# A PhD Contract for an outstanding candidate to undertake research in multi-agent coordination applied to smart buildings

The expected outcome of the research is a PhD dissertation concerning the development of distributed scalable and robust algorithms to coordinate multiple agents in open large smart buildings. Topics of interest for the research include distributed and decentralized exact and heuristic optimization, multi-agent systems, semantic technologies and data stream processing, among others.

The research will be carried out in a close collaboration between the Centre for Intelligent Information Technologies (CETINIA) at the University Rey Juan Carlos (URJC) and the Department of Informatics and Control Systems (DIA) at the Institute Mines Telecom Lille Douai (IMT Lille Douai).

The candidate will conduct research activities organised as follows:

- Months 1-18 at the Centre for Intelligent Information Technologies (CETINIA) at URJC.
- Months 19-36 at the Department of Informatics and Control Systems (DIA) at IMT Lille Douai.

## Eligibility criteria

The candidate is expected to have (or be finishing) a Master's Degree or equivalent in Computer Science, Industrial Engineering, or a related field.

The applicant is expected to have a good background in multi-agent systems, semantic technologies and operations research. Applicants with an experience in one or more of the above academic fields are encouraged to apply. Furthermore, a good knowledge of written and oral English are required, as well as good programming skills, preferably in Java or Matlab. A high level achievement and experience in multi-disciplinary collaboration are an advantage.

## Benefits of the contract

The work contract should start in April 2017 and should last for three years, with a gross average salary around €1.700 per month.

## How to apply

If you wish to apply for ***this work contract***, you are kindly asked to send your (i) motivation letter describing your research interests and goals, (ii) CV, (iii) transcripts, (iv) certificates, (v) contacts for two references, and (vi) relevant publications (if any) **in one PDF file** at the following e-mails: alberto.fernandez@urjc.es and marin.lujak@mines-douai.fr by **March 3rd, 2017**.

We will carefully review your application and you will be advised of an outcome in March 2017.

## About the Centre for Intelligent Information Technology (CETINIA)

The Centre for Intelligent Information Technology (CETINIA) at University Rey Juan Carlos (URJC), aims at applying, and disseminating knowledge in the area of Intelligent Information Technologies, as well as promoting the image of URJC and furthering its academic prestige both at national and international level. To successfully carry out research, technology transfer, and dissemination activities that are required to meet that goal, CETINIA relies on a broad multinational team of researchers and practitioners in the field of Computer Science, focusing on topics of Artificial Intelligence, Multi-Agent Coordination, Semantic Technologies, and Software Engineering, and is involved in several research projects with industrial as well as public funding, from regional, national, and European sources.

URJC is a young public university with several campuses in the greater Madrid. In its 20 years of operation, it managed to grow to 40.000 students, being currently the second largest among the six public Universities in Madrid. CETINIA is located in the campus of Mostoles, where the Presidency of the University is located. Mostoles is the second-largest city in population belonging to the autonomous community of Madrid. It is located 18 kilometres southwest from central Madrid, which can be easily reached by metro, train or bus.

## About IMT Lille Douai

IMT Lille Douai is created in the fusion between Ecole des Mines de Douai (Engineering School Douai), a French National Graduate School of Engineering (Grandes Ecoles d'Ingénieurs) located in Douai, close to Lille in France and Telecom Lille. It is the part of IMT Institut Mines Telecom and is the biggest Engineering School on the north of Paris in France.

As a leader in education and training in the digital sector, IMT Lille Douai offers numerous educational and training options, internships and research possibilities to foreign students, who now represent more than 30% of the school's population. It is highly selective and provides an excellent academic and multi-cultural student environment. Its excellence was recognized by Le Figaro that classified Ecole des Mines de Douai as one of the best 15 Engineering Schools in 2015 in France.