

## Visiting PhD and Master's Thesis Positions on Robotics and Control at UofA, Canada

### The Position:

Qualified applicants are invited to apply for **Master's thesis projects** and **Visiting PhD** positions at the NODE lab, University of Alberta (Canada) to pursue new and creative research ideas on *i*) precision coordination and risk-aware navigation for connected autonomous mobile systems, and *ii*) learning-aided control for human-autonomy interaction in dynamic environments (**Start Date: Summer and Fall 2025; duration 6-8 months**). Successful candidates will have strong collaboration and coordination skills to work directly with both research teams (at KIT and NODE lab, University of Alberta) at multiple levels to contribute to this research project successfully.

### Required Qualifications:

- Completion of a Bachelor (or Master's) of Science/Engineering degree in Electrical Engineering, Mechanical Engineering, Computer Science, Mathematics, and Human Perception (interdisciplinary PhD research are preferred)
- Keen interest and/or experience (coursework, research, and/or industrial) in: controls, machine vision, SLAM, hybrid systems, and human perception
- Proven ability to work independently

### Preferred Assets:

- Programming for embedded systems, ROS, and coding in Python/C++
- Industry and/or mechatronic systems design experience.
- Interest and experience in interdisciplinary and translational research in robot learning and perception with AI industries.

### Work Environment:

NODE Lab is directed by Dr. Ehsan Hashemi in the Department of Mechanical Engineering, University of Alberta, Canada (<https://sites.google.com/ualberta.ca/networked-optimization-diagnos/about-us>). The NODE lab research focuses on cyber-physical systems, human-robot cooperative controls, and distributed control to improve reliability, safety, and performance in autonomous systems.

### Application Procedure:

Interested candidates may send their CV, together with a cover letter and the names of three references by **April 20, 2025** to Dr. Ehsan Hashemi (he/him) at [ehashemi@ualberta.ca](mailto:ehashemi@ualberta.ca) using the subject line "Application\_KIT\_NCS25".

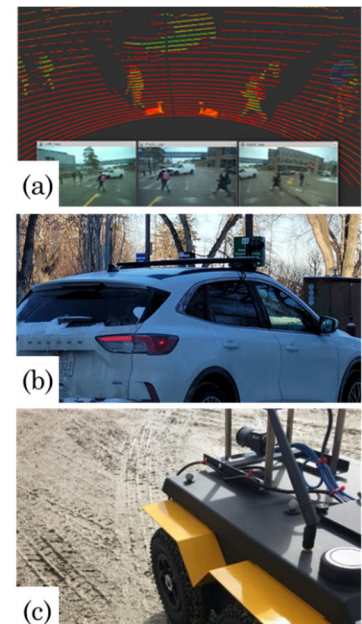


Figure 1. (a) Visual-LiDAR risk-aware navigation in dynamic environments (b) perception test vehicle (c) precision coordination for motion planning