

Research, Informatics and Graduate Studies

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PhD/Master (MSc) Positions in Multiphase thermal-hydraulic behavior of zeotropic mixtures (GS-2021005) – Group of Asst. Prof. Kumaran Kannaiyan

About GTIIT

Guangdong Technion-Israel Institute of Technology (GTIIT) is the branch campus of Technion-Israel Institute of Technology located at Shantou, Guangdong-China. Technion is a prestigious public research university based in Haifa-Israel, and it is well-known for research innovations. Until now, three of its faculty members are honored with the “Nobel prize” for their innovations.

About GTIIT MSc/PhD Programs

All the GTIIT M.Sc. and Ph.D. students are enrolled in the Technion-Israel Institute of Technology. The research projects are jointly supervised by faculty members from both GTIIT (as supervisor) and Technion (as co-supervisor). Therefore, students are given an opportunity to study at Technion for one to two semesters while continuing their research at GTIIT. Upon successful completion of their thesis, students are awarded degrees by the Technion-Israel Institute of Technology.

For more details, please refer to [Weblink](#).

“Please note that the Ph.D./M.Sc. students must satisfy the requirements for admission to Technion Graduate School and comply with its regulations as detailed here: <https://graduate.technion.ac.il/en/prospective-students/>”

Project Details and Responsibilities

In 2020, China has pledged to achieve a ‘Carbon-neutrality’ by 2060. Going forward, its emission policies will give an impetus to develop technologies that help to reduce the greenhouse gas emissions, and in turn, achieve its carbon-neutrality target. This is broadly the underlying theme of this research project. The M.Sc./Ph.D. students will work on research projects to investigate the multiphase thermal-hydraulic behavior of alternative working fluid mixtures. Role of these mixtures is to enhance the efficiency of energy exchange process and at the same time reduce the environmental impact. The end-application of this project range from refrigeration and air-conditioning industry to tapping of renewable energy sources to waste-heat recovery from industrial sources. The student responsibilities will include, but not limited to, participation in the design and development of the experimental facility, perform experimental measurements using advanced research tools, data curation, and publication of research findings in reputed peer-reviewed journals. Students will be encouraged to participate and present their work in international conferences. This project will also provide opportunities to perform theoretical/numerical simulations.

Contract duration: 2 to 3 Years (M.Sc.) and 3 to 4 Years (Ph.D.).

Prof. Kumaran Kannaiyan from the Mechanical Engineering (Robotics) Program is looking for multiple Ph.D./Master students to conduct research projects in ‘Multiphase thermal-hydraulics of novel zeotropic mixtures.’ For more details about the faculty member, please refer to this [weblink](#).

Keywords

Multiphase flow; Zeotropic mixtures; Alternative working fluids; Alternative

Position

PhD/Master

Program

Mechanical Engineering Program
(Robotics Track)

Contact

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[Web Page Link](#)

Application Deadline

Open till filled

Date posted

April 19, 2021

Location

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

Fees & Finance

How to Apply

Refrigerants; Thermal-hydraulics; Refrigeration and Air-Conditioning; Renewable energy

Selection Criteria

- PhD: Master's degree (or equivalent) in Mechanical, Chemical, or any relevant discipline is essential.
 - Strong background in Multiphase flows and mathematical skills is preferred.
 - Relevant prior experience with experimental and/or computational skills is preferred.
- MSc: Bachelor's degree (or equivalent) in Mechanical, Chemical, or relevant discipline is essential.
 - Strong interest in Multiphase flows, experimental / computational research is preferred.
- Good communication skill is essential.
- Evidence of analytical and English language skills are essential.
- Ability to work independently as well as in a team environment is essential.
- Ability to author scientific reports and scientific publications is preferred.

Application

- Application deadline: Open till filled
- Should you need more details, please contact Asst. Prof. Kumaran Kannaiyan: kumaran.kannaiyan@gtiit.edu.cn