1.	Record Nr.	UNINA9910370255803321
	Titolo	New Essays on BelnapDunn Logic / / edited by Hitoshi Omori, Heinrich Wansing
	Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
	ISBN	3-030-31136-8
	Edizione	[1st ed. 2019.]
	Descrizione fisica	1 online resource (322 pages)
	Collana	Synthese Library, Studies in Epistemology, Logic, Methodology, and Philosophy of Science, , 0166-6991 ; ; 418
	Disciplina	511.3
	Soggetti	Logic Mathematical logic Mathematical Logic and Formal Languages Mathematical Logic and Foundations
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di contenuto	An invitation to New Essays on Belnap-Dunn logic (Hitoshi Omori and Heinrich Wansing) Part I. Essays by the Founders. Natural Language versus Formal Language (J. Michael Dunn) Intuitive Semantics for First-Degree Entailment and 'Coupled Trees' (J. Michael Dunn) How a Computer Should Think (Nuel D. Belnap) A Useful Four-Valued Logic (Nuel D. Belnap) Two, Three, Four, Infinity: The Path to the Four- valued Logic and Beyond (J. Michael Dunn) Interview with Prof. Nuel D. Belnap (Nuel D. Belnap and Heinrich Wansing) Part II. New Essays. FDE as the One True Logic (Jc Beall) Default Rules in the Logic of First-Degree Entailments (Katalin Bimbó) Belnap and Nagarjuna on How Computers and Sentient Beings Should Think: Truth, Trust and the Catuskoti (Jay L. Garfield) K3, 3, LP, RM3, A3, FDE, M: How to Make Many-Valued LogicsWork for You (Allen P. Hazen and Francis Jeffry Pelletier) FDE as a Base for Constructive Logic (Andreas Kapsner) Bridging the Two Plans in the Semantics for Relevant Logic (Takuro Onishi) Bilattice Logics and Demi-Negation (Francesco Paoli) Consistency, Completeness, and Classicality (Adam Prenosil) Natural Deduction Systems for Logics in the FDE Family (Graham Priest) Modelling Sources of Inconsistent Information in Paraconsistent Modal

Sommario/riassunto

Logic (Igor Sedlár and Ondrej Majer) -- First-Degree Entailment and Structural Reasoning (Yaroslav Shramko).

This edited volume collects essays on the four-valued logic known as Belnap-Dunn logic, or first-degree entailment logic (FDE). It also looks at various formal systems closely related to it. These include the strong Kleene logic and the Logic of Paradox. Inside, readers will find reprints of seminal papers written by the fathers of the field: Nuel Belnap and Michael Dunn. In addition, the collection also features a well-known but previously unpublished manuscript of Dunn, an interview with Belnap, and a new essay by Dunn. Besides the original, monumental papers, the book also includes research by leading scholars. They consider the extraordinary importance of Belnap-Dunn logic from several perspectives. They look at how, philosophically, it has served as a basic system of inconsistency-tolerant reasoning, as the core of underlying logics for theories based on dialetheism, and, more recently, for theories based on Buddhist philosophy. Coverage also explores its contributions to computer science, such as knowledge representation and information processing. This mix of seminal papers and insightful analysis by top scholars offers readers a comprehensive outlook on Belnap-Dunn logic and its related expansions, which have been agenda setting for the debate on philosophical logic as well as philosophy of logic. The book will also enhance further discussion on the philosophical issues related to nonclassical logics in general.