higher Order Laminate Theory for Modeling Composites with Induced Strain Actuators,” Invited paper, 4th Annual Workshop on Advances in Smart Materials for Aerospace Applications, NASA Langley Research Center, Hampton, Virginia, May 1995.
 25. Chattopadhyay, A., “An Optimization Procedure for Investigating the Coupled Controls/ Structures Interaction in Composites Using Smart Structures,” Invited paper, Aerospace Flutter and Dynamics Council Meeting, Scottsdale, Arizona, May 1994.
 26. Chattopadhyay, A. and McCarthy, T. R., “Recent Efforts at Multicriteria Design Optimization of Helicopter Rotor Blades,” Invited paper, NATO Advanced Study Institute on Optimization of Large Structural System, Berchtesgaden, Germany, September 1991.
 27. Chattopadhyay, A., “Vibration Reduction in an Articulated Rotor Blade Using Structural Optimization,” Invited paper, 15th South Eastern Regional Conference on Theoretical and Applied Mechanics (SECTAM XV), Atlanta, Georgia, March 1990.

Invited Presentations/Panel

1. Keynote Speaker, 49th International Conference and Exposition on Advanced Ceramics and Composites, January 26-31, 2025: Couples Oxidation and Viscoplastic Model for Analyzing Thermomechanical Performance of CMC Structures.
2. Keynote Speaker, American Society of Mechanical Engineers Conference on Smart Materials,

- Adaptive Structures, and Intelligent Systems (SMASIS), September 11-13, 2023: Multiscale Methodologies for Multifunctional Material design.
3. Keynote Speaker, 47th International Conference and Exposition on Advanced Ceramics and Composites (ICACC), Daytona Beach, Florida, January 22-27, 2023: Multiphysics Multiscale Analysis Framework for CMCs Including Scale-dependent Characterization and Quantification of Variability.
 4. Panelist, DEVCOM ARL Mid-Term Technology Forecasting Workshop, Virtual, December 2022: Multiscale Design of Materials: Projected Scientific Breakthroughs in 2027-2032.
 5. Keynote Speaker, Asia Pacific Conference of the Prognostics and Health Management Society 2021, Dongguk University, Jeju, South Korea, September 8-12, 2021: Health Management and Prognosis of Engineering Systems - Precursor to Residual Life.
 6. Keynote Speaker, PHM Asia Pacific Conference, Republic of Korea, September 8-11, 2021: Turbine fault detection of intelligent digital power plant using optimal sensor selection.
 7. Invited Speaker, 2021 Alumni Talk Series of Aero Society, IIT Kharagpur, India. April 16, 2021.
 8. Invited Speaker, Dongguk University, South Korea, March 10, 2021: Bridging the Gap: From the Nano to the Structural Scale.
 9. Panelist, 2020 University Turbine Systems Research (UTSR) Meeting, virtual, November 17-19, 2020.
 10. Panelist, 2020 NASA University Leadership Initiative (ULI) Annual Meeting, Virtual, September 1-2, 2020.
 11. Distinguished Guest Lecture, AZ RS Chapter Meeting, IEEE Region 6 Western U.S, April 2020: Health Monitoring and Damage Prognosis – A Multidisciplinary Approach.
 12. Distinguished Guest Lecture, NAVAIR 2018 Composite Workshop, Falls Church, VA, August 8-10, 2018: Multiscale Modeling of Complex Composites.
 13. Distinguished Guest Lecture, AZ RS Chapter Meeting, IEEE Region 6 Western U.S., April 26th 2018: A Framework for Systems Health Management - Sensing to Life Prediction.
 14. Distinguished Speaker Dean's Panel, Washington D.C., VA. March 12-13, 2018: Ambassador Barbara Barrett & Justice Sandra Day O'Connor Washington Center Launch Event Series.
 15. Distinguished Seminar, AME Bert Lecture Series, The University of Oklahoma, School of Aerospace and Mechanical Engineering, April 9-10, 2017: A Multidisciplinary Approach to State Awareness and Life Estimation.
 16. Dean's Distinguished Guest Lecture, Air Force Institute of Technology, March 31, 2017: Intelligent Materials and Integrated Systems.
 17. Panelist, National Academies U.S. Army Corps of Engineering (USACE) Structural Health Monitoring Meeting, Irvine, CA, May 18-19, 2016.
 18. Invited Special Guest Speaker, IEEE RS AZ Chapter Meeting, August 18, 2016: Structural Health Monitoring and Damage Prognosis – A Multidisciplinary Approach.
 19. Invited Speaker, Orbital ATK, February 17, 2016: Structural Health Monitoring and Prognosis.
 20. Invited Speaker, American Institute of Aeronautics and Astronautics Phoenix Section November 2015 Dinner Meeting: Multifunctional Materials and Intelligent Systems.
 21. Invited Panelist at GSI & Department of Defense seminar at Arizona State University, hosted by the Fulton Schools of Engineering, October 30, 2015.
 22. Invited Speaker, webinar hosted by Honeywell, June 26, 2015: Material Characterization and Multiscale Modeling of Metals.

23. Invited Speaker, webinar hosted by Honeywell, June 25, 2015: Modeling and Materials to Improve Composite Properties.
24. Invited Speaker, Zero-Maintenance/Fatigue-Free Workshop, Vehicle Technology Directorate, Army Research Laboratory, Aberdeen Proving Ground, Maryland, August 12-14, 2014: Bridging the gap: from nano to the structural level.
25. Invited Speaker, 2014 Multiaxial/Multiscale Fatigue Summit, hosted by Technical Data Analysis, Inc., Alexandria, VA, June 10-12, 2014: Multiphysics Approach to Modeling and Characterization of Heterogeneous Material Systems Including Fatigue.
26. Invited Talk, Assembly and Test Technology Development Core Competencies, Intel Corp., November 2013: A Multidisciplinary Approach to Modeling and Damage prognosis.
27. CHN Distinguished Lecturer at Northeastern University Boston, MA, April 11, 2013: A Hybrid Approach to Damage Assessment and Prognosis using High Fidelity Models.
28. Keynote Lecture, American Society of Mechanical Engineers 2011 Conference on Smart Materials, Adaptive Structures and Intelligent Systems (SMASIS), Scottsdale, AZ, September 21, 2011: A Multidisciplinary Approach to Structural Health Monitoring and Prognosis.
29. Invited Speaker, American Institute of Aeronautics and Astronautics Student Chapter Meeting, Arizona State University, Tempe, AZ, August 24, 2011: Structural Health Management of Heterogeneous Systems.
30. Invited Speaker, Multi Scale Structural Mechanics and Prognosis Grantees' Meeting, University of Dayton Research Institute, Dayton, Ohio, August 9-11, 2011: Multidisciplinary Research at AIMS Center.
31. Invited Speaker, Rensselaer Polytechnic Institute (RPI), June 15, 2011: Multidisciplinary Approach to Structural Health Monitoring and Prognosis of Aerospace Components.
32. Army Research Lab, Aberdeen, MD, April 29, 2011: An Integrated Approach to Condition Based Monitoring.
33. NAVAIR, Patuxent River, MD, April 28, 2011: Multidisciplinary Approach to Structural Health Monitoring and Prognosis of Aerospace Components.
34. UTRC Fellow Forum, Structural and Mechanical Engineering session Hartford, Connecticut, October 2010: Advanced Solution for SHM," Keynote Presentation.
35. AFOSR Invited Workshop on Improved Precision for Space Systems, Air Force Research Labs, Kirtland Air Force Base, Albuquerque, New Mexico, May 2010: Innovative Ideas on Future Research on Space Systems.
36. Iowa State University, Department of Aerospace Engineering Ames, Iowa, March 2010: A Multidisciplinary Approach to Structural Health Monitoring and Prognosis of Aerospace Components.
37. Intel Corp., Chandler, February 2010: Multiscale Modeling for SHM and Prognosis.
38. AS&DES PL Engineering Luncheon Speaker, Raytheon Missile Systems, Tucson, AZ, February 2010: RMS Applications of Intelligent Adaptive Materials & Systems.
39. Department of Mechanical and Aerospace Engineering, University of Maryland Baltimore County, Baltimore, Maryland, February 2009: A Multidisciplinary Approach to Structural Health Monitoring and Prognosis of Aerospace Components.
40. Department of Mechanical and Aerospace Engineering, University of Arizona, Tucson, Arizona, November 2008: A Multidisciplinary Approach to Structural Health Monitoring and Prognosis of Aerospace Components.
41. Sensor, Signal and Information Processing Workshop, Sedona, AZ, May 2008: MURI on Structural

