Biographical Sketch of *HASSAN MAHFUZ*

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EDUCATION

Ph.D.	Mechanical Engineering, April, 1989. Florida Atlantic University, Boca Raton, Florida. Dissertation: "*Hybrid Stress Analysis using Digitized Photoelastic Data and Numerical Methods*,"
M.S.	Mechanical Engineering, August, 1986. Florida Atlantic University, Boca Raton, Florida. Thesis: "*3-D Photoelastic Stress Analysis of a Metal-to-Metal Contact Bolted Flange,*"
B.S.	Mechanical Engineering, April, 1975 Bangladesh University of Engineering & Technology Dhaka, Bangladesh. Undergraduate Research Project: "*Design and Fabrication of a Metallic Orifice to Measure Air Flow through Circular Pipes*."

CITIZENSHIP: US Citizen

MARITAL STATUS: Married with one child

RESEARCH INTERESTS:

Computational Methods in Solid Mechanics, Finite Element Method, Polymers, Polymer Composites, Polymeric Fibers, Composites Manufacturing, Mechanics of Composites, Nanomaterials, Nanocomposites, Experimental Stress Analysis, Machine Design, Computer Aided Design, Fluid-Structure Interaction, and Renewable Energy.

PROFESSIONAL EXPERIENCE:

Jan, 2005 – Present	**Professor**, Department of Ocean and Mechanical Engineering and **Director** of Nanocomposites Laboratory
Mar,2014–Mar,2018	**Associate Dean for Research**, College of Engineering and Computer Science
May, 97-December04	**Professor**, Department of Mechanical Engineering Tuskegee University, Tuskegee, AL 36088.

May 93-May 97	**Associate Professor**, Department of Mechanical Engineering Tuskegee University, Tuskegee, AL 36088
Aug. 89-May 93	**Assistant Professor**, Department of Mechanical Engineering Tuskegee University, Tuskegee, AL 36088
May 89-Aug. 89	**Research Associate**, Mechanical Engineering Florida Atlantic University, Boca Raton, Florida Research in probabilistic prediction of contaminant concentration in ground water.
Aug. 86-Apr. 89	**Instructor**, Mechanical Engineering Dept. Florida Atlantic University, Boca Raton, Florida Taught Engineering Graphics Course for Freshmen Engineering students using Computer Graphics and Solid Modeling.
May 85-July 86	**Research Assistant**, Mechanical Engineering Dept. 3-D Stress Analysis of a Compressor Housing; of a Pratt and Whitney Jet Aircraft Engine.
1975 - 85	**Mechanical Engineer**- Various Power and Process Industries, Responsibilities- Production, Maintenance and Process Planning.

COURSES TAUGHT:

Undergraduate:	Engineering Graphics (Lecture. & Lab.), Strength of Materials, Statics, Experimental Mechanics (Lab.), Computer Aided Design (Solid Modeling, Finite Element Method, and Optimization), Machine Design, Structural Analysis I, and Structural Analysis II
Graduate:	Theory of Elasticity, Finite Element Method, Experimental Stress Analysis, Composite Materials, Mechanics of Composites, Structural Stability Analysis, Nanocomposites, Ship Structural Design, and Offshore Structures

HONORS AND AWARDS

- Researcher of the Year Award (Professor Category), Florida Atlantic University, Boca Raton, Florida, 2014
- ASME Fellow, December 2010
- Researcher of the Year Award (Professor Category), Florida Atlantic University, Boca Raton, Florida, 2008
- The Russell W. Brown Distinguished Scientists Award, Sigma Xi Scientific Research Society, 2002
- Listed in WHO'S WHO in Plastics & Polymers, 2000.
- Faculty Achievement Award (Highest award at the University), Tuskegee University, Tuskegee, Alabama, 1998

- Listed in WHO'S WHO among America's Teachers, 1996
- Professor of the year, Mechanical Engineering Department, Tuskegee University, 1995
- 3M Faculty Award, 1993
- Outstanding Faculty Award in Research, Tuskegee University, Tuskegee, Alabama, 1992
- National Merit Scholarship, for B.S. in Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, 1970-1975

RESEARCH GRANTS:

PI and Co-PI in materials research funding totaling about $33.5 million in 52 funded projects since 1990

List of Funded Proposals:

1. ***"Characterization of High Cycle Fatigue Behavior of Titanium 5A1-2.5Sn Alloy",*** - NASA-MSFC Huntsville, Alabama ($120,000, 5/90-4/91), **Co-PI**, with Dr. S. Jeelani.

2. ***"Mechanical Property Characterization of Refractory Composites"-*** National Aerospace Plane (NASP) Joint Program office, WPAFB ($810,351, 9/90-12/95), **Co-PI,** with Drs. S. Jeelani and J. Krishnagopalan.

3. ***"Research Experience for Undergraduates (REU)",*** National Science foundation ($ 60,000, 10/90- 9/92), **Co-PI**, with Dr. P.K. Ray and M. Seif.

4. ***"Response of Thermoplastic Composites"***, Aluminum Company of America (ALCOA), Science Support Grant ($ 15,000, 5/91- 5/92), **PI.**

5. ***"Structural Analysis of the Interface between the Metallic Penetrations and the Acrylic Hull of Spherical Pressure Vessel",*** Harbor Branch Oceanographic Institution, Fort Pierce, Florida ($ 6,300,12/91- 10/92), **PI.**

6. ***"High Temperature Fatigue of SiC_f/Si_3N_4," National*** Science Foundation ($310,000, 9/92-9/95), **Co-PI**, with Drs. S. Jeelani and J. Krishnagopalan.

7. ***"Effects of Stress Ratio on Fatigue Damage in Composite Materials",*** U.S. Army, Strategic Defense Command ($200,000, 8/90-8/93), **Co-PI**, with Drs. S. Jeelani and J. Krishnagopalan.

8. ***"Mechanical Property Characterization of Resin Transfer Molded Composites"-*** McDonnell Douglas Corp. ($15,000, 10/92-5/93), **PI.**

9. ***"Microstructural Study of the Thermo-mechanically Fatigued Titanium Aluminide"-*** Naval Air Warfare Center (NAWC) ($10,000, 9/92-3/93), **PI.**

10. ***"Instrumentation for Fatigue and Compression Characterization of Advanced Composites"*** - Office of Naval Research (ONR) ($350,000, 10/93-10/95), **Co-PI**, with Dr. S. Jeelani.

11. ***"Design, Analysis and testing of a Launch Package for the MARC- IV Multi- Shot Electromagnetic Launcher",*** Eglin Air Force Base, Florida, ($85,000, 7/93- 7/94), **Co-PI,** with Dr. P.K. Ray.

12. ***"Reverse Fatigue of RTM Composites"***- 3M Corporation, St. Paul, Minnesota, ($45,000, 4/92-4/96), **PI.**

13. ***"Advanced Polymeric Composites Manufacturing and Damage Tolerance Studies"***- Lockheed Martin Manned Space Systems, New Orleans, Louisiana ($110,000 2/94-12/98), **PI.**

14. ***Summer Project Grants***, $6,000, Olin Corporation, Stafford, Connecticut, Summer of 1993 and 1994, **PI.**

15. ***"Intelligent Processing of Resin Transfer Molded Composites",*** Advanced Research Project Agency (ARPA) ($726,100, 1/95-12/96), **Co-PI,** with Drs. S. Jeelani and U. Vaidya.

16. ***"Intelligent Resin Transfer Molding for Integral Armor Applications",*** A Research Consortium including two Majority and two Minority Universities with Tuskegee being the Hub, Army Research Office (ARO), ($9.4 million, 9/95-9/00), **Co-PI**, With Drs. Jeelani, Vaidya, Haque, Krishnagopalan, Ludwick, Gajiwala, and Dadzie.

17. ***"Development and Analysis of Composite Isogrid Structures",*** NASA Marshal Space Flight Center (MSFC), Huntsville, Alabama, ($100,000, 9/95-12/97), **PI**, With Dr. Vaidya.

18. ***"Advanced Composites for Sea Structures,"*** Office of Naval Research (ONR), Arlington, VA, ($380,000, 9/95-10/98), **PI**, with Drs. Vaidya and Haque.

19. ***"Advanced Integrated Structural Optimization,"*** McDonnell Douglas Aerospace, St. Louis, Missouri, ($50,000,1/95-12/95), **PI**, with Dr. S. Jeelani.

