

**JOB OFFER FOR A PHD POSITION****VAC-2017-07 - Offer for a PhD position at the Building Energy and Environment Group of CIMNE ([www.beegroup-cimne.com](http://www.beegroup-cimne.com))**

Number of positions: 1

Professional Category: PhD Student

Place of Work: CIMNE-UdL Classrom. C/Pere de Cabrera s/n. Building CREA. Lleida (Spain)

Annual Gross Salary: 19,800 Euros

Working schedule: 40 h/week. Flexible schedule

Contract type: Pre doctoral contract

Contract period: 3 years

Scope and functions:

The PhD Thesis will be focused on the development of data driven algorithms for the application of flexibility in the electricity and thermal load of occupied buildings. The following scientific topics will be addressed:

1. Development of Artificial Intelligence (AI) algorithms for the modelling of the buildings energy load
2. Development of user behavioural models
3. Implementation of the algorithms into Web Services
4. Data mining implementation into BiG Data architectures

This PhD position will be held in the Building Energy and Environment Group of The International Center for Numerical Methods in Engineering. It will be linked to several EC funded research projects such as SIM4BLOCKS and FLEXCOOP projects.

**Centre Internacional de Mètodes Numèrics a l'Enginyeria (CIMNE)**

Edifici C1, Campus Nord UPC, Gran Capità s/n, 08034, Barcelona – Telèfon 93 401 74 95 – [cimne@cimne.upc.edu](mailto:cimne@cimne.upc.edu)

Required skills:

1. Education (300 ECS): Master in Computer Science, Bachelor in Mathematics, Bachelor in Physics, Building Physics, Master in Mechanical/Thermal Engineering
2. Education qualifications higher than 7,5 over 10 (following the Spanish score) or equivalent
3. High level of Python or R programming
4. High level of English and Spanish or Catalan
5. Knowledge of machine learning techniques and time series analysis

Merits

- To be motivated to start a research career in a dynamic flexible and market oriented environment
- To have previous experience in research
- To have previous experience in collaborative environments.

Evaluation method

The required skillness and merits will be valued with a maximum score of 100 points. To obtain this note, the values obtained in the following sections will be summed up:

1. Academic qualifications (25 %)
2. Knowledge of programming languages (20 %)
3. Professional Experience (5 %)
4. English knowledge (10 %)
5. Previous knowledge in time series data processing (20 %)
6. Remote or presencial interview (20 %)

The CVs and presentation letters should be sent by e-mail to the address [seleccio@cimne.upc.edu](mailto:seleccio@cimne.upc.edu), indicating the name of the vacancy in the subject of the post, defined in the call.

The deadline to submit the CVs will be the 30th November at 12h.

The pre-selected candidates will have to send to [seleccio@cimne.upc.edu](mailto:seleccio@cimne.upc.edu) all the documentation required in the "Required skills" and "Merits" section duly scanned and may be called to perform remote or face to face personal interviews