Research Fellow (Multi Modal based SLAM)
Nanyang Technological University

Job Title	Research Fellow (Multi Modal based SLAM)
Department	Centre for Advanced Robotics Technology Innovation
Institution	Nanyang Technological University
	Singapore, , Singapore
Date Posted	Feb. 21, 2024
Application Deadline	Open until filled
Position Start Date	Available Immediately
Job Categories	Professional Staff
Academic Field(s)	Robotics
	Engineering - Other
Job Website	https://ntu.wd3.myworkdayjobs.com/en-US/Careers/details/Research-Fellow--Multi-Modal-based-SLAM-_R00016266
Apply By Email	

Job Description

Centre for Advanced Robotics Technology Innovation (CARTIN) is looking for a candidate to join them as a Research Fellow, in the area of robotic navigation in a project that involves simultaneous localization and mapping (SLAM) algorithm development & implementation for the firefighting scenarios where the noises caused by fire and water spray can degrade the mainstreamed SLAM algorithms severely.

The successful candidate will work with Prof. Danwei Wang and a group of Research Fellows, Research Associates, and Ph.D./Masters/Bachelors students in the School of Electrical and Electronic

Engineering (EEE) at Nanyang Technological University, Singapore.

Key Responsibilities:

- Perform research, development, implementation, and experimentation of the autonomous navigation algorithm for mobile robots in smoky environments

- Solve challenges in multi modal (4D Radar, 3D Lidar, RGB Camera and Thermal Camera) simultaneous localization and mapping (SLAM), such as outlier robust state estimation, multi-sensor fusion, and gradient-free optimization

- Develop multi-modal SLAM software for autonomous robotics based on project requirements

- Responsible for robot design and implementation (advise on the sensor mounting for better perceiving and fusion)

- Handle other engineering support on software and hardware

Job Requirements:

- Ph.D. degree in automatic control, robotics, etc

- Familiar with single/multi-robot SLAM, SLAM back-end solver (Factor Graph, Gradient-free Optimization, Kalman filter), and multi-sensor fusion algorithm

- Strong skills in C++, Matlab, Linux, and experience with ROS, and code management tools (git)

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Experience with autonomous robotics platforms, and navigation algorithms with different sensors (3D LiDAR, RGB cameras, thermal cameras, IMU)

- Experience with real-world robot system design and integration.

- Good verbal and written communication skills in English and Chinese as the incumbent is required to liaise with vendors in China

- Experience in industrial product commissioning and delivery

- Experience with collaborative SLAM for the multi-robot system is a plus

- Prior working experience with miili-wave radar is a plus

We regret to inform that only shortlisted candidates will be notified.

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

Centre for Advanced Robotics Technology Innovation

Nanyang Technological University

Singapore