20. ***"Smart Materials for Transport Control",*** National Science Foundation, Alabama EPSCoR, ($300,000, 9/95-9/98), **PI**, with Drs. Vaidya and Haque

21. ***"Damage Tolerance of RTM Composite Sandwich Constructions,"*** Wright Laboratory (WL), WPAFB, Ohio, ($300,000, 9/95-9/98), **Co-PI**, with Drs. Jeelani and Vaidya.

22. ***"Resin Infusion of Advanced Aerospace Composites,"*** McDonnell Aerospace (currently The Boeing Company), ($250,000, 9/96-9/01), **PI**, with Dr. Vaidya.

23. ***"Innovative Manufacturing of Advanced Composites for Automotive Applications,"*** General Motors, ($200,000, 3/98-3/02), **PI**, with Drs. Vaidya and Haque.

24. ***"Sandwich Constructions for Sea Structures,"*** *Office* of Naval Research (ONR), Arlington, VA, ($590,000, 1/99-1/01), **PI**, with Drs. Vaidya and Haque.

25. ***"Design Analysis, and Manufacture of Connectors Joining Components of Advanced Composite Materials,"*** National Science Foundation (NSF), ($ 100,000, 10/99-9/00), **PI.**

26. ***"Innovative Manufacturing and Structural Analysis of Composite Isogrid Structure for Space Applications,"*** Air Force Office of Scientific Research (AFOSR) ($272,668, 8/1/00 - 7/31/03), **PI**, with Dr. Derrick Dean.

27. ***"High Temperature Fatigue and Creep Behavior of Ceramic Matrix Composites for Exhaust Nozzle Applications,"*** NASA Lewis Center for High Speed Research ($362,435, 06/97 - 10/00), **Co-PI**, with Dr. Anwarul Haque.

28. ***"Instrumentation for the Investigation of Structural Integrity of Sandwich Structures,"*** Office of Naval Research (ONR), ($92,000, 6/00 - 12/00), **PI**, with Dr. Jeelani.

29. "***Effect of Interface Strength on the Solder Joint Reliability of Flip Chip Packages***,**"** National Science Foundation (NSF), ($50,000, 8/00 - 8/01), **PI,** with A.K.M. Mian.

30. "***Design and Analysis of Sandwich Joints***," The Boeing Company, ($55,000, 8/00 - 12/01), **PI**.

31. ***"Innovative Manufacturing of High Performance Materials,"*** National Science Foundation, Center for Research Excellence in Science and Technology (CREST), ($4.4 million, 9/97-9/03), **Co-PI**, With Drs. Jeelani, Ray, Dean, Haque and Ludwick.

32. "***A Partnership for Innovations in Nano Composites Technology,"*** National Science Foundation ($600,000, 2/1/01 - 1/31/04), **Co-PI** with Drs. Jeelani and Dean.

33. ***"Nanophased Composites for Marine Structures,"*** Office of Naval Research (ONR) ($994,000, 2/15/02 - 07/15/04), **PI** with Dr. Jeelani.

34. ***"Innovative Manufacturing of Composite Skin Stringer Assembly***," The Boeing Company, ($50,000, 01/02 - 12/03), **PI**.

35. "***Synthesis, Manufacturing and Characterization of Structural Nanocomposites***," National Science Foundation, Center for Research Excellence in Science and Technology (CREST) Program, ($4.5 million, 9/03-9/08), **Co-PI**, With Drs. Jeelani, Ray, Dean, Ludwick, Reeves, Hosur, Saha, and Salekeen.

36. "***Multidisciplinary Graduate Education and Research Training in Nanomaterials Science and Engineering***," National Science Foundation, Integrative Graduate Education, Research and Traineeship (IGERT) Program, ($3.32 million, 10/03-09/08), **Co-PI**, With Drs. Jeelani, Ray, Dean, Ludwick, Reeves, Hosur, and Das..

37. ***"Center of Excellence for Composites and Advanced Materials,"*** a multi-university grant with Wichita State University being the lead, Federal Aviation Administration (FAA), Air Transportation Center of Excellence for Advanced Materials, ($225,000, 06/04 – 06/07), **PI.**

38. "***Studies of Structural Nanocomposites using Transmission Electron Microscopy***," National Science Foundation, ($1.0 million, 02/01/04 – 01/31/06), **Co-PI**, with Drs. Jeelani, Hosur, Ray, Ludwick and Reeves.

39. "***Development of Flexible Extremities Protection utilizing Shear Thickening Fluid/fabric Composites***," Army Research Office, Center of Excellence for Battlefield Capability Enhancement (BCE), ($2.32 millions, 11/01/04 – 09/30/09), **PI**, with Drs. Jeelani, Saha and Hosur.

40. ***"Enhancement of Nylon-6 Filaments through Infusion of Functionalized MWCNTs,"*** Alabama Center for Nanostructured Materials (ACNM), NSF-EPSCoR, ($30,000, 10/01/05 – 09/30/08), **PI**.

41. "***Reinforcement of Nanoparticles/Nanotubes into Nylon-6 and Studies of Particle-Polymer interface***," National Science Foundation (NSF), ($100,000, 10/01/06 – 09/30/09), **PI**

42. ***"Durability of Sandwich Composites with Nanophased Cores under Sea Environments***", Office of Naval Research (ONR), ($245,125, 09/01/06 – 08/09/10), **PI**

43. "***Development of an Integrated Computational Tool to couple Fluid-Structure Interactions on Composite ship Structures",*** Office of Naval Research (ONR), ($390,164, 10/01/07 – 09/30/13), **PI**

44. "***Design and Analysis of Composite Ocean Current Turbine Blades," Southeast National Marine Renewable Energy Center (SNMREC),*** ($200,792 01/01/08 – 05/08/13), **PI**

45. "***Ultra Light Structures for Reduced Crew Loading***,' Lockheed Martin Mission and Unmanned Systems, ($20,000, 07/15/08 – 02/13/09), **PI**

46. "***Nanosensors for Explosive Detection***," The Naval Sea Systems Command (NAVSEA), ($105,000, 02/01/11 – 12/31/13), **PI**

47. **"*Structure-Property Relationship in Organic Matrix Nanocomposites for High Temperature Applications*,"** Air Force Research Laboratory (AFRL), ($225,000, 10/01/13 – 11/15/18), **PI** with Leif Carlsson and Andrew Terentis.

48. "***Fatigue of Sandwich T-Joints and Design of Composite Ocean Current Turbine Blades – A Collaborative Research between IHI and FAU*,"** Research Laboratory, IHI Corporation, Yokohama, Japan, ($27,731, 10/01/13 – 03/20/14), **PI** with Javad Hashemi and Gabriel Alsenas.

49. ***"A Three-Layer Integral Armor Solution for Low Weight and Enhanced Ballistic Protection,"*** Department of the Navy, CTTSO/TSWG, ($121,125, 07/18/2014 – 07/17/2015), **PI**

50. "***Investigation of Passive Heating in Diving Wet Suit Materials using Carbon Nanotubes as Insulators***," The Naval Sea Systems Command (NAVSEA), ($60,000, 09/15/14 – 09/14/15), **PI**

51. **"*Finite Element Modeling and Fatigue Analysis of Composite Turbine Blades under Ocean Current and Sea State Conditions,*** Research Laboratory, IHI Corporation, Yokohama, Japan, ($113,650, 10/01/14 – 03/31/16), **PI** with Javad Hashemi and Gabriel Alsenas.

52. **"*Fatigue Life Prediction of Composite Structures under Ocean Current Spectra,*** Research Laboratory of IHI Corporation, Yokohama, Japan, ($43,832, 07/01/16 – 03/31/17), **PI** with Javad Hashemi.

53. **"Fatigue Modeling of Composite Structures and Flow Characterization of Ocean Current Turbine,"** Research Laboratory of IHI Corporation, Yokohama, Japan, ($30,000, 06/01/17 – 03/31/18), **PI**

54. **"In-Situ Micro-Viscosity for Precise Cure Monitoring and Control,"** Air Force Research Laboratory (AFRL), ($50,500, 04/1/17 – 05/31/18), **PI** with Andrew Terentis and Leif Carlsson

PUBLICATIONS:

a) Book and Book Chapters

1. ***Developments in Theoretical and Applied Mechanics***, Volume XXII, Editors: **Hassan Mahfuz** and Mahesh V. Hosur, ISBN 0-615-12639-1, August 2004, Tuskegee University, Tuskegee, AL.
2. **Hassan Mahfuz**, "***Structural Nanocomposites***," in Nanoengineering of Structural, Functional, and Smart Materials, (eds Mark Schulz, Ajit Kelkar and Mannur Sundaresan), Catalog no. 1653, May 2005, 712 pp., ISBN: 0-8493-1653-7, CRC Press, Boca Raton, Florida.

