

## Dept. of Mechanical & Manufacturing Engineering Postdoctoral Researcher Position



<b>Title</b>	: Postdoctoral Researcher
<b>No. of Positions</b>	: One (1)
<b>Category</b>	: Employment contract for two (2) years
<b>Location</b>	: University of Cyprus, Nicosia, Cyprus

Are you interested working in scientific computing and mathematical modelling for cutting-edge research in cancer therapy? Are you interested being part of a highly enthusiastic and highly motivated team who will support you and provide you with a friendly and positive working environment? Are you interested being part of a multidisciplinary collaboration of renowned investigators who are excellent in their research field? Are you looking for an employer that invests in sustainable employeeship and offers safe, favourable working conditions?

We welcome you to apply for a Postdoctoral Researcher position at the Department of Mechanical and Manufacturing Engineering, of the University of Cyprus (UCY). We seek to fill one (1) vacancy for a **Postdoctoral Researcher position**, for **full-time employment**. The successful candidate(s) will conduct fundamental and/or applied research as part of a national-funded project.

This work will be carried out with UCY's *In Silico Modelling Group* (ISMG; <https://in-silico-modelling.ucy.ac.cy>). The group has expertise in mathematical modelling, computational mechanics, medical image processing, biomechanics, model/imaging data analysis and high-performance computing technologies. The Special Scientists will be under the supervision of Dr Vasileios Vavourakis and Prof Constantinos Pattichis.

The filling of the position is subject to the availability of funding. Applicants need not be citizens of the Republic of Cyprus. Applicants should however ensure, before applying, that in case they are selected they will be residing in Cyprus on a full-time basis during the employment period; submission of application implies acceptance of this condition.

### THE PROJECT

The project, *PROTECT*, is a two-year initiative funded by the Research & Innovation Foundation (RIF) in Cyprus, and is entitled: "*Automated model-based surgical planning tool for PROstaTE Cancer brachyTherapy.*" The project teams up the University of Cyprus, the German Oncology Centre in Limassol, The Cyprus Institute, and two Cyprus based SMEs: 3aE HEALTH Ltd and EUNDO Ltd.

In the *PROTECT* project, we are looking for a highly motivated research associate with a sound background in computational techniques in solids, in biomechanics, in numerical methods and high-performance computing to carry out cutting-edge R&D in *in silico* modelling and cancer therapy.

### DUTIES AND RESPONSIBILITIES

The successful candidates are expected to:

- Develop novel *in silico* modelling procedures in either of the following R&D directions:
  - high-performance computing simulations of biological soft tissue biomechanics and solid-solid

- interaction nonlinear models
  - simulation algorithms for surrogate models pertinent to optimization of *in silico* procedures
- Collaborate closely with post-graduate and post-doctoral group members working in this project.
- Supervise post-graduate students of the *ISMG*.
- Disseminate project results (internally and externally):
  - write research articles in high-impact factor journals,
  - write proceedings and give talks in prominent international conferences / congresses,
  - compile technical reports for the project.
- Prepare grant proposals and be very active in networking.

## PROFILE AND EXPERIENCE

- PhD in Computer Science or in Engineering or in Applied Mathematics or in Medical Physics or any other relevant to the project field.
- Solid background in computer programming and parallel computing is paramount, while experience in C, C++ or/and Python is very important.
- Expertise in numerical methods and simulations (e.g., Finite Element method, Mesh-free or Particle-based methods), while experience with Machine Learning techniques is a great advantage.
- Previous research work experience in EU projects is considered a great plus.
- Excellent skills in English (written and verbal communication) are required.
- Strong motivation, be a reliable and a trustworthy team member, with very good communication and organizational skills, and eagerness to learn are essential.

## EMPLOYMENT TERMS

The position is on a contract basis. Initially, a 24-month contract will be offered that can be extended based on successful progress and performance. The gross monthly salary will be within the range €3,000 – €4,500 depending on experience and qualifications, while a 13<sup>th</sup> salary bonus is being incorporated in the monthly salary. Employee contributions to the various Government Funds will be deducted from the aforementioned amounts. Maternity leave will be granted according to 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>) by **May 5, 2024**:

- Cover letter explaining the interest of the applicant for this post, a short summary of prior work experience, R&D activities, accomplishments, and their employment availability date (max. 2 pages).
- Curriculum Vitae clearly indicating current and previously held job posts, peer-reviewed publications and talks, participation in research projects and awards (max. 4 pages).
- Referees: at least 2 academia or/and industry-based referees (provide their names, emails, telephone number, affiliation, ORCID) that we contact with.

At least the best three candidates that satisfy the required qualifications, will be interviewed by a 3-member Committee. Candidates shall be informed of the result of their application by the relevant entity soon after interviews.

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

UCY is committed to promoting inclusivity, diversity, and equality, as well as the elimination of all forms of discrimination 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. 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 healthy environment.

**Applications should be submitted by (including) 5 May 2024.** Evaluation of the applications will begin immediately with interviews taking place soon after application submission deadline, and candidates shall be informed of the result of their application by UCY. For more information, interested candidates can contact directly the project responsible investigators: Dr V. Vavourakis ([vavourakis.vasileios@ucy.ac.cy](mailto:vavourakis.vasileios@ucy.ac.cy)) and Prof C. Pattichis ([pattichis.costas@ucy.ac.cy](mailto:pattichis.costas@ucy.ac.cy)).