
PROGRAMA DE VERÃO 2021 - 709

ESCOLA DE MATEMÁTICA APLICADA FGV EMap

DISCIPLINA: Topological Data Analysis - theoretical foundations and applications, with a focus on persistent homology

PROFESSOR: Raphaël Tinarrage (FGV)

CARGA HORÁRIA: 24h

PERÍODO: 26 de janeiro até 10 de fevereiro

HORÁRIO: 14h às 16h

PLANO DE ENSINO

1. Ementa

26/01 (2pm-4pm) - Topological spaces

27/01 (2pm-4pm) - Homotopy equivalence

28/01 (2pm-4pm) - Simplicial complexes

29/01 (2pm-4pm) - Python tutorial

01/02 (2pm-4pm) - Singular homology

02/02 (2pm-4pm) - Simplicial homology

03/02 (2pm-4pm) - Topological inference

04/02 (2pm-4pm) - Python tutorial

08/02 (2pm-4pm) - Persistence modules - Decomposition

09/02 (2pm-4pm) - Persistence modules - Stability

10/02 (2pm-4pm) - Python tutorial

2. Procedimentos de avaliação

Não será aplicado avaliação durante o curso.

3. Bibliografia Obrigatória

Não há.

4. Mini Currículo

I spent most of my mathematical education at the University of Paris-Saclay (Orsay, France). I studied two years at the Ecole Normale Supérieure de Cachan, where I obtained the Agrégation (a teaching

diploma). I then accomplished my PhD at Inria Saclay lab, in the field of persistent homology theory (Topological inference from measures and vector bundles). I am now enthusiastically pursuing my mathematical and pedagogical expeditions, in ever-increasing dimensions.