

SIPO (Seminario de Investigadores Postdoctorales)

Speaker: Juan Pablo Contreras Fernández, Universidad Diego Portales.

Title: Deterministic and stochastic fixed-point iterations in normed spaces.

Abstract:

In this talk, we present a survey of techniques and results on error bounds and convergence rates for both deterministic and stochastic fixed-point iterations, with a focus on methods such as the Krasnoselskii-Mann and Halpern iterations. Our primary emphasis is on general normed spaces, where we employ tools from optimal transport to derive tight error bounds. For spaces with additional structure, such as Hilbert spaces, we also discuss existing techniques and the sharp results established in the literature. Finally, we highlight applications of these findings in reinforcement learning and optimization, and outline open questions and potential directions for future research.

Date and Time: 16th June, Monday at 2.30 PM

Venue: John Von Neumann Seminar Room, CMM, Beauchef 851, North Tower, 7th Floor

