
PROGRAMA DE VERÃO 2023 - 709

ESCOLA DE MATEMÁTICA APLICADA FGV EMap

DISCIPLINA: Topological Data Analysis: Foundations and Algorithms

PROFESSOR: Clément Maria

CARGA HORÁRIA: 15h

PRÉ-REQUISITO:

PERÍODO: 16/01 a 31/01 (Segundas, quartas e sextas-feiras)

HORÁRIO: 14h às 17h

PLANO DE ENSINO

1. Ementa

This course is a self contained introduction to Topological Data Analysis, a recent topological approach to study the “shape of data”, which has gained a lot of interest in recent years. We will introduce basic geometric notions of sampling theory and reconstruction, concepts of algebraic topology for simplicial homology, persistent homology, and discrete Morse theory, and algorithms making the whole construction computable.

2. Procedimentos de avaliação

Não será aplicado avaliação durante o curso.

3. Bibliografia Obrigatória

Não há.

4. Mini Currículo

Clément Maria is a research from INRIA (France) . He previously studied at École Normale Supérieure, received a PhD in computer science from INRIA and the University of Nice-Côte d’Azur, and worked at the University of Queensland (Australia).

His research lies in the algorithmic aspects of topology, more principally in the theory of persistent homology and in quantum topology.