3. **Mahfuz, H**., Saha, M., Biggs, R. and Jeelani, S., "***Damage Tolerance of Resin Infiltrated Composites After Low Velocity Impact - Experimental and Numerical Studies,***" *Key Engineering Materials*, Vol. 141-143 (1998), 209 pp., ISSN: 1013-9826, Trans Tech Publications, Switzerland.

4. Haque, A., Rahman, M., Vaidya, U., **Mahfuz, H**. and Jeelani, S., "***Tensile Behavior of Woven Ceramic Matrix Composites at Room and Elevated Temperature: An Experimental and Numerical Study,***" *Key Engineering Materials*, Vols. 164-165 (1999), 341 pp., ISSN: 1013-9826, Trans Tech Publications, Switzerland.

5. **Mahfuz, H**., Mamun, W., Haque, A., Vaidya, U. and Jeelani, S., "***Stress Wave Propagation through Fiber and Matrix in a Cylindrical Composite Coupon,'*** *Physics and Modern Topics in Mechanical and Electrical Engineering*, 151 pp., ISBN: 960-8052-10-6), World Scientific and Engineering Society Press.

6. Gama, B., Bogetti, T., Fink, B., **Mahfuz, H**., and Gillespie, J., "***Modeling and Simulation of the Dynamic Behavior of EPDM Rubber under Stress Wave Loading***," *Physics and Modern Topics in Mechanical and Electrical Engineering*, 144 pp, ISBN: 960-8052-10-6, World Scientific and Engineering Society Press.

7. **Hassan Mahfuz**, Shaik Zainuddin, Mohammed F. Uddin, Vijaya K. Rangari and Shaik Jeelani, "***Fatigue of Pure and Nanophased Sandwich Composites under Shear Loading,***" in Sandwich Structures 7: Advancing with Sandwich Structures and Materials, January 2006, 183 pp, ISBN 978-1-4020-3444-2, Springer Netherlands, P.O. Box 17, 3300 AA, Dordrecht, Netherlands.

8. Yuanxin Zhou, **Hassan Mahfuz**, Vijaya Rangari and Shaik Jeelani, "***An Experimental and Analytical Study of Unidirectional Carbon Fiber Reinforced Epoxy Modified by SiC Nanoparticles***,' In: Composite Materials Research Progress, Editor: Lucas P. Durand, pp 129-164, 2008, ISBN: 1-60021-994-2.

9. Khan, M. and **Mahfuz, H**., "***Nanoscale reinforcement of polymer textile fibers***," in Encyclopedia of Nanoscience and Nanotechnology, American Scientific Publishers, in press, May 2017.

b) Patent: U.S. Patent No. 6,934,600, ***"Nanotube Fiber Reinforced Composite Materials and Method of Producing Fiber Reinforced Composites***," Issue Date – August 23, 2005, Inventors – B. Zeng, J. Li, S. Chen, Z. Li, **H. Mahfuz** and A. Adnan

c) Journal Publications

1. Case, R.O. and **Mahfuz, H**., "Photoelastic Analysis of a Thin-Walled Compressor Housing", ***Experimental Mechanics*****,** Vol. 28, No. 1, March 1988, pp. 98-104.

2. Case, R.O. and **Mahfuz, H**., "Bolt Analysis by Combined Use of the Reflective and Transmission Polariscope", ***Experimental Techniques***, May 1988, pp. 28-31.

3. **Mahfuz, H**., Case, R.O. and Wong, Tin-Lup, "Mesh Generation within an Arbitrary Digitized Boundary for Solution of Elliptic Boundary Value Problems by Finite Difference Method", ***Computers in Engineering,*** Vol. 2, 1989, pp. 181-185.

4. **Mahfuz, H**., Case, R.O. and Wong, Tin-Lup, "Hybrid Stress Analysis by Digitized Photoelastic Data and Numerical Methods", ***Experimental Mechanics***, Vol. 30, No. 2, June 1990, pp. 190-194.

5. **Mahfuz, H**., Case, R.O. and Wong, Tin-Lup, "Separation of the Principal Stresses by SOR Technique Over Arbitrary Boundaries", ***Experimental Mechanics***, Vol. 30, No. 4, December 1990, pp. 319-326

6. **Mahfuz, H**., Wong, Tin-Lup and Case, R.O., "Photoelastic Data Acquisition by Digitizing Technique Over Arbitrary Boundaries", ***Experimental Techniques***, May 1992, pp. 39-42.

7. **Mahfuz, H**., Yu T. and Jeelani, S., "High Cycle Fatigue Characterization of Titanium 5Al-2.5Sn Alloy," ***Journal of Material Science***, 28 (1993), 138-144.

8. Salekeen, S., Haque, A., Copes, J.S., **Mahfuz, H**. and Jeelani, S., "Effect of Reinforcement Geometry on the Mechanical Properties of $SiC/A1_20_3$ Composites and Prediction of Flexural Properties by Energy Method***," Composites Engineering***, Vol. 2, No. 4, pp. 239-247, 1992.

9. **Mahfuz, H**., Ingram, C.I. and Jeelani, S., "Compressive Response of Thermoplastic Composites by Layered Shell Elements", ***Computers in Engineering***, Vol. 2, 1992, pp. 95-101.

10. **Mahfuz, H**., Partha, S.D., Jeelani, S., Baker, D.M. and Johnson, S., "Failure Mechanisms in Mission Cycled Carbon/Carbon Composites under Flexural Load at Room and Elevated Temperatures", ***Journal of Material Science***, 28 (1993) 5880- 5886.

11. **Mahfuz, H**., Partha, S.D., Jeelani, S., Baker, D.M. and Johnson, S., "Effect of Mission Cycling on the Fatigue Performance of SiC Coated Carbon-Carbon Composites", ***International Journal of Fatigue***, Vol. 15, No. 4 (1993), pp. 283-291.

12. **Mahfuz, H.,** Partha, S.D., Xue, D., Krishnagopalan, J. and Jeelani, S., "A Combined Experimental and Finite Element Study to Predict the Failure Mechanisms in SiC Coated Carbon/Carbon Composites at Room and Elevated Temperatures Under Flexural Loading", ***Journal of Reinforced Plastics and Composites***, Vol. 12, No. 7, July 1993, pp. 825-842.

13. **Mahfuz, H.,** Xue, D., Jeelani, S., Baker, D.M. and Johnson, S., "Response of SiC Coated Carbon-Carbon Composites at Room and Elevated Temperatures under Tensile Loading", ***Composite Science and Technology***, 50 (1994) 411-422.

14. Haque, A., **Mahfuz, H**., Ingram, C. and Jeelani, S., "Response of Thermoplastic and Thermosetting Composites under Compressive Loading- An Experimental and Finite Element Study", ***Composites Engineering***, Vol. 4, No. 6, 1994, pp. 637-651.

15. **Mahfuz, H**., Zadoo, D., Wilks, F., Maniruzzarman, M. and Jeelani, S., "Fracture and Flexural Characterization of SiC_W/SiC Composites at Room and Elevated Temperatures", ***Journal of Materials Science***, 1995, Vol. 30, pp. 2406-2411.

16. Vaidya, U.K., **Mahfuz, H.** and S. Jeelani, "NDE of Structural and Functional Carbon-Carbon Composites after First Carbonization", ***Journal of Advanced Materials***, Vol. 26, No. 2, pp. 41-47, 1995.

17. **Mahfuz, H**., Maniruzzaman, M., Vaidya, U., and Jeelani, S., "Effects of Stress Ratio on the Fatigue Life of Carbon-Carbon Composites", ***Theoretical and Applied Fracture Mechanics***, 24 (1995), 21-31.

18. **Mahfuz, H**., Haque, A., Yu, D. and Jeelani, S., "Response of Resin Transfer Molded (RTM) Composites under Reversed Cyclic Loading", Transaction of the ASME, ***Journal of Engineering Materials and Technology***, Vol. 118, pp. 49-57, 1996.

