

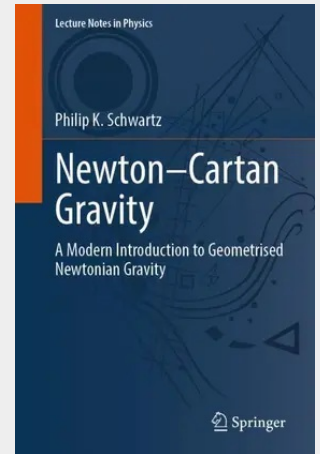
Newton-Cartan Gravity

A Modern Introduction to Geometrised Newtonian Gravity

This book offers an introduction to Newton–Cartan gravity, a reformulation of Newtonian gravity in differential-geometric language, which brings it closer to General Relativity (GR) than the standard formulation. The text systematically develops Newton–Cartan gravity from its geometric foundations, and provides a detailed discussion of the classical results on its relation to both standard Newtonian gravity and GR. Furthermore, it presents a global formulation of the gauge- theoretic perspective that underlies many modern developments in this field, and briefly discusses applications in Newtonian limits of string theory. This book is designed for researchers and graduate students in gravitational physics and related disciplines, providing a clear path toward understanding current research literature.

The book is written in a rigorous mathematical style. It includes an extensive set of illustrative exercises. A solid understanding of basic differential geometry is required; familiarity with principal bundles and associated vector bundles is necessary for the gauge-theoretic part.

This book offers an introduction to Newton–Cartan gravity, a reformulation of Newtonian gravity in differential-geometric language, which brings it closer to General Relativity (GR) than the standard formulation. The text systematically develops Newton–Cartan gravity from its geometric foundations, and provides a detailed discussion of the classical results on its relation to both standard Newtonian gravity and GR. Furthermore, it presents a global formulation of the gauge- theoretic perspective that underlies many modern developments in this field, and briefly discusses applications in Newtonian limits of string theory. This book is designed for researchers and graduate students in gravitational physics and related disciplines, providing a clear path toward understanding current research literature. The book is written in a rigorous mathematical style. It includes an extensive set of illustrative exercises. A solid understanding of basic differential geometry is required; familiarity with principal bundles and associated vector bundles is necessary for the gauge-theoretic part.



69,54 €

64,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9783032039668

Medium: Buch

ISBN: 978-3-032-03966-8

Verlag: Palgrave Macmillan

Erscheinungstermin: 28.01.2026

Sprache(n): Englisch

Auflage: Erscheinungsjahr 2026

Serie: Lecture Notes in Physics

Produktform: Kartoniert

Gewicht: 300 g

Seiten: 176

Format (B x H): 155 x 235 mm

