

MAR17-2016-000931

Abstract for an Invited Paper
for the MAR17 Meeting of
the American Physical Society

Beller Lectureship: Stochasticity and robustness in growth and morphogenesis

AREZKI BOUDAUD, Ecole Normale Supérieure de Lyon

How do organisms cope with natural variability to achieve well-defined morphologies and architectures? We addressed this question by combining experiments with live plants and analyses of stochastic models that integrate cell-cell communication and tissue mechanics. This led us to counterintuitive results on the role of noise in development, whereby noise is either filtered or enhanced according to the level at which it is acting.