



COMBUSTION & ENERGY RESEARCH LABORATORY

AUBURN UNIVERSITY

The Combustion and Energy Research Laboratory at Auburn University has an immediate opening for a postdoctoral research associate with a focus on experimental and numerical initiatives in the area of non-equilibrium plasma-assisted combustion (PAC). The research group led by Dr. Nicholas Tsolas has projects currently sponsored by NSF, DOE, and NASA supporting a range of applications from next generation advanced compression ignition and multi-mode engines, CubeSat micro-propulsion, combustion characteristics of second/third generation biofuels, and more.

The primary focus of this position will be to support research activities of the lab with opportunities to contribute to ongoing internal and collaborative projects. Responsibilities will include planning and leading experiments including experimental facility design, diagnostic development, data acquisition, and data analysis; mentoring and support of graduate and undergraduate students; preparation of peer-reviewed journal articles, conference publications and technical reports; presentation of work at professional conferences; and participation in the development of new research ideas and research proposals. Candidates will also be highly encouraged to use this opportunity to gain new experimental skills related to plenoptic imaging, design for high-voltage plasmas, additive manufacturing and spectroscopy.

Applicants must have a doctoral degree in mechanical engineering, aerospace engineering or a related discipline and must have an outstanding academic record. The successful candidate will have experience in the development of experimental facilities, preferably laser-based optical diagnostics, such as LIF or similar measurements. Numerically focused candidates will also be considered with computation background in molecular dynamics simulations, ReaxFF and, or chemical kinetic modelling. The candidate will also possess strong oral and written communication skills.

The initial appointment has a flexible start date with an anticipated duration of one year, with the possibility of extensions based on availability of funds and performance. Interested applicants should send, via e-mail: a cover letter describing their background, interest in the position and career goals; their C.V.; electronic copies of at least two representative publications; and a list of 3 references to:

Dr. Nicholas Tsolas
Department of Mechanical Engineering
ntsolas@auburn.edu

About Auburn University:

Auburn University is a public R1 research institution and is considered one of the fastest growing educational and research institutions in the country. The Samuel Ginn College of Engineering is considered the top-ranked engineering graduate school in the state of Alabama and is one of the nation's top 50 institutions in research expenditures. Cutting edge research is underway across 10 departments and 21 nationally recognized research centers and institutes, focused on producing technology and innovation that will help drive economic growth while improving human life on a global scale. AU's campus is located in Auburn, Alabama and was recently voted one of the best places to live in the US in 2018. More information can be found at <http://www.auburn.edu/main/welcome/>