
PROGRAMA DE VERÃO 2023 - 709

ESCOLA DE MATEMÁTICA APLICADA FGV EMAP

DISCIPLINA: Applications of stochastic optimal transport in finance

PROFESSOR: Beatrice Acciaio

CARGA HORÁRIA: 06h

PRÉ-REQUISITO:

PERÍODO: 25/01/23 a 27/01/23 – (Quartas, quintas e sextas-feiras).

HORÁRIO: 10h às 12h

PLANO DE ENSINO

1. Ementa

In this minicourse, I will introduce adapted versions of optimal transport distances and will review some of their applications in mathematical finance and stochastic analysis. In particular, I will discuss stochastic optimization problems under model-uncertainty and with respect to different information sets, robust pricing and hedging, and applications in machine learning for market generation.

2. Procedimentos de avaliação

Não será aplicado avaliação durante o curso.

3. Mini Currículo

- J. P. O. Santos et al : Introdução à Análise combinatória. E. Ciência Moderna.
 - J. P. O Santos e E. L. Estrada: Problemas resolvidos de análise combinatória. Ed. Ciência Moderna.
 - A. C. O. Morgado et al : Análise combinatória e probabilidade (com as soluções dos exercícios). Ed. SBM.
 - D. A. Cohen: Basic techniques of combinatorial analysis. Ed. Wiley.
 - R. A. Brualdi: Introductory combinatorics. Ed. Prentice Hall.
 - M. Bóna: A walk through combinatorics. Ed. World Scientific.
 - A. Benjamin e J. Quinn: Proofs that really count: the art of combinatorial proof. MAA
- 2020 - present: Full Professor at the Department of Mathematics at ETH Zürich, Switzerland.
2016-2020: Associate professor (promoted Full professor in 2020), Department of Statistics, LSE London, UK.

2013-2016: Assistant professor, Department of Statistics, LSE London, UK.

2009-2016: Assistant professor, Department of Economics, Finance and Statistics, University of Perugia.

2010-2013: Project leader, Faculty of Mathematics, University of Vienna.

2006-2009: Post-Doc positions, Department of Economics, Finance and Statistics, University of Perugia, and Financial and Actuarial Mathematics, Vienna University of Technology.

Education

2002-2006: Doctoral studies in Mathematical and Statistical Methods for Economic and Social Research, University of Perugia. Supervisor: Prof. W. Schachermayer

1997-2002: Bachelor and Master in Mathematics, University of Perugia. Advisor: Prof. P. Pucci

Grants and awards

2022: Louis Bachelier prize, awarded by the London Mathematical Society (LMS), the Natixis Foundation for Research and Innovation and the Société de Mathématiques Appliquées et Industrielles (SMAI)

2009: Wiener Wissenschafts-, Forschungs- und Technologiefonds, "Mathematics and ..." call for High Potentials Project (4 years): "Mathematics of Financial Risk Measurement and Stochastic Dependence"

2009: European Science Foundation - "Advanced Mathematical Methods for Finance" Project (6 months): "Dynamic Measurement of Multiperiod Risk"

2007: Doctoral Studies Award by the Italian Association of Mathematics Applied to Economic and Social Sciences

2006: European Science Foundation - "Advanced Mathematical Methods for Finance" Project (6 months): "Optimal sharing of pooled risk among an aggregate of economic agents"

Memberships

Executive Secretary of the Bachelier Finance Society

Associate Editor for the Bocconi & Springer Series on Mathematics, Statistics, Finance and Economics

Associate Editor for Finance and Stochastics

Associate Editor for SIAM Journal on Financial Mathematics

Associate Editor for Mathematical Finance

Associate Editor for Electronic Journal of Probability (until 2020)

Associate Editor for Electronic Communications in Probability (until 2020)

Member of the Editorial Board of Dependence Modeling