

Call for Applications for a Project Postdoctoral Fellow Position

Applications are invited for one post of *Project Post-Doctoral Fellow* under the project entitled "**Automated Synthesis of Motion Plans for Large-Scale Multi-Robot Systems from Complex Specifications**" at the Cyber-Physical Systems Laboratory in the Department of Computer Science and Engineering, IIT Kanpur. The project is funded by DRDO.

The Cyber-Physical Systems Laboratory is engaged in research in various aspects related to the development of autonomous systems, with a special focus on multi-robot systems. We apply techniques from AI and formal methods to solve challenging problems in the domain of robotics and automation. The lab is equipped with a high precision motion capture system and various robots, including mobile ground robots, quadcopters, and a humanoid robot. Recent successes of the lab include the development of scalable coverage algorithm for a robot swarm, algorithms for energy-efficient design of warehouse employing mobile robots, and deep neural network based control of a quadcopter.

Essential Qualification

- Ph.D (Computer Science/ Information Technology/ Electrical Engineering/ Electronics and Communication Engineering/ Mechanical Engineering/ Aerospace Engineering).
- Strong Software development skill in C++.
- Experience of Working with ROS and real robotic systems.

Desirable Qualification

Prior research experience in one of the following areas: (a) Formal Methods, (b) Artificial Intelligence (c) Embedded and Cyber-Physical Systems, (d) Robot Motion Planning, (e) Internet of Things.

Nature of Work

The Candidate would be responsible for carrying out cutting-edge research in the area of **AI and formal methods for robotics and automation**. The candidate is expected to develop algorithms for autonomous vehicles, implement the algorithms as software systems, evaluate the system through simulation, and finally test it on real robotic systems.

The candidate is expected to work independently and also in collaboration with graduate and undergraduate students, and produce high-quality research results that lead to publications in top conferences and journals.

Duration of Appointment

The post is purely temporary and is for one year, which may be extended for up to one more years based on the performance.

Salary Range: Consolidated Salary (INR)

60000 / 65000 /70000

Submission of Application

Interested candidates are requested to submit their applications through email to isaha@cse.iitk.ac.in. The application should contain the following:

1. Current curriculum vitae including all educational/academic details and a complete list of publications/ patents
2. Statement of Purpose highlighting the major research contribution during PhD, the reasons for applying, and the career goal.

Also, please arrange two reference letters to be directly sent to isaha@cse.iitk.ac.in.

The deadline for submitting the email application: **February 29, 2020**.

The deadline for receiving the reference letters: **February 29, 2020**.

Selection Procedure

Candidates will be selected for interview based on the suitability of their profile for the job. The selected candidates will be invited for a Skype interview.

Tentative date for interview: **March 4-5, 2019**.