Project title: "**X-ray *spectral and phase-contrast microtomographic imaging on biomedical samples based on a compact laboratory system***"

Description: "The successful candidate will work at innovative imaging protocols delivering X-ray spectral and phase-contrast 3D images on the µm scale of biological samples on the cm scale. The project will be based on a new compact micro-computed tomography system leveraging two enabling technologies: a chromatic X-ray detector and the edge-illumination phase-contrast. Each of the two guarantees substantial advantages compared to conventional X-ray imaging, namely the generation of material-specific maps and the signal extraction from poorly absorbing or microstructured features. The project will be carried out in collaboration with national (e.g., INFN, Istituto Ortopedico Rizzoli - IRCSS, Elettra Synchrotron) and international (e.g., UCL - London) institutions in a multidisciplinary context. The successful applicant must possess a strong background in the field of X-ray imaging. Specific experience in spectral and phase-contrast imaging will be positively evaluated as well as programming skills in MATLAB or Python."

Position 1.

- Institution: University of Trieste, Dept. of Physics
- Duration: 24 months
- Net salary: ~1900 Euro/month
- timeline: application December 2023, start February 2024. The online application form will be soon available.

Position 2.

- Institution: Italian National Institute for Nuclear Physics (INFN), Division of Ferrara
- Duration: 24 months
- Net salary: ~1900/month
- timeline: application early 2024, start Spring 2024. The online application form will be soon available.

For further information don't hesitate to contact us at lbrombal@units.it (position 1), and cardarelli@fe.infn.it (position 2)!

Lab webpage: https://web.infn.it/PEPI/index.php/en/