

1-year postdoc position in luminescence dosimetry at the Paul Scherrer Institute (PSI)

We would like to identify potential postdoctoral candidates for a SNF-funded SPARK project “*Wearing dosimeters – towards radiation-sensitive clothing*”. We envision that this position will be available starting on 01.12.2020, pending internal approval at PSI.

This project aims to characterise the thermoluminescence properties of calcium carbonate fillers embedded in the core of polyester fibres in response to ionising radiations, with the aim of utilising them to produce radiation-sensitive clothes.

Your tasks

- To characterise the fibres for their thermoluminescence emission in response to ionising radiation
- To develop a protocol enabling rapid, precise and accurate dose assessment following beta, gamma and neutron exposure of fibres containing calcium carbonate fillers using their thermoluminescence response
- To organise blind-tests to assess the performance of the fibre and of the protocol in more realistic situations
- To liaise with the fabric industry to propose changes in the fibre’s design for dosimetry purposes
- To take part in other projects within the dosimetry group

Your profile

- PhD in radiation dosimetry, material sciences or physics
- Experience in dosimetry and developing new protocols for dose assessments
- Experience in luminescence dosimetry techniques and instrumentation would be an advantage
- Experience in Monte-Carlo radiation-transport simulations (e.g., MCNP, GEANT) would be helpful
- Excellent command of English

For further information and to apply, please contact Dr. Lily Bossin, lily.bossin@unil.ch, or Dr. Eduardo Yukihara, eduardo.yukihara@psi.ch.