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Marie Skłodowska-Curie Actions

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Postdoctoral Fellowships



CALL FOR APPLICATIONS 2025 – FELLOWS

Supervisor	Badr Kaoui
Supervisor page	https://sites.google.com/site/bkaoui/
Host Institution	Université de Technologie Compiègne (UTC) https://www.utc.fr/en/
Research Lab	Laboratoire BioMécanique et BioIngénierie https://bmbi.utc.fr/
Research Team	Biological Fluid Structure Interactions https://bmbi.utc.fr/recherche/equipes-de-recherche/interactions-fluides-structures-biologiques-ifsfb/

Project Title

Multiphysics Simulations of Organ-on-Chips

Project Description

The goal of the proposed research project is to contribute to the design of new artificial organs that could be fit into microfluidic devices and still mimic efficiently healthy organs. The project will use computer simulations to investigate the interplay between the details of the microfluidic chip geometry and the performance of organ-on-chip under dynamical flow conditions to come up with useful digital twins of experimentally studied organ-on-chips prototypes at BMBI laboratory.

Keywords

high performance computing (HPC), fluid-structure interaction (FSI), organ-on-Chip (OoC)

Description of the Host Lab

BMBI is uniquely positioned in the field of Life Mechanics and Health Engineering. We carry out fundamental studies on the understanding/modeling of living systems at different scales (from the cell to the whole body), and develop solutions or applications for the diagnosis, prognosis, treatment, replacement or even prevention of pathologies of the musculoskeletal, cardiovascular or metabolic systems. In this way, we aim to ensure a continuum of fundamental research-engineering-technology for healthcare.

To submit your application, please send an email with the required documents to
msca-pf@sorbonne-universite.fr