

Séminaire de Probabilités et Statistiques

Mardi 09 Mai à 14h00

Laboratoire Dieudonné

Salle de Conférences

Martin Rasmussen

(Imperial College London)

Topological equivalence of random dynamical systems

We study bifurcations of dynamical systems perturbed by bounded noise. A simplified approach to look at such systems is to consider the induced set-valued dynamical system (by ignoring the involved probabilities), and bifurcations in set-valued dynamical systems can be observed as discontinuous changes in the minimal invariant sets. On the other hand, a more detailed description is possible when considering the induced random dynamical systems instead of the set-valued dynamical system. Here we study bifurcations induced by a breakdown of topological equivalence and discuss in particular one-dimensional monotone random maps and random circle homeomorphisms. Differences and similarities of both approaches will be highlighted in the talk. Joint work with Thai Son Doan, Jeroen Lamb and Julian Newman.