

## Postdoctoral Position at University of Alabama in Huntsville

**Description:** A postdoctoral position is available in the Mechanical and Aerospace Engineering department at the University of Alabama in Huntsville. The candidate would work in the area of plasma science and engineering, specifically experimental high-pressure microplasma optical diagnostics. The research is part of an ongoing project to characterize high-pressure (700-1000 Torr) plasma generated in noble gas mixtures and the metastable densities and rates. The operating pressure requires small physical dimensions on the order of millimeters. These small scales make physical probe difficult, thus optical diagnostics are required. The research will be carried out at both the UAH Propulsion Research Center and the Center for Applied Optics.

**Duties and Responsibilities:** The candidate will be expected to build or modified experimental vacuum equipment, operate high-voltage power sources, perform optical (passive or laser-based) measurements, produce high-quality journal publication, consult and assist other students in the lab, work with the PI on proposals, and interface with other faculty and staff.

**Qualifications:** A Ph.D. in engineering, physics, chemistry, or a related field is required. The candidate should have prior experience with optical diagnostics of plasma or gases. Experience in optical emissions spectroscopy, specifically with collisional-radiative models, is strongly desired. Demonstrated experience in optical diagnostic via journal publications is required. Good written and verbal communication skills are expected. *U.S. citizenship is required.*

### Contact Information:

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Interested candidates should contact Gabe Xu. Please include a CV, a cover letter highlighting relevant experience, and a list of three references. Review of candidate begins immediately but application will continue to be accepted until the position is filled.

**About UAH and Huntsville:** The University of Alabama in Huntsville, classified as a Higher Research Activity institution, offers academic and research programs in the Colleges of Nursing, Business, Engineering, Science, Education, Professional and Continuing Studies and Arts, Humanities & Social Sciences. UAH is the anchor tenant of Cummings Research Park, the second largest research park in the U.S., home to nearly 300 companies and 30,000 employees. The city of Huntsville maintains one of the highest per capita incomes and standards of living in the Southeast. It is a national center of aerospace and high technology research and is home to NASA's Marshall Space Flight Center and the Redstone Arsenal.

**About the MAE Department:** The Department offers a BS degree in both Mechanical Engineering and Aerospace Engineering, and an MS and Ph.D. in Mechanical Engineering and Aerospace Systems Engineering. Our faculty is currently comprised of 19 tenure-track/tenured members and 4 full-time lecturers. Our undergraduate student body is comprised of approximately 565 aerospace engineering students and 670 mechanical engineering students. We have approximately 155 graduate students in both disciplines. Our faculty's research interests include materials for aerospace applications and for energy storage, gas turbine heat transfer, electrochemical energy conversion and storage, control of unmanned systems, applications of smart materials, and computational fluid dynamics applied to low-speed combustion and fire applications, fluid-structure interactions, and high-speed aerodynamics. In addition to its nationally known educational and research activities in rocket propulsion, the Department is engaged in a wide range of research activities currently funded by NSF, DOD, NASA, DOE, USDA, the State of Alabama, and several corporate sponsors.

The University of Alabama in Huntsville is an affirmative action, equal opportunity employer. We strongly encourage applications from women, minorities, individuals with disabilities, and veterans