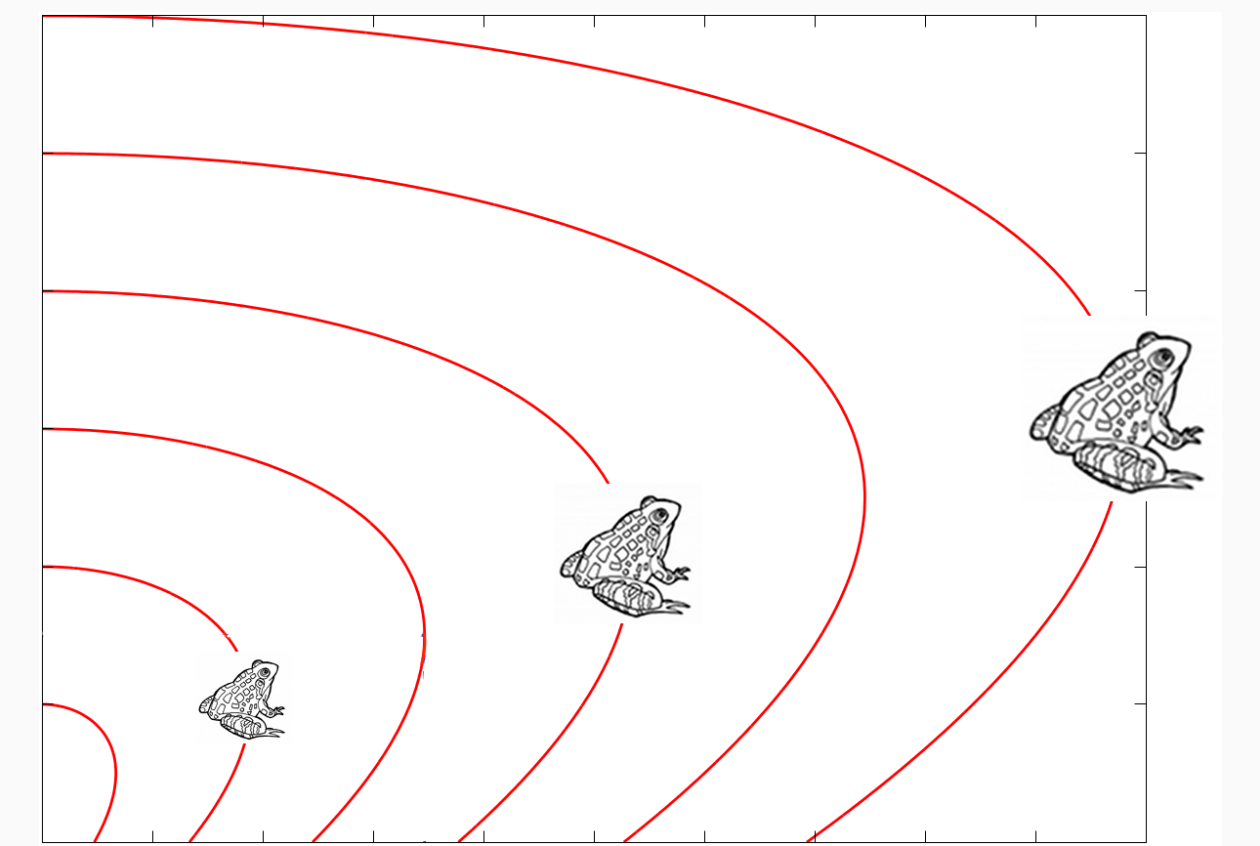


Analysis

A review of functional analysis tools for PDEs
A review of numerical methods for PDEs
Analysis of nonlinear PDEs from geometry
Geometric control and boundaries in kinetic theory
Information and complexity
Introduction to control theory
Introduction to evolution PDEs
Introduction to non-linear PDEs
Mean field game theory
Numerical methods for PDEs and control
Continuous optimisation
Reaction-diffusion equations and populations dynamics
On transport equations
Cross diffusion systems
Spectral theory and variational methods
Variational and geodesic methods for image analysis

