

# Postdoctoral position in theoretical biophysics

The lab "Cellular Spatial Organization", Institut Jacques Monod, Paris, is looking to hire a post-doctoral fellow who will be mentored by Dr. Serge Dmitrieff, in collaboration with Dr. Nicolas Minc. We aim at understanding how mechanical elements in the cell, such as the cytoskeleton, cell wall, etc. self-organize under constraint from their environment

**The project** You will be involved in developing a research project on intracellular mechanics and architecture. You will be involved with developing the theory (continuous and/or simulations) and you will actively communicate with the experimentalists; this may involve participating in designing the experiments and the data analysis. Possible project guidelines involve :

- How mechanical constraint shape actin networks
- Theory of cell wall mechanics
- Self-organization of actin cables

**The lab** The team "Cellular Spatial Organization" is an interdisciplinary team that hosts both theoreticians and experimentalists, and has gained a reputation on intracellular architecture and mechanics. We develop cutting-edge methods both experimental and theoretical. It is in an ideal scientific environment for a biophysicist, being located in a biology institute with a strong focus on experimental biophysics, and neighbour to an experimental and theoretical physics institute. It is also conveniently located inside Paris at the intersection of several public transport networks.

**The candidate** You need to have a PhD in physics or computational biology, an experience in theoretical biophysics being preferable. Publications in peer-reviewed journals are strongly desirable. Experience in scripting or programming is necessary. Communication skills are a must, since you will be working with collaborators, and in an interdisciplinary atmosphere.

**The application** Send a CV, cover letter, and contact information of two (or more) references to [serge.dmitrieff@ijm.fr](mailto:serge.dmitrieff@ijm.fr).

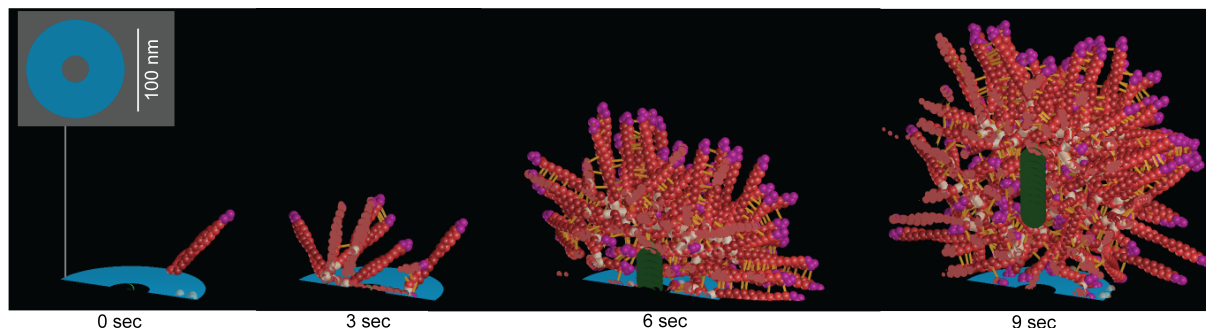


FIGURE 1 – Langevin simulation of actin in yeast endocytosis. Actin (red) polymerizes at the nucleation disc (blue). Since actin is tethered to the vesicle (green), the polymerization of new filaments will pull the vesicle upwards. (+) ends of actin filaments are indicated in purple.