Completed Ph.D. and MS Degrees

from

NSF IUCRC HVT Center

between

March 2014 and June 2024

Completed PhDs = 42

(Additional 1 will be completed before the End of Phase 1 in Spring 2024)

Completed MS = 15

University of Illinois at Urbana-Champaign

Completed PhDs:

1. Ankit Saharan, Homogenization and Elastic-Plastic Transitions in Random and FGM Microstructures, Ph.D. in Mechanical Engineering, UIUC, completed in 2014.

2. Vinesh Nishawala, Transient Wave Propagation on Random Fields with Fractal and Hurst Effects, Ph.D. in Mechanical Engineering, UIUC, completed in 2016.

3. Sohan Kale, Avalanches, Percolation, and Stochastic Damage Evolution in Disordered Media, Ph.D. in Mechanical Engineering (*Outstanding Mechanical Engineering Dissertation Award Winner*), UIUC, completed in 2016.

4. Jun Zhang, Scale-Dependent Homogenization of Elastic-Viscoelastic Random Composites, Ph.D. in Theoretical and Applied Mechanics, UIUC, completed in 2017.

5. Mete Bakir, Design and Characterization of Aromatic Thermosetting Copolyester Resin for Polymer Matrix Nanocomposites, Ph.D. in Mechanical Engineering, UIUC, completed in August 2018.

6. Dansong Zhang, Thermomechanics and Dynamics of Helically-Wound Cables, Ph.D. in Mechanical Engineering, Ph.D. in Mechanical Engineering, UIUC, completed in December 2018.

7. Fereshteh Sabet, Modeling of Bone and 3D printed Bioinspired Composites, Ph.D. in Theoretical and Applied Mechanics, UIUC, Ph.D. in Theoretical and Applied Mechanics, defended in August 2019, completed May 2021

8. Diab Abueidda, Characterization and Modeling of Lightweight Cellular Materials based on Triply Periodic minimal Surfaces, Ph.D. in Mechanical Engineering, UIUC, completed in

December 2019.

9. Jacob Meyer, Characterization of Aromatic Thermosetting Copolyesters and their Bonding via Interchain Transesterification Reactions, Ph.D. in Mechanical Engineering, UIUC, defended in January 2020, completed in May 2021.

10. Bharath Raghavan, Rheological properties, stochastic characteristics, and Second Law violations of atomic fluids in Couette flow," Ph.D. in Mechanical Engineering, completed in April 2020.

11. Xian Zhang, Hyperbolic and parabolic problems on random fields with fractal and Hurst effects, Ph.D. in Theoretical and Applied Mechanics, UIUC, July 2021.

12. Pouyan Karimi, Scale effects in electromagnetic and mechanical properties of composites, Ph.D. in Theoretical and Applied Mechanics, UIUC, September 2021.

13. Siyuan Pang, Mechanical and Compositional Analysis of Bone Nanostructure and Designs for Bio-inspired Co-continuous Composites, Ph.D. in Mechanical Engineering, defended in May 2022.

14. Amiri-Hezaveh, Amirhossein, Convolution Method in Elastodynamics, Ph.D. in Theoretical and Applied Mechanics, UIUC, December 2021.

Completed Masters:

1. Srikanth Raviprasad, Experimental and Numerical Investigation of Ballistic Impacts: An Introduction to Novel Polymer Foam Core Sandwich Structures and Adaptive SPH Formulation, M.S. degree in Aerospace Engineering, UIUC, completed in May 2017.

2. Gabriela Couvertier-Santos, Characterization of Mechanical Properties of Covetic Wires, M.S. degree in Mechanical Engineering, UIUC, completed in August 2017.

3. Christopher Kozuch, Impact of Microstructural Parameters on Topology Optimization of Structures Made of Composites with Elliptical Inclusions, M.S. in Mechanical Engineering, UIUC, completed in May 2018.

