Symposium Stochastic Dynamics of Growth Processes in Biological and Social Systems (SYGP)

jointly organized by
the Dynamics and Statistical Physics Division (DY),
the Biological Physics Division (BP), and
the Physics of Socio-economic Systems Division (SOE)

Tobias Galla
Complex Systems and Statistical Physics Group
School of Physics and Astronomy
The University of Manchester
Manchester M13 9PL, England
Tobias.Galla@manchester.ac.uk

Arne Traulsen
Research Group for Evolutionary Theory
Max-Planck-Institute for Evolutionary Biology
August-Thienemann-Str. 2
24306 Plön, Germany
traulsen@evolbio.mpg.de

Stochastic dynamics of growth processes have been considered in great detail for physical systems in the past. Currently, there is significant and increasing interest on similar processes in adjacent disciplines, for example in the context of cancer modeling, in growing bacterial populations or in the formation of social communities. Talks at this symposium will discuss physics-based methods with which to study these phenomena, and how these methods can be applied to questions in biology and economics.

Overview of Invited Talks and Sessions

(Lecture room: HSZ 02)

Invited Talks

SYGP 1.1	Thu	15:00–15:30	HSZ 02	**Noisy invasions: large fluctuations in stochastic invasion models** — •Baruch Meerson
SYGP 1.2	Thu	15:30–16:00	HSZ 02	**Fractal clustering of inertial particles in random velocity fields** — •Bernhard Mehlig, Kristian Gustavsson
SYGP 1.3	Thu	16:00–16:30	HSZ 02	**Stochastic population dynamics on rugged fitness landscapes** — •Joachim Krug
SYGP 1.4	Thu	16:45–17:15	HSZ 02	**Modeling cancer as a stochastic process** — •Tibor Antal
SYGP 1.5	Thu	17:15–17:45	HSZ 02	**Von Neumann's growth model: from statistical mechanics to cell metabolism** — •Andrea De Martino

Sessions

SYGP 1.1–1.5	Thu	15:00–17:45	HSZ 02	**Symposium SYGP: Stochastic Dynamics of Growth Processes in Biological and Social Systems**