

Post Doctorate Research Opportunity
Multifunctional Materials Modeling and Experimental Characterization
 Florida A&M—Florida State University (FAMU-FSU) College of Engineering
 Department of Mechanical Engineering
 Tallahassee, FL 32310

A post doctorate research opportunity is available in the Mechanical Engineering Department and the Florida Center for Advanced Aeropropulsion (FCAAP) at the joint FAMU-FSU College of Engineering. The research aims to investigate the interdependency of fractal material geometry and fractional constitutive property relations using entropy dynamics, fractional calculus, and Bayesian inference. It builds upon applications of fractal functions for understanding multiscale mechanics.

The mathematical properties of fractals exhibit power law characteristics which are often found in natural and biological systems such as blood flow, walking gaits, river tributaries, lightning strikes, and neuron firings. The research in mechanics will provide many opportunities to advance knowledge in functional materials using theoretical, computational, and experimental solid mechanics. This will include model validation against a variety of smart materials and 3D printed materials.

The position provides a competitive package, commensurate with experience, and is renewable after the first year. The researcher will be embedded in a highly interdisciplinary group that includes engineers working in fields associated with energy, aerospace, and robotics; see <https://ame.fsu.edu/> for details. Interested applicants should contact Prof. William S. Oates at woates@fsu.edu. More details about our research group can be found at: <http://www.eng.famu.fsu.edu/~woates/>

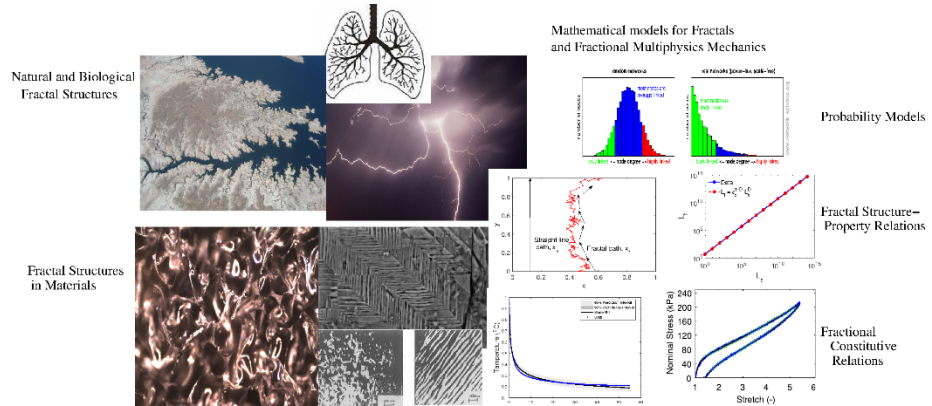


Illustration of the analogies of fractal behavior in nature and functional materials along with the corresponding fractal and fractional order models describing their complexity.