

We are one of the youngest universities in Germany and think in terms of possibilities, not limitations. In the heart of the Ruhr region, we develop ideas of the future at 11 faculties. We are strong in research and teaching, live diversity, support potential and are highly committed to educational equality.

The University Hospital Essen offers first class medical services in the Ruhr metropolis. Every year, 225.000 patients are treated in 30 clinics, 27 institutes and specialized centres. With more than 8.000 employees we offer medical care with state-of-the art diagnostics and therapies that meet highest international standards. Patient care is connected with basic and translational research at an internationally competitive level.

The **University of Duisburg-Essen** offers in the
German Research Council (DFG)-funded Research Training Group GRK 2762

1 PhD position (f/m/d) – E 13 TV-L, 65%

in a project on

Computational Modeling of Radiation Oncology Data

Starting 1 October 2022

The pay grade classification depends on the personal and collective legal requirements. The salary is in accordance with the German public service salary scale. The positions are third-party funded until September 30th, 2026.

About us

The advertised position is located at the Center for Medical Biotechnology, Department of Bioinformatics and Computational Biophysics (principal investigator Prof. Daniel Hoffmann). The project part of the GRK focus area *Mathematical and Computational Modelling*.

The question asked in this project is: Can we develop computational methods that allow us to gain reliable knowledge from experimental or clinical data despite this high level of heterogeneity and complexity of cancers and their responses to radiation and other therapies? At its core, the answer that we envision is a computational toolbox that enables researchers to integrate complex data from our systems of interest in probabilistic models. Such probabilistic models can explicitly account for uncertainty and thus for heterogeneity. The models will be used to study our systems quantitatively by Bayesian inference. Around this central modelling component, further tools can be added for data processing and complementary analyses such as ordination or clustering, resulting in data analysis pipelines for reproducible research in radiation oncology. The GRK 2762 on “Heterogeneity, plasticity and dynamics in cancer cell, tumour and normal tissue responses to cancer radiotherapy” offers outstanding internationally-oriented interdisciplinary scientific research and training opportunities for graduates of experimental or computational life sciences and (bio)medicine with interest in basic and translational cancer research and computational biology

(<http://www.uni-due.de/med/forschung/grk2762/index.shtml>)

We offer

- Opportunities to conduct cutting-edge interdisciplinary research projects
- A stimulating interdisciplinary and internationally-oriented academic environment
- Innovative cross-disciplinary scientific training for PhD and MD students at the interface between radiation biology and oncology, precision medicine, and computational biology
- Training in transferable academic and soft skills
- Funding for active participation in workshops and conferences and international visits to collaboration partners
- Regular supervision and mentoring
- Excellent career opportunities

Qualification profile

- Talented and enthusiastic candidates with interested in the research topic of GRK 2762
- Excellent Diploma/Master degree in Computational Biology, Biostatistics, or related fields
- Strong motivation and commitment to active cross-disciplinary collaboration
- Ability to solve complex problems and to work independently
- Fluency in spoken and written English (knowledge of German is not a requirement)

Applications

Interested candidates should fill the application form available at <https://www.uni-due.de/med/forschung/grk2762/jobs.php> and send it together with a curriculum vitae, a copy of all university degrees and other certificates (e.g. on English language skills), together with contact data of two referees (university professors) in **a single** pdf-file by e-mail to bewerbung@uk-essen.de with subject line "tender number **1231**, application GRK 2762/Project M1" (or by mail to Universitätsklinikum Essen, Personaldezernat, Hufelandstraße 55, 45147 Essen, Germany).

Application deadline: **30.06.2022**

Interviews will take place in Essen in July 2022, starting **14th of July 2022**.

The University Duisburg-Essen aims at promoting the diversity of its members (see <http://www.uni-due.de/diversity/international.shtml>). Applications from disabled or equivalents according to § 2 Abs. 3 SGB IX are encouraged. The participation in secondary employment depends on the "Hochschulnebenberufungsverordnung" of North-Rhine Westphalia. The University Duisburg-Essen aims at increasing the share of women in the scientific personnel and therefore explicitly encourages women to apply. Women will be preferentially considered when equally qualified according to the state equality law.

We use your data exclusively for application purposes in accordance with the applicable data protection regulations. Further information can be found in the privacy statement on our homepage at: www.uk-essen.de.