

Simon, Barry

The $P(\phi)_2$ Euclidean (quantum) field theory. (English) [Zbl 1175.81146](#)

[Princeton Series in Physics](#). Princeton, NJ: Princeton University Press. xx, 392 p. (1974).

This book is a phenomenon, and the author's power over detail is remarkable. The reader is able (with a bit of work, it is true) to enter the very difficult field of constructive quantum field theory up to the very latest and best results up to 1974. The book is suitable as a text for a postgraduate seminar for probabilists and analysts intent on some hard work.

Equally impressive is the topicality of the book (in 1974). The only thing missing at the time of publication was the cluster expansion of Glimm, Jaffe and Spencer. Consequent to its rapid publication and somewhat hasty writing, there are some misprints—the worst is that part of the statement of one theorem is missing.

The proofs are detailed and are well explained; the one exception occurring on p. 264, (c), on the convergence of the lattice approximation. The author claims that the needed bounds follow by mimicking the proof of Nelson and Glimm; the reviewer would like to see this worked out.

Reviewer: [Raymond Streater \(MR0489552\)](#)

MSC:

81Txx Quantum field theory; related classical field theories

81-02 Research exposition (monographs, survey articles) pertaining to quantum theory

Cited in **1** Review
Cited in **283** Documents