



NASA Glenn Research Center (GRC) is accepting applications for a Biomimicry Fellowship with an anticipated August 2020 start date.

Eligibility:

An individual may apply for the NASA GRC Biomimicry Fellowship prior to being admitted to a doctoral program at The University of Akron (UA)—e.g., Chemistry, Engineering, Integrated Bioscience, Polymer Engineering, and Polymer Science—but must ultimately be admitted with intent to enroll in order to accept a Biomimicry Fellowship offer. Students in the first or second year of a five-year doctoral program at UA may also be considered for the NASA GRC Biomimicry Fellowship. Candidates must be a U.S. citizen or national, hold a Bachelor’s degree in a STEM field, and have a minimum GPA of 3.0 on a 4.0 scale on their most recent official transcript.

Project Description:

PeTaL (Periodic Table of Life) is an open source artificial intelligence (AI) design tool to enable researchers to design novel systems by leveraging data from nature and technology. NASA GRC is looking for a highly-motivated PhD student with a background in data science to enhance the core capabilities of the software including an ontology, unstructured database, topic modeling and computer vision. The focus of computer vision is to identify pattern-function/structure-function relationships by leveraging digitized (CT-scans, images) collections.

To Apply:

Stage 1

Submit a CV and personal statement to Dr. Emily Kennedy (ekennedy@uakron.edu), Director of External Relations for UA’s Biomimicry Research and Innovation Center (BRIC).

The CV should not exceed two pages and should include: 1) name; 2) current academic level; 3) title; 4) department; 5) institution address; 6) institution phone number; 7) relevant career or academic experience; 8) research or significant projects; 9) awards and recognition; and 10) other relevant accomplishments.

The personal statement should not exceed two pages and should address the question: “How do you envision graduate school will prepare you for a career that allows you to contribute to

expanding scientific understanding and its application to NASA's Missions?" Specifically, the statement should include: 1) Describe your personal, educational and professional experiences that inspire and motivate your decision to pursue advanced studies in science, technology, engineering or mathematics (STEM) and in NASA-related research.; 2) Include specific examples of any relevant research and/or professional activities in which you have participated.; 3) Present a concise description of STEM preparation/activities, and highlight the results and discuss how these activities have prepared you to seek a graduate degree.; 4) Specify your role in the activity including the extent to which you worked independently and/or as part of a team.; and 5) Describe the contributions of your activity to advancing knowledge in STEM fields, as well as the potential impacts in NASA Missions.

Stage 2

Select candidates will be invited to participate in an informational interview with a NASA Technical Advisor.

Stage 3

Select candidates will be invited to independently conceive a research hypothesis or engineering design project concept relevant to above Project Description. The NASA Technical Advisor, prospective UA faculty advisor, and candidate will further develop the proposal and submit to NASA's Office of STEM Engagement. If a Training Grant is awarded, a Biomimicry Fellowship offer will be extended to the candidate.

Note: Applications will be accepted on a rolling basis until the position has been filled.

About NASA GRC:

NASA GRC, in Cleveland, Ohio, researches, designs, develops and tests innovative technology for aeronautics and spaceflight. We design game-changing technology for spaceflight that enables further exploration of the universe. We create cutting-edge aeronautical technology that revolutionizes air travel.

More Information:

For more information about the Biomimicry Fellowship Program, in general, or the NASA GRC Biomimicry Fellowship, specifically, contact Dr. Emily Kennedy (ekennedy@uakron.edu), BRIC's Director of External Relations. For more information about BRIC's strategic partner, Great Lakes Biomimicry, who co-designed and co-implements the Biomimicry Fellowship Program, visit their website at www.glbiomimicry.org.