



PhD in BIOINGEGNERIA / BIOENGINEERING - 40th cycle

THEMATIC Research Field: AI-DRIVEN, NEXT-GENERATION PERSONALIZED MODELS FOR DISEASE PREDICTION AND PREVENTION

Monthly net income of PhDscholarship (max 36 months)

€ 1400.0

In case of a change of the welfare rates during the three-year period, the amount could be modified.

Context of the research activity

<p>Motivation and objectives of the research in this field</p>	<p>The main objective of this work is to develop data analytics techniques including, but not limited to artificial intelligence (AI) algorithms and mathematical models to develop personalized models to predict and prevent chronic diseases. The work is developed within the framework of ongoing collaborative research at CNR-IEIIT, specifically the European Project PRAESIIDIUM (Physics informed machine learning-based prediction and reversion of impaired fasting glucose management, call HORIZON-HLTH-2022-STAYHLTH-02, grant n. 101095672).</p>
<p>Methods and techniques that will be developed and used to carry out the research</p>	<p>The developed techniques will include a combination of machine learning, signal processing, statistical and mathematical modeling, and optimization techniques.</p>
<p>Educational objectives</p>	<p>To train the PhD student in data analytics and modeling techniques including machine learning, statistical and mathematical modeling, and optimization for application in next-generation predictive, prescriptive models for personalized risk characterization and disease prevention.</p>
<p>Job opportunities</p>	<p>The research will be carried out in the framework of ongoing collaborative research projects at CNR-IEIIT, in collaboration with partners from academia, healthcare organizations, and industry in Italy and abroad. CNR-IEIIT has large opportunities for post-doc positions</p>



	and interdisciplinary research careers and has strong links with several academic and industrial partners at national and international level.
Composition of the research group	0 Full Professors 0 Associated Professors 7 Assistant Professors 6 PhD Students
Name of the research directors	Prof. ALESSIA PAGLIALONGA - PAOLO RAVAZZANI

Contacts	
Alessia Paglialonga	
Email: alessia.paglialonga@cnr.it	
Phone: +39 02 2399 3343	
Webpage: https://publications.cnr.it/authors/alessia.paglialonga	

Additional support - Financial aid per PhD student per year (gross amount)	
Housing - Foreign Students	--
Housing - Out-of-town residents (more than 80Km out of Milano)	--

Scholarship Increase for a period abroad	
Amount monthly	700.0 €
By number of months	6

Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information
<p>Educational activity: The student will be encouraged to attend to courses at POLIMI or abroad 2 / 3in International Schools.</p> <p>The student will be encouraged to attend courses, seminars, and schools in the areas of machine learning, signal processing, statistics, and mathematical modeling, at Politecnico di Milano and at CNR and at other Universities.</p> <p>Teaching assistantship: 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.</p> <p>Computer and desk availability: the student will be allowed to access facilities of the DEIB.</p> <p>https://www.ieiit.cnr.it/expertise/information-systems-engineering</p>