19. Vaidya, U., **Mahfuz, H.** and Jeelani, S., "Nondestructive Characterization/Evaluation of Functional Sandwich and Hybrid Carbon-Carbon Composites", ***Journal of Reinforced Plastics and Composites***, Vol. 15, October 1996, pp. 988- 1010.

20. Vaidya, U., Dadzie, P., Haque, A., **Mahfuz, H**. and Jeelani, S., "NDE and Characterization of Microfibers Modified Textile Carbon/Phenolic and Carbon/Carbon Composites, ***Journal of Reinforced Plastics and Composites***, Vol. 16, No. 11, 1997, pp. 968-1001.

21. **Mahfuz, H**., Maniruzzaman, M., Vaidya, U. and Jeelani, S., "Response of SiC_f /Si_3N_4 Composites Under Cyclic Loading - An Experimental and Statistical Analysis," Transaction of the ASME, ***Journal of Engineering Materials and Technology***, Vol. 119, pp 186-193, April 1997.

22. **Mahfuz, H**., Saha, M., Biggs, R. and Jeelani, S., "Damage Tolerance of Resin Infiltrated Composites After Low Velocity Impact - Experimental and Numerical Studies," ***Key Engineering Materials***, Trans. Tech Publications, Switzerland, Vol. 141-143 (1998), pp. 209-234.

23. **Mahfuz, H**., Mian, A.K.M., Vaidya, U., Brown, T. and Jeelani, S., "Finite Element Study of the Fiber-Matrix Interface Behavior of [0/90] Laminated Composites Under Tensile Loading," ***Journal of Materials Science***, 33 (1998) 2965-2973.

24. Vaidya, U.K., Kamath, M.V., **Mahfuz, H**. and Jeelani, S., "Low Velocity Impact Response of Resin Infusion molded foam Filled Honeycomb Sandwich Composites," ***Journal of Reinforced Plastics and Composites***, Vol. 17, No. 9/1998, pp. 819-849.

25. Haque, A., Rahman, M., Vaidya, U., **Mahfuz, H**. and Jeelani, S., "Tensile Behavior of Woven Ceramic Matrix Composites at Room and Elevated Temperature: An Experimental and Numerical Study," ***Key Engineering Materials***, Vols. 164-165 (1999) pp. 341-344.

26. **Mahfuz, H**., Mamun, W., Hisham, M., Vaidya, U., Haque, A., and Jeelani, S., "High Strain rate Response of Resin Infusion Molded Sandwich Composites," ASME 1999, AMD-Vol. 235, ***Thick Composites for Load Bearing Structures***, pp. 105-112.

27. Gama, B., Bogetti, T., Fink, B., **Mahfuz, H**., and Gillespie, J., "Modeling and Simulation of the Dynamic Behavior of EPDM Rubber under Stress Wave Loading," ***Physics and Modern Topics in Mechanical and Electrical Engineering*** (ISBN: 960-8052-10-6), World Scientific and Engineering Society Press, pp. 137-144, 1999.

28. **Mahfuz, H**., Mamun, W., Haque, A., Vaidya, U. and Jeelani, S., "Stress Wave Propagation through Fiber and Matrix in a Cylindrical Composite Coupon,' ***Physics and Modern Topics in Mechanical and Electrical Engineering*** (ISBN: 960-8052-10-6), World Scientific and Engineering Society Press, pp. 151-158, 1999**.**

29. Motuku, M, Janowski, G.M., Vaidya, U.K. **Mahfuz, H.** and Jeelani, S.," Low Velocity Impact Characterization of Unreinforced Vinyl Ester 411-350 and 411-C50 Resin Systems," ***Polymer & Polymer Composites***, Vol. 7, No. 6, 1999, pp. 383-407.

30. U.K. Vaidya, M.V. Kamath, M.V. Hosur, **Mahfuz, H**. and S. Jeelani, "Manufacturing and Low Velocity Impact Response of Sandwich Composites with Hollow and Foam Filled Z-Pin Reinforced Core," ***Journal of Composites Technology and Research***, JCTRER, Vol. 21, No.2, April 1999, pp. 84-97.

31. **Mahfuz, H**., Zhu, Y, Haque, A., Vaidya, U, Jeelani, S, "Investigation of High Velocity Impact on Integral Armor Using Finite Element Method," ***International Journal of Impact Engineering***, Vol. 24, No. 2 (2000), pp. 203-217.

32. **Mahfuz, H**., Mamun, W., and Jeelani, S., "Effect of Core Density and Implanted Delamination in the High Strain Rate Response of Foam Core Sandwich Composites***," Sandwich Construction 5***, Volume 2, pp. 597-606, 2000.

33. **Mahfuz, H**., Mamun, W., Haque, A., Vaidya, U. and Jeelani, S., " An Innovative Technique for Measuring the High Strain Rate Response of Sandwich Composites," ***Composite Structures***, 50 (2000) 279-285.

34. **Mahfuz, H**., Zaman K., Hisham, M., Foy, Costee, Haque, A. and Jeelani, "Fatigue Life Prediction of Thick-Section S2-Glass/Vinyl-Ester Composites under Flexural Loading*,"* Transaction of ASME*, **Journal of Engineering Materials and Technology***, Vol. 122, October 2000, pp. 402-408.

35. Motuku, M., Janowski, G.M., Vaidya, U, **Mahfuz, H** and Jeelani, S., "Damage Evolution in Low-Velocity Impacted Unreinforced Vinyl Ester 411-350 and 411-C50 Resin Systems," ***Polymer Composites***, No. 6, Vol. 21, December 2000, pp.878-899.

36. Gama, B.A., Gillespie, J.W., **Mahfuz, H**., Bogetti, and Fink, B.K., "Effect of Non-Linear Material Behavior on the Through-Thickness Stress Wave Propagation in Multi-Layer Hybrid Lightweight Armor," Advances in Computational Engineering & Sciences, Volume 1, pp. 157, 2000.

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c) Keynote and Invited Papers/Presentations

1. **Mahfuz, H**., Mian, A.K.M. A., Vaidya, U., Brown, T. and Jeelani, S., "Study of the Interface Behavior of SiC_f/Si_3N_4 Composites Using a 3-D Unit Cell Model", ***4th International Symposium on Advanced Materials (ISAM-4)***, Islamabad, Pakistan, Sept. 17-21, 1995, Vol. 1, pp. 667-677.

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3. **Mahfuz, H**., "Symposium on Processing, Characterization and Modeling of High Temperature Composite Materials", ***Invited Speaker*****,** 1997 Joint ASME and ASCE Summer Meeting, Northwestern University, Evanston, Illinois, June 29 - July 2, 1997.

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14. **Mahfuz, H.,** Thomas, T., Rangari, V., Islam, M. and Jeelani, S.," On the Dynamic Response of Sandwich Composites and their Core Materials," Invited lecture on the Symposium in honor of Professor C.T. Sun at the ***American Society for Composites, 18th Annual Tech. Conf.***, Gainesville, Florida, October 19-22, 2003.

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17. **Mahfuz, H**., Chisholm, N., Ashfaq, A., Rangari, V. and Jeelani, "Recent Advances in Structural Nanocomposites," ***Keynote Lecture, 2nd BSME-ASME International Conference***, January 2-4, 2004, Dhaka, Bangladesh, Vol-1, pp. 82-101.

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21. **Mahfuz, H**., "View of Nanocomposites Development," ***Workshop of Modeling/Simulations for Large Engineering Problems, Mississippi State University***, Starkville, Mississippi, October 27, 2004.

22. **Mahfuz, H**., ***Colloquium*** on "Nanoparticle Infusion into Structural Polymers and the Influence of Magnetic Flocculation," at the Department of Aerospace and Astronautics, ***Purdue University*** on December 2, 2004.

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26. **Mahfuz, H.,** Adnan, A., Rangari, V.K., Hasan, M.M., Jeelani, S., Wright, W.J. and DeTeresa, S.J., "Enhancement of Strength and Stiffness of Nylon 6 Filaments through Carbon Nanotubes Reinforcements," presented at the ***ASME International Mechanical Engineering Congress***, November 5-11, 2005.

27. **Mahfuz, H.** and Jeelani, H., "Enhancement in Strength and Stiffness of Nylon-6 Filaments through Functionalized SiO_2 Nanoparticles," Invited seminar at the Department of Physics, ***University of Liverpool***, Liverpool, L69 3BX, UK, October 02, 2006.

