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TBA

Jeudi 18 Janvier 2018, 14 :30
IHES, Amphithéâtre Léon Motchane(Séminaire de mathématique-Biologie)
Domaines : hep-th

Titre : *Mechanics of blastocyst morphogenesis*

Orateur : **Jean-Leon Maitre (Institut Curie, Paris)**

Résumé : *During pre-implantation development, the mammalian embryo forms the blastocyst, which will implant into the uterus. The architecture of the blastocyst is essential to the specification of the first mammalian lineages and to the implantation of the embryo. Consisting of an epithelium enveloping a fluid-filled cavity and the inner cell mass, the blastocyst is sculpted by a succession of morphogenetic events. These deformations result from the changes in the forces and mechanical properties of the tissue composing the embryo. Using microaspiration, live-imaging, genetics and theoretical modelling, we study the biophysical and cellular changes leading to the formation of the blastocyst. In particular, we uncover the crucial role of acto-myosin contractility, which generates periodic waves of contractions, compacts the embryo, controls the position of cells within the embryo and influences fate specification.*