

Multiphysics Solver Development Engineer – Plasma: ESI Group,

ESI Group, a dynamic and diversified company specializing in CAE solutions for virtual manufacturing and prototyping, seeks an expert with a development background in the computational modeling of low temperature technological plasmas.

The expert will be part of the Solver development group and participate in the development, modeling support, maintenance, and extension of our flagship multi-physics product – the ACE+ Suite. The plasma modeling team is currently working on non-equilibrium plasmas and their effects in reactor and feature scale models.

Essential Functions

- Work collaboratively with experienced computational physics research and development staff to advance the state-of-the-art in plasma modeling to make an impact in the semiconductor, automotive and aerospace industries.
- Design, and develop new algorithms and methodologies applicable to high performance computation of plasmas and electromagnetics in complex geometries, chemistries and process conditions using fluid, particle and hybrid approaches.
- Create validation and benchmarking problems to test and verify new developments and existing capabilities.
- Provide high quality consultation and support to customers related to new developments and capabilities
- Propose, define and contribute to new research topics relevant to customer needs and demands
- Participate in software engineering in relation to development and maintenance of software products

Education and Skills

- A PhD in plasma physics or engineering with development experience in plasma modeling, or an M.S. Degree in a relevant field with 5 or more years of directly relevant experience.
- Experience in the modeling and simulation of materials processing involving plasma is required.
- Industrial experience in the modeling and simulation of low temperature plasmas is highly desired.
- Reactor scale and feature scale modeling knowledge and experience is preferred.
- Experience in source code development for solving plasma governing equations is required.
- Hands-on experience modeling plasma chemistry (volumetric and surface reactions, involving ions and electrons) is required.
- Working experience with C/C++/F90 is preferred.
- Understanding of parallel programming and optimizing code for high performance is required.
- Knowledge of DSMC, molecular dynamics, Boltzmann and particle methods is preferred.

To apply, please submit your resume on this site: <https://esigroup.applicantpro.com/jobs/>

Contact:

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