UNIVERSIDAD DE GRANADA

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Ofertas de Trabajo de Otras Entidades

Fully funded PhD position at the SeRCAS lab of Coventry University - UK. 06/04/2026. Fecha límite: 01/05/2026

A fully funded PhD position is available within the SeRCAS Lab - Secure and Resilient Connected Autonomous Systems under the Coventry-GITAM Cotutelle PhD Studentship programme.

PhD Project Title:

Drone-assisted Connected and Autonomous Vehicles for Enhanced Road Safety and Traffic Efficiency

Project Overview:

Recent research in cooperative perception and control for Connected and Autonomous Vehicles (CAVs) has moved rapidly into AI-driven frameworks. For perception, transformer-based models such as V2VFormer enhance vehicle-to-vehicle (V2V) cooperative sensing by dynamically weighting spatial and channel features across agents. On the decision-making and control side, multi-agent reinforcement learning (MARL) methods are being applied to CAVs to address safety, efficiency and coordination under mixed motives and shared information. At the same time, leveraging the advantages of drones in speed, flexibility, and wide field of view, recent studies recognized that aerial support through drones has significant potential in improving road safety and traffic efficiency, paving the way for drones and CAVs cooperation and large-scale deployment of drone-assisted CAV systems. Therefore, this PhD project advances CAV research by introducing a novel drone-assisted cooperative intelligence framework. Unlike existing V2V or V2X approaches, which rely on ground-based perception, this project leverages aerial sensing and AI-driven heterogeneous data fusion to improve environmental awareness and decision-making. From an industry standpoint, the proposed framework will enable new business models for stakeholders in the drone community, and further advance the development, deployment, and widespread adoption of CAV technologies.

Research Question:

This PhD project aims to answer the following research question:

"How can cooperative AI systems efficiently integrate heterogeneous aerial and ground sensor data, multi-agent learning, and realistic drone-CAVs interactions to optimize traffic environments at scale?"

Supervisory Team:
Soufiene Djahel, Shanti Chilukuri, Hui Zhou, and Vasile Palade

Requirements
We are looking for highly skilled applicants, from any nationality, who have demonstrated outstanding academic performance in Computer Science or closely related disciplines at both undergraduate and Master's levels (a distinction is essential). In particular, the successful applicants must possess a strong foundation in programming, mathematics, and the core principles of AI, together with a solid understanding of advanced topics such as Federated Learning (FL) and Multi-Agent Deep Reinforcement Learning (MADRL). Applicants must be able to rapidly master new simulation environments, analytical evaluation techniques, and experimental frameworks.

Mobility Requirement:
Year 2 of the PhD will be spent at **GITAM Deemed University** in India.

Application Deadline:
1 May 2026

Application Link:
Apply here

Start Date:
September 2026

Eligibility:
UK/International (including EU) graduates who meet the required entry requirements.

Duration:
Full-time – between three and three and a half years fixed.

Postdoctoral Research Positions in HPC or Compilers. 06/04/2026

Job Description
The GMAP research group (Website: https://gmap.pucrs.br/gmap, GitHub: https://github.com/GMAP) at the Pontifical Catholic University of Rio Grande do Sul (in the southern part of Brazil) invites applications for postdoctoral positions to investigate high-performance computing techniques in distributed heterogeneous computing systems. We seek highly motivated and independent

individuals eager to contribute to our research, which spans GPU programming, fault-tolerance, malleability/elasticity, compiler techniques, benchmarking, and parallel application design.

About Our Research:
Our group is a high-performance computing (HPC) research group whose core philosophy is that performance is a fundamental characteristic of computer systems. We work with applied research aiming to solve real-world problems both in academia and industry.
Ongoing research and projects include:
- Parallel application development
- Parallelization with compilers
- GPU Programming
- Stream processing systems
- Fault-tolerance
- Elasticity and Malleability
- HPC Benchmarking
As a postdoctoral researcher, you will conduct research and collaborate with master's and doctoral students in one or more of these fields. We provide mentorship on experimental design and scientific communication, supporting the development of a publication-ready body of work at the frontiers of HPC research.

Qualifications:
- Ph.D. or M.D./Ph.D. in computer science or a related field;
- Experience in one or more of the research areas of the research group;
- Proven experience in publishing scientific research at peer-reviewed conferences and journals;
- Excellent communication skills and the ability to work effectively in a team.

