



HORIZON 2020

Early Stage Researcher position as a PhD scholarship available at the **University of Milan (ITALY)**, in the framework of the EU-funded **Marie Skłodowska - Curie ITN-ETN training network "MY-ATRIA: Multidisciplinary training network for Atrial fibrillation monitoring, treatment and progression"**.

The MY-ATRIA network

MY-ATRIA is an Innovative Training Network programme for highly motivated young scientists, where state-of-the-art research is combined with a comprehensive training programme. The network is funded by the European Community through the Horizon 2020 Actions. The European Commission wants to make research careers more attractive to young people and therefore offers early-stage researchers (ESR) the opportunity to improve their research skills, join established research teams, and enhance their career prospects via the so-called Marie Curie Initial Training Networks.

The scientific goal of MY-ATRIA is to address the challenging problems related to detecting atrial arrhythmias with novel device technology as well as to understanding the influence of atrial geometries, anatomical substrates and remodelling processes in atrial disease development and response to treatment

MY-ATRIA training through research programme integrates top level formation in three areas: academia, clinic and industry. This is possible thanks to a multi-sectoral consortium that will perform research in the multi-disciplinary area of atrial arrhythmias. Academic formation is complemented by a network-wide secondments scheme, workshops and summer schools providing each ESR employed in the network with a wide intersectoral and interdisciplinary background.

The MY-ATRIA network consists of 6 academic partner institutions (Politecnico di Milano-Italy, Karlsruhe Institute of Technology-Germany, Lund University-Sweden, Università degli Studi di Milano-Italy, Universidad Politécnica de Valencia-Spain, and Universidad de Zaragoza-Spain) and (Medtronic-Netherlands and Mortara-Italy) industrial partners from 5 different countries in Europe.

For more information on MY-ATRIA please visit: <http://www.myatria.polimi.it/>.

The research project

Project Title: Atrial complex networks in endocavitary recordings during AF (ESR4)

Objectives:

- To study concurrent EGMs collected in different positions within the atria in term of complex network measures
- To quantify local circuitry and their stability

Expected Results:

- A solid background in the theory of complex network and in the electrophysiological properties of the atria
- Testing and selection of relevant metrics, using computer simulation of the electrical activity of the atria
- A validation of the metrics with the design of proper experimental protocol to be conducted, after

informed consent, during routine electrophysiological interventions

Planned secondments:

- Universitat Politecnica de Valencia (3 months, starting December 2018) and Universidad de Zaragoza (2 months, starting October 2019) to acquire complementary expertise in endocardial networks and endocardial EGM signal analysis, respectively
- Medtronic BRC (1 month, starting June 2019) to acquire expertise in signal analysis and data collection of EGM signals from available clinical studies
- Fondazione IRCCS Ca' Granda Ospedale Maggiore (1 month, starting May 2020) to acquire complementary expertise in clinical endocardial procedures

Starting date of the PhD programme: April-May 2018.

Research group and general conditions

The PhD student will perform his/her activity under the supervision of prof. Roberto Sassi, at the Department of Computer Science, University of Milan, ITALY. The recruited PhD student will be enrolled in the PhD programme in "Computer Science", and will be covered under the social security scheme. He or she will receive a Monthly Living Allowance plus a Mobility Allowance compliant with the applicable EU Marie Skłodowska-Curie Actions-ITN general conditions.

The recruited PhD student will participate in the network's training activities and work placements at the laboratories of the participating academic and industrial partners. In addition, the training programme of the recruited ESRs will be supplemented by regular meetings and workshops within the MY-ATRIA International Training Network.

Admission criteria for doctoral education at the University of Milan

In order to apply for a place in the PhD programme, students must have a second-level degree, an equivalent qualification, or an equivalent qualification by study level (Master's Degree) from a foreign University. The suitability of the foreign academic qualifications in terms of content is appraised by the Examining Board constituted for admission to each PhD programme, in compliance with the regulations in force in Italy and in the country in which the academic qualification was issued, and the international treaties or agreements pertaining to the conferment of qualifications for the continuation of studies.

Other project specific requirements

- The Candidates must hold a M.Sc. Degree by the starting date of the fellowship, in one of the following area: Computer Science, Engineering, Physics, Applied Mathematics.
- The contract will last 36 months.
- Salary and additional benefits are according to EU-standards for Marie Curie ESRs. Additional benefits are foreseen for mobility and family allowance (if applicable).
- The ESR must be working exclusively for the action.
- Each ESR will have to complete at least three secondments (temporary transfer to another MY-ATRIA academic, industrial or clinical partner) for a total period of minimum 6 months during the term of his/her employment.
- Each ESR must actively participate in the events organized by Universities and partners, such as training/network events as well as in regular yearly Outreach Activities targeting different audiences.
- Recruitment, selection and appointment of the ESR follow the European Charter & Code of Conduct. All MY-ATRIA partners commit themselves to provide equal opportunities for male, female and disabled ESR.
- ESR's progress will be regularly monitored. Every year, the candidate and his/her work will be challenged and questioned. Failure in providing evidence of a regular and continuous commitment may result in his/her exclusion from the programme.

- Good collaborative and social skills and an open-minded attitude;
- Proficiency in the English language (including both written and oral fluency) is essential.

Mobility eligibility requirement

Eligible ESR candidates may be of any nationality but must not, at the time of recruitment 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 last 3 years immediately prior to the reference date.

Experience eligibility requirement

Eligible ESR Candidates must be, at the time of recruitment by the host organization, in the first four years (full-time equivalent) of their research careers and have not yet been awarded a doctoral degree. This is measured from the date when they obtained the Master degree that would formally entitle them to embark on a doctorate.

Application procedure

List of Documents to provide:

- Application Form (see attachment)
- Letter of motivation (max. 1 page)
- Copies of degree and academic transcripts (with grades and rankings)
- Resumé of Master's thesis (max. 1 page)
- Short CV including a publication list (if any)
- Two reference letters from academicsⁱ. Candidates must indicate the academics detail when applying.
- Passport copy

All the above-mentioned documents must be collected in a **single pdf file**.

The pdf file has to be sent within ~~February 28, 2018~~ **March 19, 2018** to the MY-ATRIA Coordination Office at the following email address: **myatria@polimi.it**.

Recruitment strategy

A common scoring system and recorded interviews will be used, respecting privacy and protection of the Applicant's data. Female candidates and candidates with disabilities are encouraged to apply.

The selection process is based on two steps:

1. Evaluation of the documents provided by the Applicant (Assessment of academic records)
2. Interview by at least the 2 of the beneficiaries of each candidate having possessing the eligibility requisites (evaluated through the first step), which will be organized remotely, via teleconference.

ⁱ The letters must be compiled using only the given template. The academics need to send the letters directly to the Coordination Office from their official e-mail address, no later than ~~28/2/2018~~ **19/3/2018**. It is the Applicant's responsibility to contact the Academics and provide them with the Recommendation Template.