Health Monitoring.

42. Keynote Speaker, 4th Int. Conf. on Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM 2007), Indian Institute of Technology, Kharagpur, India, December 2007: A Multidisciplinary Approach to SHM and Prognosis.
43. Keynote Speaker, 4th Int. Conf. on Theoretical, Applied, Computational and Experimental Mechanics, Indian Institute of Technology, ICTACEM 2007, Kharagpur, India, December 2007: A Hybrid Approach to Structural Health Management and Prognosis of Metallic Aerospace Components.
44. Penn State, Center for Structural Health Monitoring, Inaugural Meeting, November 2007: Challenges in Structural Health Monitoring of Heterogeneous Systems.
45. Int. Conference on Computational Experimental Engineering and Sciences (ICCES'05), Chennai, India, December 2005: Structural Health Monitoring of Composites using Wave Based Technique and Novel Signal Processing.
46. Keynote Lecture, Condition Monitoring 2005, Cambridge, UK, July 2005: Structural Health Monitoring of Composites using Wave Based Technique and Novel Signal Processing.
47. Virginia Polytechnic Institute, Blacksburg, VA, March 2005: Multiscale Modeling and Structural Health Monitoring of Heterogeneous Systems.
48. NASA Glenn Research Center, May 24, 2005: Unified Approach to Model Multiscale, Progressive and High Strain-Rate Dependent, Damage in Composite Structures.
49. Electronic Packaging Group, Intel, Chandler, January 2005: Multiscale Analysis including Damage for Electronic Packaging Systems.
50. Dept. of Aerospace Engineering, San Diego State University, October 7, 2004: Modeling, Simulation and Health Monitoring of Adaptive Composite Structures.
51. Army Research Laboratory, Aberdeen, March 2000: Modeling and Detection of Damage in Smart Composites.
52. Department of Aerospace Engineering, University of Michigan, February 2000: Modeling and Analysis of Segmented Constrained Layer Damping Treatment for Improved Helicopter Aeromechanical Stability.
53. Wright Patterson Air Force Base, Ohio, September 1999: Modeling Issues in Smart Composites.
54. NASA Ames Research Center, March 1999: Modeling, Analysis and Design of Smart Structures – Rotary Wing Applications.
55. NASA Langley Research Center, Hampton, VA, September 1998: Modeling, Analysis and Design of Smart Structures.
56. Department of Mechanical and Aerospace Engineering, University of California, Los Angeles, CA, December 1997: Development of Refined Higher Order Theory for Composites Including Smart Structures.
57. Mathematics Promenade, Arizona State University, November 1997: Research in Composites and Adaptive Composites.
58. US Army Research Office (ARO) Annual Review Meeting, Research Triangle, NC, June 1997: Research in Mechanics of Composites and Adaptive Structures.
59. NASA Ames Research Center, Moffett Field, California, March 1996: Development of a Higher Order Theory for the Analysis and Aeroelastic Tailoring of Composite Box Sections.
60. NASA Ames Research Center, Moffett Field, California, March 1996: Enhanced Multiobjective Optimization for Design Optimization of High Speed Aircraft.

61. NASA Ames Research Center, Moffett Field, California, March 1996: Sonic Boom Minimization of High Speed Aircraft using Semi-Analytical Sensitivity Analysis and Multiobjective Optimization.
62. NASA Langley Research Center, Hampton, Virginia, May 1995: Buckling and Postbuckling of Composite Laminates with Delaminations
63. NASA Ames Research Center, Moffett Field, California, April 1995: Efficient Multidisciplinary Design Optimization Using Semi-Analytical Sensitivities and Smart Decomposition Technique.
64. NASA Langley Research Center, Hampton, Virginia, July 1994: Analysis and Design of Smart Structures with Coupled Structures/Controls Interaction Using Simulated Annealing Technique.
65. NASA Langley Research Center, Hampton, Virginia, July 1994: A New Higher-Order Based Theory for Composites with Delamination.
66. School of Aerospace Engineering, Georgia Institute of Technology, Atlanta, Georgia, May 1994: A Decomposition Based Optimization Procedure.
67. Department of Mechanical, Aerospace and Nuclear Engineering, University of Virginia, Charlottesville, Virginia, March 1993: The Development of Multidisciplinary Optimization Procedures and Semi-Analytical Nonlinear Sensitivity Analysis Techniques.
68. Department of Aerospace Engineering, The University of Michigan, Ann Arbor, Michigan, March 1993: The Development of Multidisciplinary Optimization Procedures and Semi-Analytical Nonlinear Sensitivity Analysis Techniques for Application to Aerospace Vehicles.
69. Rotorcraft Technology Branch, Aircraft Technology Division, NASA Ames Research Center, Moffett Field, California, December 1992: A Multiobjective Optimization and Semi-Analytical Sensitivity Analysis Procedure for the Design of High Speed Civil Transport Using CFD Techniques.
70. Rotorcraft Technology Branch, Aircraft Technology Division, NASA Ames Research Center, Moffett Field, California, July 1992: Aeroelastic Optimization of High Speed Prop-Rotors Using Composite Tailoring.
71. Department of Aeronautics and Astronautics, Purdue University, West Lafayette, Indiana, March 1992: Multidisciplinary Design Optimization of Rotary Wing Aircraft.
72. Rotorcraft Technology Branch, Aircraft Technology Division, NASA Ames Research Center, Moffett Field, California, March 1992: A Multidisciplinary Approach for Design Optimization of High Speed Prop-Rotors.
73. Mechanical Engineering Department, Indian Institute of Technology, Kharagpur, India, August 1991: Optimization of Helicopter Rotor Blades using Multidisciplinary Coupling
74. Rotorcraft Technology Branch, Aircraft Technology Division, NASA Ames Research Center, Moffett Field, California, June 1991: Optimum Design of High Speed Prop-Rotors.
75. Department of Mechanical and Aerospace Engineering, Arizona State University, Tempe, Arizona, December 1990: Multidisciplinary Optimization of Helicopter Rotors.
76. Rotorcraft Technology Transfer Meeting, NASA Langley Research Center, Hampton, Virginia, September 1989: Integrated Aerodynamic/Dynamic Optimization of Helicopter Rotor Blades.
77. Interdisciplinary Research Office, NASA Langley Research Center, Hampton, Virginia, April 1988: Integrated Dynamic, Structural and Aerodynamic Optimization of Rotor Blades.
78. Interdisciplinary Research Office, NASA Langley Research Center, Hampton, Virginia, September 1987: Vibration Reduction in Helicopter Rotor Blades Using Structural Optimization.
79. Indian Space Research Organization, India, August 1984: An Optimality Criterion Based Procedure for the Design of Vibrating Structures with Coupled Bending and Torsion.