Desired Qualifications (not expected to have all of them):
- System languages such as C/C++ and Rust
- Scripting languages
- HPC MPI frameworks such as OpenMPI
- CUDA, OpenCL, or other GPU programming frameworks
- Clang/LLVM compiler frameworks

Scientific Environment:
The GMAP research group is situated at the Pontifical Catholic University of Rio Grande do Sul campus. The group is closely affiliated with the CIACD (Research Center in Artificial Intelligence and Data Science) and maintains active collaborations with foreign universities. Furthermore, GMAP has or has had projects/collaborations with industry partners, including HPE (Hewlett Packard Enterprise), SAP, and

Petrobras. This location offers a rich, interdisciplinary ecosystem to help build your career.

Compensation and Duration:
- The salary starts from R$10.000,00 Brazilian reais free of taxes. It depends on the qualifications of the candidate.
- The scholarship contract can be extended for up to 3 years. We seek candidates who want to make significant progress in research so that we can offer a permanent position.

How to Apply:
https://forms.gle/AMabD3BZ4wsTXXCx5

More Information:
Informal inquiries are welcome by email Dr. Dalvan Griebler at @email entitled "Application for Postdoctoral Research Position in HPC".

PhD position in Distributed Machine Learning and IoT. 16/03/2026. Fecha límite: 06/04/2026

Driving distributed machines learning by the network in IoT
− Ph.D proposal in Computer Science −

Director: Benoît HILT
Supervisors: Ismaïl BENNIS, Sébastien BINDEL
Laboratory: IRIMAS (UR 7499)
Research team: Network and Telecommunications
Place: 34 rue du Grillenbreit, Colmar (FR)
Duration: 3 years (starting on September 2026)
Funding: French government grant
Contacts: benoit.hilt@uha.fr, ismail.bennis@uha.fr, sebastien.bindel@uha.fr

Context
One research topic developed by the Network and Telecommunication team concerns the Internet of Things (IoT) in which each device connected to the Internet has its own computing power and energy capacity. In order to meet the QoS requirements of applications, devices can use different communication technologies with different features, such as the LoRa for long range transmissions and the NB-IoT/LTE-M for low latency communications. In the context of Machine Learning Algorithms (ML), communications between devices play a critical impact on the algorithms performances, including both data sharing and the decision-making. However, their characteristics are not sufficiently taken into account. Because it

affects the performance of machine learning algorithms, this issue is particularly important in wireless networks, due to variable throughput, packet loss, and power consumption constraints. Depending on the communication technology, particularly with LoRa, factors such as duty cycle must also be taken into account. To meet the requirements of machine learning (ML) algorithms in wireless networks, the use of distributed ML can fill this gap.

Research project
The proposed topic of this PhD thesis is the driving of distributed ML thanks to the network. Could be considered as a resource allocation problem in a distributed environment, four issues have been identified. The first one is the optimisation of data transmission, through the transmission parameters selection problem with the possibility to slice or aggregate data. The second one concerns the transmission scheduling problem under multiple communication technologies and related to the learning model update. The aim is perform a communication technology selection according to the constraints, such as the energy consumption for a transmission or the desired latency to transmit data for contributing to a global model. The third one is related to the concurrent scheduling, such a medium access technique. The last one is on the convergence and the fairness of asynchronous model. The use graph labelling technique will be used to model and guarantee to compute a solution either fair or egalitarian. The mobility of nodes could also considered under a test scenario related to industrial or vehicular networks.
All algorithms will be tested and validated with a simulator. The implementation of the protocol in a demonstrator will reinforce research results got previously. It will be a starting point for the development of innovative solutions for driving distributed ML thanks to the network.

Qualifications and requirements for candidates
This position requires:
1. A Master’s degree in Electrical or Computer Engineering, Computer Science, or a related discipline,
2. Excellent writing, communication and presentation skills in English,
3. Good knowledge in:
a) Good coding skills in Python and C, and excellent analytical capabilities,
b) LoRa technology, cellular communication ans Networking,
c) Machine learning.

How to apply
For all applicants:
1. Send per Email to the three supervisors the pieces listed below:
a) Your CV,
b) Your cover letter highlighting your knowledge and skills related to the topic of this

PhD work. If you have recommendation letter.s or referral.s join them to your cover letter,
c) A copy of your diplomas and transcripts of records indicating your exam results since your Bachelor’s degree (diplomas and TOR will be merged in a .zip file).
The Email subject MUST BE: DDML PhD Application from “First-name” “FAMILY NAME” (this last written in UPPERCASE). As numbered here over, your application email must contain three files.
The application deadline April 6th, 2026.