Open Research Positions at University of Messina and University of Sassari - PRIN PNRR Project TrainAR

Two 24-month research grant positions are open at the University of Messina and the University of Sassari. Project goals and relevant research activities are described below.

Project TRainAR - a wearable sensors plaTfoRm and an Augmented reallty enviroNment for the design of personAlized physical tRaining programs:

The TrainAR project aims at developing personalized training programs in mixed/augmented reality by:

1) developing a wearable sensor platform, capable of providing multi-modal information that, combined with quantitative metrics, monitors motor performance and physiological state in real time;

2) designing and implementing physical training programs in mixed/augmented reality environments, dynamically adjusted while experienced, in a closed-loop configuration based on the personal motor performance and physiological state.

Research Grant 1:

"*Development of a multi-modal wearable sensor platform for monitoring physiological parameters*" at the Department of Engineering of the University of Messina (24 months): the research activity will be aimed at the development of a wearable sensor platform and sensors' data integration for monitoring parameters linked to movement execution and to the subject's physiological state. The platform will include the integration of various types of data, including data from inertial, electrocardiographic, photoplethysmographic and electrodermal activity sensors, with the final objective of defining a set of metrics and compact indicators capable of quantitatively describing the physiological state and motor performance of the subject during the execution of activities in mixed/augmented reality.

The researcher will have access to the facilities of the Department of Engineering of the University of Messina, including labs dedicated to human movement analysis, electronic measurements and to the development and characterization of sensors and transducers.

For more info please contact: Cristiano De Marchis, University of Messina: cristiano.demarchis@unime.it

To apply go to:
ttps://www.unime.it/bandi/procedura-selettiva-n-1-assegno-di-tipo-b-attivita-di-ricerca-area-cun-09-ssd-ing-inf06

Research Grant 2:

"*Development of physical training programs in mixed/augmented reality environments*", at the Department of Biomedical Sciences of the University of Sassari (24 months): research activity will focus on the design and implementation of physical training programs to be performed in a mixed/augmented reality environment that is adjusted in real time to the user performance and physiological state as assessed by the wearable sensor platform.

The researcher will have full access to the NORMAL (Neuro.Ortho.Research.Motion.Analysis.Lab) at the University of Sassari, equipped with a 12-camera VICON motion analysis system, force platforms, multiple inertial sensors, an EMG system, a Hololens-2 augmented/mixed reality headset and more.

For more info please contact: Ugo Della Croce, University of Sassari: dellacro@uniss.it

To apply go to: https://bandi.miur.it/bandi.php/public/fellowship/id_fellow/254261

Research Grants information and requirements:

Both Research Grants will have a gross annual salary of 30.000€, and the contract is expected to start before March 2024. The positions are opened for early career researchers, either post-graduate or post-doc, with a Master's degree or a PhD in sectors relevant to the planned research activities, including Biomedical Engineering, Electronics Engineering and Computer Science.