

## Molecular motors and stochastic processes

#### Lecturer

Pierre GASPARD (Coordinator)

#### Course mnemonic

PHYS-F512

#### **ECTS** credits

5 credits

### Language(s) of instruction

English

#### Course period

First term

## Course content

Theory of stochastic processes; thermodynamics of small systems; non-equilibrium fluctuation relations; mechanochemical coupling; the FoF1-ATPase rotary motor; the myosinactin, kinesin-microtubule, and dynein-microtubule linear motors; transmission processes of genetic information.

# Objectives (and/or specific learning outcomes)

The goal of the course is to give an overview of current knowledge on molecular motors and the tools for their modelization.

## Teaching method and learning activities

Lectures and exercices

## Other information

## Contact(s)

Pierre Gaspard E-mail: gaspard@ulb.ac.be

## Evaluation method(s)

Other

## Evaluation method(s) (additional information)

Oral test

## **Programmes**

# Programmes proposing this course at the faculty of Sciences

MA-BINF | Master in Bio-informatics and Modelling | finalité Research/unit 2, MA-IRBC | Master in Chemistry and Bio-industries Bioengineering | finalité Professional/unit 2 and MA-PHYS | Master in Physics | finalité Research/unit 2 and finalité Teaching/unit 2

# Programmes proposing this course at the Brussels School of Engineering

MA-IRBC | Master in Chemistry and Bio-industries Bioengineering | finalité Professional/unit 2 and MS-NATE | Specialized Master in Nanotechnology | unit U