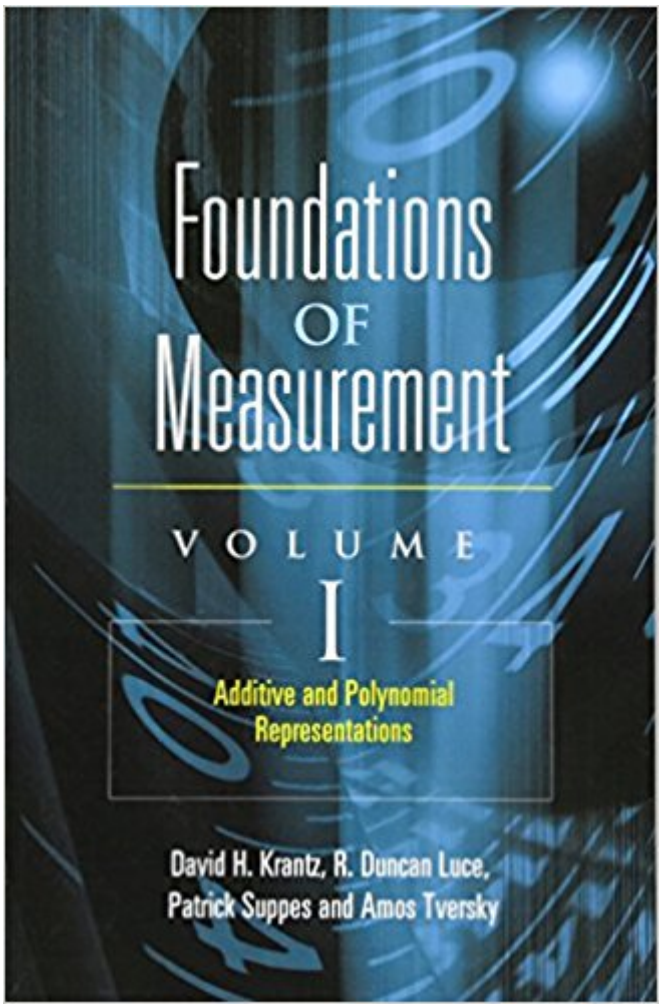
Foundations Of Measurement Volume I: Additive And Polynomial Representations (Dover Books On Mathematics)



Synopsis

All of the sciences â ” physical, biological, and social â ” have a need for quantitative measurement. This influential series, Foundations of Measurement, established the formal foundations for measurement, justifying the assignment of numbers to objects in terms of their structural correspondence.Volume I introduces the distinct mathematical results that serve to formulate numerical representations of qualitative structures. Volume II extends the subject in the direction of geometrical, threshold, and probabilistic representations, and Volume III examines representation as expressed in axiomatization and invariance.

Book Information

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Customer Reviews

David H. Krantz is affiliated with Columbia University; R. Duncan Luce with the University of California, Irvine; and Patrick Suppes with Stanford University. Amos Tversky is deceased.

A note: this review is written from a philosopher’s viewpoint; I have not focused on its relevance for the empirical sciences themselves.The Foundations of Measurement volumes by Krantz, Luce, Suppes and Tversky are classics in the philosophy of science, and Dover have, as usual, made a beautiful contribution to the field by reissuing them at such a cheap price. In here you will find all you need to know about how to assign numbers or other mathematical objects to empirical quantities or phenomena in a non-arbitrary way. You will also find discussions of dimensional analysis,

probability, and of the meaning of invariance, all tied together with rigorous but accessible mathematics.All philosophers, and not only philosophers of science, could learn a lot from these books: moral philosophers who wonder about what it means to compare add up different persons' values, or different goods. Epistemologists who wonder about the proper way to represent belief. And metaphysicians who wonder about determinates and determinables, or for that matter about the general relationship between the world and our mathematical representations of it.

the series of 3 books is a philosophic-analytic approach to measurement which unfortunately does not really address the fundamental issues of measurement. Whitehead and Russell forward 100 years sans elegance.