

Lam Research Corporation

Product Engineer

Essential Functions and Duties

Provide product design guidance through modeling and simulation for processing plasmas and Computational Fluid Dynamics (CFD) with existing/new modeling platforms in the Etch Product Development group. Support and guide modeling activities/capabilities for capacitive, inductive, remote plasma, RF coupling, fluid flow modeling, thermal phenomena, and vacuum chamber design aspects in synergy with experiments and diagnostics. Manage and provide guidance for product design or optimization and establish links between product hardware/process engineering aspects. Contribute to engineering design, process, HW testing to solve product issues and interface in complex cross-functional teams. Develop and sustain process improvements to reduce production costs and increase yields.

Skills, Knowledge and Abilities

- Expertise in plasma modeling and platforms (HPEM / nonPDPsim / Vizglow), problem setup, optimization, troubleshooting for both ICP and CCP systems
- Expertise in CFD (ACE / CCM+ / Fluent, Comsol, Maxwell, HFSS) for flow, chemistry, thermal, structural, electromagnetics and related meshing
- Familiarity designing particle-in-cell simulations, for charged particle and electron trajectory simulations
- Sound knowledge of plasma material processing, plasma physics and diagnostics
- Significant experience with computer-based design and analysis of experiments
- Proficiency in modeling & simulation, computational sciences, numerical methods and optimization, programming and working with relevant compilers for Windows / Linux OS as appropriate
- Experience in programming with Fortran/ C/ C++, OpenMP/CUDA, Python/ Matlab and related SW tools
- Be open to designing experiments and/or guiding process experiments / diagnostics
- Subject matter expertise in plasma physics required; experimental background preferred but not required
- Ability to work in cross-functional environment and strong problem solving / analysis, communication, and presentation skills
- MS-Powerpoint, MS-Word, MS-Excel, Origin, JMP and other data processing software
- Ability to quickly learn and master new software tools is desirable
- High energy, self-motivated, quick study with flexible nature
- Work independently in a highly dynamic and fast-paced environment

Requirements

PhD Physics/Chemistry/ Engineering – Chemical, Electrical, Materials Science or related field

Demonstrated experience in computational physics, plasma science & technology, programming

Demonstrated experience in plasma modeling & simulation

Strong skills in computational engineering

New College Graduates / Postdoc / Prior industry or academic experience post-PhD

Ability to work in dynamic cross-functional teams and interface with experimentalists, design & process engineers

Interested applicants are invited to apply at [Apply-Fremont-Product-Engineer](#) or contact Saravanapriyan Sriraman (saravanapriyan.sriraman@lamresearch.com) directly