



Predictive
Engineering &
Computational Science



Postdoctoral Scholar Positions - Plasma Modeling

The Center for Predictive Engineering and Computational Sciences in the Oden Institute for Computational Engineering and Sciences at the University of Texas at Austin is searching for a Postdoctoral Scholar with a background in plasma modeling to contribute to the development, calibration and validation of models to be used in high fidelity simulation of inductively coupled plasma (ICP) torches. An ICP torch presents a multi-physics modeling challenge, requiring representations of electromagnetics, compressible flow, weakly-ionized plasma kinetics and thermal radiation. This postdoc will help develop, implement, and validate a suite of models of varying fidelity to represent the plasma kinetics processes critical to the performance of a plasma torch. The effort will involve the development and implementation of physical models based on both a fluid representation and the Boltzmann equation. Further, the postdoc will contribute to uncertainty quantification and model validation, participating in both uncertainty modeling and propagation, and measurement campaigns in both the ICP torch and a glow discharge facility. These activities will be pursued as part of an interdisciplinary team working at the forefront of many areas of physics, computational science, and computer science.

Applicants must have a Doctorate in Science, Engineering, Computer Science, Computational Science, Applied Mathematics, or a related technical field, and a strong background in plasma modeling and simulation. Experience with uncertainty quantification in computational models is preferred.

For more information about the project and team, visit pecos.oden.utexas.edu. To apply, please send a cover letter describing your interests, a CV, and a list of three references to pecos_recruit@oden.utexas.edu.