80. Structures Directorate, National Aeronautical Laboratory, Bangalore, India, August 1984: Development of an Optimality Criterion Based Procedure for Structural Optimization.

Student Theses and Dissertations Supervised

Doctoral Degrees Awarded

1. Javaid Ikram, October 2023 “Nonlinear Synchrosqueezing for Dispersive Signal Analysis” Co-Advisor)
2. Md Fazle Rabbi, July 2023 “Mechanical Behavior of Meteorites: Multiscale Characterization of the Strength and Failure Mechanism”
3. Khaled Khafagy, May 2022 “High-fidelity Multiscale Modeling and In-situ Experiments of Advanced Aerospace Composites in Extreme Environments”
4. Jacob J. Schichtel, May 2022 “Fundamental Investigations into the Properties and Performance of Advanced Materials” (Ira A. Fulton Schools of Engineering 2022 Dean’s Dissertation Award)
5. Christopher Sorini, November 2021 “Multiscale Modeling of Polymer and Ceramic Matrix Composites”
6. Hyunseong Lee, September 2021 “Health Management of Complex Systems Integrating Multisource Sensing, Nondestructive Evaluation, and Machine Learning”
7. Karthik Venkatesan, July 2021 “High Fidelity Modeling and Analysis of Nanoengineered Composites and Complex Sandwich Structures”
8. Travis Skinner, May 2021 “Deformation and Damage in Fiber Reinforced Polymer and Ceramic Matrix Composite Materials”
9. Abhay Singh, May 2021 “Micro- and Macro-Scale Characterization of Fatigue Damage Behavior in Metallic Materials Under Constant and Variable Amplitude Multiaxial Loading”
10. Guoyi Li, April 2019 “Health Management and Prognostics of Complex Structures and Systems”
11. Siddhant Datta, August 2018 “Characterization of Fatigue Damage In Aerospace Materials Under Complex Multiaxial Loading”
12. Ashwin Rai, February 2018 “Novel Methodology for Atomistically Informed Multiscale Modeling of Advanced Composites”
13. Nithya Subramanian, February 2018 “Physics-Based Modeling of Material Behavior and Damage Initiation in Nanoengineered Composites”
14. Bonsung Koo, May 2017 “A New Atomistic Simulation Framework for Mechanochemical Reaction Analysis of Mechanophore Embedded Nanocomposites”
15. Joel Johnston, July 2016 “Stochastic Multiscale Modeling and Statistical Characterization of Complex Polymer Matrix Composites”
16. Rajesh Kumar Neerukatti, July 2016 “Systems Health Management and Prognosis using Physics Based Modeling and Machine Learning”
17. Inho Kim, January 2016 “Feature and Statistical Model Development in Structure Health Monitoring”
18. Luke Borkowski, May 2015 “Multiscale Modeling of Advanced Materials for Damage Prediction and Structural Health Monitoring”
19. Jin Zou, November 2014 “Development of Mechanochemically Active Polymers for Early Damage Detection”, Co-Chair
20. Zeaid Hasan, July 2014 “Multiscale Analysis of Nanocomposites and their use in Structural Level

Applications”

21. Jinjun Zhang, July 2014 “Multiscale Modeling of Heterogeneous Material Systems”
22. Albert Moncada, December 2012 “Advances in Micromechanics Modeling of Composites Structures for Structural Health Monitoring”
23. Yingtao Liu, March 2012 “Integrated Structural Health Management of Complex Carbon Fiber Reinforced Composite Structures”
24. Chuntao Luo, August 2011 “Multiscale Modeling & Virtual Sensing for Structural Health Monitoring”
25. Kuang Liu, July 2011 “Micromechanics Based Multiscale Modeling of the Inelastic Response and Failure of Complex Architecture Composites”
26. Clyde Coelho, June 2011 “Sensing and Knowledge Mining for Structural Health Management”
27. Masoud Yekani Fard, August 2011 “Nonlinear Inelastic Mechanical Behavior of Epoxy Resin Polymeric Materials”
28. Sunil Soni, August 2010 "Structural Health Management of Aerospace Hotspots under Fatigue Loading"
29. Subhasish Mohanty, May 2010 "Structural Health Monitoring and Condition Based Fatigue Damage Prognosis of Complex Metallic Structures"
30. Cynthia Swann, May 2009 “Structural Health Monitoring of Heterogeneous Materials Using Damage Index Methods and Piezoelectric Sensors”
31. Chaitanya Deenadayalu, August 2007 “Multiscale Damage Modeling and Detection Using a Combination of High Fidelity Analysis, Optimization and Dynamic Neural Networks”
32. Santanu Das, August 2007 “Development of a Wave-based Sensor- Integrated Structural Health Monitoring Procedure for Composite Laminates”
33. Sorin Munteanu, May 2007 “An Efficient Approach to Solve Nonlinear Aeroelastic Problems Including Thermal Effect”
34. Linfa Zhu, July 2006 “Multiscale High Strain Rate Models for Polymer Matrix Composites”
35. Heungsoo Kim, December 2003 "A Comprehensive Coupled Theory for Smart Composite Structures Including Delaminations"
36. Robert Thornburgh, August 2002 "A Unified Approach to Modeling Delamination and Matrix Cracking in Smart Composite Structures”
37. Xu Zhou, August 2002 "Modeling of Piezoceramics and Piezoelectric Laminates Addressing Complete Coupling and Hysteresis Behavior"
38. Adrian Radu, August 2001 "Dynamic Stability of Composite Laminates in the Presence of Delaminations"
39. Qiang Liu, December 2000 "Development of Smart Composite Rotor Blade Concept for Improved Vibration and Stability Characteristics"
40. Shashishekara Talya, May 2000 "Multidisciplinary Design Optimization Procedure for Turbomachinery Blades and Sensitivity Analysis Technique for Aerospace Applications"
41. Ratneshwar Jha, May 1999 "Development of Multidisciplinary Design Optimization Procedures for Smart Composite Wings and Turbomachinery Blades"
42. Charles E. Seeley, May 1997 "Analysis and Optimization of Smart Composite Using Piezoelectric Materials"
43. Haozhong Gu, August 1996 "A New Approach for Buckling and Postbuckling Analysis of

