



## “Small animal proton Irradiator for Research in Molecular Image-guided radiation-Oncology (SIRMIO)”

To strengthen our team at the Chair of Medical Physics of the Ludwig-Maximilians-University Munich we are offering

### 1 PhD position (3 years) for proton radiography and tomography

within the ERC project SIRMIO (Small animal proton Irradiator for Research in Molecular Image-guided radiation-Oncology, PI Prof. Dr. Katia Parodi).

#### Your tasks

- Realization and characterization of a setup for proton radiography and tomography within a novel small animal proton irradiator
- Utilization of the acquired information for small animal positioning and treatment planning
- Integration of the imaging setup in the small-animal irradiator prototype

#### Our (ideal) requirements

- MSc in physics or biomedical engineering
- Good understanding of radiation interaction with matter and of medical imaging
- Experience with detector signal processing and data acquisition/reconstruction techniques
- Experience in coding and documentation standards, Monte Carlo simulations (FLUKA or Geant4), programming languages (preferably C/C++, Python, MATLAB) and Linux and Windows OS
- High level of creativity
- Fluent English knowledge (spoken and written)

The LMU Chair of Medical Physics offers a multi-disciplinary environment and works on various core-topics of ion beam therapy. With the SIRMIO project, we aim to provide a novel platform for high precision, image guided proton irradiation of small animals. The main goal of your work will be to implement a novel proton transmission imaging system to enable pre-treatment imaging for positioning and treatment planning.

The working place will be at the Forschungszentrum Garching, which is well connected with public transportation to the city of Munich. Disabled candidates are preferentially considered in case of equal qualification. Applications from women are encouraged.

If you are interested in the position, please send us your application (letter of motivation, curriculum vitae, last school certificate, university degree including grades, publication list [if applicable], other qualification certificates like TOEFL) until the **20<sup>th</sup> of May 2018** via email to

**katia.parodi@lmu.de and Andrea.Leinthal@physik.uni-muenchen.de** , indicating your earliest possible entry date.