

PhD Position in Medical Physics – Particle Therapy Treatment Optimisation

Aarhus University is set to host the future Danish National Center for Particle Radiotherapy, which is planned to be operational in 2018. In view of this project, the Department of Medical Physics and Experimental Clinical Oncology is offering a

PhD position

for research in treatment planning and optimization of particle radiation therapy. The project is part of a key endeavour to increase treatment safety, efficacy and tolerance especially for lung and abdominal tumors. More information about the particle therapy center can be found here (and following the links at the bottom of the page): [http://www.auh.dk/forskning/partikelterapi/national+center+for+particle+radiotherapy+\(ncprt\)](http://www.auh.dk/forskning/partikelterapi/national+center+for+particle+radiotherapy+(ncprt))

The project is concerned with the development of robust dose optimization and delivery for geometrically variable target volumes. Robust optimization is a fairly recent mathematical method that minimizes the deleterious effect of geometric perturbations on the desired treatment outcome and is related to methods of financial portfolio risk management. An ideal solution for clinical application would also consider radiobiological aspects and the technological details of beam delivery. In short, a very broad, multi-faceted and relevant project at the forefront of scientific development.

The candidate is expected to have a degree in Physics or Computational Physics, a strong background/interest in numerical mathematics and programming, and a passion for working in international, interdisciplinary teams. Danish language skills are not required, but a good command of English is beneficial.

We offer

- A chance to work on a project with tangible impact
- Tuition and teaching infrastructure of Denmark's largest university and one of the largest radiotherapy research centers in Europe
- The stimulating environment of Denmark's second largest city
- Collaborations with other particle therapy centers in Europe
- A competitive salary. The position is limited to three years.

Please send your full application (in Danish, German or English) to Prof. Markus Alber (markalbe@rm.dk) until March 31st, 2014, including a cover letter (a brief statement of motivation), a CV, and all academic certificates. Contact person:

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