Offer #2022-04889

PhD Position F/M Application Performance Management of Smart Field Devices for the industrial Internet of Things

Contract type : Fixed-term contract

Level of qualifications required : Graduate degree or equivalent

Fonction : PhD Position

Context

This is an unique opportunity for you to complete your education with a PhD between the industrial powerhouse Siemens, and the leading research institute Inria. As a Siemens employee, you will be primarily based in Erlangen, Germany, which frequent visits to Inria in Paris, France. You will be co-supervised by Siemens and Inria, benefiting from the best of both world, and resulting in a highly sought after combination of stellar engineering and scientific excellence.

Apply to this position by applying tohttps://jobs.siemens.com/jobs/307464?lang=en-us. What follows in this job description is taken from that job posting.

Do you like the sound of finding the smartest solution side by side with professionals and experts? If so, complete your education with a PhD position with us. We can help you to combine knowledge, discover connections, and formulate ideas. When you join our team, you will gain an insight into a range of departments and processes. It is a chance like no other to break new ground as we head into the future of electrification, automation, and digitalization. Seize this opportunity today!

Assignment

What part will you play?

In industrial sensor networks, it is not possible to make predictions about topology, traffic, and interactions due to changing participants, tasks, and network relationships. By tracing, logging, and measuring the behavior of IoT devices and their interactions, one can identify problems and unbalanced utilization and respond accordingly. In this thesis, you will explore and investigate methods, technologies and tools for monitoring and controlling smart sensor systems and sensor networks with regard to their behavior and performance:

- You determine the state of the art in the field of application performance monitoring and management
- You will examine methods and tools available on the market for their applicability in sensor systems and sensor networks
- You develop novel software components for sensor nodes
- You will develop procedures and methods for monitoring and controlling sensor systems and networks. Among other things, you will use established technologies from distributed computer systems
- You implement the new methods and software components prototypically on embedded systems
- You design, implement and test demonstrators for testing in industrial applications

Main activities

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Skills

We don't need superheroes, just super minds.

- You successfully completed your university studies (standard duration > 4 years) in the field of electrical engineering, mechatronics, computer science or similar. You already gained basic knowledge in the areas of distributed systems, machine learning, network technology and embedded systems
- You have knowledge of hardware-related programming, especially on constrained device classes with real-time operating systems
- You are confident in using at least one system programming language (ideally C/C++/RUST) and have knowledge of a high-level language (such as Java Script, Python, golang)
- Due to the international structure of the doctorate, very good English and German skills are required. Knowledge of French is an advantage

General Information

- **Theme/Domain :** Networks and Telecommunications
  System & Networks (BAP E)
- **Town/city :** Erlangen (DE) / Paris (FR)
- **Inria Center :** Centre Inria de Paris
- **Starting date :** 2022-09-01
- **Duration of contract :** 3 years
- **Deadline to apply :** 2022-06-30

Contacts

- **Inria Team :** AIO
- **PhD Supervisor :**
  Watteyne Thomas / thomas.watteyne@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.

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

Apply to this position by applying tohttps://jobs.siemens.com/jobs/307464?lang=en-us

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.