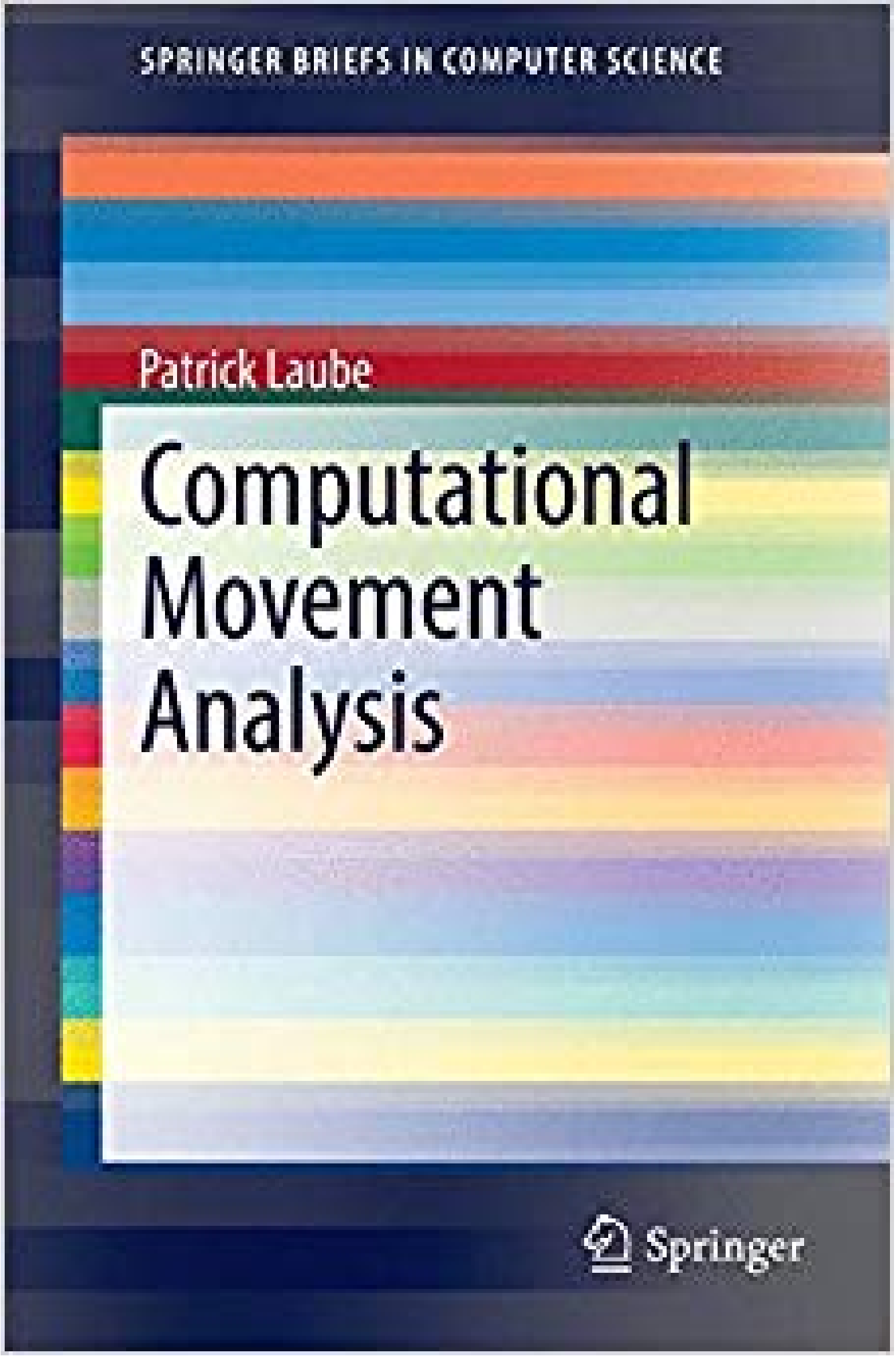
SPRINGER BRIEFS IN COMPUTER SCIENCE
Patrick Laube
Computational Movement Analysis
Springer

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Computational Movement Analysis (SpringerBriefs in Computer Science)

This SpringerBrief discusses the characteristics of spatiotemporal movement data, including uncertainty and scale. The interdisciplinary principles of Computational Movement Analysis make this an important book for experts and students in computer science, geographic information science and its application areas, especially motion ecology and transportation study. The writer presents Computational Movement Analysis as an interdisciplinary umbrella for analyzing movement processes with methods from a variety of areas including GIScience, spatiotemporal databases and data mining. Essential challenges in Computational Motion Analysis consist of bridging the semantic gap, privacy issues when movement data involves people, incorporating big and open up data, and opportunities for decentralized movement evaluation arising from the web of items. It investigates three core aspects of Computational Movement Evaluation: Conceptual modeling of movement and movement spaces, spatiotemporal analysis methods aiming at an improved understanding of movement procedures (with a concentrate on data mining for motion patterns), and using decentralized spatial computing methods in movement analysis.