



OGGETTO: INTEGRAZIONE AL BANDO DI CONCORSO PER L'AMMISSIONE AL CORSO DI DOTTORATO DI RICERCA "THEORETICAL AND APPLIED NEUROSCIENCE" (XL CICLO a.a. 2024/2025), DR n. 326/2024 Prot. N. 0046958 del 28.06.2024

Il Rettore

VISTO il regolamento in materia di dottorato di ricerca, emanato con DR n.169/2022;

RICHIAMATO il bando di concorso per l'ammissione per l'ammissione al corso di dottorato di ricerca "Theoretical and Applied Neuroscience" (XL ciclo a.a. 2024/2025), DR n. 326/2024 prot. n. 0046958 del 28.06.2024 e ss.mm.;

VISTO il Decreto del Dirigente del settore Istruzione, Innovazione Sociale e Sport n. 63/IISP del 29/04/2024. PR Marche FSE+ 2021-2027 Asse 4 OS 4a DGR N. 445 del 25/03/2024. Avviso pubblico per l'assegnazione di n.40 borse di ricerca di dottorato innovativo con caratterizzazione industriale a.a. 2024/2025;

VISTO il relativo DDS della Regione Marche n. 109 del 27/06/2024 (Allegato A) recante l'approvazione della graduatoria riguardo l'assegnazione delle borse di studio finanziate dalla Regione Marche;

RITENUTO OPPORTUNO integrare il bando di cui sopra, in particolare in merito all'ANNEX 1, fermi restando i termini per la presentazione delle domande di ammissione originariamente previsti;

DECRETA

Di integrare l'ANNEX 1 come segue:

- inserimento dei progetti di ricerca ammessi in base al DDS della Regione Marche di cui alle premesse;
- modifica del research topic n. 4.3 dell' ANNEX 1 come da scheda allegata al presente.

Camerino,

Il Rettore

Prof. Graziano Leoni

OBJECT: AMENDMENT of the SELECTION PROCEDURE FOR ADMISSION TO PHD PROGRAMME “THEORETICAL AND APPLIED NEUROSCIENCE” (CYCLE 40, Academic Year 2024/2025) Rector’s Decree No. 326/2024 Prot. N. 0046958 of 28.06.2024

THE RECTOR

HAVING REGARD to the Regulations on PhD Programmes, issued with Rector’s Decree No. 169/2022;

HAVING REGARD to the notice of selection procedure for admission to phd programme “Theoretical and Applied Neuroscience” (Cycle 40, academic year 2024/2025) Rector’s Decree no. 326/2024 prot. No. 0046958 of 28.06.2024;

SEEN the decree of the Director of the Education, Social Innovation, and Sports sector no. 63/IISP dated 29/04/2024. PR Marche FSE+ 2021-2027 Axis 4 OS 4a DGR No. 445 dated 25/03/2024. Public notice for the awarding of scholarships for innovative doctorates with industrial characterization for the academic year 2024/2025;

SEEN the relevant DDS of the Marche Region no. 109 dated 27/06/2024 (Annex A) approving the ranking for the awarding of scholarships funded by the Marche Region;

DEEMED APPROPRIATE to proceed with an AMENDMENT of the SELECTION PROCEDURE above mentioned, in particular regarding ANNEX 1, without prejudice to the terms originally scheduled for the submission of applications;

DECREE

The ANNEX 1 is integrated as follows:

- inclusion of the approved research projects based on the DDS of the Marche Region as in the premises;
- to modify the research topic No. 4.3 as per the updated sheet attached in ANNEX 1.

Camerino,

Il Rettore

Prof. Graziano Leoni

Scholarship code: 4.3



Language of the Phd Program: English

PhD Course and curriculum: Theoretical and Applied Neuroscience - Curriculum 4: Computational and System Neuroscience

Leader of the Phd Course: Roberto Ciccocioppo

Lead Partner of the PhD Program: University of Camerino (UNICAM)

Partners and possible operative sites of the Phd Student: UNIVPM, AM Microsystems, Tech4care.

