



## Corporate Internship Program on Plasma Technology Applications



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**Project Title:**

Exploring physics informed neural networks for plasma science and technologies

**Project Reference Code:**

CFDRC-Kolobov

**Host Facility:**

CFD Research Corporation

**Host Facility Location:**

6820 Moquin Dr NW, Huntsville, AL

<https://www.cfd-research.com/>

**Project Description:**

CFDRC is seeking a summer intern with good computer skills to explore Physics Informed Neural Networks for solving direct and inverse problems in plasma science and technologies. The intern will learn how to solve partial differential equations using artificial neural networks and apply available software packages to solve specific problems. Background knowledge of computer science and plasma physics is a plus. The intern will work closely with researchers from CFDRC and other ESPCoR institutions to develop and apply computational tools for solving plasma problems of interest. Some levels of qualifications are required in programming, visualization & data exploitation on Linux and Windows platforms. Work experience with MS Office applications for reporting and presentation of results is required.

**Disciplines:**

Physics Informed Neural Networks, Computer Science, Computational Plasma Physics, Electrical and Computer Engineering

**Is U.S. citizenship required to participate in this project?**

No

**Internship Location and COVID-19 related Backup Plan**

The internship location is at CFD Research Corp. in Huntsville, AL. We are planning for an in-person internship. However, due to the continuing COVID-19 pandemic, we are preparing additional options to ensure that the internship will take place, such as a hybrid or fully virtual option.

**Name(s) of Mentor(s) and contact information:**

Dr. Vladimir Kolobov ([vik@cfdrc.com](mailto:vik@cfdrc.com)) Phone: 256-726-4847

Dr. Robert Arslanbekov ([rra@cfdrc.com](mailto:rra@cfdrc.com)) Phone: 256-726-4808

**Internship Coordinator/ HR manager:**

Rick Wilbourn, HR manager ([rick.wilbourn@cfdrc.com](mailto:rick.wilbourn@cfdrc.com)) Phone:256-726-4901

The name and contact information of personnel at the host facility is provided for further assistance with questions regarding the host facility or the project.



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Interns will not enter into an employee/employer relationship with the host facility. No commitment with regard to later employment is implied or should be inferred.