

## **RESEARCH CONTRACT ASSOCIATED TO EUROPEAN PROJECT RUN4LIFE**

### **Position's characteristics**

6-month research contract (extendable 6 more months) is offered by the Group of Environmental Biotechnology (Biogroup) of the University of Santiago de Compostela to work in the European project "Recovery and utilisation of nutrients for low impact fertiliser" (RUN4LIFE). The contract includes an approximate gross salary of 1000 €/month and 14 payments/year (1200 €/month from month 7 onwards). The contract starting date would be October 1, 2018.

### **Project description**

Domestic wastewater is an important source of nutrients that can be used as fertilisers. However, their exploitation is inefficient as these resources reach wastewater treatment plants as diluted sewerage. Run4Life proposes a radical change to efficiently recover nutrients from wastewater by decentralising the treatment and recovery at the source. Therefore, concentrated wastewater streams can be exploited using innovative nutrient recovery technologies with lower environmental impact. Different technologies will be demonstrated in Spain, Netherlands, Belgium and Sweden as a proof-of-principle of decentralised treatment schemes.

The Group of Environmental Biotechnology (Biogroup) from the University of Santiago de Compostela participates in Run4life, an ambitious collaboration project within the H2020 framework with 15 international partners from Spain, Netherlands, UK, Norway, Sweden and Belgium. Among other tasks, Biogroup activities deal with the development of mathematical models to simulate the 4 demonstration sites and to evaluate, by simulation, process alternatives for optimal decentralised resource recovery.

Biogroup is one of the most important research groups at European level. As part of a world renowned research group you will work at state-of-the-art lab facilities with the support of experienced technicians. Biogroup staff is composed by 10 full/assoc. professors, 9 postdocs and ~25 PhD students providing a stimulating and multidisciplinary work environment to conduct your research.

### **Research area**

Modelling of wastewater treatment and resource recovery

### **Supervisors**

Juan M. Lema and Miguel Mauricio Iglesias

### **Brief work description**

- Development of mathematical models of different technologies used in decentralised treatment and resource recovery of domestic wastewater
- Collection of experimental data in 4 demo-sites in Spain, Netherlands, Belgium and Sweden for calibration of the mathematical models
- Model implementation in scientific software (e.g. Matlab) and simulation of alternative process layouts

## Requirements

- Candidates must have a master's degree in chemical or environmental engineering, or similar, and present adequate training in wastewater treatment
- Specific knowledge of mathematical modelling and scientific computing tools (e.g. Matlab, Octave, Python...) will be very valuable.
- Candidates must have a good level in English.
- Candidates must show the ability to travel abroad to attend project meetings or conferences.

## Selection process

Applications must be sent to [miguel.mauricio@usc.es](mailto:miguel.mauricio@usc.es) (including in the subject: "RUN4LIFE position") before 10<sup>th</sup> July 2018 at 12:00.

Applications must contain the following documents:

- Motivation letter (not more than 1 page), indicating the contact details of the candidate and a brief description of the reasons why he/she should be selected.
- Academic record (Bachelor and Master)
- Curriculum Vitae

The selection process involves the following steps:

### 1. Evaluation of applications (motivation letter, CV and academic record)

The adequacy of applicant's profile to the requirements of the call will be tested. It is a qualifying stage and it accounts for 30% of the total score.

### 2. Screening test

Successful candidates from the first stage will be invited to a qualifying screening test, which will account for 30% of the total score. The objective of this test is to evaluate candidate's competency to develop a research career as well as his/her reading and writing skills in English.

### 3. Personal interview

Successful candidates from the second stage will be invited for a personal interview in which, among others, his/her oral skills in English will be assessed. The personal interview and English level account for 20% and 20%, respectively, of the total score.

The selected candidate will be invited to sign the research contract and a waiting list with the following 3 candidates will be elaborated.