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Alessio Figalli
Federico Glaudo

An Invitation to
Optimal Transport,
Wasserstein Distances,
and Gradient Flows



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An Invitation to Optimal Transport, Wasserstein Distances, and Gradient Flows

Alessio Figalli, *ETH Zürich, Switzerland*, and **Federico Glaudo**, *ETH Zürich, Switzerland*

This book provides a self-contained introduction to optimal transport, and it is intended as a starting point for any researcher who wants to enter into this beautiful subject.

The presentation focuses on the essential topics of the theory: Kantorovich duality, existence and uniqueness of optimal transport maps, Wasserstein distances, the JKO scheme, Otto's calculus, and Wasserstein gradient flows. At the end, a presentation of some selected applications of optimal transport is given. The book is suitable for a course at the graduate level and also includes an appendix with a series of exercises along with their solutions.

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