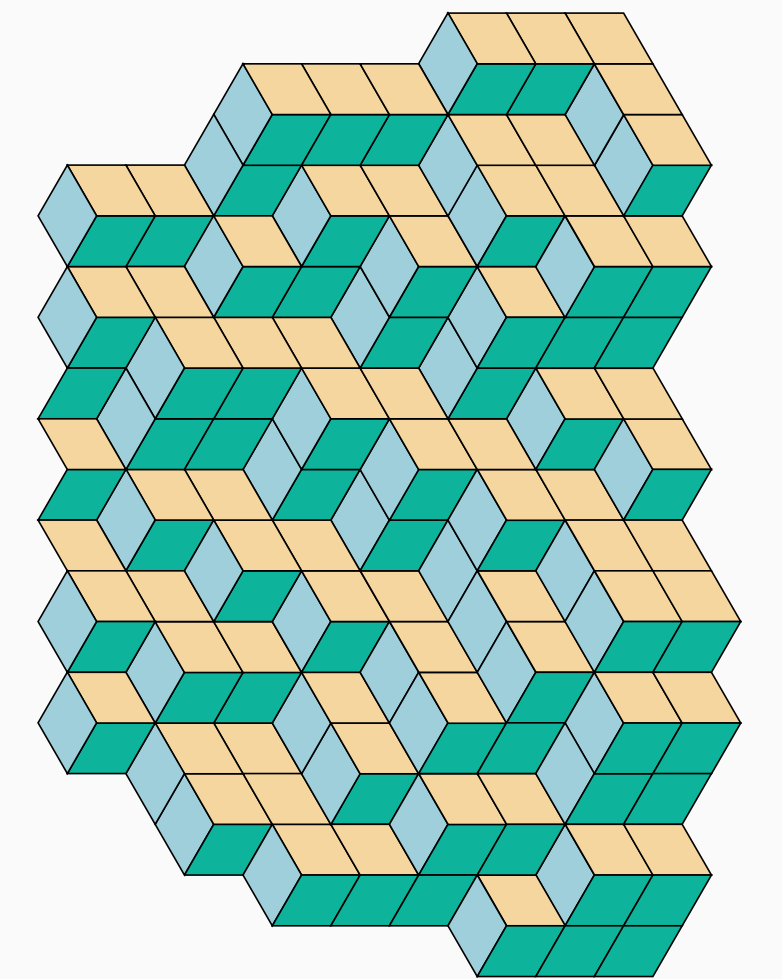
D. Gontier
G. Legendre
P. Laurain
C. Mouhot
S. Mallat
D. Bresch-Pietri & O. Glass
S. Mischler
É. Séré
P. Cardaliaguet
J. Salomon
A. Chambolle
G. Nadin
P.-L. Lions
A. Moussa
M. Lewin
L. Cohen



Probability

A review of probability theory foundations
High dimensional probability
Introduction to statistical mechanics
Jump processes
Long time behavior of Markov processes
Large deviations and applications in Physics and Analysis
Mixing times of Markov chains
Monte Carlo and finite differences methods with applications in finance
Products of random matrices and disordered systems in statistical mechanics
Random geometric models
Random operators
Stochastic calculus
Stochastic control

