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ESCUELA TÉCNICA SUPERIOR DE INGENIERÍA AERONÁUTICA Y DEL ESPACIO

Research Engineer

Machine Learning to accelerate Computational Fluid Dynamics

Job description

We are looking for a skilled researcher to work on acceleration techniques for high order discontinuous Galerkin methods for fluid dynamics. We have shown that Machine Learning can be useful to provide acceleration for simple turbulent cases. This position will develop Machine Learning acceleration techniques to solve complex applications related to wind turbines and aeroacoustics.

The project requires a good knowledge of numerical techniques for fluid dynamics (CFD), HPC and machine learning techniques.

We are looking for a highly motivated and dynamic researcher to join Prof. Ferrer's team (https://sites.google.com/site/eferrerdg/) at the school of aeronautics ETSIAE-UPM in Madrid, Spain. The successful candidate will have good communication and analytical skills, and should be able to work independently and also collaborating with a team.

Required qualifications

Mandatory technical skills and experience:
- **Background:** PhD in engineering, applied mathematics or physics.
- **Required knowledge**: Computational Fluid Dynamics, Machine Learning (Neural Networks, Reinforcement Learning, etc.)
- **Skills:** Excellent computational skills: Fortran, Python and Machine Learning (e.g., Keras).
- **Additional knowledge**: wind turbines, aeroacoustics is beneficial.

Language skills:
- Fluent in English.
- Spanish is advantageous but optional.

What do we offer?

A competitive salary for 18 months (initially but can be extended). We also offer to work in a stimulating, young and multicultural environment, and to be part of a dynamic and growing research team.

How to apply?

Please send your CV, including track record of publications, and contact references, to esteban.ferrer@upm.es quoting the reference **Research_CFD_ML_2022** before **25th of January**