

Hong Kong - Singapore joint Seminar Series in Financial Mathematics/Engineering

Stability of Entropic Optimal Transport and Convergence of Sinkhorn's Algorithm

Professor Marcel Nutz
Columbia University, USA

Abstract

We discuss entropically regularized optimal transport and its stability with respect to the marginals. A qualitative result (for weak convergence) is obtained using the geometric notion of c -cyclical monotonicity and a quantitative result (for Wasserstein distance) is obtained by control theoretic methods. These results can be applied to deduce convergence of Sinkhorn's algorithm for unbounded cost functions such as the quadratic cost and find a convergence rate in Wasserstein sense. Based on joint works with Espen Bernton, Stephan Eckstein, Promit Ghosal, Johannes Wiesel.

About the speaker

Marcel Nutz is a full Professor at Columbia University since 2020. Professor Nutz's research focuses on mathematical finance, optimal transport and game theory. He holds a PhD in mathematics from ETH Zurich. Prof. Nutz serves on the editorial boards of FMF, MF, MOR, SIFIN, SPA, as co-Chair of the IMS-FIPS, and as Columbia-Ecole Polytechnique Alliance Professor 2020-2021. He has been supported by an Alfred P. Sloan Fellowship and several NSF grants.

Date

16 Dec 2021(Thursday)
(HK Time)

Time

10:00am – 11:00am (HK
Time)

Zoom

<https://cityu.zoom.us/j/92749785287?pwd=amZlZ2E2ZDNYeXordVR4SHJpZWVnZz09>

Meeting ID:

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