

# Research, Informatics and Graduate Studies

<https://sites.gtiit.edu.cn/research/positions/gs-2024004/>

## PhD/Master (MSc) Positions in Alternative Fuels for Internal Combustion Engines (GS-2024004) – Group of Assoc. Prof. Pavlòs Dimitriou

### About the University

**Guangdong Technion-Israel Institute of Technology (GTIIT)** is a public technological institute and non-profit research university in Shantou, Guangdong province, China. GTIIT is the first Sino-foreign cooperative university with an independent legal personality to introduce high-quality higher education resources from the Technion-Israel Institute of Technology. Technion is a prestigious public research university based in Haifa-Israel, well-known for research innovations. Since 2004, Technion has celebrated three Nobel Prize laureates and is consistently ranked as a top-100 university. The vision of GTIIT is to become a world-class international university, conducting cutting-edge research in science and technology.

### Description

The Mechanical Engineering Program (group of Pavlos Dimitriou) is looking for 2–3 PhD/Master candidates to conduct research projects in alternative fuels (hydrogen, ammonia) combustion and energy recovery solutions for power generation and marine applications.

Contract duration: 2–3 years for Master and 3 + 1 years for PhD.

### Project Details

Current global efforts to cut greenhouse gas emissions have urged the need for essential steps towards independence from fossil fuels. China has pledged to achieve a carbon-neutrality by 2060, and in this effort, the students will look at alternative solutions for power generation and marine applications. The research activities will include alternative fuels such as hydrogen, ammonia, biofuels and synthetic fuels combustion to power compression- and spark-ignited internal combustion engines. The work will consist of experimental testing on brand new engine testbeds and simulation analysis of combustion fundamentals and air path systems.

### Keywords

Internal combustion engines, power generation, alternative fuels, hydrogen, ammonia

### Selection Criteria

- PhD: Master's degree (or equivalent) in Mechanical Engineering or any relevant discipline is essential.
  - Strong background in combustion and internal combustion engines is essential.
  - Relevant prior experience with experimental and/or computational skills is essential.
- MSc: Bachelor's degree (or equivalent) in Mechanical Engineering or relevant discipline is essential.
  - Strong background in combustion and internal combustion engines is preferred.
  - Relevant prior experience with experimental and/or computational

### Position

PhD/Master

### Program

Mechanical Engineering (Robotics)

### Contact

Assoc. Prof. Pavlos Dimitriou

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[Web Page Link](#)

### Application Deadline

Open till filled

### Date posted

July 3, 2024

### Location

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

### Fees & Finance

How to Apply

skills is preferred.

- Good communication skills, good command of English (essential).
- Chinese language skills (preferred but not essential)
- Ability to work both independently and in a team environment (essential)
- Ability to author scientific reports and co-author scientific publications (essential)
- Strong interest to work temporarily at research institutes in China, Europe, Israel and Japan (essential)
- Willingness to participate in other research projects (essential)
- The candidate must fulfil the requirements for admission to the Technion Graduate School and needs to comply with its regulations leading to the PhD/MSc degree: <https://graduate.technion.ac.il/en/prospective-students/>

## **Application**

- Application deadline: Open till filled
- Should you need more details, please contact Asst. Prof. Pavlos Dimitriou: [pavlos.dimitriou@gtiit.edu.cn](mailto:pavlos.dimitriou@gtiit.edu.cn)