28. **Mahfuz, H**., Hasan, M., Stewart, J., Rangari, V. and Jeelani, S., "Functionalization of Nanoparticles and their Influence on Nanocomposites Properties: A Combined Experimental and Theoretical Investigation," ***Keynote Lecture, 3rd BSME-ASME International Conference***, December 20-22, 2006, Dhaka, Bangladesh. CD Proceedings, Vol-1.

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50. Mahfuz, H. and Jeelani, S., "Development of Flexible Extremities Protection Utilizing Shear Thickening Fluid/Fabric Composites," ***3rd Annual Review of the HBCU Centers of Excellence for Battlefield Capability Enhancements (BCE)***, U.S. Army Research Office, Research Triangle Park, NC 27709, March 26, 2008.

51. Mahfuz, H., "Development of an Integrated Computational Tool to couple Fluid-Structure Interactions on Composite ship Structures," ***Office of Naval Research (ONR), Sea Base Enablers Innovative Naval Prototype Transformational Craft Tool Development Program Review***, February 3-5, 2009, Dania Beach, Florida.

52. Mahfuz, H., "Enhancing Spike and Stab Resistance Using Hybrid Fabrics and a Cross-Linking Fixative Polymer," ***4th Internal Review of the HBCU Centers of Excellence for Battlefield Capability Enhancements (BCE)***, Army Research Laboratory (ARL), Aberdeen Proving Ground, MD, March 16, 2009.

53. Mahfuz, H. and Jeelani, S., "Development of Flexible Extremities Protection Utilizing Shear Thickening Fluid/Fabric Composites," ***4th Annual Review of the HBCU Centers of Excellence for Battlefield Capability Enhancements (BCE)***, U.S. Army Research Office, Research Triangle Park, NC 27709, April 07, 2009.

54. Mahfuz, H., "Infusion of Nanoparticles into Polymers to Enhance Durability of Composites," ***ONR Review Meeting,*** ONR Headquarter, Arlington, Virginia, April 15, 2009.

55. Mahfuz, H., "A finite Element Tool for Structural Analysis of Sandwich Composite Ship Structure with Fluid Structure Interaction***," Office of Naval Research (ONR), Sea Base Enablers Innovative Naval Prototype Transformational Craft Tool Development Program Review***, February 15-17, 2010, Dania Beach, Florida.

56. Mahfuz, H., "A finite Element Tool for Structural Analysis of Sandwich Composite Ship Structure under Extreme Loading," ***Office of Naval Research (ONR), Sea Base Enablers Innovative Naval Prototype Transformational Craft Tool Development Program Review***, January 11-14, 2011, Dania Beach, Florida.

57. Mahfuz, H., "A finite Element Tool for Structural Analysis of Sandwich Composite Ship Structure under Extreme Loading," ***Office of Naval Research (ONR), Sea Base Enablers Innovative Naval Prototype Transformational Craft Tool Development Program Review***, January 08-10, 2012, Dania Beach, Florida.

58. Mahfuz, H., ***NAVSEA Technical Review Meeting***, University of Michigan, Ann Arbor, Michigan, March 21-23, 2012

59. Mahfuz, H., ***SNMREC Technical Review Meeting,*** Embry Riddle Aeronautical University (ERAU), Daytona Beach, Florida, March 08, 2012.

60. Mahfuz, H., "Nanosensors for Explosives Detection," ***Naval Engineering Education Center (NEEC) Review***, Philadelphia, PA, May 22-24, 2012.

61. Mahfuz, H., "Analysis of Curved Composite Turbine Blades and Fatigue Characterization of Joints," ***Technical Overview Meeting at IHI Corporation*****,** Yokohama, Japan, October 31, 2014.

62. Mahfuz, H., Frame, J., Roy, T., Carlsson, L., "Investigation of Structure-Property Relationship in MVK-14 after Reinforcement with COOH Functionalized Nanotubes," ***Air Force Research Laboratory (AFRL) Minority Leaders (ML) Research Collaboration Program Review***, University of Dayton, 15-17 September, 2015.

63. Mahfuz, H., Rowbottom, C, Roy, T., and Carlsson, L., "Investigation of Structure-Property Relationship in MVK-14 after Reinforcement with COOH Functionalized Nanotubes," ***Air Force Research Laboratory (AFRL) Minority Leaders (ML) Research Collaboration Program Review***, University of Dayton, 20-22 September, 2016.

PROFESSIONAL ACTIVITIES

1. ***Session Chair:*** NSF National Conference on Diversity in the Scientific and Technological Work Force, Washington, D.C., October 28-30, 1993.
2. ***Session Co-Chair:*** Computational Methods, 3rd International Symposium on Advanced Materials (ISAM), Islamabad, Pakistan, September 20-24, 1993.
3. ***Session Chair:*** Finite Element and CAD Applications, 13th International Computers in Engineering Conference, ASME, San Diego, CA, August 8-11, 1993.
4. ***Session Co-Chair:*** Processing of Materials, 4th International Symposium on Advanced Materials (ISAM-IV), Islamabad, Pakistan, September 19-21, 1995.
5. ***Program Coordinator*****:** 2nd Annual Smart Materials Workshop, Jointly Sponsored by Tuskegee and Auburn Universities under the NSF Alabama - EPSCOR Program, October, 1995.
6. ***Program Coordinator*****:** 1996 SEM Southeastern Symposium, Tuskegee University, Tuskegee, AL.
7. ***Program Coordinator*****:** 3rd Annual Smart Materials Workshop, Sponsored by NSF Alabama EPSCoR Program, Tuskegee University, Tuskegee, AL., 1996.
8. ***Session Co-Chair*****:** "Mathematical Modeling," 5th International Symposium on Advanced Materials (ISAM), Islamabad, Pakistan, September 21-26, 1997.

9. ***Session Co-Chair*****:** "Vibroacoustic Methods in Processing and Characterization of Advanced Materials and Structures," 1997 International Mechanical Engineering Congress, Dallas, Texas, November 15-20, 1997.
10. ***Session Chair*****:** "Processing and Performance Evaluation of Thick-Section Composites," 1998 Southeastern Conference on Theoretical and Applied Mechanics (SECTAM XIX), May 3-5, 1998, Deerfield Beach, Florida.
11. ***Session Chair*****:** "Mechanical Characterization of Composites," SEM Annual Conference on Theoretical, Experimental and Computational Mechanics, June 7-9, 1999, Cincinnati, Ohio.
12. ***Session Chair*****:** "Numerical and Mathematical Analysis of Composite Structures," 1999 Mathematics and Computers in Mechanical Engineering (MCME) Conference, World Scientific and Engineering Society (WSES), Marathon, Florida 33050.
13. ***Session Co-Chair:*** "Mechanics of Sandwich Structures," The 2000 ASME International Mechanical Engineering Congress, November 5-10, Orlando, Florida.
14. ***Program Coordinator*****:** 2000 SEM Southeastern Symposium, Tuskegee University, Tuskegee, AL.
15. ***Program Coordinator:*** Alabama EPSCoR Conference held jointly with NSF Nanoscale Science and Technology Conference, January 18-19, 2001, Tuskegee University, Tuskegee, AL.
16. ***Session Chair:*** "Manufacturing Process," 4th International Conference on Mechanical Engineering (ICME), December 26-29, 2001, Dhaka, Bangladesh.
17. ***Session Chair:*** "Composite Materials - I," 21st Southeastern Consortium on Theoretical and Applied Mechanics (SECTAM XXI), May 21-23, 2002, Orlando, Florida.
18. ***Session Chair***: "Composite Materials V," United States Congress on Theoretical and Applied Mechanics (USNCTAM), Blacksburg, Virginia, June 23-28, 2002.
19. ***Session Chair***: "Composite Materials III," United States Congress on Theoretical and Applied Mechanics (USNCTAM), Blacksburg, Virginia, June 23-28, 2002.
20. ***Session Co-Chair:*** "Nanocomposite Materials and Structures-I," ASME International Mechanical Engineering Congress, November 17-22, 2002, New Orleans, Louisiana.
21. ***Session Chair:*** "Core Materials –IV," 6th International Conference on Sandwich Structures (ICS6), March 31-April 2, 2003, Ft. Lauderdale, Florida.
22. ***Session Chair:*** "Composite Materials," 2003 SEM Annual Conference on Experimental and Applied Mechanics, June 2-4, 2003, Charlotte, North Carolina.
23. ***Session Chair:*** "Nanocomposites; Mechanical and Physical Properties," International Conference on Composite Materials (ICCM-14), July 14-18, 2003, San Diego, California.
24. ***Session Chair*****:** "Impact and Energy Absorption," 18th Annual Technical Conference, American Society for Composites, October 19-22, Gainesville, Florida.
25. ***Session Chair:*** "Nanocomposites," ASME International Mechanical Engineering Congress, November 15-21, 2003, Washington, DC.
26. ***Session Chair:*** Session 2.4B, International Conference on Mechanical Engineering, December 26-28, 2003, Dhaka, Bangladesh.

