

Two postdoctoral positions at Institut Jacques Monod in Paris

Mechanobiology of the cytoskeleton at the single filament and network scale

We are **recruiting two postdocs** by the end of 2024 (start date flexible):

- one project on **vimentin single filament mechanics *in vitro*** (supervised by Cécile Leduc)
- one project on **actin network mechanics *in vitro*** (supervised by Guillaume Romet-Lemonne)

Context: Cell mechanics is mostly governed by the cytoskeleton which is composed of three types of interconnected filaments: actin, microtubules and intermediate filaments (including vimentin), but the mechanical regulation of these systems remains elusive. *In vitro* experiments, in a very controlled environment, are required to understand their properties at different scales. Both projects are in close collaboration with cell biologists and with theoretical physicists.

Keywords : microfluidics, optical traps, TIRF microscopy, biophysics, mechanobiology, micro-rheology

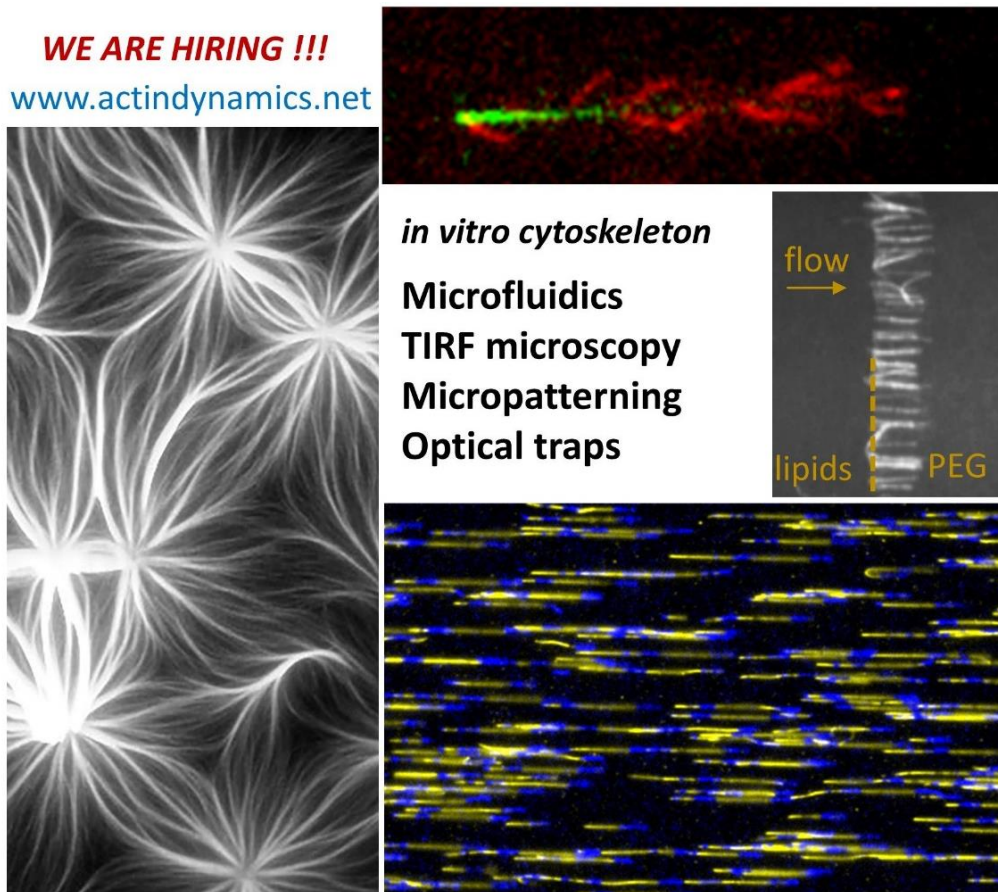
Localization : At [Institut Jacques Monod](https://www.ijm.fr) in Paris - a great environment with awesome teams and facilities!

The team: The team '[Regulation of Actin Assembly Dynamics](https://www.actindynamics.net)' is a very dynamic, multidisciplinary team, working at the interface between biochemistry, biology, and physics. It is composed of 16 persons of 5 different nationalities.

Application: We are open to various profiles, and particularly interested in applicants with a background in physics or engineering. Applicants are asked to send a CV, a cover letter and contacts of 2 references.

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WE ARE HIRING !!!
www.actindynamics.net



in vitro cytoskeleton

Microfluidics
 TIRF microscopy
 Micropatterning
 Optical traps

flow →
 lipids PEG

The complex block contains several microscopy images. At the top right is a fluorescence image showing red and green filaments. Below it is a grayscale image of a microfluidic channel with a flow arrow pointing right, and labels for 'lipids' and 'PEG'. At the bottom right is a fluorescence image showing yellow and blue filaments. On the left side of the block is a large grayscale image showing a network of white filaments.