Delaminated Composites"

44. Narayanan Pagaldipti, August 1996 "Semi-Analytical Sensitivity Analysis Procedure and Multidisciplinary Design Optimization Techniques for Aerospace Applications"
45. Ruijiang Guo, August 1996 "Analytical Design Sensitivity Analysis of Nonlinear Composite Structures with Application to Energy Absorption"
46. Thomas R. McCarthy, August 1996 "A New Higher-Order Composite Theory for Analysis and Design of High Speed Tilt-Rotor Blades"

Masters Degrees Awarded

1. Ravya Ranade, July 2024 (MS) "Multiscale Investigation of the Effects of Thermal and Mechanical Properties on the Performance of Advanced Materials"
2. Kartik Tripathi, May 2024 (MSME) "Electrical and Mechanical Characterization of Hybrid Buckypaper/Carbon Fiber Reinforced Polymer Matrix Composites"
3. Trevor Johnson, December 2014 (MSE)
4. Cristopher Heitland, November 2014 (MSE)
5. Kevin Hensberry, May 2013 (MS) "Probabilistic Fatigue Damage Localization at Unknown Temperatures Using Guided Wave Methods"
6. Ryan Lawson, May 2013 (MSE)
7. Anthony Vizzini, April 2012 "Damage Detection in Blade-Stiffened Anisotropic Composite Panels Using Lamb Wave Mode Conversions"
8. Kuang Liu, December 2010 (MSE)
9. Cristobal Hiche Schwarzhaupt, August 2010 (MS) "Impact Damage Characterization and the Localization on Aircraft Composite Components using FBG Sensors"
10. Steve Lewis Patterson, May 2010 (MSE)
11. Whitney Reynolds, May 2009 "Structural Health Monitoring in Composite Materials using Guided Waves"
12. Siddarth Sharma, Fall 2008 (MSE) "Detection of Plastic Zones in Lug Joints using the Aramis Optical Imaging System"
13. Santosh Ramachandran, November 2006 "Modeling Structural Response of Composite Beams Using Fiber Optic Bragg Grating Sensors"
14. David Krzyzanowski, October 2006 "Elastic and Inelastic Behavior of Carbon Nanotube Reinforced Polystyrene"
15. William Lee, December 2005 "Statistical approach to multiscale damage modeling"
16. David Miller, April 2005 "Wave Propagation in Structural Health Monitoring"
17. Jeff Koldhoff, August 2004 (MSE)
18. Rajan Beri, August 2000 "Optimization of Smart Composite Plates with Segmented Active Constrained Layer Damping"
19. Dan Dragemir-Daescu, May 1999 "Modeling and Detection of Delaminations in Smart Composite Structures"
20. Jingmei Li, August 1998 "A Thermo-Piezoelectric-Mechanical Coupled Model for Smart Composite Laminates"
21. Wensheng Xu, May 1998, (MSE)
22. Lori Mitchell, May 1998 "First Order Shear Deformation Theory Based Modeling of Curved

C-Block Actuators"

23. Ralph Andy Jury, December 1997 "An Enhanced Multiobjective Optimization Formulation Techniques for Multidisciplinary Design Optimization"
24. Sen Zhang, December 1996 "Modeling of Composite Wing Box Sections Using Higher Order Laminate Theory"
25. Charles E. Seeley, December 1993 "Optimization of Intelligent Structures Using Piezoelectric Materials"
26. Jay M. Ferreira, May 1992 "Structural Optimization and Design Sensitivity of Composite Cylindrical Shells for Buckling and Postbuckling"
27. Thomas R. McCarthy, December 1992 "An Integrated Multidisciplinary Optimization Approach for Rotary Wing Design"

Other Theses Supervised

1. Omid Eghlidos, October 2023, "Systematic Methods for Coarse-Grained Modeling of Nanostructure-Property Relationships in Semicrystalline Polymers," Doctoral Thesis Committee. Mechanical Engineering.
2. Jose Roman, September 2021, "Characterization of Carbon Nanotube Dispersion in Polymer Matrix," Honors Thesis, Mechanical Engineering.
3. Rayva Ranade, April 2021, "High-Temperature Damage Behavior of Ceramic Matrix Composites," Honors Thesis, Mechanical Engineering.
4. Nathaniel Briggs, April 2019, "Structural Health Monitoring: Acoustic Emissions Testing," Honors Thesis, Mechanical Engineering.
5. John Woodward, April 2017 "The Effects of Manufacturing Technology on the Microstructure of Carbon Nanotube Membranes," Honors Thesis, Mechanical Engineering.
6. Mateo Oramas, April 2017 "Cyclic Initiation and Propagation Fracture Properties of Seamless and Stitch Bonded Composite Pipes," Honors Thesis, Mechanical Engineering.
7. Marissa Palermo, April 2017 "Mechanical Properties of Recycled 3D Print Filament," Honors Thesis, Mechanical Engineering.
8. Michael Padilla, April 2017 "Translaminar Fracture Properties of Seamless Carbon Fiber Tube Type Structures," Honors Thesis, Mechanical Engineering.
9. Abhishek Rajadas, April 2016 "A Wave-based Damage Detection, Quantification, and Localization Method in Complex X-Cor Composite Structures," Honors Thesis, Mechanical Engineering
10. John McCrea, April 2015 "Structural Health Monitoring of Fiber Reinforced Composite Structures under High Velocity Impact Loads," Honors Thesis, Aerospace Engineering.
11. Zachary Barnes, April 2015 "Improving Damage Detection and Localization in Complex Composites," Honors Thesis, Mechanical Engineering.
12. William Lee, December 2004, Honors Thesis, Aerospace Engineering.
13. Jason Olivarez, December 2003, Honors Thesis, Mechanical Engineering.
14. Anna Quiroga, December 2000, Honors Thesis, Mechanical Engineering.
15. Keyan Homayounfar (Technical University of Braunschweig), July 1993, "Development of a Finite Element Model for the Structural and Aeroelastic Analysis of Helicopter Rotor Blades"

