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The **Lagadic** group at Inria/Irisa Rennes, France

<http://www.irisa.fr/lagadic/welcome-eng.html>

has an open position for a **Robotics Engineer** aimed at developing and managing the software/hardware integration of the quadrotor platforms available in the lab.



## ROLES

The engineer will be in charge of the hardware/software development for managing the group of quadrotor UAVs available in our lab (currently 6 MikroKopters and 1 Iris). Some examples of activities are:

- implementation/testing/debugging of state estimation and flight control algorithms for the individual quadrotors
- implementation/testing/debugging of formation control algorithms
- integration of new hardware onboard the quadrotors (e.g., cameras, optical flow sensors)
- management (and development of new features) of the mission control software
- maintenance of the robot fleet (and associated hardware), and technical support to the other group members involved in activities with quadrotor UAVs

## SKILLS

The ideal candidate is expected to have a strong background in software engineering (C/C++) for managing and extending the existing software framework used in the lab.

Good experience with implementation of state estimation/motion control algorithms for mobile robots (in particular quadrotors) is also expected, as well as the willingness to master new hardware/software tools, to be open to novelties (e.g., new sensors), and to be fond of testing robotics algorithms in real conditions.

A M.Sc. degree in robotics, computer science, applied mathematics (or related fields) is a minimum requirement, while a Ph.D. degree is a plus. In general, the successful applicant is expected to possess a good level of maturity in code development and real implementations of robotics algorithms.

The applicant should be proficient in C/C++ and ROS. Good knowledge of:

- Robotic simulator softwares (such as Gazebo or V-REP)
- Matlab/Simulink

is a plus.

Finally, a good level of written/spoken English is also required in order to interact with the rest of the team.

## OFFER

The position is funded until **end of April 2018** starting at the earliest. The candidate will be under the supervision of Dr. Paolo Robuffo Giordano

[http://www.irisa.fr/lagadic/team/Paolo.Robuffo\\_Giordano.html](http://www.irisa.fr/lagadic/team/Paolo.Robuffo_Giordano.html)

and will work in close collaboration with the other members of the Lagadic group involved in activities with quadrotors (examples: formation control using onboard vision, aggressive visual-based control, cooperative indoor localization/mapping).

Possible collaborations with other external groups will also be strongly encouraged.

Salary and health insurance are regulated by the French legislation and depends upon the successful candidate experience.



## ENVIRONMENT

The Lagadic group (about 40 people, among which 9 permanent researchers and 20 PhD students)

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is internationally recognized for its scientific activity as well as for experience in technology transfer in the field of visual tracking, visual servoing, computer vision and sensor-based control for robotics applications.

The facilities available in the group include:

- three 6-dof manipulator arms
- a 6-dof torque-controlled and backdrivable arm
- a pioneer indoor mobile robot
- two state-of-the-art human-size humanoid robots (Romeo and Pepper)
- a fleet of quadrotor UAVs
- an indoor large testing arena instrumented with Vicon

The Lagadic group is part of the INRIA/IRISA-CNRS lab that spreads its activities in 30 research teams working in computer science, signal processing, and control. It involves about 650 people, including 120 professors and assistant professors, 100 full-time researchers, 80 administrative staff, and 250 PhD students.

## HOW TO APPLY

Interested candidates must send to Dr. Paolo Robuffo Giordano (prg [at] irisa.fr) the following material:

- motivation letter
- detailed CV
- name of two referees
- any relevant information for proving the experience and willingness of the candidate in designing, developing, and testing complex robotic algorithms