ERC Field: PE6_11 Machine learning, statistical data processing and applications using signal processing; PE6_12 Scientific computing, simulation and modelling tools; LS5_2 Systems neuroscience and computational neuroscience.

Key words: Diagnostics for brain disorders; electronics, machine learning, coding.

Research Topic and project:

Sviluppo di sensoristica elettronica avanzata per il monitoraggio diagnostico in ambito sanitario

Il progetto mira a sviluppare sistemi di sensori per la diagnostica a distanza in modalità non invasiva. Questo permetterà di migliorare il monitoraggio della salute a casa, alleggerendo così la pressione sui sistemi ospedalieri e ambulatoriali. I sensori proposti elaboreranno segnali generati da dispositivi contactless, rilevando vari parametri fisiologici come frequenza cardiaca e respiratoria, pressione sanguigna, nonché deficit posturali, tremori, difficoltà motorie e altro. Questi sistemi consentiranno di acquisire e trasmettere le biometrie dei pazienti ai centri ospedalieri o ambulatoriali per diagnosi e assistenza remota, senza necessità di coinvolgere personale specializzato.

Development of Advanced Electronic Sensors for Diagnostic Monitoring in Healthcare

The project aims to develop sensor systems for remote diagnostics in a non-invasive manner. This will improve health monitoring at home, thereby reducing the pressure on hospital and outpatient systems. The proposed sensors will process signals generated by contactless devices, detecting various physiological parameters such as heart rate and respiratory rate, blood pressure, as well as postural deficits, tremors, movement difficulties, and more. These systems will enable the acquisition and transmission of patient biometrics to hospital or outpatient centers for remote diagnosis and assistance, without the need for specialized personnel.

Supervisor: Massimo Ubaldi (massimo.ubaldi@unicam.it)

Scholarship funded by the Marche Region under Innovative PhD research scholarships with an industrial characterization for the academic year 2024/2025 - PR Marche FSE+ 2021-2027. Asse 4 OS 4a. DGR n. 445 del 25/3/2024 Avviso Pubblico Decreto n. 63/IISP del 29/4/2024. Assegnazione n. 40 borse di dottorato di ricerca di dottorato innovativo a caratterizzazione industriale.

Duration: **3 years**

Starting date: **1st November 2024**

ECTS credits (within 3 years): 180

The Doctoral program consists of 180 ECTS credits, distributed in the following way, in order to contribute to a better recognition of your title at a European and global level

- 1 Year:
 - 40 ECTS in research activity (with a yearly evaluation)
 - 10 ECTS in mandatory SAS Activities to acquire transferable skills
 - 10 ECTS in curricular related activities: 7 ECTS for participation in thematic option courses ; 3 ECTS for participation in seminars and events
- 2 Year:
 - 40 ECTS in research activity (with a yearly evaluation)
 - 10 ECTS in mandatory SAS Activities to acquire transferable skills
 - 10 ECTS in curricular related activities: 7 ECTS for participation in thematic option courses ; 3 ECTS for participation in seminars and events
- 3 Year:
 - 50 ECTS in research activity (writing and defend the Doctoral dissertation)
 - 10 ECTS in mandatory SAS Activities to acquire transferable skills

The Curricular related activities (seminars and courses in specific topics of interest) are organized by the Scientific Board of the Doctoral course.

Special requirements, additional to "standard" ones:

***Scholarships reserved for graduates residing or domiciled in the Marche region, unemployed/not working, in accordance with current regulations, who have not yet reached 36 years of age at the time of application. The requirements above mentioned must be met by the candidates at the time of submission of the application for participation in this call for applications.

-Mandatory Period of research mobility abroad: at least 6 months

-Further mandatory period of research and training mobility for the scope of the research topic (in Italy): period to be defined at the premises of the involved companies and Clusters of Marche Region

Further aspects related to this topic must comply with the project the position is based on.