

Faculty Name:

Carlos Paz-Soldan

Faculty Email:

carlos.pazsoldan@columbia.edu

Lab:

Columbia Plasma Physics Laboratory

Project Title:

Draw and Design Tokamak Structures

Description:

This project will focus on designing new supporting structures for a tokamak device that is being refurbished in the Applied Physics & Applied Mathematics' plasma lab. As part of this project the candidate will:

- 1) Build a CAD model from existing resources and direct measurements of the existing device
- 2) Design new structures to support the windings of a large electromagnet
- 3) Perform structural and thermal analysis of the new magnet to ensure robustness of the resulting design
- 4) Document their design for future fabrication and use
- 5) Participate in group discussions and perform reading to understand the broader context of this project in the space of fusion engineering

The candidate will be supervised by Prof. Carlos Paz-Soldan and Dr. Christopher Hansen. The project will build the candidates skills related to mechanical and electro-magnetic design and provide a unique opportunity to engage in the burgeoning field of fusion engineering.

Location of Research:

On-Site

of hrs/week:

40

Department/Program:

Applied Physics and Applied Mathematics

Eligibility:

BS, First Year, BS, Second Year

To apply, please contact:

carlos.pazsoldan@columbia.edu