

## **2 PhD positions available – University College Cork (UCC), Ireland**

Applications are invited for two four-year doctoral studentships in computer science to be located at University College Cork as part of the SMARTeBuses project funded by the Sustainable Energy Authority of Ireland Research RD&D Programme.

The project classified as Non-economic Public Good Research under the EU State Aid regulations. The project will exploit, combine and improve cutting-edge AI technologies (Constraint Programming, Mixed Integer Programming, Metaheuristics and their combination with Machine Learning) to develop and implement optimization models for the operation of electric buses in Ireland with operational constraints (e.g., limited driving range and battery charging/discharging time).

Further details on the project are available at <https://tinyurl.com/r7e79ly>. General enquiries about the PhD positions can be made to Dr. Alejandro Arbelaez: [a.arbelaez@cs.ucc.ie](mailto:a.arbelaez@cs.ucc.ie) and/or Dr. Laura Climent: [l.climent@cs.ucc.ie](mailto:l.climent@cs.ucc.ie) (former student of Universitat Politècnica de Valencia (UPV)).

### **Applicant Expertise Requirements:**

These students will have an undergraduate or taught postgraduate degree in computer science or mathematics, with strong analytical, problem solving, and software experience. Students will be expected to have some experience in constraint programming, operations research, machine learning, optimization, local search, graph theory or artificial intelligence, e.g. having undertaken an undergraduate project in one of these areas or having completed an MSc in a closely related area. Other relevant areas of expertise would be knowledge in constraint, integer or dynamic programming, or evolutionary computation or other metaheuristics, or a machine learning area such as reinforcement learning.

### **Funding Details:**

The successful applicants will each receive total funding of €18,500 per annum for up to four years and an annual contribution of €5,500 towards tuition fees.

### **To Apply for the PhD positions:**

Interested candidates should apply by email to Dr. Alejandro Arbelaez ([a.arbelaez@cs.ucc.ie](mailto:a.arbelaez@cs.ucc.ie)) and/or Dr. Laura Climent ([l.climent@cs.ucc.ie](mailto:l.climent@cs.ucc.ie)).

Applications must include, in PDF format only:

1. Full CV;
2. A transcript of results for all university level modules and courses;
3. One-page abstract describing final year undergraduate project (if applicable);
4. One-page abstract describing MSc project (if applicable);
5. One-page abstract describing relevant work experience (if applicable);
6. 300 word statement explaining interest in research, referring explicitly to one or more of the areas listed above.

If the successful applicant's first language is not English they will have to provide evidence of English language proficiency.

<https://www.ucc.ie/en/study/comparison/english/postgraduate/>

Applications will be considered until the positions have been filled. Preference will be given to applications received before February 1<sup>st</sup>, 2020.

For more information about the Department of Computer Science, please see the following link: <http://www.cs.ucc.ie/>