POLITECNICO DI MILANO

PhD in BIOINGEGNERIA / BIOENGINEERING - 40th cycle

THEMATIC Research Field: ADVANCED EM MODELING FOR APPLICATION IN MEDICINE, HEALTH AND ENVIRONMENT

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	
Motivation and objectives of the research in this field	The main objective of this work is to develop advanced electromagnetic models to study and improve innovative applications in bioengineering. Specifically, hybrid models uniting the physics of electromagnetism with physiology will drive the conceptualization of new paradigms for driving significant innovations across multiple domains, contributing to better health outcomes and a safer environment.
Methods and techniques that will be developed and used to carry out the research	Multi-scale and multi-physics modeling, computational electromagnetic and AI techniques will be integrated to properly model the interaction between electric/magnetic fields and biological tissues, with reference to the development of digital twin brain.
Educational objectives	- To gain a multidisciplinary knowledge in the bioelectromagnetics field - To train the PhD student in computational methods and AI techniques for the development of more sophisticated and accurate digital twin models of brain function.
Job opportunities	CNR IEIIT has large opportunities for post-doc positions and interdisciplinary research career.
Composition of the research group	1 Full Professors 0 Associated Professors

	0 Associated Professors 8 Assistant Professors 1 PhD Students
Name of the research directors	Prof. Serena Fiocchi - Prof. Paolo Ravazzani

Contacts
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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
The student will be encouraged to attend courses with subjects bioelectromagnetics, statistics, stochastic modeling and AI methods courses either at POLIMI and at CNR-IEIIT.