

Dept. of Mechanical & Manufacturing Engineering
Special Scientist (Postdoctoral Researcher)
position in OpenFOAM and Multiphysics
Simulations



Title	: Special Scientist (Postdoctoral Researcher)
No. of Positions	: One (1)
Category	: Employment contract for one (1) year (subject to renewal), full time, on-site
Location	: University of Cyprus, Nicosia, Cyprus

We are seeking a highly motivated Postdoctoral Researcher in OpenFOAM-based multiphysics modelling and high-performance computing (HPC) to join the IgnitePLASMA project at the University of Cyprus. The successful candidate will develop advanced computational models and simulation tools for plasma-fluid dynamics and plasma-tissue interactions in cutting-edge cancer therapy applications. The position offers the opportunity to work within an international consortium of leading academic, clinical, and industrial partners, from Cyprus, Greece, France and the UK, while contributing to high-impact research in scientific computing, computational mechanics, and biomedical engineering. The researcher will join a dynamic and collaborative environment with access to advanced HPC infrastructure and strong opportunities for scientific publications, international networking, and career development.

We welcome you to apply for a Special Scientist (Research Associate) at the Department of Mechanical and Manufacturing Engineering, of the University of Cyprus (UCY). We seek to fill one (1) vacancy for a **Special Scientist** (Research Associate) **position, for on-site, full-time employment.** The successful candidate will conduct applied research as part of the EU-funded project, IgnitePLASMA.

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. The Special Scientist will be under the supervision of Assoc. Prof. Vasileios Vavourakis. In the project you will be developing algorithms and models using the open-source platform OpenFOAM, and you will have access to advanced distributed computing infrastructure, such as the University of Cyprus HPC Cluster and our in-house computing servers.

THE PROJECT

The project, *IgnitePLASMA*, is within the Pathfinder Open topic of the European Innovation Council, and is entitled: "*A minimally Invasive surgical platform aGainst paNcreatlc and biliary Tract canCErs using cold atmospheric PLASMA.*" Information about the project is available from here: <https://igniteplasma.eu>.

In the *IgnitePLASMA* project, we are looking for a highly motivated research associate with a solid background in mathematical and computational techniques, 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 candidate is expected to:

- Develop novel *in silico* modelling procedures in either two of the following R&D directions:

- high-performance computing fluid dynamics and plasma biochemistry models
- multiscale model that couples the interaction of plasma with biological soft tissue
- simulation algorithms for surrogate models pertinent to simulation-based optimization
- Collaborate closely with post-graduate and post-doctoral group members working in this project, and
- Supervise post-graduate and undergraduate 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, and
 - compile technical reports for the project.
- Prepare grant proposals and be very active in networking.

PROFILE AND EXPERIENCE

- PhD in Engineering, or in Computer Science, or in Applied Mathematics, or in Medical Physics, or any other relevant field to the project.
- Experience in OpenFOAM is necessary for this post, while experience in commercial CFD and Multiphysics solvers is a plus.
- Theoretical expertise in numerical methods and simulations (e.g., Finite Volumes, FEA, HPC) is necessary, while experience with machine learning techniques is a great advantage.
- Solid background and experience in computer programming (C++ and Python).
- Excellent skills in English (written and verbal communication) are required.
- Previous research work experience in EU projects is a great plus.
- Strong motivation is a must. Be a reliable and a trustworthy team member, with very good communication and organizational skills, and with a strong eager to learn is of paramount importance.

EMPLOYMENT TERMS

The position is on a contract basis. Initially, a 12-month contract will be offered that can be extended based on successful progress and performance for up to 24 months or/and up to the entire funding duration of the project. The gross monthly salary will be within the range €3,000 – €4,500 depending on experience and qualifications, while a 13th salary bonus is being incorporated in the monthly salary. 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 **June 14, 2026**:

- 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 (2 pages max).
- Curriculum Vitae clearly indicating current and previously held job posts, peer-reviewed publications and talks, participation in research projects and awards.
- Recommendation letters by 3 academic 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 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 14 June 2026. Evaluation of the applications will begin immediately with interviews taking place a week after application submission deadline, and candidates shall be informed of the result of their application by UCY. For more information, interested candidates can contact the project responsible investigators: Prof V. Vavourakis (vavourakis.vasileios@ucy.ac.cy) and Dr C. Anastassiou (anastassiou.charalambos@ucy.ac.cy).