University of Connecticut

Completed PhDs:

1. Lihua Chen, Electronic Structure and Vibrational Behavior of Polyethylene: Role of Chemical Morphological and Interfacial Complexity, PhD in Material Science, UConn, completed in August 2017.

2. Mattewos Tefferi, Characterization of Conduction Properties of DC Cable Dielectric Materials, PhD in Electrical Engineering, UConn, completed in December 2018.

3. Zongze Li, High Electric Field Conduction and Polarization in Polymer Dielectrics, Ph.D in Electrical Engineering, UConn, completed in November 2019.

4. Jindong Huo, Multiphysics Modelling of Arc-Solid Interaction and Gas Dynamics of Arc Interruption, Ph.D. in Materials Science, completed in September 2020.

5. Hiep Nguyen, 2D- Nanostructured Insulation Material for High Torque Density Electric Propulsion Motors, Ph.D. in Electrical Engineering, completed in November 2021.

6. Tohid Shahsavarian, Streamer and Partial Discharge Investigations on HVDC/MVDC Electrical and Electronic Applications at Harsh Environmental Conditions, completed in March 2022.

7. Mohamadreza Arab_Baferani, Novel Nanodielectrics for High-Voltage/Medium-Voltage Direct-Current Cable Insulation, completed in October 2022.

8. Wenqiang Gao, C_4F_7N-based SF_6 Alternatives for Eco-friendly Electrical Insulation, January 2024

University of Denver

Completed PhDs:

1. Middleton, James, Aging of a Polymer Core Composite Conductor under Combined Ozone and Temperature Conditions, PhD in Materials Science, DU, completed in July 2014.

2. Hoffman, Joseph., On Thermal Aging Prevention in Polymer Core Composite Conductor Rods, PhD in Nanoscale Science and Engineering, DU, completed in Sept. 2015.

3. Hakansson, Eva., Galvanic Corrosion of Aluminum/Carbon Composite Systems, PhD in Mechanical Engineering, DU, completed in June 2016.

4. Bleszynski, Monika., Nanoengineering of Next Generation Silicone Rubber Materials for Extreme Applications, PhD in Mat Sci, MME Dept, DU, completed on June 28, 2018.

5. Lu, Tianyi, Synergistic Aging of GRP Composites, PhD in Mat Sci, MME Dept., DU, completed in Nov. 2018.

6. Henderson, Chrissy, Protection of High-Voltage Transformer Bushings and other Brittle Structures Against Impact, PhD in Engineering, completed in Fall 2019.

7. Daniel Waters; Monitoring of Polymer Core Composite Conductors under Excessive Mechanical Loads using Fiber Bragg Grating Sensors, PhD in Mechanical Engineering, completed in Oct 2021.

8. Sabuj Khadka, Monitoring of State Transitions in Extreme Environment Application Materials Using Fiber Bragg Grating Sensors, complete on Feb 18, 2022.

9. Jide William, The Modernization of Large Power Transformer Tanks Ph.D. in Materials Science, completed in May 2023.

10. Billy Grell, Fatigue and Fracture of Electron Beam Melting Ti-6Al-4VPh.D. in Mechanical Engineering, completed in summer 2023 7, 2023.

11. Matt Reil, Effect of Oxidation of Graphene on Agglomeration and the Mechanical Properties of Thermosetting Resins, successfully defended in May 2024

Completed Masters:

1. Kosak, J. Stress Corrosion Cracking in Polymer Matrix Glass Fiber Composites. MS Thesis in Mechanical Engineering, MME Dep., DU, completed in May 2014.

2. Lu, Tianyi, Degradation of High Voltage Glass Fiber-Reinforced Polymer Matrix Composites by Aggressive Environmental Conditions, MS in Materials Science, Department of Mechanical and Materials Engineering, DU, completed in July 2014.

3. Bleszynski, Monika, Aging Assessment of High Voltage Single Component Room Temperature Vulcanized Silicone Rubber (RTV-1) Subjected to Aqueous Salt, MS in Engineering, MME Dep., DU, completed Dec 9, 2015.

