

# Statistical model selection for stochastic systems, with applications to Bioinformatics, Linguistics and Neurobiology.

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This course provides a short introduction to statistical model selection for stochastic processes and random complex systems. The emphasis will be put on processes with memory of variable length and variable neighborhood interacting systems. During the course, we will present recent theoretical results and applications in Bioinformatics, Linguistics and Neurobiology. To the best of our knowledge, the topics to be presented in the course are presently only treated in recent research papers, not being covered by textbooks or publicly available lecture notes.

**Prerequisites:** Basic knowledge of probability and statistics. It is recommended, but not mandatory, to have some previous knowledge in stochastic processes.