

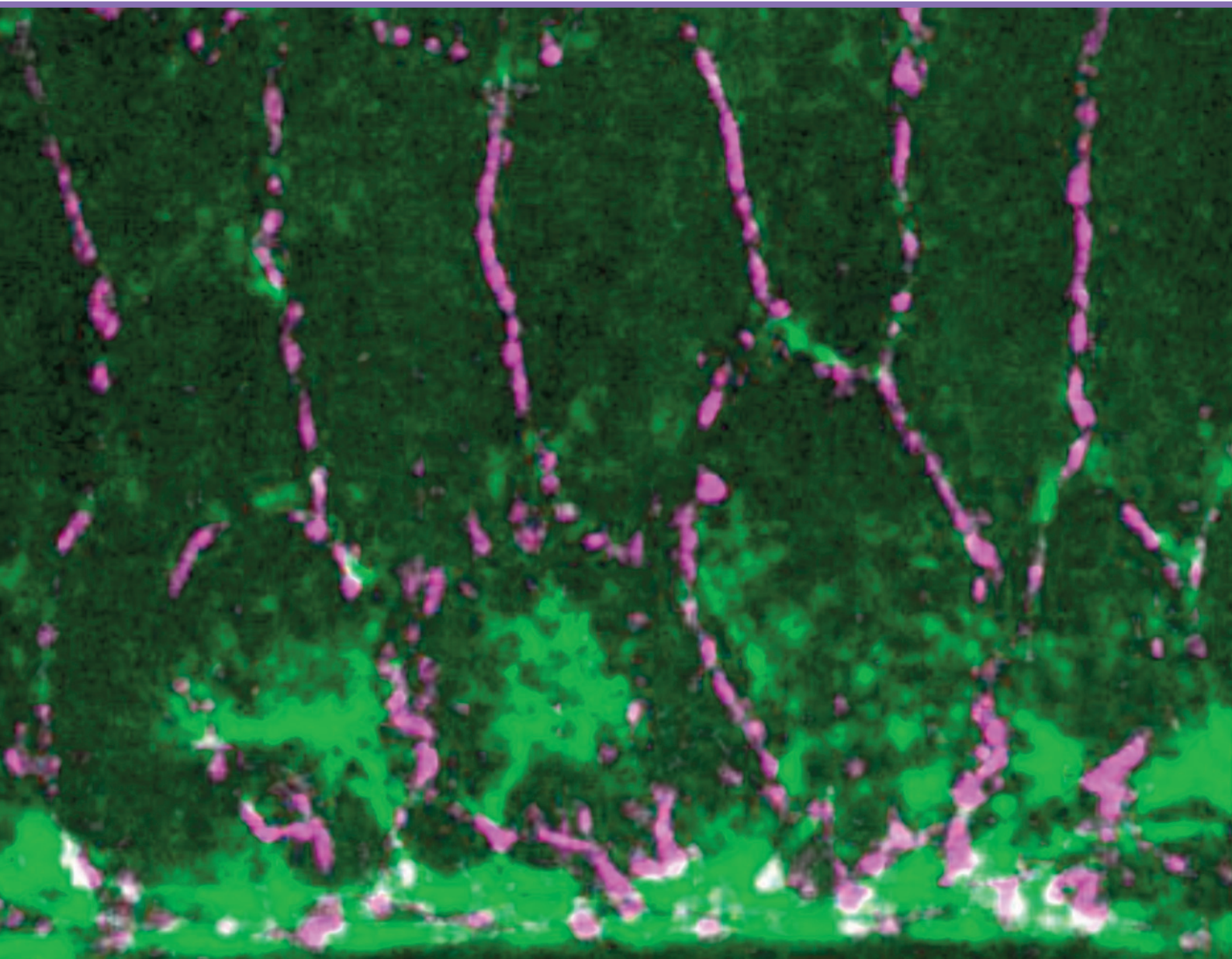


ACADÉMIE
DES SCIENCES
INSTITUT DE FRANCE

COLLOQUE

Grande salle des séances
Institut de France
23, quai de Conti - 75006 Paris

2 AVRIL 2024 de 9h à 18h



**MORPHODYNAMICS
OF LIVING SYSTEMS**

PRESENTATION

The study of biological phenomena is a vast and rapidly advancing research topic, at the crossroads of physics, mechanics, mathematics, computational science and, of course, biology and medicine. The development of this field of research is based on the enormous progress made recently in the acquisition of quantitative data in living cells and tissues, and on the introduction of new concepts concerning non-equilibrium systems. This field sheds new light on the morphodynamics of living systems across scales, ranging from cell function and movement to collective behavior, embryo and organ formation.

Through a number of highly interdisciplinary presentations, this meeting will showcase some of the recent and exciting advances.

9h00 - 9h15

Accueil et présentation du colloque

Antoine TRILLER, Secrétaire perpétuel de l'Académie des sciences
Thomas LECUIT, membre de l'Académie des sciences

9h15 - 9h50

Assessing the hydromechanical control of plant growth

Arezki BOUDAUD, LadHyX, CNRS, Ecole polytechnique, IP Paris

9h50 - 10h25

Spatial and temporal order in the developing *Drosophila* eye

Francis CORSON, CNRS, Laboratoire de Physique de l'ENS

10h25 - 10h55

Break

10h55 - 11h30

Geometry and topology questions in self-propelled particle systems

Pierre DEGOND, Institut de Mathématiques de Toulouse

11h30 - 12h05

Chiral Active Matter

Stephan GRILL, MPI-CBG Dresden

12h05 - 14h00

Lunch

14h00 - 14h35

Active matter models of collective cell migration

Edouard HANNEZO, Institute of Science and Technology Austria

14h35 - 15h10

Memory imprints during cell migration

Benoit LADOUX, CNRS, "Cell Adhesion and Mechanics" - Institut Jacques Monod, Université Paris cité & CNRS

15h10 - 15h45

Developmental mechanisms shaping skin pattern variation in birds

Marie MANCEAU, Centre Interdisciplinaire de Recherche en Biologie, Collège de France

15h45 - 16h15

Break

16h15 - 16h50

The Biology of collective Bacterial predators: stakes for soil ecology

Tâm MIGNOT, CNRS, Laboratoire de Chimie Bactérienne

16h50 - 17h25

Stochastic dynamics of cell shape changes: the role of noise in morphogenesis

Ewa PALUCH, University of Cambridge, UK

17h25 - 18h00

Topological defects control morphogenesis of cellular tornadoes and bicephalous hydra

Daniel PIERCE, university of Geneva, Biochemistry Department



Scanner ce QR code pour avoir accès à la page dédiée sur le site de l'Académie des sciences et à l'inscription (obligatoire)