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Descrizione fisica	1 online resource (xx, 391 pages) : digital, PDF file(s)
Collana	Cambridge monographs on mathematical physics
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Nota di contenuto	pt. 1. Causality and differentiable structure -- pt. 2. Geometrical points and measurement theory.
Sommario/riassunto	Introducing graduate students and researchers to mathematical physics, this book discusses two recent developments: the demonstration that causality can be defined on discrete space-times; and Sewell's measurement theory, in which the wave packet is reduced without recourse to the observer's conscious ego, nonlinearities or interaction with the rest of the universe. The definition of causality on a discrete space-time assumes that space-time is made up of geometrical points. Using Sewell's measurement theory, the author concludes that the notion of geometrical points is as meaningful in quantum mechanics as it is in classical mechanics, and that it is impossible to tell whether the differential calculus is a discovery or an invention. Providing a mathematical discourse on the relation between

theoretical and experimental physics, the book gives detailed accounts of the mathematically difficult measurement theories of von Neumann and Sewell.

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