

**Nelson, Edward****Quantum fluctuations.** (English) [Zbl 0563.60001](#)**Princeton Series in Physics.** Princeton, New Jersey: Princeton University Press. VIII, 146 p. hbk: \$ 42.00; pbk: \$ 12.95 (1985).

The author says in the preface that his book was written as an "attempt to express a viewpoint about the nature of quantum fluctuations". However, the book gives both a detailed account of the kinematics of diffusion processes and a discussion of possible physical causes of quantum fluctuations in terms of the background field hypothesis. The local causality in the sense of Bell and the problem of measurement are also investigated.

This volume provides an introduction to quantum fluctuations because it reviews the necessary basics of differential geometry and probability theory, too.

Reviewer: I.G.Kalmár

**MSC:**

- 60-02** Research exposition (monographs, survey articles) pertaining to probability theory
- 81P20** Stochastic mechanics (including stochastic electrodynamics)
- 53B50** Applications of local differential geometry to the sciences

Cited in <b>8</b> Reviews Cited in <b>209</b> Documents
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**Keywords:**

quantum fluctuations; local causality; problem of measurement