

## UC3M – UNIVERSIDAD CARLOS III DE MADRID

One Doctoral Fellowship

**Ref:** **UC3M.1.** Doctoral Fellowship at Universidad Carlos III de Madrid

**Duration:** 5 months maximum (from September 2019 to January 2020)

**Degree awarded:** Research certificate

**Academic requirements:** Candidates must be enrolled at a Ph.D. program in either a Department of a University/ Institute or in a Research Institute, which is recognized to conduct and award of the Ph.D. degree. Candidates must be fluent in English, although knowledge of Spanish or French is advisable.

**Required documents:** those required in the application form

**Other information:**

Precedence will be given to those candidates including a gender perspective in their research projects.

**The Fellowship will cover:**

- Round trip to Madrid
- Accommodation at the UC3M Hall of Residence (in a single room, meals are not included)
- Medical Insurance
- Other costs associated to the Visa issuance (visa fares, medical certificate if required)
- A gross monthly allowance of 600 Euro or the proportional part in case of incomplete months (a tax deduction could be applied, according to Spanish legislation).

## **ENERGY ACCESS AND ENERGY POVERTY CHARACTERISATION**

### **Fellowship research field**

Energy access and energy poverty characterisation in the candidate's working geographic area.

This fellowship is related to SDG 7 and its targets: Ensure access to affordable, reliable, sustainable and modern energy for all.

The research will address energy poverty characterisation in its complexity, focusing on the variety of energy uses (cooking, lighting, heating, household appliances, working tools, etc.) and the associated diversity of energy sources and technologies available for each one. The development of accurate energy poverty characterisation models is critical for the SDG 7 accomplishment.

The results of the research will consist in the framing and selection of indicators that are locally appropriate to identify the problems related to energy access and the characteristics of energy poverty in the region. These indicators could then be tested in the field, generating a collaborative research line.

The UC3M Research Group *Appropriate Technologies for Sustainable Development* and the Cooperation Group *Engineering for Human Development* have been working together for the last 10 years on energy access solutions for vulnerable communities, mainly in Latin America and Africa (with projects in Botswana, Namibia, and South Africa, or Senegal, Mali and Niger), and are currently developing research lines on energy poverty characterisation both in Spain and LATAM. The group coordinates an Appropriate Technologies Lab dealing with, among other energy technologies, isolated PV systems, smart grids, solar dryers, or improved cook stoves.

### **Academic profile of candidates**

Academic and research profile related to energy, preferably focused on the access to energy of vulnerable communities. Knowledge on energy engineering (or related areas such as mechanical, electrical or chemical engineering), energy policy, energy economy or energy sociology will be positively assessed

### **Coordinator contact**

Dr. Ulpiano Ruiz-Rivas Hernando. Associate Professor of Thermal and Fluid Engineering, Director of the Appropriate Technologies for Sustainable Development Research Group and Member of the Engineering for Human Development Cooperation Group. UC3M