Current Graduate Projects in Progress

Doctoral Thesis

1. Chris Whitney (Committee Advisor, Spring 2021 – Present)
2. Mohamed Hamza (Fall 2021 – Present)
3. Jose Roman (Fall 2022 – Present)
4. Mostafa Mohamed (Spring 2023 – Present)
5. Hyeonho Hwang (Fall 2023 – Present)
6. Obed Tetteh (Spring 2024 – Present)
7. Jacob Eaton (Summer 2024 – Present)

Post-doctoral and Visiting Professor Supervision

1. Venkatasatyanand Mutnuri (Post-doctoral Research Associate, School for Engineering of Matter, Transport and Energy, ASU Tempe Campus, 2021-2023)
2. Karthik Venkatesan (Post-doctoral Research Associate, School for Engineering of Matter, Transport and Energy, ASU Tempe Campus, 2021-2022)
3. Hyeonho Hwang (Current Position: Exchange Student, Dongguk University, Seoul, South Korea, 2021 - 2022)
4. Hwayoung Kim (Current Position: Exchange Student, Dongguk University, Seoul, South Korea, 2021 – 2022)
5. Siddhant Datta (Current position: Engineer, Oakridge National Lab)
6. Bonsung Koo (Current position: Engineer Mechanics Core Competency Group, Intel)
7. Hyungjin Lim (Current position: Assistant Professor, Department of Civil Engineering, Kyonggi University, Seoul, South Korea).
8. Maskurkar Aziz Faezz (Post-doctoral Research Associate, School for Engineering of Matter, Transport and Energy, ASU Tempe Campus, 2020-2021)
9. Kranthi Balusu (Current position: Post-doctoral Research Associate, Comp. & Data Engineering Team, Pacific Northwest National Laboratory, Richland, WA)
10. Ashwin Rai (Current position: Data Scientist, IVADO Labs, Toronto, Canada)
11. Nithya Subramanian (Current Position: Post-doctoral Scholar, Delft University of Technology (TU Delft))
12. Heung Soo Kim (Current Position: Professor, Dongguk University), Visiting Professor, 2016-2017.
13. Masoud Yekani Fard (Current Position: Assistant Research Professor, School for Engineering of Matter, Transport and Energy, ASU Tempe Campus), 2011-Present.
14. Yingtao Liu (Current Position: William H. Barkow Presidential Professor, Aerospace and Mechanical Engineering, The University of Oklahoma).
15. Kuang C. Liu (Current position: Senior Package Engineer, Intel).
16. Seung Bum Kim (Current position: Senior Research Engineer, Applied Physics Group United Technologies Research Center)
17. Sourav Banerjee (Current position: Assistant Professor, University of South Carolina)
18. Jun Wei (Current position: Assistant Research Professor, Missouri University of Science and Technology). Topics: solid mechanics, composite materials
19. Santanu Das (Current position: DMTS – Algorithms/Big Data Analytics, Verizon).
20. Xu Zhou (Current position: Boeing, Seattle).
21. Xing Jibo (Visiting Professor), Topics: Micromechanics, High Velocity Impact. January

2003-December 2003.

22. Anindya Ghoshal (Current position: Prognostics and Diagnostics Team Lead Mechanics Division, Vehicle Technology Directorate U.S. Army Research Laboratory)
23. Jon-Sung Kim (Current position: Associate Professor, Mechanical and Aerospace Engineering, Hankuk Aviation Inst., Seoul, S. Korea)
24. Changho Nam (Current position: Associate Professor, Dept. of Engineering Technology, College of Technology and Innovation ASU Polytechnic Campus)
25. Haozhong Gu (Current position: Senior Research Engineer, Boeing Research & Technology, St. Louis, Missouri)

Mentorship

1. Olivia Allen (AEOP High School Recipient: Summer 2025)
2. Shreyansh Lalan (AEOP High School Recipient: Summer 2025)
3. Tin Nguyen (AEOP Recipient: Summer 2025; Undergraduate Research Aide: Fall 2025)
4. Dr. Cindy Li (SEMTE Mentoring Communities Program 2024)
5. Dr. Jifeng Sun (SEMTE Mentoring Communities Program 2024)
6. Matthew Martin (AEOP Recipient: Summer 2024)
7. Connor Olson (AEOP Recipient: Summer 2024)
8. Trae Nelson (AEOP Recipient: Summer 2024 & 2025; Undergraduate Research Aide: Fall 2024)
9. Kaia Thompson (AEOP High School Recipient: Summer 2024)
10. Shreyansh Lalan (High School Lab Volunteer: Summer 2024)
11. Xavier Lujan-Flores (SURI Recipient: Summer 2023)
12. Vinicius Oliveira Fontes (Phd student: Fall 2023 – Spring 2024)
13. Jacob Eaton (SURI Recipient: Summer 2023; Undergraduate Research Aide: Fall 2023 – Spring 2024)
14. Amanda Stone (SURI Recipient: Summer 2022, Lab Volunteer: Fall 2022)
15. Rayva Ranade (FURI Recipient: Spring 2022 – Summer 2022)
16. Charles Galluscio (SURI Recipient: Summer 2022)
17. Cole Errico (FURI Recipient: Fall 2021 – Spring 2022)
18. Jose Roman (SURI Recipient: Summer 2022; Lab Volunteer: Fall 2021 – Summer 2022; Graduate Research Associate)
19. Ian Chandra (SURI Recipient: Spring 2021 – Summer 2021, Lab Volunteer: Spring 2021 – current)
20. Ian Kelley (Lab Volunteer: Summer – Fall 2021)
21. Ruslan Polichsuk (Spring 2021 – Fall 2022)
22. Noah Gorman (Lab Volunteer: Fall 2020)
23. Christian Burgoyne (Lab Volunteer, UG Researcher: Spring 2020, Management Intern: Summer 2021)
24. Paul Parker (AIMS/NGC Intern, Lab Volunteer: Spring 2020 – Fall 2020, UG Researcher: Fall 2021)
25. Nicholas Denisuk (AIMS/NGC Intern, Lab Volunteer: Spring 2020)
26. Alex Gardeck (AIMS/NGC Intern, Lab Volunteer: Spring 2020)

