

## **Helmholtz-Zentrum Dresden-Rossendorf e.V.**



With cutting-edge research in the fields of ENERGY, HEALTH and MATTER, around 1,500 employees from more than 70 nations at Helmholtz-Zentrum Dresden-Rossendorf (HZDR) are committed to mastering the great challenges facing society today. At the Institute of Radiooncology - OncoRay scientists (f/m/d) specializing in medicine, physics, biology and IT work together to crucially improve the treatment of cancer by administering radiation therapy that is biologically personalized and technically optimized. The Department of Medical Radiation Physics is looking for a PhD Student (f/m/d) Tailoring of Photon-Counting CT imaging for application in Radiation Oncology within the EU-funded project EMPATHY. Recruitment is subject to final approval by the project sponsor.

### **PhD Student (f/m/d) Tailoring of Photon-Counting CT imaging for application in Radiation Oncology within the EU-funded project EMPATHY**

City: Dresden; Starting Date: 01/06/25; Duration: 36 months; Remuneration: TVöD-Bund; Reference number: 2025/35; Closing date: 27/02/25

#### **Working field**

- Unlock and tailor the novel Photon-Counting CT imaging technology for Radiation Oncology application with the clear goal to reduce dose to healthy tissues and thereby the toxicity risk of the radiation therapy treatment on multiple levels:
  - A) Reduce the imaging dose of the pre-treatment CT scan
  - B) Enable the highly-accurate DirectSPR approach for particle range prediction for moving tumors
  - C) Further improve the accuracy of the DirectSPR approach for particle range prediction
- Collaborate within the EMPATHY project with researchers from KU Leuven (Belgium) and the proton therapy center at the Hospital Clínic Barcelona. A secondment in Barcelona is foreseen.

#### **Requirements**

- Completed university studies (Master/Diploma) in the field of Physics, Medical Physics, Informatics, Medical Technology, Data Science or a related fields
- Advanced programming skills in a high-level programming language (e.g. Python, MATLAB)
- Proven experience in CT imaging is highly desirable
- Excellent problem-solving skills, academic writing skills, and communication skills
- Team player with the willingness to work within a group of motivated interdisciplinary professionals
- Proficiency in spoken and written English, preferably also in German

## What We Offer

- A vibrant research community in an open, diverse and international work environment
- Scientific excellence and extensive professional networking opportunities
- A structured PhD program with a comprehensive range of continuing education and networking opportunities - more information about the PhD program at the HZDR can be found here
- Salary and social benefits in accordance with the collective agreement for the public sector (TVöD-Bund) including 30 days of paid holiday leave, company pension scheme (VBL)
- We support a good work-life balance with the possibility of part-time employment, mobile working and flexible working hours
- Numerous company health management offerings
- Employee discounts with well-known providers via the platform Corporate Benefits
- An employer subsidy for the "Deutschland-Ticket Jobticket"

## Application

We look forward to receiving your application documents (including cover letter, CV, diplomas/transcripts, etc.), which you can submit via our online-applicationsystem: <https://www.hzdr.de/db/Cms?pNid=490&pLang=en&pOid=74007>

More information at <https://stellenticket.de/191458/>  
Offer visible until 27/02/25

