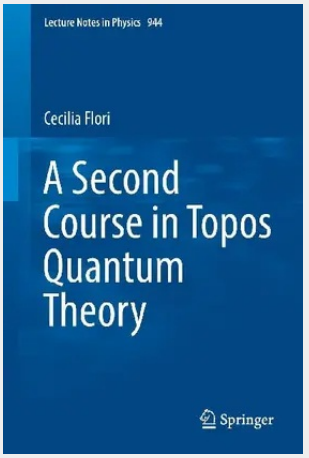
Flori

A Second Course in Topos Quantum Theory



This advanced course, a sequel to the first volume of this lecture series on topos quantum theory, delves deeper into the theory, addressing further technical aspects and recent advances. These include, but are not limited to, the development of physical quantities and self-adjoint operators; insights into the quantization process; the description of an alternative, covariant version of topos quantum theory; and last but not least, the development of a new concept of spacetime.

The book builds on the concepts introduced in the first volume (published as Lect. Notes Phys. 868), which presents the main building blocks of the theory and how it could provide solutions to interpretational problems in quantum theory, such as: What are the main conceptual issues in quantum theory? And how can these issues be solved within a new theoretical framework of quantum theory?

These two volumes together provide a complete, basic course on topos quantum theory, offering a set of mathematical tools to readers interested in tackling fundamental issues in quantum theory in general, and in quantum gravity in particular.

From the reviews of the first volume:

The book is self-contained and can be used as a textbook or self-study manual teaching the usage of category theory and topos theory, in particular in theoretical physics or in investigating the foundations of quantum theory in mathematically rigorous terms. [The] book is a very welcome contribution. *Frank Antonsen, Mathematical Reviews, December, 2013*

This advanced course, a sequel to the first volume of this lecture series on topos quantum theory, delves deeper into the theory, addressing further technical aspects and recent advances. These include, but are not limited to, the development of physical quantities and self-adjoint operators; insights into the quantization process; the description of an alternative, covariant version of topos quantum theory; and last but not least, the development of a new concept of spacetime. The book builds on the concepts introduced in the first volume (published as Lect. Notes Phys. 868), which presents the main building blocks of the theory and how it could provide solutions to interpretational problems in quantum theory, such as: What are the main conceptual issues in quantum theory? And how can these issues be solved within a new theoretical framework of quantum theory? These two volumes together provide a complete, basic course on topos quantum theory, offering a set of mathematical tools to readers interested in tackling fundamental issues in quantum theory in general, and in quantum gravity in particular. From the reviews of the first volume: The book is self-contained and can be used as a textbook or self-study manual teaching the usage of category theory and topos theory, in particular in theoretical physics or in investigating the foundations of quantum theory in mathematically rigorous terms. [The] book is a very welcome contribution. Frank Antonsen, Mathematical Reviews, December, 2013

64,19 €
59,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9783319711072
Medium: Buch
ISBN: 978-3-319-71107-2
Verlag: Springer
Erscheinungstermin: 09.02.2018
Sprache(n): Englisch
Auflage: 1. Auflage 2018
Serie: Lecture Notes in Physics
Produktform: Kartoniert
Gewicht: 540 g
Seiten: 342
Format (B x H): 155 x 235 mm

Kundenservice Verlag Dr. Otto Schmidt KG
Neumannstraße 10, 40235 Düsseldorf | kundenservice@otto-schmidt.de | 0221-93738-997 (Inland)