

# The Optimal Transport Problem

Master Thesis

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Math  
Meets

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## Master Thesis

by

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# Preface

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# 1

## Preliminaries.

### Notation



# 2

## Basics in Convex Analysis.

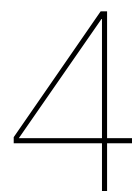


# 3

## Linear Programming

### **Interior Methods**





# Optimal Transport Theory

**Kantorovich formulation as relaxation**





# 5

## Computational Optimal Transport

**Linear Programming Formulation.**  
**Sinkhorn-Knopp Algorithm.**



# 6

## Applications

**Nash Equilibrium.**

**Track of a Dynamic.**

**Domain Adaptation.**

**Isoperimetric Inequality.**

**Barycenter of a Fourier Power Spectrum.**



# Bibliography