27. ***Conference Chair:*** 2004 Southeastern Conference on Theoretical and Applied Conference (SECTAM), August 15-17, 2004, Tuskegee, AL.
28. ***Session Chair*****:** "Nanotechnology I," 19th Annual Technical Conference, American Society for Composites, October 17-20, 2004, Atlanta, Georgia.
29. ***Session Co-Chair***: "AERO-12C Nano-Structures/Advanced Structural Concepts," 2004 ASME International Congress, Anaheim, CA, November 13-19, 2004.
30. ***Session Chair***: "AMD-5C Structural Integrity of Sandwich Composites," 2005 ASME International Mechanical Engineering Congress, Orlando, FL, November 5-11, 2005.
31. ***Session Chair***: "AMD-13D Structural Nanocomposites," 2005 ASME International Mechanical Engineering Congress, Orlando, FL, November 5-11, 2005.
32. ***Session Chair***: "Processing – 1," ICSS-7, 7th International Conference on Sandwich Structures, August 29-31, 2005, Aalborg, Denmark.
33. ***Session Chair***: "Properties and Characterization," Experimental Techniques and Design in Composite Materials (ETDCM 8), Sardinia, Italy, 3-6 October, 2007.
34. ***Session Co-Chair:*** "Nano-,Bio-, Cellular, and Nonlinear Materials IV," ASME International Mechanical Engineering Congress," Boston, Massachusetts, October 31 – November 6, 2008.
35. ***Session Chair***, "Chou Symposium," The 24th Annual American Society for Composites (ASC) Conference, University of Delaware, Newark, Delaware, September 15-17, 2009.
36. ***Symposium Organizer and Session Chair***, "Interfacial Mechanics in Nanocomposites," ASME International Mechanical Engineering Congress and Exposition, November 13-19, 2009, Lake Buena Vista, Florida.
37. ***Symposium Organizer and Session Chair***, "Nano-modified Structural Fibers," ASME International Mechanical Engineering Congress and Exposition, November 13-19, 2009, Lake Buena Vista, Florida.
38. ***Symposium Co-Organizer and Session Chair***, "Composites Durability-I," ASME International Mechanical Engineering Congress and Exposition, November 13-19, 2009, Lake Buena Vista, Florida.
39. ***Symposium Co-Organizer***, "Composites Durability-II," ASME International Mechanical Engineering Congress and Exposition, November 13-19, 2009, Lake Buena Vista, Florida.
40. ***Symposium Organizer and Session Chair***, "Nanocomposites-II," ASME International Mechanical Engineering Congress and Exposition, November 13-19, 2009, Lake Buena Vista, Florida.
41. ***Vice Chair,*** AMD (Applied Mechanics Division) Composites Committee Meeting, ASME International Mechanical Engineering Congress and Exposition, November 14, 2009, Lake Buena Vista, Florida.
42. ***Chair,*** AMD (Applied Mechanics Division) Composites Committee Meeting, ASME International Mechanical Engineering Congress and Exposition, November 16, 2010, Vancouver, British Columbia, Canada.
43. ***Symposium Organizer and Session Chair***, "Mechanics of Cellular Materials and Their Composites," ASME International Mechanical Engineering Congress and Exposition, November 17, 2010, Vancouver, British Columbia, Canada.

44. ***Session Chair***, "Flow Visualization–I," 13th Asian Congress of Fluid Mechanics (13–ACFM), Dhaka, Bangladesh, December 17-21, 2010
45. ***Symposium Organizer and Session Chair***, "Composite Materials for Renewable Energy," ASME International Mechanical Engineering Congress and Exposition, November 17, 2011, Denver, Colorado.
46. ***Session Chair***, "Nanocomposites-2," ASME International Mechanical Engineering Congress and Exposition, November 16, 2011, Denver, Colorado.
47. ***Chair,*** AMD (Applied Mechanics Division) Composites Committee Meeting, ASME International Mechanical Engineering Congress and Exposition, November 15, 2011, Denver, Colorado.
48. ***Session Chair***, "Plenary Lecture -II," *International Conference on Mechanical Engineering (ICME-2011),* December 18-20, 2011, Dhaka, Bangladesh
49. ***Chair, Advisory Committee***, Alabama-EPSCOR (NSF) Meeting, April 13, 2012, Tuskegee University, Tuskegee, Alabama
50. ***Session Chair,*** "Nanomedicine, Nanobiotechnology and Nanobioengineering," ***Nanoflorida-2012***, September 29, 2012, University of South Florida, Tampa, Florida
51. ***Chair,*** AMD (Applied Mechanics Division) Composites Committee Meeting, ASME International Mechanical Engineering Congress and Exposition, November 13, 2012, Houston, Texas.
52. ***Symposium Organizer and Session Chair***, "Multi-Scale Modeling in Nanostructured Materials-1," ASME International Mechanical Engineering Congress and Exposition, November 14, 2012, Houston, Texas.
53. ***Symposium Organizer and Session Chair***, "Multi-Scale Modeling in Nanostructured Materials-2," ASME International Mechanical Engineering Congress and Exposition, November 14, 2012, Houston, Texas.
54. ***Symposium Organizer and Session Chair***, "Composite Materials for Renewable Energy Systems," ASME International Mechanical Engineering Congress and Exposition, November 18, 2013, San Diego, California.
55. ***Symposium Organizer and Session Chair***, "Nanocomposites Synthesis and Performance - 1," ASME International Mechanical Engineering Congress and Exposition, November 19, 2013, San Diego, California.
56. ***Symposium Organizer and Session Chair***, "Nanoscale Mechanics of Polymer Nanocomposites and Nanostructured Materials," ASME International Mechanical Engineering Congress and Exposition, November 21, 2013, San Diego, California.
57. ***Track Co-Chair,*** "Advanced Manufacturing," ASME International Mechanical Engineering Congress and Exposition, November 14-20, 2014, Montreal, Quebec, Canada.
58. ***Track Organizer,*** ASME International Mechanical Engineering Congress and Exposition, November 14-20, 2014, Montreal, Quebec, Canada.
59. ***Session Organizer, "***Polymer Nanocomposites and Nanostructured Materials," Track 12-15-1, ASME International Mechanical Engineering Congress and Exposition, November 14-20, 2014, Montreal, Quebec, Canada.
60. ***Session Organizer, "***Polymer Nanocomposites Simulations and Experiments" Track 12-17-1, ASME International Mechanical Engineering Congress and Exposition, November 14-20, 2014, Montreal, Quebec, Canada.

61. ***Session Co-Organizer***, "Tribology and Mechanical Properties," Track 2-1-1, ASME International Mechanical Engineering Congress and Exposition, November 14-20, 2014, Montreal, Quebec, Canada.
62. ***Session Chair,*** "Advanced Forming - I," Track 2-6-1, ASME International Mechanical Engineering Congress and Exposition, November 14-20, 2014, Montreal, Quebec, Canada.
63. ***Session Chair,*** "Advanced Forming - II," Track 2-6-2, ASME International Mechanical Engineering Congress and Exposition, November 14-20, 2014, Montreal, Quebec, Canada.
64. ***Topic Organizer***, "Nanocomposite Fibers," Track 12-35, ***ASME International Mechanical Engineering Congress and Exposition,*** November 13-19, 2015, Houston, Texas.
65. ***Topic Co-Organizer***, "Advance Forming," Track 2-6, ***ASME International Mechanical Engineering Congress and Exposition,*** November 13-19, 2015, Houston, Texas.
66. ***Topic Co-Organizer***, "Nanomechanics and Nanomaterials," Track 12-32-4, ***ASME International Mechanical Engineering Congress and Exposition,*** November 13-16, 2016, Phoenix, Arizona.
67. ***Topic Co-Organizer***, "Durability and Life Prediction of Advanced Materials," Track 12-27-1, ***ASME International Mechanical Engineering Congress and Exposition,*** November 13-16, 2016, Phoenix, Arizona.
68. ***Topic Co-Organizer***, "Mechanical Behavior of Additively Manufactured Materials," Track 12-29-3, ***ASME International Mechanical Engineering Congress and Exposition,*** November 13-16, 2016, Phoenix, Arizona.

