

# Postdoctoral position at the University Côte d'Azur

## Studying the mechanisms and mechanics of sea urchin gastrulation: a model for epithelial folding

During embryo gastrulation one of the key morphogenetic processes is tissue folding. We use the sea urchin embryo, a spherical monolayer epithelium that folds its vegetal plate forming a tube: the future gut. What are the mechanisms and the mechanical forces driving folding is still not well understood. The sea urchin gastrula combines a number of outstanding features making this model system a unique opportunity to study the mechanisms and mechanics of tissue folding: (1) simplicity; (2) transparency for *in toto* light sheet imaging; (3) known key signaling factors; (4) the gastrula is a mechanically accessible tissue: it can be partitioned, cells can be transplanted, micro-indentation and micro-pipetting techniques can be applied to measure tissue mechanical properties. The sea urchin gastrula is thus a perfect playground for biologists and biophysicists.

The projects developed in the lab gather people from different backgrounds (biology, informatics, physics, and engineering) to generate an interdisciplinary and synergistic group in an international environment.

Seeking talented candidates preferably with experience in micro pipetting, nano/ $\mu$  indentation, live imaging, light sheet microscopy or marine model systems.

**Deadline: May 10<sup>th</sup>, 2020.** Starting date: Before the end of 2020.

Send a CV, motivation letter and reference letters to [matteo.rauzi@univ-cotedazur.fr](mailto:matteo.rauzi@univ-cotedazur.fr)

RAUZI LAB: <http://ibv.unice.fr/research-team/rauzi>



We are here!

