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## Essential Functions and Duties

Provide direct assistance and contributions in enabling, developing, and supporting activities in plasma modeling & diagnostics with existing and/or new modeling platforms in the Conductor Etch C&F group. Internship work is expected to enhance existing modeling capability and guide design activities for capacitively and inductively coupled plasma reactor operations.

## Requirements

- Prefer a candidate who is currently pursuing a Ph.D. in following disciplines:
  - Chemical / Electrical Engineering, Computational Plasmas, Physics, Materials Science
- Internship is expected to start May-June and be for 3-4 months, but can be extended if needed

## Skills, Knowledge and Abilities

- Expertise in computational plasmas, physics of RF sheath behavior, electromagnetics, plasma chemistry
- Sound knowledge of plasma material processing, plasma physics and diagnostics
- Proficiency in computational sciences, numerical methods, and optimization
- Expertise in coding and GUI development: Fortran/C/C++, OpenMP/CUDA, Python/Matlab, Compilers
- Ability to develop from scratch particle-in-cell charged particle and electron trajectory simulations
- Knowledge and proficiency in HPEM/nonPDPsim plasma modeling platforms, their source code, problem setup and troubleshooting for ICP & CCP systems
- Knowledge and experience in data science/machine learning also preferred but not required
- Ability to quickly learn and master new software tools
- MS-Powerpoint, MS-Word, MS-Excel, Origin, JMP and other data processing software
- Strong communication, analysis, and presentation skills
- High energy, self-motivated, quick study with flexibility
- Ability to work in fast-paced, results-oriented, cross-functional and matrix-managed environment
- Provide regular meetings, daily updates and internal presentations
- Meet project deliverables and requirements on time