27. Marcus Gambatese (AIMS/NGC Intern, Lab Volunteer: Spring 2020)
28. Michael Alex (UG Researcher: Spring – Summer 2020)
29. Noah Kurus (UG Researcher: Fall 2019 – Spring 2020)
30. Nicholas Galvach (URAP Recipient: Fall 2018)
31. Nathaniel Briggs (URAP Recipient: Summer - Fall 2018)
32. Collin Overall (FURI Recipient: Fall 2018, Lab Volunteer: 2017)
33. Catherine Hong (HSAP Recipient: Summer 2018)
34. Bradley Northern (Lab Volunteer 2017)
35. Aldo Soberon (FURI Recipient: 2017, URAP Recipient: 2017)
36. Jack Miller (URAP Recipient: Summer – Fall 2017)
37. Bhavik Patel (URAP Recipient: Summer – Fall 2017)
38. Andrew Sweeney (Lab Volunteer: Spring 2017 – Spring 2018)
39. Collin Foster (FURI Recipient: Fall 2017, Lab Volunteer: Spring 2017 – Spring 2018)
40. Eric Probst (FURI Recipient: 2017, Lab Volunteer: Spring 2017 – Spring 2018)
41. Michael Tucker (FURI Recipient: 2017, Lab Volunteer: Spring 2017 – Spring 2018)
42. Suparva Paruthy (FURI Recipient: 2017, Lab Volunteer: Spring 2017 – Spring 2018)
43. Marissa Palermo (Lab Volunteer: Summer 2016 – Summer 2017)
44. Chase Lee (HSAP Recipient: Summer 2017)
45. Akshay Nalla (FURI Recipient: 2017, Lab Volunteer: Fall 2016 – 2017)
46. Daniel Orr (Lab Volunteer: Fall 2017)
47. Michael Padilla (Lab Volunteer: Summer 2016 – Spring 2017)
48. Matthew Schneider (FURI Recipient: Fall 2016, Fall 2017, Lab Volunteer: 2016 – 2017)
49. Carlos Lopez (FURI Recipient: Fall 2016, Lab Volunteer: 2015 – 2017)
50. John Woodward (Lab Volunteer: Spring 2015 - 2017)
51. Abhishek Rajadas (FURI Recipient: Fall 2015, Lab Volunteer: 2013, 2016, 2017)
52. Travis Skinner (Lab Volunteer: 2017, NASA Space Grant Recipient 2016, URAP Recipient: Fall 2016)
53. John McCrea (FURI Recipient: Fall 2015, Lab Volunteer: 2016)
54. Elizabeth Quigley (FURI Recipient: Fall 2015, Lab Volunteer: 2016, NASA Space Grant Recipient 2015, URAP Recipient: Fall 2015)
55. Steve Thach (Lab Volunteer: 2016)
56. Mateo Oramas (Lab Volunteer: Fall 2015 – Fall 2016)
57. Joshua Oremland (FURI Recipient: Fall 2015, Lab Volunteer: 2015)
58. Christopher Sorini (Lab Volunteer: 2013, NASA Space Grant Recipient 2015, URAP Recipient: Fall 2015)
59. Jack Griffin (HS Volunteer: 2015)
60. Sam Frommer (UG Researcher: Spring 2013 – Fall 2014)
61. Kolby Devery (HS Volunteer: 2013)
62. Joseph Williams (Lab Volunteer: 2012 - 2013)

63. Lee Burke (FURI Recipient: Fall 2013, Lab Volunteer: 2012)
64. Xiao Cheng (Lab Volunteer: Fall 2012 – Spring 2013)
65. Brianna Duong (Lab Volunteer: 2012)

Professional and Scientific Service

Professional Committee Service

- American Institute of Aeronautics and Astronautics Short course, AI for Air Traffic Safety Enhancement, February 2023, also available on-demand
- Award Committee, American Society of Mechanical Engineers Adaptive Structures and Material Systems Award (2024-Present)
- Member, Regents' Professor Selection Committee, Arizona State University (2018-Present)
- Member, President's Academic Council, Arizona State University (2018-Present)
- Mentor/Master of Aerospace and Business, GoFly Boeing (2017-Present)
- Member, American Society of Mechanical Engineers Mechanics of Soft Materials Technical Committee(2013-Present)
- Member, American Institute of Aeronautics and Astronautics Awards Sub-Committee (1994-1998)
- Member, American Institute of Aeronautics and Astronautics Adaptive Structures Technical Committee (1997-Present)
- Member, American Institute of Aeronautics and Astronautics Structures Technical Committee (1991-Present)
- Member, Dean's Faculty Advisory Council, Arizona State University (2016-Present)
- Member, American Institute of Aeronautics and Astronautics PAG for Aerospace Design, Materials and Structures on the American Institute of Aeronautics and Astronautics Fellow Selection Committee (2016-2017)
- Member, American Institute of Aeronautics and Astronautics Fellow Selection Committee (2007-2017)
- Member, Education Committee, American Helicopter Society (1996-2015)
- Member of the National Academies Panel on Mechanical Science and Engineering at the Army Research Laboratory (2013-2015)
- Chair, American Institute of Aeronautics and Astronautics Composite Structures Sub-Committee (1998-2001)
- Chair, Aircraft Design Technical Committee of the American Helicopter Society (1997-1999)

Conference Activities

- Session Chair, "Enabling Sustainability Through Aerospace Technology," American Institute of Aeronautics and Astronautics Science and Technology Forum 2022.
- Structures Technical Committee, 36th Technical Conference of American Society for Composites, September 19-22, 2021.
- Session Chair, 61st American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics, and Materials Conference, American Institute of Aeronautics and Astronautics Science and Technology Forum 2020, Orlando, Florida, January 6-10,

2020.

- Session Co-Chair, 60th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics, and Materials Conference, American Institute of Aeronautics and Astronautics Science and Technology Forum 2019, San Diego, California, January 7-11, 2019.
- Session Chair, International Workshop on Structural Health Monitoring (IWSHM) Conference, Stanford University, CA, September 2018.
- Program Committee Member, New Trends in Fatigue and Fracture Committee, U.S. Association for Computational Mechanics, Tucson, AZ, 2018-19.
- Session Chair, 59th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics, and Materials Conference, American Institute of Aeronautics and Astronautics Science and Technology Forum 2018, Kissimmee, Florida, January 8-12, 2018.
- Session Chair, The 11th International Workshop on Structural Health Monitoring (IWSHM). Stanford, California, 2017.
- Track Lead, Multiscale Modeling of Structures, Int. Conference on Composite Materials (ICCM 21), Xian, China, 2015.
- Session Chair, 57th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics, and Materials Conference, American Institute of Aeronautics and Astronautics Science and Technology Forum 2015.
- Co-Chair, "Space Structures," American Institute of Aeronautics and Astronautics Science and Technology Forum 2015, Kissimmee, FL, January 2015.
- Program Committee, SPIE's 2012 Symposium on Nondestructive Characterization for Composite Materials, Aerospace Engineering, Civil Infrastructure and Homeland Security VI, San Diego, California 2012.
- Program Committee, SPIE's 2012 Symposium on Active and Passive Smart Structures and Integrated Systems VI, San Diego, California 2012.
- Chair, SPIE Smart Structures/NDE, International Symposium on Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring, San Diego, CA 2011.
- Program Committee, SPIE's 2011 Symposium on Nondestructive Characterization for Composite Materials, Aerospace Engineering, Civil Infrastructure and Homeland Security V, San Diego, California 2011.
- Program Committee, SPIE's 2011 Symposium on Active and Passive Smart Structures and Integrated Systems V, San Diego, California 2011.
- Chair, SPIE Smart Structures/NDE, International Symposium on Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring, San Diego, CA 2010.
- Chair, SMASIS American Society of Mechanical Engineers 2010 Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Philadelphia, PA, September 2010.
- Chair, Structural Health Monitoring, 2010 51st American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/ American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials

Conference 2010.

