Publish date: November 2023

Deadline for application: January 15th, 2023

Ref. 24/012

Project: NETBUILD

Area: Energy Systems Analytics

Group:

Group leader: Josh Eichman

PI: Gabriela Benveniste

R1- Junior position in the field of flexibility energy management from smart buildings and electric vehicles

Description:

The Energy Systems Analytics group is actively seeking a candidate specializing in the field of smart building modeling and energy markets. This position offers an exceptional opportunity to engage in cutting-edge research focused on developing novel techniques for intelligent energy management of IoT devices and other technologies. The research spans a wide range of areas, including electricity trading between local communities or buildings, as well as fine-grained control of energy within individual rooms. As a member of the esteemed Energy Systems Analytics group, the selected candidate will collaborate closely with a diverse team of highly qualified researchers, fostering a stimulating and collaborative environment.

.

Responsibilities:

- Contribute to the integration of buildings in the development of Smart Cities and future energy systems and markets.
- Design and implement optimization solutions to improve energy efficiency while reducing environmental impact for energy systems using software tools such as Python, GAMS, and R.
- Analyze data to enable load management of heating and electrical equipment, integrating price signals, peak shaving, and other techniques to add value at the building level.
- Develop black-box models for forecasting HVAC flexibility.
- Evaluate the environmental performance of holistic management algorithms, focusing on energy efficiency, indoor comfort, and air quality.
- Produce impactful research papers and present findings at conferences and workshops, covering theoretical, conceptual, and methodological aspects.
- Collaborate with ICT companies, industry partners, and the research team.
- Collaborate with national and international stakeholders to develop competitive project proposals.

Qualifications and experience required:

Essential:

- Candidates should have a master's degree (or equivalent experience) in Operations Research, Computer Science, Electrical Engineering or a related discipline.
- Experience of optimization, modelling and statistical analysis.
- Experience with energy systems and related fields Knowledge of programing, simulation and optimization software capabilities
- Strong communication skills and ability to work in cross-functional teams
- Self-motivated and able to work independently
- Fluent in Spanish and English

Preferred:

- Experience in renewables, electric vehicle or energy storage integration.
- Experience in energy flexibility, local markets and optimization.
- Experience in industrial or competitive projects leadership.
- Experience in buildings energy modelling

Personal skills:

- Team Worker
- Initiative in Research and Innovation.
- Flexibility
- Results-oriented
- Analytical and synthesis capabilities

Required documents:

Applicants must submit the following documents by email to irecjobs@irec.cat; gbenveniste@irec.cat and ligualada@irec.cat

Reference:

- Curriculum Vitae, specifying the completed degree and any relevant professional experience.
- Motivation letter.

Offer of job position:

We offer a R1 position for 21months on the frame of NETBUILD project.

Salaries will be paid in accordance with the IREC's salary policy, depending on the candidate's qualification and professional experience.