

Research, Informatics and Graduate Studies

<https://sites.gtiit.edu.cn/research/positions/gs-2024007/>

PhD Positions in Turbulence prediction from sparse observations (GS-2024007) – Group of Assoc. Prof. Vikrant Gupta

Description

The Mechanical Engineering (Robotics) Program (group of Vikrant Gupta) is looking for a motivated PhD candidate to conduct research on turbulence prediction in practical situations using data assimilation and machine learning techniques. Contract duration: 3 + 1 years.

Project Details

The study of fluid mechanics is undergoing a transformation due to recent advancements in measurement techniques and computational power. Data-driven methods can now be utilized to forecast increasingly complex turbulent flows. However, sparsity of measurements requires knowledge incorporation for predicting practical systems. This project involves using governing equations and model-reduction tools for predicting turbulence from highly sparse observations. The project recently received a reputable grant from NSFC, China.

The student will work in collaboration with other team members and have access to research facilities at Guangdong Technion and Technion-IIT, Israel. The student will be trained in big data and state-of-the-art computational tools. International students are welcome. The tuition will be fully covered and a generous stipend is offered (per month RMB 7000 in Shantou and \$ 2167 in Haifa). The degree is from Technion – Israel Institute of Technology, which is among the most reputed universities in the world, and we maintain the same qualification standards at Guangdong Technion.

Keywords

Forecasting, Turbulence, Data assimilation, Machine Learning

Selection Criteria

- Master's degree (or an excellent Bachelor's degree) in Engineering or Science (essential)
- Basic understanding of the Navier-Stokes equations and machine learning (essential)
- Experience in data assimilation (desirable)
- Good communication skills, good command of English (essential)
- Ability to work independently as well as in a team environment (essential)
- Ability to author scientific reports and co-author scientific publications (essential)
- The PhD candidate must fulfill the requirements for admission to the Technion Graduate School and needs to comply with its regulations leading to the PhD degree: <https://graduate.technion.ac.il/en/prospective-students/>

Application

- Application deadline: 31 December 2024 (full consideration), 28 February 2025
- Send required documents to: vikrant.gupta@gtiit.edu.cn
- Please click [here](#) for the details.

Position

PhD

Program

Mechanical Engineering (Robotics)

Contact

Assoc. Prof. Vikrant Gupta

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[Web Page Link](#)

Application Deadline

28 February 2025

Date posted

September 10, 2024

Location

Guangdong Technion – Israel Institute of Technology (GTIIT), China & Technion-Israel Institute of Technology, Israel.

[Fees & Finance](#)

[How to Apply](#)

Contact

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