Stability and instability of a planar random dynamical system

Michael Scheutzow
(TU Berlin)

25 October 2023, 17:15–18:15* Berlin time
IRTG 2544: "Stochastic Analysis in Interaction"
— Berlin Probability Colloquium —

Abstract

We study a planar stochastic differential equation with additive noise for which the rotational speed is of the form $\rho(R)$ where R is the radial part.

We investigate how phenomena like strong or weak synchronization, existence of a pullback or a point attractor and strong completeness of the associated random dynamical system depend on the function ρ. This is joint work (in progress) with Maximilian Engel and Dennis Chemnitz (FU Berlin).

*Punctual, i.e. sine tempore!