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Titolo	On Meaningful Scientific Laws // by Jean-Claude Falmagne, Christopher Doble
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2015
ISBN	3-662-46098-X
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (175 p.)
Disciplina	004
Soggetti	Algorithms Computer science—Mathematics Difference equations Functional equations Philosophy and science Algorithm Analysis and Problem Complexity Math Applications in Computer Science Difference and Functional Equations Philosophy of Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Overview -- Extensive Measurement -- Functional Equations -- Abstract Axioms and their Representations -- Defining Meaningfulness -- Meaningfulness and Dimensional Invariance -- Propagating Axioms via Meaningfulness -- Meaningful Representation of Scientific Codes -- Order Invariance under Transformations -- Open Problems -- Bibliography -- Index.
Sommario/riassunto	The authors describe systematic methods for uncovering scientific laws a priori, on the basis of intuition, or "gedanken experiments". Mathematical expressions of scientific laws are, by convention, constrained by the rule that their form must be invariant with changes of the units of their variables. This constraint makes it possible to narrow down the possible forms of the laws. It is closely related to, but different from, dimensional analysis. It is a mathematical book, largely based on solving functional equations. In fact, one chapter is an