- Chair, SMASIS American Society of Mechanical Engineers 2009 Conference on Smart Materials, Adaptive Structures and Intelligent Systems, Oxnard, CA, September 2009.
- Chair, 2009 International Workshop on Structural Health Monitoring (IWSHM) Conference, Stanford University, CA, September 2009.
- Organizer, Special sessions on Structural Health Monitoring for the 2009 50th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/ American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference, Palm Springs, CA 2009.
- Organizer & Chair, Special session on MURI at the Structural Health Monitoring/NDE Symposium, American Society of Mechanical Engineers conference on Smart Materials, Adaptive Structures & Intelligent Systems., Ellicott City, MD, October 2008.
- Organizer & Chair, Special session -Structural Health Monitoring, 49th Structures, Structural Dynamics, & Materials Conf. (SDM), April 2008.
- Organizer, Special sessions on Structural Health Monitoring for the 2008 49th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/ American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference and Adaptive Structures Forum, Schaumburg, IL 2008.
- Organizer, Special sessions for Adaptive Intelligent Materials & Systems Center Inaugural Meeting, November 2007.
- Sustainability team member, ASU Workshop on Sensors.
- Program Committee, SPIE's 2008 Symposium on Modeling, Sensors and Signal Processing, San Diego, California 2007.
- Program Committee, SPIE's 2008 Symposium on Smart Structures and Integrated Systems, San Diego, California 2007.
- Organizer, Special sessions on AFOSR MURI - Information Management for Structural Health Management for presentation at SPIE's Conference on 15th International Symposium on Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring, San Diego, CA 2007.
- Vice Chair, and North American Chair, 2nd World Congress on Engineering Asset Management and 4th International Conference on Condition Monitoring (WCEAM/CM'2007), Harrogate, UK, June 2007.
- International Symposium on Smart Materials and Structures, San Diego, California, March 2006.
- Chair, Special Symposium on SHM for Composite Materials, SPIE Smart Structures/NDE 2006.
- Structures, Structural Dynamics, and Materials Conference, Newport, Rhode Island, May 2006.
- Chair, Special Symposium on Structural Health Monitoring, 47th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites.
- Organizer, Special Symposium on Active Materials and Intelligent Systems, 5th Int. Conference on Computational & Experimental Engineering and Sciences, Hyderabad, India, December 2005.
- Member, Host Organizing Committee, 5th Int. Conference on Computational & Experimental Engineering and Sciences, Hyderabad, India, December 2005.
- Chair, Special symposium on Health Monitoring, SPIE Smart Structures/NDE 2005, San Diego,

California, March 2005.

- Member, Program Committee, SPIE's 2005 Symposium on Smart Structures and Integrated Systems, Newport Beach, California, March 2005.
- Member, International Organizing Committee, Int. Conference on Theoretical, Applied, Computational and Experimental Mechanics, Kharagpur, India, December 2004.
- Organizer, Special Symposium on Active Materials and Intelligent Systems, 4th Int. Conference on Computational & Experimental Engineering and Sciences, Madeira, Portugal, July 2004.
- Organizer, Special Sessions on Structural Health Management, 45th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference and Adaptive Structures Forum, Palm Springs, CA, April 2004.
- Member, Program Committee, SPIE's 2004 Symposium on Smart Structures and Integrated Systems, San Diego, California, March 2004.
- Organizer, Special Symposium on Active Materials and Intelligent Systems, 3rd Int. Conference on Computational & Experimental Engineering and Sciences, Corfu, Greece, July 2003.
- Member, Int. Organizing Committee, 3rd Int. Conference on Computational & Experimental Engineering and Sciences, Corfu, Greece, July 2003.
- Member, Program Committee, Thermal Stresses 2003, The Fifth Int. Congress on Thermal Stresses and Related Topics, Blacksburg, VA, June 2003.
- Member, Program Committee, SPIE's 2003 Symposium on Smart Structures and Integrated Systems, San Diego, California, March 2003.
- Chair, Sensitivity-Based Methods I, 9th American Institute of Aeronautics and Astronautics/USAF/NASA/ISSMO Symposium on Multi-disciplinary Analysis and Optimization, Atlanta, GA, September 2002.
- Chair, Keynote Lecture, IUTAM symposium on "Dynamics of Advanced Materials and Smart Structures," Yonezawa, Japan, May 2002.
- Chair, Modeling of Adaptive Laminates-Beams and Plates, 43rd American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/ American Society for Composites Structures, Structural Dynamics and Materials Conference and Adaptive Structures Forum, Denver, CO, April 2002.
- Chair, Jefferson Goblet Student Paper Competition, 43rd American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference and Adaptive Structures Forum, Denver, CO, April 2002.
- Member, Planning Committee, 43rd American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference and Adaptive Structures Forum, Denver, CO, April 2002.
- Chair, "Rotorcraft Applications," SPIE 2002 Symposium on Smart Structures and Integrated Systems, San Diego, California, March 2002.
- Member, Program Committee, SPIE's 2002 Symposium on Smart Structures and Integrated Systems, San Diego, California, March 2002.
- Member, Int. Advisory Board for ICTACEM2001 (International Conference on Theoretical,

Analytical, Computational and Experimental Mechanics), Indian Inst. of Technology, Kharagpur, India, December 2001.

- Chair “Sandwich Composites-II,” 42nd American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference and Adaptive Structures Forum, Seattle, WA, April 2001.
- Chair “Active Damage Detection,” 42nd American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference and Adaptive Structures Forum, Seattle, WA, April 2001.
- Chair “Aircraft and Helicopter Applications II,” SPIE 2001 Symposium on Smart Structures and Integrated Systems, Newport Beach, California, March 2001.
- Member, Program Committee, SPIE’s 2001 Symposium on Smart Structures and Integrated Systems, Newport Beach, California, March 2001.
- Chair, “Aircraft Applications,” SPIE’s 2000 Symposium on Smart Structures and Integrated Systems, Newport Beach, California, March 2000.
- Member, Program Committee, SPIE’s 2000 Symposium on Smart Structures and Integrated Systems, Newport Beach, California, March 2000.
- Chair, “Composite Structures-Failure Modeling II,” 41st American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference and Adaptive Structures Forum, St. Louis, MO, April 1999.
- Chair, “Affordability I,” Panel session and technical presentation, 41st American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/ American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference and Adaptive Structures Forum, St. Louis, MO, April 1999.
- Organizer, special sessions on “Affordable Composites,” 41st American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference and Adaptive Structures Forum, Atlanta, GA, April 2000.
- Chair, “Composite Structures,” 40th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference and Adaptive Structures Forum, St. Louis, MO, April 1999.
- Member, Program Committee, SPIE’s 1999 Symposium on Smart Structures and Integrated Systems, San Diego, California, March 1999.
- Chair, “Composite Structures,” 39th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference and Adaptive Structures Forum, Long Beach, CA, April 1998.
- Structures Technical Committee Representative, 39th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference and Adaptive Structures Forum, Long Beach, CA, April 1998.

