**1 PhD position / Early Stage Researcher**

**PhD fellowship funded through the Marie Skłodowska-Curie action**

The Biomedical Signal Interpretation and Computational Simulation (BSICoS) group of the Aragon Institute of Engineering Research (I3A) at the University of Zaragoza, Spain, is one of the institutions in the new EU-funded project “Personalised In-silico Cardiology” (PIC), with 15 young researchers divided between 10 different European research institutions and companies. We are looking for excellent candidates to fill our PhD fellowship for 3-year Early Stage Researcher (ESR) position at the BSICoS group in the topic of electrophysiological computational modeling and signal processing. The PhD project will be part of the PIC project, which is an Innovative Training Network funded through the Marie Skłodowska-Curie action of the EU.

**The I3A Institute at University of Zaragoza**

The Aragon Institute of Engineering Research (I3A), within the University of Zaragoza, comprises more than 500 researchers and a vibrant environment for multidisciplinary research. I3A has gained notable national and international recognition. Every year I3A participates in more than 300 research projects funded with over 10 M€ and more than 200 contracts with industry with 5 M€ turnover. Around 50 PhD theses supervised by I3A members are defended and nearly 300 papers are published in JCR journals every year. The Biomedical Signal Interpretation and Computational Simulation group at I3A, University of Zaragoza is a leading expert in the development of signal processing tools to aid in the diagnosis, prognosis and treatment of cardiovascular diseases and conditions. The expertise in processing of invasive and non-invasive signals is combined with modeling and simulation of cardiac electrophysiology to provide insight into the mechanisms underlying phenomena observed from the processed signals.

**The ESR position**

The F3 position within PIC relates to personalisation of cardiac cell and tissue electrical models based on available clinical data, including signals measured on the body surface (ECG). Inter- and intra-individual variability will be represented through identification of cell parameter values across the myocardium. The developed methods will rely on the access to a wide range of clinical / experimental data and our expertise on the formulation of stochastic models. The developed methods will have diagnostic and prognostic value, and will be used in simulations to predict individualized risks to drugs (in collaboration with fellowship F11) and the optimal treatment of cardiac diseases (in collaboration with fellowships F10, F14).

**Qualifications**

* Must have a University degree in Engineering, Mathematics or Physics plus Master of Science degree in related disciplines.
* Experience in signal processing, statistical data analysis and numerical simulations is advantageous.
* Strong academic record both for University degree and Master of Science degree.
* Interest in clinical and experimental studies is desirable.
* Emphasis on teamwork, innovation, being dynamic and enthusiastic as well as collaborating well with other members of a team.
* **Special rules for eligibility of ESR candidates:**

**Early-Stage Researchers (ESRs)** shall, at the time of recruitment by the host organization, be in the first four years (*full-time equivalent research experience*) of their research careers and have not been awarded a doctoral degree.

**Mobility Rule**: at the time of recruitment by the host organization, researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of their host organization for more than 12 months in the 3 years immediately before the reference date. Compulsory national service and/or short stays such as holidays are not taken into account. As far as international European interest organizations or international organizations are concerned, this rule does not apply to the hosting of eligible researchers. However, the appointed researcher must not have spent more than 12 months in the 3 years immediately prior to their recruitment at the host organization.

**Application**

Relevant certificates, including all grades, credits and marks and recommendation letters must be submitted along with the application. Certified copies of study credits with grades will be needed from those called to an interview.

For further information about F3 position please contact Associate Professor Esther Pueyo ([epueyo@unizar.es)](mailto:epueyo@unizar.es))

Application deadline: 3rd November 2017.