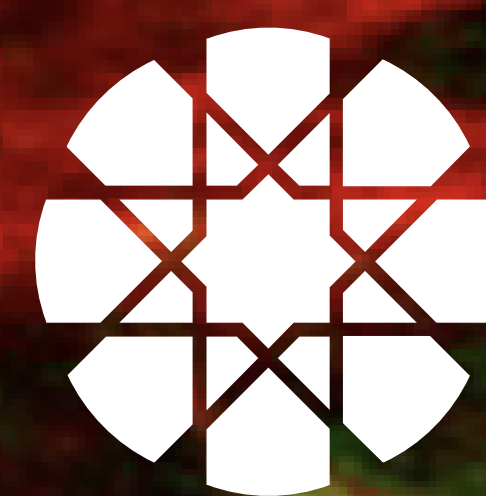


Mechanobiology of tissue morphogenesis and disease



Universidad
Internacional
de Andalucía

21st-23rd October 2025

ABOUT THE WORKSHOP

Developmental biology has undergone a revolution over the last two decades. Work in different model organisms has placed biophysical methods, quantitative imaging, and mathematical modelling at the forefront of the study of tissue morphogenesis. In particular, the establishment of tools to measure and manipulate mechanical forces in living embryos has demonstrated that mechanical cues profoundly shape animal development, while force misregulation leads to congenital defects.

In this workshop, we will discuss the impact of mechanical forces on embryonic development in a variety of model organism, including worms, flies, frogs, fish and mice. We will explore recent advances in our understanding of the molecular players involved in generating and sensing mechanical cues. We will examine the interplay between chemical, mechanical, and genetic signals in the regulation of adhesive and cytoskeletal networks in collective cell behaviour, and the fundamental role that mathematical models play in the interpretation of the complex relationships between signalling modalities.

Finally, we will survey how redistribution and reorganization of adhesive and cytoskeletal proteins promote cellular dynamics that result in large-scale cell and tissue movements in developing embryos. The workshop should be of interest for developmental and cell biologists, biophysicists and bioengineers.

FORMAT OF THE WORKSHOP

The workshop will bring together 15 speakers and a maximum of 35 participants, consist of platform and poster sessions. The scientific programme will start in the morning of Tuesday October 21st and will end in the morning on Thursday October 23rd. Ample time for informal discussion will be reserved. Participants are encouraged to present a poster. Several submitted abstracts will be selected for short talks.

VENUE OF THE WORKSHOP

The workshop will be held in Baeza, at the “Antonio Machado Headquarters”, a XVII century building turned into a Conference Centre of the International University of Andalusia (UNIA). A complex made up of two historic buildings: the Jabalquinto Palace (XV/XVI centuries) and the old Seminary (XVII century) located in the heart of the historic complex, among the old University, church of Santa Cruz, the cathedral and the Upper Town Halls.

This site includes a recently restored residence, where speakers and participants will be accommodated. This same space is where the meetings will be held, which facilitates social interaction and informal discussions.

Baeza is a UNESCO World Heritage town, known for its Renaissance and Gothic architecture.

The venue includes a recently restored residence, accommodating speakers and participants in the same location as the scientific sessions, fostering informal discussions and collaborations.

More info

www.unia.es

workshops.biomed@unia.es



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**DEADLINE for
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12th September, 2025**

VENUE

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