



16 mai 2025 — COLLOQUIUM

# Information Processing in Biological Systems

Organisation : Thomas LECUIT,  
Chaire Dynamiques du vivant

FRIDAY, MAY 16<sup>th</sup>, 2025 — Amphithéâtre Maurice Halbwachs

09:00 Thomas Lecuit, Collège de France  
*Welcome*

09:10 Stephen Quake, Stanford University, USA  
*Information flow in the cell: from genome to cell type*

09:50 Yaron Antebi, Weizman Institute, Israel  
*Deciphering cellular integration  
of the contradictory BMP and TGFβ signals*

10:30 Coffee break

11:00 Lisa Manning, University of Syracuse, USA  
*Are cell-scale physical learning rules operating  
during embryonic development?*

11:40 Manuel Théry, Institut Pierre Gilles de Gennes, Paris, France  
*What is encoded in the selective stabilization  
of microtubules?*

12:20 Lunch

14:00 Thomas Gregor, Institut Pasteur, Paris, France  
*Specifying cellular identities in the early fly embryo*

14:40 Madan Rao, NCBS, Bangalore, India  
*Decoding & encoding of molecular information,  
global optimization and geometry*

15:20 Aleksandra Walczak, ENS Paris, France  
*Precision in a rush: temporal aspects of decision making*

16:00 Coffee break

16:30 David Brueckner, Univ Basel, Biozentrum, Switzerland  
*Self-organized information flow in stem cell patterning*

17:10 Claire Wyart, ICM Institute, Paris, France  
*Decoding individual variability in motor  
strategies during navigation*

17:50 *Conclusions*