Research, Informatics and Graduate Studies

https://sites.gtiit.edu.cn/research/positions/guangdong-technion-israel-institute-of-technology-job-post-research-fellow-vikrant-guptaa-research-group-1/

Guangdong Technion-Israel Institute of Technology Job Post – Research Fellow (Vikrant Gupta's Research Group)

Position
Research Fellow

Program
Mechanical Engineering Robotics

Contact
Assoc. Prof. Vikrant Gupta

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Webpage: Personal Webpage

Application Deadline
Open till filled

Location
Guangdong Technion – Israel Institute of Technology (GTIIT), China

Description

Position Title: Research Fellow

Department: Mechanical Engineering Robotics

Report to: Vikrant Gupta

Start Date: 26-04-01

Type of Position: Full-time

Number of Hiring: 1

Position Description:

Data-driven methods are gaining popularity for predicting complex systems, including turbulent flows. In this project, we focus on implementing data assimilation methods to predict high-Reynolds number wall flows relevant to wind energy. Data assimilation methods constrain the governing equations to be close to the ground truth by optimally using the available sparse measurements. However, it is not clear under what conditions can they work, if they can be scaled to high Reynolds numbers, and if they can handle the intermittent dynamics of three-dimensional turbulence. The postdoctoral research fellow will combine CFD, low-order modelling, machine learning with data assimilation techniques to answer these challenging questions.

Duties and Responsibilities:

- Implement ensemble Kalman Filter and particle filters for predicting wall turbulence
- Publish work in high impact journals and present at reputed international conferences
- Support graduate students in the research group
- Maintain GPU clusters in the group and help with procuring new clusters
- Help the PI with other research tasks

Required Job Specifications

- Required qualification / academic degree: PhD in computational fluid dynamics and related area.
- Required experience: Experience in high performance computing is a must. Experience in boundary layer simulations, wind turbine simulations, and GPU computations are desirable.

Required Job Competencies:

- Language ability:C, C++, and Fortran
- Proven publication track record
- Ability to work in a team

Application Details

Please send your CV with a cover letter to vikrant.gupta@gtiit.edu.cn in the format of name + position (post ID). Only qualified candidates will be contacted.