***Reviewer (Journal)*:** Experimental Mechanics, Journal of Composites Engineering, Journal of Thermoplastic Composite Materials, AIAA Journal, Journal of Engineering Materials and Technology, Composites Part A: Applied Science and Manufacturing, Composites Part B: Engineering, Macromolecular Materials and Engineering, Polymer and Polymer Composites, Journal of Composite Materials, Composite Science and Technology, Advanced Materials, International Journal of Fatigue, Macromolecular Bioscience.

Reviewer (Proposals): Oklahoma Department of Transportation, National Science Foundation, U.S. Army Corps of Engineers - Engineer Research and Development Center (ERDC).

Post-Doctoral Research Advisor.

1. Dr. Mohammed Ashraf Saad M. Zaky (PF # 4409) from Menoufia University, Egypt, Fellow, Sponsored by United States Agency for International Aid (USAID), June 1993 - December 1993.
2. Dr. Partha S. Das (1997), Research Assistant Professor at the Materials Research Laboratory.
3. Dr. Wahhaj Uddin (1998), Visiting Faculty from Bangladesh University of Engineering and Technology, Dhaka, Bangladesh.

4. Dr. Vijay K. Rangari (2000 – 2004), Research Assistant Professor at the Materials Research Laboratory.
5. Dr. Yuanxin Zhou (July 2004 – December 2004), Research Assistant Professor at the Materials Research Laboratory.
6. Dr. Fang Zhou (January 2014 – May 2014), Research Scientist, Fatigue Testing and Blade Design of Composite Ocean Current Turbine under IHI contract.
7. Dr. Seyed Morteza Sabet (June 2016 – current), Research Scientist, High Temperature Polymer and Micro-Viscometry. Department of Ocean and Mechanical Engineering, Florida Atlantic University.

Member of the Honorary Board of Editors, Journal of Mechanical Engineering Research and Developments, Published by Bangladesh University and Technology, Dhaka, Bangladesh.

External Member of the Selection Board for Appointment of Professors and Associate Professors, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh (2000 – present)

Chair, External Advisory Board for NSF-EPSCoR in Alabama (2013 – 2016)

Professional Affiliations

American Society of Mechanical Engineers (ASME) - Member
Society for Experimental Mechanics (SEM) - Member
American Society for Engineering Education (ASEE) - Member
American Ceramic Society (ACerS) - Member
American Society for Testing & Materials (ASTM) - Member
International Community for Composites Engineering (ICCE) - Member

Honor Societies
Tau Beta Pi
Phi Kappa Phi
Sigma Xi

GRADUATE THESES AND STUDENTS:
(Supervised as Major Professor and Chair of the Committee)

Graduated **11 Ph.D.** and **46 MS** Students

Current Graduate Students: 1 (Ph.D.), 2 (MS)

Completed Graduation:

Ph.D.: Tonnia Thomas (2003), Krishnan Kanny (2003), Nathaniel Chisholm (2005), Renee Rodgers (2007), Mujibur R. Khan (2010), Felicia Powell (2011), Olga Malkina

(2011), Siyuan Ma (2012), Fang Zhou (2013), Seyed Morteza Sabet (2016), and Takuya Suzuki (2017) = **Total of 11**

MS: Yu Ting Xing (1991), Partha S. Das (1992), Dongwei Xue (1992), Cynthia R. Ingram (1993), George Grant (1993), M. Maniruzzaman (1993), Mrinal K. Saha (1995), Ahsan Miah (1994), Daixu Yu (1995), Timothy D. Brown (1996), David Lord (1995), Camille Watkins (1995), Roshan Raines (1996), Robert Harris (1996), Bazle Gama (1997), Alicia Grant (1997), Khalid Eltom (1998), Mojibur Rahman (1998), Aloke K. Pal (1999), M. Kamruzzaman (2000), Yuhui Zhu (2000), Wahid A. Mamun (2000), Syful Islam (2001), Chinmoy Joarder (2002), Nitin Kulkarni (2002) Mohamad Gamaleldin (2002), ABM Khalid Hasan (2003), Mohammad Mostafizur Rahman (2003), Uttam Chakravarty (2003), Mohammad Sadikul Islam (2003), Prasun Majumdar (2003), Adnan Ashfaq (2003), Mohammed F. Uddin (2004), Justice Nana (2004), Mohammed Baseer (2005), Shaik Zainuddin (2005), Floria Clements (2007), Justin Stewart (2008), Vincent Lambert (2009), Nickolas Asseff (2009), Felicia Powell (2009), Debdutta Das (2009), Wasim Akram (2010), Mohammad H. Rahman (2013), Charles M. Davis (2013), and Marco Canino (2016) = **Total of 46**

List of Dissertations/Theses Supervised (as Major Professor and Committee Chair)

A) Ph.D. Dissertations:

1. **Krishnan Kanny**, "*Effects of Viscoelasticity on the Structural Integrity of Foam Core Sandwich Composites*," Ph.D. Dissertation, Tuskegee University, May 2003.
2. **Tonnia Thomas**, "*Effects of Temperature and Strain Rate on the Impact Response of Foam Core Sandwich Structures*," Ph.D. Dissertation, Tuskegee University, May 2003.
3. **Nathaniel Chisholm, "***Synthesis, Manufacturing, and Characterization of Nanophased Carbon/Epoxy Composites*," Ph.D. Dissertation, Tuskegee University, May 2005.
4. **Renee Rodgers, "***Infusion of SiC nanoparticles into SC-15 Epoxy; an Investigation of Thermal and Mechanical Response*," Ph.D. Dissertation, Tuskegee University, May 2006.
5. **Mujibur R. Khan**, "*Investigation of Nanoscale Reinforcement into Textile Polymers,"* Ph.D. Dissertation, Florida Atlantic University, May 2010
6. **Felicia Powell,** "*A Study of the Effects of Nanoparticle Modification on the Thermal, Mechanical, and Hygrothermal Performances of Carbon/Vinyl Ester Composites,"* Ph.D. Dissertation, Florida Atlantic University, December 2011.
7. **Olga Malkina,** "*Anisotropic Physical Properties of SC-15 Epoxy Reinforced with Magnetic Nanofillers under Uniform Magnetic Field*," Ph.D. Dissertation, Florida Atlantic University, December 2011.
8. **Siyuan Ma, "***Studies of Composite Multihull Ship Structures using Fluid Structure Interaction,*" Ph.D. Dissertation, Florida Atlantic University, July 2012.

9. **Fang Zhou,** "*Development of an Integrated Computational Tool for Design and Analysis of Composite Turbine Blades under Ocean Current Loading*," Ph.D. Dissertation, Florida Atlantic University, July 2013.
10. **Seyed Morteza Sabet,** "*Effects of Carbon Nanotubes (CNT) Dispersion and Interface Condition on Thermo-Mechanical Behavior of CNT-Reinforced Vinyl Ester,*" Ph.D. Dissertation, Florida Atlantic University, May 2016
11. **Takuya Suzuki,** "*Development of a Comprehensive Design Methodology and Fatigue Life Prediction of Composite Turbine Blades under Random Ocean Current Loading,*" Ph.D. Dissertation, Florida Atlantic University, December 2017.

