

Politecnico di Milano

PhD in

Bioingegneria

Research Title:

Novel ECG feature extraction methods and Big data analytics tools for the screening of Atrial Fibrillation population recordings.

Scholarships and Financial support	
Monthly net income of PhD scholarship (max 36 months)	€. 1200
Number of scholarships	1
Beginning of PhD	May 1, 2017
Deadline for application	March 6, 2017
Context of the research activity	
Motivations and objectives of the research in this field	To develop novel ECG signal processing algorithms and methodologies for the analysis of patients with, or at risk of, Atrial Fibrillation (AF).
Methods and techniques that will be developed and used to carry out the research	Novel ECG signal processing algorithms for P-wave multi-lead analysis and predictive analytics methodologies for screening large population recordings of Atrial Fibrillation patients (Swiss-AF repository).
Educational objectives	To train PhD students in up-to-date ECG processing methodologies and predictive analytics tools. To train PhD students in developing independent research work within an international, multidisciplinary team.
Job opportunities	The research will be carried out with the Swiss University (USI) of Lugano and its research center (Cardicentro Ticino) which have large opportunities for post-doc positions and Research carrier. The PhD will also work in contact with the Swiss company Schiller a

	worldwide leader manufacturer of ECG devices.
Composition of the research group	1 Associate professor, 1 Assistant professor (RTD), 1 post-doc and 2 PhD Students.
Names of the research directors	Prof. Luca Mainardi
E-mail address, phone number and web-page	luca.mainardi@polimi.it , +39-02-2399-3347
List of Universities, Companies, Agencies and/or National or International Institutions that are cooperating in the research	1. Università della Svizzera Italiana (USI) in Lugano (Switzerland).
Additional support	
<u>Housing:</u> financial aid per PhD student per year (gross amount)	none
<u>Funding for educational activities</u> (purchase of study books and material, funding for participation in courses, summer schools, workshops and conferences): funding per PhD student per year	1 st year: 00 euros per student 2 nd year: 00 euros per student 3 rd year: 00 euros per student
<u>Teaching assistantship:</u> availability of funding in recognition of support to teaching activities by the PhD student	There are various forms of financial aid for activities of support to the teaching practice. The PhD student is encouraged to take part in these activities, within the limits allowed by the regulations.
<u>Computer availability:</u>	1 st year: indicate <i>individual use</i> 2 nd year: indicate <i>individual use</i> 3 rd year: indicate <i>individual use</i>
<u>Desk availability:</u>	1 st year: indicate <i>individual use</i> 2 nd year: indicate <i>individual use</i> 3 rd year: indicate <i>individual use</i>