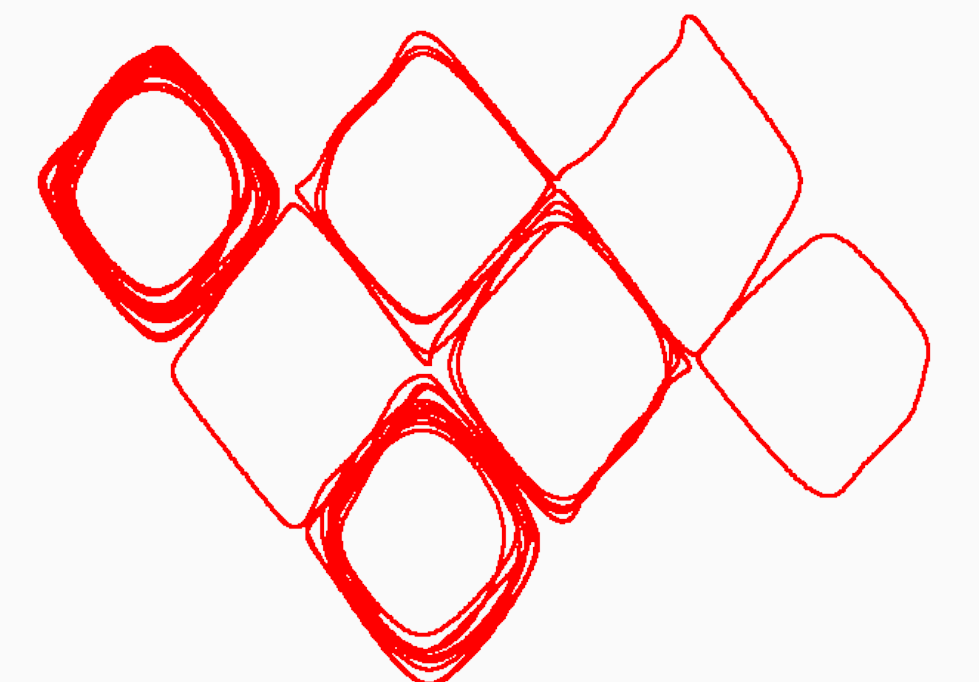
D. Chafaï
D. Chafaï
B. de Tilière & C. Toninelli
J. Poisat
P. Monmarché
S. Olla
J. Salez
J. Claisse
G. Giacomin
B. Błaszczyszyn
L. Dumaz
J. Salez
B. Bouchard



Dynamical Systems and Geometry

A review of differential calculus for ODEs and PDEs
Classical gravitation and celestial mechanics
Differentiable dynamical systems in Mechanics and Physics
Dynamics of gravitational systems with a large number of particles
Higgs bundles and representations of surface groups
Generic properties of Hamiltonian systems

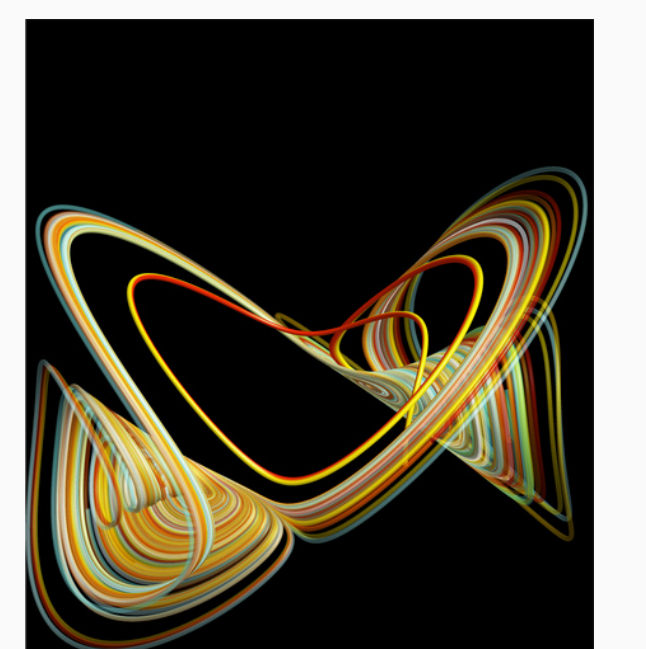
E. Bouin
G. Boué
J. Fejoz & L. Niederman
J.-P. Marco
N. Tholozan
P. Bernard



Mathematical Modelling and Macroscopic Physics

Instabilities and nonlinear phenomena
Numerical methods for fluid dynamics
Plasma Physics and advanced fluid dynamics
Soft solids
Systems out of equilibrium and non-linear dynamics

S. Fauve & L. Tuckerman
E. Dormy
C. Gissinger & J.-M. Rax
B. Roman & M. Ciccotti
K. Mallick & F. Petrelis



Scholarship programs

- PSL PhD Track for a combined scholarship M2-PhD
 - PSL M2 scholarships
 - FSMP/PGSM M2 scholarships
- See deadlines on the web

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