

Markov chains

Introducing

Description

Markov chains and their classification: definition and class properties (irreducibility, recurrence, transience, aperiodicity), convergence to the stationary distribution, reversible Markov chain, absorbing time.

Objectives

Time-homogenous Markov chain over discrete state space, classification of states, stationary measure, reversible Markov chain, convergence to stationary distribution, ergodic theorem.

Markov chains:

The description of a Markovian model to its formalization by a Markov chain
develop an analysis of Markov chains (description of its communication classes, conclusion on the existence of a stationary distribution and on the convergence of the chain distribution)

Necessary prerequisites

Basic notions in discrete probability theory

Évaluation

L'évaluation des acquis d'apprentissage est réalisée en continu tout le long du semestre. En fonction des enseignements, elle peut prendre différentes formes : examen écrit, oral, compte-rendu, rapport écrit, évaluation par les pairs...

Practical info

Location(s)

 Toulouse