

## BEHNAZ HASSANPOUR

Arlington, TX | 682-261-7810 | [behnaz.hassanpour@gmail.com](mailto:behnaz.hassanpour@gmail.com) | [www.linkedin.com/in/behnaz-hassanpour](http://www.linkedin.com/in/behnaz-hassanpour)

---

### PROFESSIONAL SUMMARY

A self-motivated and skilled Civil and Mechanical Engineer with passion for Composite Material (Fiber Reinforcement Polymer Composites), design and manufacturing. Specializing in Additive & Advanced Additive Manufacturing with skills in CAD tools, Finite Element Analysis, 3D printing, and Post processing

---

### TECHNICAL SKILLS

**Desing Applications:** SolidWorks, AutoCAD, HyperWorks, HyperMesh, Magics

**Simulation Softwares:** MATLAB, ANSYS (DesingXplorer, CFD & Structure), ANSYS Icepak,

**Application:** Microsoft Excel, Microsoft Word, Microsoft PowerPoint.

---

### EDUCATION

**PhD in Civil Engineering, University of Texas at Arlington,** May 2020 - Summer 2024  
Dissertation Thesis: "Hygrothermal Exposure Based Moisture and Glass Transition Temperature Kinetics of Carbon/Epoxy Composites"

**Master of Science in Mechanical Engineering, University of Texas at Arlington,** Aug 2018 - May 2020  
Thesis: "Investigation of Microstructure and Viscoelastic Properties of SLM IN718 Following Different Heat Treatment"

**Bachelor of Physics Engineering- Laser and Optics,** Aug 2009 - May 2013

---

### RELEVANT PROJECTS

- Research on Additive Manufacturing, using EOS M219 Machine.
  - Material Characterizing using SEM, EDS, XRD, Thermal, Tensile Test, DMA, and TMA to understand the relation & influence of working temperature as well as loading frequency to determine if the material can achieve all the requirements for the desired high-temperature applications.
- 

### WORK EXPERIENCE

**Graduate Research Assistant, Additive manufacturing lab & MAGIC Lab, UTA.** Aug 2018 - May 2020

- Research on advanced Electronic Packaging, Redistribution Layer (RDL) Technology, Silicon Package Interconnection, and Performance Optimizing
- Design of experiment on metal additive 3D printer EOS 290M for optimizing process parameters for Nickel superalloys & Incoel718 and optimization of post process heat treatments on additively manufactured part
- Characterizing Dynamic viscoelasticity, phase transformation, damping properties, and creep recovery of the specimens fabricated by metal additive 3D printer EOS 290M using Hitachi Dynamic Mechanical Analyzer DMA 7100 and Thermal Dynamic Analyzer TMA/SS6000 for design optimization.
- Designed, assembled 500+ structures for industrial, aerospace and medical applications using a selective laser melting (SLM) 3D printer (EOS M290) • Performed Dynamic & Thermal Mechanical test for SLM fabricated parts out of metal powders (e.g., IN718, Ti64 & NiTi)

**Graduate Teaching Assistant**

- Thermodynamics 1/2
- Thermal Engineering

- Introduction to Manufacturing Engineering
- Thermodynamics and Heat Transfer
- Mechanics of Materials 1

### **Internship at UTA Research Institute.**

May 2019 – July 2019

Analyzed Microstructure of Fabricated part (e.g., SEM results), Material composition and phase analysis using Xray diffractome. • SEM, EDS, EBSD Sample preparation including grinding, polishing and etching using Mechanical and Electrochemical polishing systems

---

### **HONOR & AWARD**

- |   |                         |
|---|-------------------------|
| • Civil & Environmental Engineering STEM Doctoral Fellowship                | Spring 2022-Spring 2024 |
| • DDOC COE Civil Engineering  | Fall 2022 – Spring 2023 |
| • Civil Engineering Scholarship   | Fall 2022 – Spring 2023 |
| • Civ & Env Eng DACA Schol  | Fall 2022 – Spring 2023 |
| • DDDA MAE Scholarship  | Fall 2020 – Fall 2021   |
| • MAE A. Haji-Sheikh Scholarshp   | Fall 2020 – Spring 2021 |
| • DDOC COE Mech & Aerospace Engineering                                     | Fall 2020 – Fall 2021   |
| • Mech & Aerosp Engr STEM Flwshp  | Fall 2020 – Spring 2021 |
| • DDDA MAE Scholarship  | Fall 2020 – Spring 2021 |
| • Mechanical Dept. Chair Graduate Assistantship                             | Aug 2019 - May 2020     |
| • Receiving CoE Research Experiences for Undergraduates (REU) Program award | Aug 2019 - May 2020     |
| • UTARI STEM Doc Fellowship   | Fall 2018 - Summer 2019 |

---

### **MEMBERSHIP & ACTIVITIES**

- Society of Women Engineers(SWE) & Monitoring Officer in Conference
- National Society of Black Engineers(NSBE),
- Digital Divas 2020, participated on a college panel to promote the presence of women in STEM, to share advice on being women in STEM, and to inspire more women to choose engineering as career
- Member of college panel (Digital Divas 2020) participated on a college panel at Digital Divas 2020, an event that introduces girls to engineering and promotes the presence of women in STEM, to share advises on college and what it means to become an engineer

### **PUBLICATIONS**

- Hassanpour B, Karbhari VM. Chapter 15 - Glass transition temperature as a characteristic of the durability of fiber-reinforced polymer composites. Woodhead Publishing; 2024. p. 341-362. <https://www.sciencedirect.com/science/article/pii/B9780443155451000020>.
- Hassanpour, B.; Karbhari, V.M. Moisture and Glass Transition Temperature Kinetics of Ambient-Cured Carbon/Epoxy Composites. *J. Compos. Sci.* 2023, 7, 447. <https://doi.org/10.3390/jcs7110447>
- V. M. Karbhari, B. Hassanpour, *J. Appl. Polym. Sci.* 2022, 139(27), e52496. <https://doi.org/10.1002/app.52496>