

Dept. of Mechanical & Manufacturing Engineering

Special Scientist Position



Title	: Special Scientist (Research Fellow)
No. of Positions	: One (1)
Category	: Employment contract for one (1) year (subject to renewal)
Location	: University of Cyprus, Nicosia, Cyprus

We seek to fill the vacancy for **one (1) Special Scientist (Research Associate) position**, for **full-time employment**. The successful candidate will conduct fundamental and/or applied research as part of an R&D-funded project from the Cyprus Cancer Research Institute.

This research post is available at the *In Silico Modelling Group* (<https://in-silico-modelling.ucy.ac.cy>) of the University of Cyprus (UCY), which is part of UCY's Computational Sciences Lab. The group has expertise in mathematical modelling, simulations, medical image processing, bioengineering, data analysis, and high-performance computing. The post-doctoral fellow will be under the supervision of [Dr Vasileios Vavourakis](#).

THE PROJECT

Treatment of brain cancer metastasis (BCM) is often surgery, radiation therapy or both – clinical evidence suggests that stereotactic radiosurgery or in combination with whole brain radiotherapy have shown improved cancer patient survival. However, prediction of response to treatment on a patient-specific basis remains elusive. Thus, our project aims to develop novel digital tools for clinical decision making in patients with BCM by predicting and assessing the efficacy of external beam radiation treatment.

We are looking for a highly motivated research associate with a solid background in computer science, biomechanics, mathematical modelling and simulations to work towards (a) developing a multiscale model of tumour growth and brain tissue deformation, and (b) personalizing the model to simulate the effect of radiotherapy.

DUTIES AND RESPONSIBILITIES

The successful candidate is expected to:

- Develop a novel mathematical model for brain metastasis, encompassing tissue and tumour deformation, angiogenesis and oedema formation.
- Integrate the model with medical imaging data to generate personalised model predictions.
- Simulate brain radiotherapy treatments on a patient-specific basis.
- Collaborate closely with post-graduate and post-doctoral group members working on this project, and
- Supervise post-graduate students working on this project.
- Disseminate project results (internally and externally):
 - write research articles in high-impact factor journals,
 - write proceedings and give talks in prominent international conferences / congresses, and
 - compile technical reports for the project.
- Prepare grant proposals and be active in networking.

PROFILE AND EXPERIENCE

- PhD in either Computer Science, Medical Physics, (Mechanical or Biomedical) Engineering, Applied Mathematics, or any other relevant to the project field.
- Solid background in numerical methods and modelling.
- Experience in computer programming (C++ is important, Python is a plus).
- Previous research work experience is considered a great advantage.
- Very good skills in English (written and verbal communication) are required.
- Strong motivation is a must. Be reliable and a trustworthy team member, with good communication and organizational skills, and with a strong eager to learn.

EMPLOYMENT TERMS

The position is on a contract basis. Initially, a 12-month contract will be offered that could be extended based on successful progress and performance. The gross monthly salary will be within the range €2,500 – €2,900 depending on experience and qualifications, while a 13th salary bonus is being incorporated in the monthly salary. Contributions to the various governmental funds will be deducted from this amount. Maternity leave will be granted based on Maternity Protection Law 1997(N.100(I)/1997), and the existing amendment laws.

APPLICATION DOCUMENTS

Interested candidates should submit the following documentation (in English) online through UCY's recruitment website (<https://applications.ucy.ac.cy/recruitment>):

- Cover letter explaining the interest of the applicant for this post, a short summary of prior work experience, R&D activities and accomplishments, and their employment availability date (2 pages max).
- Curriculum Vitae of the applicant.
- Copies of degrees and transcripts
- Recommendation letters by 2 academy- or/and industry-based referees.

The University of Cyprus shall collect and process your personal data according to the provisions of the General Regulation on Personal Data (EU) 2016/679.

The University of Cyprus (UCY) is committed to promoting inclusivity, diversity, and equality, as well as the elimination of all forms of discrimination in order to provide a fair, safe, and pleasant environment for the entire university community, where students and staff members will feel supported both in their professional and personal development, within and beyond their multiple identities. To this end, UCY seeks to create the necessary conditions that will encourage and respect diversity, and ensure dignity both in the workplace and society at large. Moreover, UCY has adopted specific policies to promote equal opportunities, as well as respect and understanding of diversity, while it is committed to promoting and maintaining a working, teaching, and learning environment, free from any form of discrimination, whether direct or indirect.

Applications should be submitted by 26 February 2023.

Evaluation of the applications will begin immediately with interviews taking place shortly after application submission. At least the best three candidates that satisfy the required qualifications, will be interviewed by a 3-member committee. Candidates shall be informed about the result of their application by relevant entity.

For more information, interested candidates can contact Dr Vasileios Vavourakis (vasvav@ucy.ac.cy).