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Data Science and Optimization

Springer

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Preface

Data science and optimization are increasingly intertwined as both focus on developing computational and methodological approaches to tackling large and otherwise complex datasets. Optimization is primarily concerned with accuracy, computational efficiency, and robustness while data science emphasizes achieving effective results on real datasets. Although some data science approaches involve the implicit optimization of objective functions, there remains a dearth of work that brings advanced optimization techniques to bear on data science problems. The goal of the Fields Focus Program on Data Science and Optimization held in November 2019 at the Fields Institute in Toronto, was to bring together researchers in data science and optimization, both theoretical and applied, in an effort to bridge the fields and stimulate cross-disciplinary interaction and collaboration.

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