



Open PhD position at the University of Bonn, Germany



RHEINISCHE
FRIEDRICH-WILHELMS-
UNIVERSITÄT BONN

Position: 3 year fully funded 100% TV-L E13
Start date: Within the next 6 months
Application deadline: August 15, 2022

The Humanoid Robots Lab at the University of Bonn in Germany, headed by Maren Bennewitz, is looking for highly motivated and qualified PhD students (f/m/d) in the area of navigation, mobile manipulation, and visual perception for robots operating in human environments.

About the Candidate:

Candidates for PhD positions should have a background in one or more of the following fields:

- Deep learning
- Reinforcement learning
- Computer vision
- Robotics & autonomous systems
- Human-robot interaction
- Simultaneous localization and mapping (SLAM)
- Robot navigation
- Pattern recognition
- Machine learning

Candidates for PhD positions must hold a very good Master's degree in computer science, engineering, physics or a related field. Solid programming skills in C++ and Python are required, expertise in working with robotic systems is a plus. Very good knowledge of English is a prerequisite, knowledge of German is welcome but no requirement. High interpersonal skills are a big plus and high reliability is expected.

As the candidates will be involved in teaching activities in courses on robotics offered by the lab, teaching experience and excellent communication skills are a big plus.

About the Humanoid Robots Lab:

The Humanoid Robots Lab has been participating in several national and international projects funded by the German Research Foundation and the European Commission. The lab conducts research on robots acting in human environments. In particular, we develop techniques that allow robots to adapt their behavior to the environment and to the surrounding people thereby exploiting semantic information about the environment and the activities of users. We have introduced several novel methods for environment modeling as well as for planning navigation and manipulation actions for wheeled and biped robots. Among them are techniques for 3D environment perception and exploration, footstep planning, manipulation planning, human-aware navigation, and imitation of human motions. Currently, our special focus lies on motion planning and navigation through cluttered and dynamic scenes as well as on generating foresighted robot behavior by anticipating human behavior. Additionally, we work on active perception of crops for monitoring growth and enable harvesting in the cluster of excellence PhenoRob.



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About the University:

The University of Bonn was founded in 1818 and is one of Germany's most important institutes of higher education. As a place of learning to over 38,000 students, it enjoys an outstanding reputation both at home and abroad. It is one of the world's leading research-based universities and proudly holds the status of academic excellence. Our institute for computer science has a long tradition of robotic research.

About Bonn:

Bonn is a city on the banks of the river Rhine in the German state of North-Rhine-Westphalia and has a population of around 330,000. The city has been founded in the first century BC as a Roman settlement, making it one of Germany's oldest cities. Bonn has an oceanic climate and due to its location a few kilometers south of the Cologne basin valley, it belongs to one of Germany's warmest regions along the Rhine. With the amenities of a former capital city, Bonn is well connected with the Cologne-Bonn airport and high-speed rail.

RELEVANT LINKS:

- **Humanoid Robots Lab:** <https://www.hrl.uni-bonn.de/>
- **University of Bonn:** <http://www.uni-bonn.de>
- **Bonn, Germany:** <http://en.wikipedia.org/wiki/Bonn>

How to Apply:

If you are qualified and interested in the position, your application should include:

- 1) Cover letter describing background, research interests and relevant experience
- 2) Programming experience (C++, Python, Tensorflow, PyBullet, Isaac Gym, Gazebo, ROS, etc.)
- 3) CV and a transcript of records
- 4) Date of availability
- 5) Names and contact information for two reference letters

All documents should be submitted by August 15 via email as a single pdf file smaller than 8 MB to: jobs22@hrl.uni-bonn.de



Scan for more
information

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