Offer #2024-07795

Wireless Embedded System Engineer, AIO Team, Inria-Paris

Contract type : Fixed-term contract

Level of qualifications required : A levels + 2 years of higher education or equivalent

Fonction : Temporary scientific engineer

Level of experience : Recently graduated

Context

Within the framework of:

AIO team at Inria-Paris
In collaboration with the SWARM Associate Team with UC Berkeley
Potential collaboration with the OpenSwarm European Project
Travel to conferences is covered within the context of the project

Existing Hardware/Software:

OpenWSN and RIOT
The Single-Chip Mote Hardware Platform

Assignment

For a better knowledge of the proposed research subject :

The AIO team at Inria-Paris: https://aio.inria.fr/
The Single-Chip Mote academic publication, available here:https://hal-lirmm.ccsd.cnrs.fr/INRIA-SILICONVALLEY/hal-02420868v1

Responsibilities :

Maintaining a repository of their code
Performing experiments with hardware
Presenting results of these experiments both within the group and to the wireless networking community

Main activities

Main activities:

Programming off-the-shelf and custom wireless embedded systems
Collaborate with researchers and other engineers to experiment on large numbers of networking devices
Impelement and assist with design of new wireless networking protocols
Perform FPGA development to augment existing wireless systems with additional protocols and time synchronization capabilities
Use software defined radios for prototyping and experimentation.

Additional activities:

Develop and maintain a repository of software
Potentially: development of new hardware platforms (PCB design)

Skills

Technical skills and level required:

A degree with focus on embedded C or 2+ years of experience in industry/academia
2+ years of programming embedded systems hardware
Some experience with FPGA development and programming is ideal
Some experience with Python for data analysis is ideal
Some experience with Verilog/VHDL is ideal

Strong analytical and problem-solving skills

Languages:

Excellent English proficiency
Familiarity with French is helpful but not strictly necessary

Relational skills:

Strong verbal and written communication skills
Ability to concisely present experimental results

Benefits package

- Subsidized meals
- Partial reimbursement of public transport costs
- Leave: 7 weeks of annual leave + 10 extra days off due to RTT (statutory reduction in working hours) + possibility of exceptional leave (sick children, moving home, etc.)
- Possibility of teleworking and flexible organization of working hours
- Professional equipment available (videoconferencing, loan of computer equipment, etc.)
- Social, cultural and sports events and activities

General Information

- **Theme/Domain :** Networks and Telecommunications
  Instrumentation et expérimentation (BAP C)
- **Town/city :** Paris
- **Inria Center :** [Centre Inria de Paris](#)
- **Starting date :** 2024-09-02
- **Duration of contract :** 1 year, 6 months
- **Deadline to apply :** 2024-07-31

Contacts

- **Inria Team :** [AIO](#)
- **Recruiter :**
  Maksimovic Filip / filip.maksimovic@inria.fr

About Inria

Inria is the French national research institute dedicated to digital science and technology. It employs 2,600 people. Its 200 agile project teams, generally run jointly with academic partners, include more than 3,500 scientists and engineers working to meet the challenges of digital technology, often at the interface with other disciplines. The Institute also employs numerous talents in over forty different professions. 900 research support staff contribute to the preparation and development of scientific and entrepreneurial projects that have a worldwide impact.

The keys to success

We are seeking a talented and experienced wireless embedded system engineer to join the AIO project team at Inria. The ideal candidate will have extensive knowledge of wireless communication protocols, embedded system programming, and some experience with FPGA development. You will work closely with a team of engineers and scientists to design, implement, and test large-scale wireless sensor networks on off-the-shelf and custom-built academic hardware.

> **Warning** : you must enter your e-mail address in order to save your application to Inria. Applications must be submitted online on the Inria website. Processing of applications sent from other channels is not guaranteed.

Instruction to apply

Defence Security :
This position is likely to be situated in a restricted area (ZRR), as defined in Decree No. 2011-1425 relating to the protection of national scientific and technical potential (PPST).Authorisation to enter an area is granted by the director of the unit, following a favourable Ministerial decision, as defined in the decree of 3 July 2012 relating to the PPST. An unfavourable Ministerial decision in respect of a position situated in a ZRR would result in the cancellation of the appointment.

Recruitment Policy :
As part of its diversity policy, all Inria positions are accessible to people with disabilities.