

PhD position in medical physics

Description

The Institute of Radiation Physics (IRA), part of radiology department of the University Hospital (CHUV) and the University of Lausanne (UNIL), develops its activities in the fields of ionizing radiation in medicine (medical physics) and the protection of workers and the public against ionizing radiation (health physics).

The PhD student will carry out a research project in radiation therapy medical physics. The project called "FLIRT: FLASH IRradiation Treatment planning to facilitate and optimize glioblastoma treatments with very-high energy electron FLASH radiation therapy » has been granted by the Swiss Cancer League for a duration of 4 years. The PhD student will firstly create, optimize and validate a FLASH irradiation treatment planning platform for very high energy electrons (VHEE). This platform will enable the prediction and optimization of 3D absorbed dose distributions produced by VHEE in patients and will implement radiobiological models to evaluate the impact of the FLASH effect on the treatment. Secondly, the PhD student will apply this newly created platform to establish the most suitable treatment approaches for glioblastoma patients with VHEE while assessing uncertainties in FLASH effect predictions.

This research project will be performed within the framework of the doctoral school of UNIL.

Position requirements

- Master in physics or equivalent;
- Strong interest in research;
- Advanced abilities in scripting and programming (python, ...);
- Good data analysis, optimization, and problem solving skills;
- Nimble-mindedness, rigorous, proactive, independent, organization and time-management;
- Sense of collaboration, good communication and synthesis capacities; Adaptable to irregular schedules;
- Knowledge of radiation therapy and treatment planning (TPS) is a plus
- Working language: French or English
- Good scientific writing skills in English

Application deadline: 14 August 2024

More information:

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If you are interested in a new challenge that offers competitive wage conditions (above EUR 3000.— net salary per month), do not hesitate to send us your application documents (with an application letter, CV, 2 referees, certificates and copies of degrees and grades) to the following link: <https://recrutement.chuv.ch/vacancy/phd-position-in-the-institute-of-radiation-physics-ira-300928.html>