- Chair, “Current Actuator Technology,” SPIE’s 1998 Symposium on Smart Structures and Integrated Systems, San Diego, California, February 1998.
- Member, Program Committee, SPIE’s 1998 Symposium on Smart Structures and Integrated Systems, San Diego, California, February 1998.
- Chair, “Composite Beams, Plates and Shells,” 38th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference, Kissimmee, Florida, April 1997.
- Chair, “Composite Beams, Plates and Shells,” 38th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Member, International Advisory Board, 4th International Conference in Composites Engineering, Hawaii, August 1997.
- Program Committee, 38th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference, Orlando, Florida, April 1997.
- Program Committee, SPIE’s 1997 Symposium on Smart Structures and Integrated Systems, San Diego, California, February 1997.
- Organizing Committee, SPIE’s Pacific Rim Conference on Smart Structures, Materials and MEMS, Indian Institute of Science, Bangalore, India, December 1996.
- Organizing Mini Symposium on “Smart Structures and Materials,” 33rd Annual Technical Meeting of the Society of Engineering Science, Tempe, Arizona, October 1996.
- Chair, “Aeroelasticity I,” 6th American Institute of Aeronautics and Astronautics/NASA/USAF Multidisciplinary Analysis & Optimization Symposium, Bellevue, Washington, September 1996.
- Organized Exhibit for Arizona State University at the 53rd Forum and Annual Exhibit of the American Helicopter Society, Washington, D.C., May 1996.
- Chair, “Modeling/Simulation of Adaptive Structures,” 37th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference, Salt Lake City, Utah, April 1996.
- Chair, “Delamination Buckling,” 37th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference, Salt Lake City, Utah, April 1996.
- Chair, “Composite Beams, Plates and Shells–I,” 37th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference, Salt Lake City, Utah, April 1996.
- Organized sessions in Adaptive Structures and Mechanics of Composites for the 37th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/ American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference, Salt Lake City, Utah, April 1996.
- Program Committee, SPIE’s 1996 Symposium on Smart Structures and Integrated Systems, San Diego, California, February 1996.

- Forum Chair, “Aircraft Design,” 51st Forum and Exhibit of the American Helicopter Society, Fort Worth, Texas, May 1995.
- Organized Exhibit for Arizona State University at the 52nd Forum and Annual Exhibit of the American Helicopter Society, Fort Worth, Texas, May 1995.
- Chair, “Aircraft Design Optimization,” 36th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference, New Orleans, Louisiana, April 1995.
- Organized sessions in Adaptive Structures and Mechanics of Composites for the 36th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference, New Orleans, Louisiana, April 1995.
- Chair, “Composite Smart Structures,” SPIE’s 1995 North American Conference on Smart Structures and Materials, San Diego, California, February 1995.
- Program Committee, SPIE’s 1995 Symposium on Smart Structures and Integrated Systems, San Diego, California, February 1995.
- Chair, “Composite Beams, Plates and Shells,” 35th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference, Hilton Head, South Carolina, April 1994.
- Organized sessions in Adaptive Structures and Mechanics of Composites for the 35th American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics and Materials Conference, Hilton Head, South Carolina, April 1994.
- Program Committee, SPIE’s 1994 Symposium on Smart Structures and Integrated Systems, Orlando, Florida, February 1994.
- Chair, “Rotorcraft Design,” American Institute of Aeronautics and Astronautics Aerospace Design Conference, Irvine, California, February 1993.
- Chair, “Machine Analysis,” 1992 Applied Mechanics and Aerospace Summer Meeting of the American Society of Mechanical Engineers, Scottsdale, Arizona, April 1992.
- Organized Exhibit for Arizona State University at the 50th Forum and Annual Exhibit of the American Helicopter Society, Phoenix, Arizona, June 1991.
- Chair, “Problems in Mechanics V,” 15th South Eastern Conference on Theoretical and Applied Mechanics (SECTAM XV), Atlanta, Georgia, March 1990.

Editorship Current

- *Member*, Editorial Board, *Digital Engineering and Digital Twin* (2023-present)
- *Member*, Editorial Board, *Journal of Structural Durability and Health Monitoring* (2008-present)

Editorship Past

- *Guest Editor*, Special Issue: Structural Health Monitoring, *Journal of Intelligent Material Systems and Structures*, Vol. 24, 17, November 2013.

- *Guest Editor*, Special Issue: Information Technology for Structural Health Management, *Journal of Intelligent Material Systems and Structures*, Vol. 20, 11, July 2009.
- *Member*, Editorial Board, *Engineering Optimization*
- *Member*, Editorial Board, *Computer Modeling in Engineering & Sciences*
- *Associate Editor*, American Institute of Aeronautics and Astronautics Journal
- *Associate Technical Editor*, Inverse Problems in Engineering
- *Associate Editor*, *The Journal of American Helicopter Society*

Journal Referee Service

Carbon, Int. Journal of Fatigue, Journal of Applied Mechanics, Journal of Engineering Mechanics, Composite Science and Technology, Composites Part B, Engineering Optimization, American Institute of Aeronautics and Astronautics Journal, Journal of the American Helicopter Society, Journal of Sound and Vibration, American Institute of Aeronautics and Astronautics Journal of Aircraft, Structural Optimization, Journal of Smart Materials and Structures, Journal of Nonlinear Mechanics, Journal of Intelligent Material Systems and Structures, Int. Journal of Solids and Structures, Journal of Vibration and Acoustics, Structural Health Monitoring, etc.

Conference Referee Service

- American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Society for Composites/American Helicopter Society/American Society for Composites Structures, Structural Dynamics & Materials Conference
- American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers/American Helicopter Society Adaptive Structures Forum
- American Helicopter Society's Annual Forum
- International Mechanical Engineering Congress & Exposition
- SPIE's Symposium on Smart Structures and Integrated Systems
- Integrated Systems Health Management Conference
- International Conference on Condition Based Management

Proposal Panel Reviewer Service

- Air Force Office of Scientific Research
- Department of Energy
- National Science Foundation
- Office of Naval Research
- US Army Research Office