



## PhD & Postdoc offers

The ISI group (<https://futur.upc.edu/GRUPI>) at the Universitat Politècnica de Catalunya (<https://www.upc.edu/en>) is seeking several PhD candidates and one Postdoc candidate to deal with energy harvesting topics for autonomous sensors inside buildings in the framework of an European project.

For the **PhDs**, the topics are:

- Indoors light energy harvesting. First tasks: lab characterization of commercial PV cells, indoor light measurements across the building, in situ characterization of PV cells and their energy output during extended periods of time.
- Thermal energy harvesting. First tasks: laboratory characterization of commercial TEGs, temperature measurements of heat and cold sources across the building, in situ characterization of TEGs and their energy output during extended periods of time.
- Radiofrequency energy harvesting. First tasks: Design, implementation and characterization of high-efficient rectennas, RF measurement across the building and when using RF transmitters, in situ characterization of the rectennas and their energy output during extended periods of time.

In all cases, the tasks will also include the design and implementation of maximum power point trackers (MPPTs) and the fabrication of complete prototypes to power autonomous sensors inside buildings.

As for the **Postdoc**, he should manage the UPC part of the project and co-supervise and help the PhDs involved in the different topics. Proficiency on radiofrequency energy harvesting is welcome.

Year Salary:

- PhD: 17000 €/year (1<sup>st</sup> & 2<sup>nd</sup> years)
- Postdoc: 23000 €/year
- In both cases salary complements up to 50 % according to performance and budget availability

Location: UPC, Castelldefels (Barcelona), Catalonia, Spain

Starting date: October 2022

Period: 3 years

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