B) M.S. Theses:

12. **Marco Canino**," *Finite Element Modeling and Fatigue Analysis of Composite Turbine Blades under Random Ocean Current and Turbulence*," M.S. Thesis, August 2016.
13. **Mohammad H. Rahman**," *Design and Analysis of Hybrid Titanium-Composite Hull Structures under Wave and Slamming Loads*," M.S. Thesis, December 2013.
14. **Charles M. Davis**," *Studies of Nanoparticle Reinforced Polymer Coating for Trace Gas Detection,*" M.S. Thesis, December 2013.
15. **Mohammad W. Akram**, "*Fatigue Modeling of Composite Ocean Current Turbine Blade,*" M.S. Thesis, May 2010.
16. **Debdutta Das, "***Reinforcement of Syntactic Foam with SiC Nanoparticles,*" M.S. Thesis, December 2009.
17. **Felicia Powell, "***Effects of POSS Fiber Sizing on the Mechanical and Thermal Properties of Carbon/Vinyl Ester Composites*,' M.S. Thesis, December 2009.
18. **Nickolas Asseff**, "*Design and Finite Element Analysis of a Composite Ocean Current Turbine Blade,*" M.S. Thesis, July 2009
19. **Vincent Lambert**, "*Enhancement of Spike and Stab Resistance of Flexible Armor using Nanoparticles and a Cross-linking Fixative*," M.S. Thesis, April 2009
20. **Justin Stewart,** "*Nanoparticles Reinforced Core Materials for Sandwich Construction,"* M.S. Thesis, May 2008
21. **Floria E. Clements,** "*Development of Flexible Puncture Resistant Materials System Using Silica Nanoparticles*," M.S. Thesis, May 2007
22. **Mohammed Baseer**, "*An Experimental and Analytical Study of Nano-Phased Carbon Prepreg Laminates and Cylinders*," M.S. Thesis, March 2005.
23. **Shaik Zainuddin**, "*Infusion Of Spherical And Acicular Nanoparticles into a Polymer; An Investigation of the Influence of High Magnetic Fields*," M.S. Thesis, March 2005.
24. **Justice Nana Amoako, "***Thermal Shock Induced Damage Assessment in Nicalon Fiber Reinforced SiCN Ceramic Matrix Composites*," M.S. Thesis, July 2004.
25. **Mohammed F. Uddin, "***Dynamic Behavior of Sandwich Structures with Nanophased Cores*," M.S. Thesis, May 2004.
26. **Ashfaq Adnan**, "*Manufacturing and Characterization of Nanophased Filaments and their Composites*," M.S. Thesis, December 2003.

27. **Prasun K. Majumdar**, "Innovative Manufacturing and Stability Analysis of Composite Skin-Stringer Assembly," M.S. Thesis, December 2003.
28. **Muhammad S. Islam**, "*Flexural Response of Sandwich Composites with Nanophased Cores*," ," M.S. Thesis, August 2003.
29. **Uttam K. Chakravarty**, "*High Strain Rate Response of Sandwich Core Materials*," M.S. Thesis, August 2003.
30. **Mostafezur Rahman**, "*Long-Term Creep and Creep Rupture Behavior of Woven Ceramic Matrix Composites*," M.S. Thesis, May 2003.
31. **ABM Khalid Hasan,** "*Finite Element Analysis of Flip Chip Package*," M.S. Thesis, December 2002.
32. **Mohamed K. Gamaleldin,** "*Innovative Manufacturing of Composite Isogrid Cylinders and their Compressive Response*," M.S. Thesis, August 2002.
33. **Nitin Kulkarni,** "*Fatigue Response and Life Prediction of Foam-Core Sandwich Composites under Flexural Loading*," M.S. Thesis, May 2002.
34. **Chinmoy Joarder**, "*Innovative Manufacturing, Design and Analysis of Sandwich T-Joints,*" M.S. Thesis, May 2002.
35. **Md. Syful Islam**, "*Effects of Implanted Delamination and Core Density on the Buckling Response of Sandwich Plates*," M.S. Thesis, May 2001.
36. **Wahid A. Mamun**, "*New Fomulations for Hopkinson Bar to Determine Composite Materials Response*," M.S. Thesis, August 2000.
37. **Aloke Pal**, "*Fatigue Modeling and Fracture Analysis of L-10 Composites*," M.S. Thesis, May 2000.
38. **Mohammad Kamruzzaman**,"*Flexural Fatigue Characterization of Hybrid and Sandwich Composites*," M.S. Thesis, May 2000.
39. **Yuehui Zhu**, "*Response of Integral Armor under High Velocity Impact using FEM*," M.S. Thesis, May 2000.
40. **Mojibur Rahman**, "*Finite Element Analysis of Composite Isogrid Cylinders*," M.S. Thesis, December 1998.
41. **Alecia C. Grant**,"*Fatigue Behavior of Polymeric Composites after Low Velocity Impact*," M.S. Thesis, May 1998.
42. **Khalid Eltom**, "*High Frequency Fatigue of Continuous Silicon Carbide Fiber Reinforced Silicon Nitride Matrix Composites*," M.S. Thesis, August 1998.
43. **Bazle A. Gama, "***High Strain Rate Behavior of Integral Armor: An Experimental and Finite Element Study*," M.S. Thesis, August 1997.
44. **Roshan P. Raines**, "*The Investigation of High Strain Rate Effects on Glass Fiber Composite Materials,*" M.S. Thesis, August 1997.
45. **Robert M. Harris IV**, "*Fatigue Behavior of Notched High Modulus Epoxy Composites under Reversed Cyclic Loading*," M.S. Thesis, May 1997.
46. **Camille Watkins**, "*Response of Carbon/Carbon Composites under Tension-Tension Fatigue*," M.S. Thesis, August 1996.
47. **David R. Lord**, "*Finite Element Analysis of the Dynamic Response of a Solid Armature due to Contact Arcing in one Leg of an Electromagnetic Launcher*," M.S. Thesis, May 1995.
48. **Timothy D. Brown**, "*Response of SiC_f/Si_3N_4 Composites under Static and Cyclic Loading at Room and Elevated Temperatures*," M.S. Thesis, May 1995.

49. **Daixu, Yu,** *"Reversed Fatigue of Resin Transfer Molded (RTM) Composites,"* M.S. Thesis, May 1995.
50. **Md. Maniruzzaman, "***Fatigue Response of 2-D Woven carbon-Carbon Composites*," M.S. Thesis, August 1995.
51. **AKM Ahsan Mian,** "*Finite Element Study of Fiber-Matrix Interface Behavior of Ceramic and Metal matrix Composites*," M.S. Thesis, December 1995.
52. **Mrinal C. Saha, "***Damage Tolerance Study of Advanced Polymeric Composites at Low Velocity Impact*," M.S. Thesis, December 1995.
53. **George K. Grant, "***Investigation of Mode I Fracture Behavior of SiC_f/Si_3N_4 Ceramic Composites using Finite Element and Experimental Methods*," M.S. Thesis, December 1994.
54. **Cynthia R. Ingram,** Effects of Defects on the Compressive and Tensile Properties of Resin Transfer Molded Composites," M.S. Thesis, August 1993.
55. **Dongwei, Xue**, "*Analysis of 2-D Carbon/Carbon Composites by Isoparametric Layered Shell Elements under Flexural and Tensile Loading*," M.S. Thesis, May 1993.
56. **Partha S. Das, "**Fatigue and Flexural Behavior of 2-D carbon/Carbon Composites at room and Elevated Temperatures," M.S. Thesis, December 1992.
57. **Yu Ting Xin,** "High Cycle Fatigue Characterization of Titanium 5AL-2.5 Sn Alloy," M.S. Thesis, May 1992.

Undergraduate Research Students (Supported by Research Grants as undergraduate Research Assistants)

Cassandra Gentry (1991), Cynthia R. Ingram (1992), Anthony Mommon (1992), William L. Austin (1993), Cynthia Lester (1992), Leo C. Gale (1993), Chauncy Eagleston (1994), Kevin Spencer (1994), Derek Robinson (1995), Roderick Riley (1995), Tina Savage (1995), Donna Childs (1996), Alicia Carruthers (1996), Earnest M. Foster (1997), Shondretta Able (1997), Anthony Walker (1998), John Holland (1998), Marcus Richardson (1998), Tonia Thomas (1998), Kimberly Bailey (1999), Chistopher Harris (1999), Annette Harris (1999), Damien Brooks (1999), Nikki McDowell (2000), Rasheed Muwakkil (2000), Michael Calahoun (2000), Costy Foy (2001), Sherida Turner (2001), Lesa Austin (2001), Makeba Atkins (2002), Julius Martin (2002), Bruce Dewalt (2003), Michael Houston (2004), Tanya Orme (2005), Travis (2005), Casey Nelson (2006), Patrick Bordner (2008), Juan Moreno (2008), Lea Miller (2009), Phillip Rosen (2009), DeAnna Sewell (2010), Charles Davis (2011), Richard Vallejo (2013), Emma Cusano (2014), Jennifer Frame (2015), John Walsh (2015), Travis Roy (2015), Collin Rowbottom (2016), Alexander Gonzales (2017), and Reinaldo Dos Santos (2018) = **Total of 50**