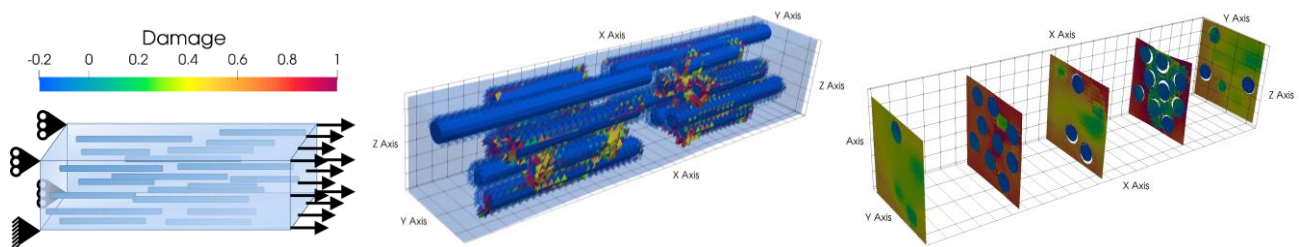




PhD Position Opening Computational Modeling of Polymer Matrix Composites for Extreme Environments

Overview. This project aims to elucidate the effects of high temperature on the initiation of cracks and accumulation of damage in 3-D printed discontinuous fiber-reinforced polymer matrix composites (DFR-PMC). These composites are light and durable, and are anticipated for high-temperature applications in aeronautical components such as nacelles, fan cases, or engine compressor stages. The student will work on the finite element based numerical framework, machine learning approaches, and analytical sensitivity analysis to achieve the project goals.



The positions include a summer internship at the Air-Force Research Lab for the interested candidate. The ideal candidate will be proficient in solid, damage, and computational mechanics, with a strong interest in the mechanics and physics of composites. Coding experiences would be appreciated.

Advisor: Prof. Maryam Shakiba (Civil and Environmental Engineering)

Duration: ~3.5 years, starting in Fall 2020 or Spring 2021.

Location: Virginia Tech campus at Blacksburg, VA., U.S.A.

Salary: Full funded GRA position.

To apply: Send CV, transcripts, and letter of motivation to mshakiba@vt.edu