

Dimensionality reduction of stochastic differential equations with distributed delays

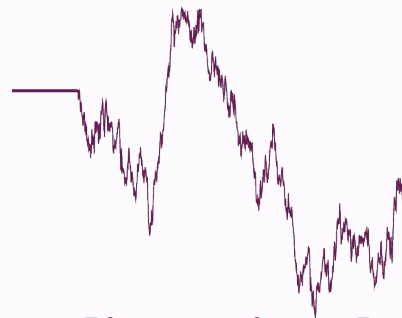
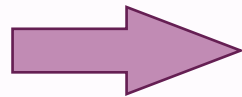
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Problem statement

delayed feedback



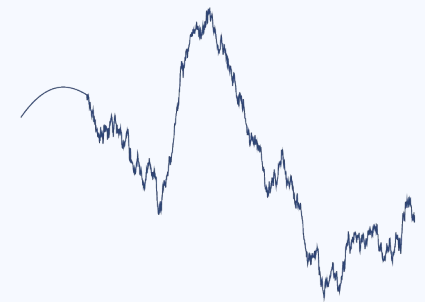
noise



∞ dimensional

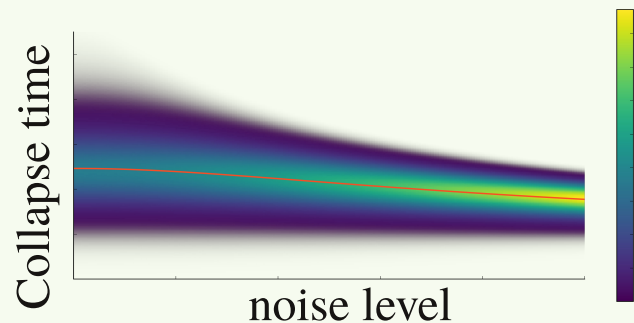
Solution method

Decomposition into modes



Dimensional collapse

System collapses to space spanned by dominant mode



Modes are strongly hierarchized

Analytical expressions for

- solutions
- autocoriance/
autocorrelation