



The Department of Radiotherapy plans to appoint a

PhD student or postdoc for advanced robotic radiotherapy

((applied) physics, biomedical engineering or related)

36 hours per week

Work environment

The department of Radiotherapy of the Erasmus MC Cancer Institute is one of the largest departments of radiotherapy in Europe, treating over 5.000 cancer patients per year. The department has an extensive and renowned research program with important national and international collaborations with academic partners and industry. Physics is of major importance in the research program, and a large part of the 60 employees of the Medical Physics unit is involved in research projects. The research is embedded in multi-disciplinary teams, consisting of radiation oncologists, (medical) physicists, mathematicians, technologists, and computer scientists.

Job description

The department of Radiotherapy is a pioneer and world leader in research related to computer optimization of treatment plans, with on-going developments in photon and proton therapy. The goal of computer optimization/planning is to establish optimal, patient-specific treatment machine parameters for delivery of an adequate radiation dose to the tumor while maximally avoiding dose to healthy tissues to avoid negative side effects. Basically, planning entails proper definition of a mathematical optimization problem and solving the problem with computers, using dedicated algorithms. Many of the research projects are performed in close collaboration with vendors of radiotherapy equipment. The person to be hired will be working in this dynamic field. The research will be focused on development and evaluation of algorithms for optimization of high precision treatments on robotic Cyberknife treatment units, and on the use of these algorithms for development and evaluation of novel treatment strategies to further enhance the treatment outcome of cancer patients. The research is performed in a collaboration with the manufacturer of the Cyberknife and will be imbedded in a multi-disciplinary group of investigators.

Qualifications and skills

Candidates have a Master or PhD degree in (applied) Physics, Biomedical Engineering or a related discipline. They have experience in data analyses with Matlab, Python or comparable software, or are eager to learn. Excellent writing skills are also required. Experience in radiation oncology, especially related to treatment planning, is an advantage. You are creative, ambitious, result-driven, focused on creation of scientific output, and a team player. Being able to present a certificate of good conduct is a condition for the appointment.

Terms of employment

The terms of employment are in accordance with the Collective Bargaining Agreement for University Medical Centers (cao UMC). The gross monthly salary depends on your level of education and experience. You will receive a temporary position for 4 years.

Information

For more information about this position, please contact Prof. dr. B.J.M Heijmen, medical physicist and professor in radiation oncology physics (0031-10-7041304 or e-mail b.heijmen@erasmusmc.nl). For other information please contact A.S. de Wringer-van Vliet MBA, sector manager Medical Physics (003110-7031248 or e-mail a.dewringer@erasmusmc.nl).

Application

Please send your application including Curriculum Vitae and accompanying letter by e-mail to: sollicitatie.daniieldenhoed@erasmusmc.nl, stating vacancy code

No vacancies.