Rome, June 15th, 2022

Call for Expression of Interest for two positions (1 PhD, 1 Postdoctoral Research Scientist).

The University of Rome Tor Vergata, Italy, invites expressions of interest for three positions (2 PhD, 1 Postdoc). We aim to train young researchers with scientific and professional profiles responding to the **ever growing need for methodological and technological skills in the life sciences**, with impact **both in the academic and industrial world**.

The research and training will span interconnected areas such as, for example, **Neurotech** (neuronanotechnologies, neuromorphic computing, many-person neuroscience), **Artificial Intelligence** (deep learning and machine learning for biomedical data modeling (images, signals, sounds, videos, radiation therapy planning etc), **Biomedical imaging and simulation** (physics of quantitative biomedical imaging, Monte Carlo dosimetry), **Novel drug delivery and neuromodulation tech** (focused ultrasound for permeabilization of the blood brain barrier and for deep neuromodulation), **Physiological systems modeling** (dynamical/complex systems for brain connectivity, pharmacokinetic modeling, non-invasive quantitative biomarkers based on physical techniques), development of HW/SW for non-invasive physiological signal monitoring.

We seek **highly motivated, results-oriented graduate and postgraduate candidates for full-time positions**. The work may be both computational and experimental, depending on profile and interests.

You will join an interdisciplinary team (webpage) that values collaboration, teamwork, and enthusiasm. You will be exposed to national and international collaborations and research problems across all basic and clinical sciences. The group has a history of publications in high impact journals, to which you will be supported and encouraged to contribute. Grant-writing and drafting of scientific publications will also be part of daily activities. Occasional involvement in university level teaching activities will also be possible.

Our research is currently funded by the European Commission (Horizon 2020 and EIC), the Italian National Ministry of Health, The Italian Association for Cancer research (AIRC), the US department of defense (DOD) and the National Institutes of health (NIH) as well as private institutions and foundation. Strong links to Industry are also active.

PhD: Applicants should hold an undergraduate degree in physics, engineering, mathematics, computer science or similar/equivalent. You will spend at least 6 months abroad in partner laboratories. According to experience and personal interest You will be encouraged to apply to the following programs (starting Nov 1, 2022):
- National PhD in Artificial Intelligence (Pillar: "AI for Health and Life Science")
- PhD Program in Biotechnologies and Translational Medicine (Curriculum: "Medical Physics, Neurotechnology and AI")

Postdoctoral: Applicants should hold a PhD in physics, engineering, mathematics, computer science or similar/equivalent, and should have a track record in conducting independent research during their Ph.D.
Experience: Highly desirable: Technical computing (e.g. Linux, Python, Matlab, Mathematica etc.). Desirable: Transdisciplinary experience in applying physical, mathematical, computational tools to biomedical research, experience in animal research in neuroscience

Expressions of interest should include a brief motivation letter and a Curriculum Vitae and should be sent to Prof. Nicola Toschi (toschi@med.uniroma2.it).

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