4. Waters, D., Low-Velocity Impact to High-Temperature Low-Sag Overhead Conductors, MS in Mechanical Engineering, MME Dep., DU, completed in Feb 2016.

5. Clark, Edward, Variable Oxidation & Defects in Ti-6Al-4V Material in Electron Beam Melting Additive Manufacturing, MME Dep., DU, completed in March 2017.

6. Woll, Theodore "Robert", Ice Adhesion Analysis of Severely Aged PDMS Rubbers; MS in Materials Science, MME Dept., DU, completed in June 2018.

7. Reil, Matt. Graphene/Oxide Interactions with Polymer Matrix Composites Modeled Using Molecular Dynamics; MS in Materials Science, MME Dept., DU, completed in August 2020.

Michigan Technological University

Completed PhDs:

1. William Pisani, "Molecular Dynamics Modeling of PEEK, Cyanate Esters, and Carbon Nanotubes for Aerospace Applications", PhD in Mechanical Engineering – Engineering Mechanics, Michigan Technological University, December 2019

2. Oladeji Fadayomi, "Development of Aluminum Alloys with Optimal Strength and Electrical Conductivity" PhD in Department of Materials Science and Engineering, Michigan Tech University, February 2019.

3. Julie M. Tomasi, "Investigation of Mechanical, Electrical, and Thermal Properties of Particulate/Fiber/Polymer Composites", Ph.D., Department of Chemical Engineering, Michigan Technological University, April 2018.

4. Sorayot Chinkanjanarot, “Multiscale Modeling: Thermal Conductivity of Graphene/Cyclaliphatic Epoxy Composites”, Ph.D. in Mechanical Engineering – Engineering Mechanics, Michigan Technological University, November 27, 2017.

5. Matthew S. Radue, “Molecular Modeling of Aerospace Polymer Matrices Including Carbon Nanotube-Enhanced Epoxy”, Ph.D. in Mechanical Engineering – Engineering Mechanics, Michigan Technological University, July 2017.

6. Cameron Hadden, “Molecular Modeling of Epon 862-DETDA/Carbon Composites”, Ph.D. in Mechanical Engineering – Engineering Mechanics, Michigan Technological University, May 2015.

7. Danielle Rene Klimek-McDonald, “Mechanical Properties of Graphene Nanoplatelet/Epoxy Composites”, Department of Chemical Engineering, Michigan Technological University, July 17, 2015.

8. Benjamin D. Jensen, “Predicting the Mechanical Properties of Carbon-Based Materials using Molecular Dynamics”, Ph.D. in Mechanical Engineering – Engineering Mechanics, Michigan Technological University, April 3, 2014

9. William Pisani, "Multiscale Computational Modeling of PEEK Materials" Ph.D. in Mechanical Engineering – Engineering Mechanics, Michigan Technological University, August 2019.

Completed Masters:

1. Omkar Bhumkar, "FEA modeling of Pressurized Borosilicate Bushing Impact", M.S. report in Mechanical Engineering – Engineering Mechanics, Michigan Technological University, April 2019.

2. Mayank Bagaria, "Split-Hopkinson Bar Testing and FEA Analysis of Borosilicate Glass Impact", M.S. report in Mechanical Engineering – Engineering Mechanics, Michigan Technological University, April 2019.

3. Sandesh Gandhi, “Simulation of Crack Pattern on Borosilicate Glass Cylinder Under Pellet Impact, Using LS-Dyna”, M.S. report in Mechanical Engineering – Engineering Mechanics, Michigan Technological University, July 2017.

4. Paul M. Roehm, “Minimizing Run Time of Finite Element Analyses: Applications in Conformable CNG Tank Modeling”, M.S. report in Mechanical Engineering – Engineering Mechanics, Michigan Technological University, March 2017.

5. Rachel Clark, “Heat Treatment of 4943 Aluminum Produced by GTAW- and GMAW-Based Additive Manufacturing”, Master of Science, Department of Materials Science and Engineering, Michigan Technological University, August 2017.