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Titolo	Intuitionistic Proof Versus Classical Truth : The Role of Brouwer's Creative Subject in Intuitionistic Mathematics // by Enrico Martino
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Descrizione fisica	1 online resource (173 pages)
Collana	Logic, Epistemology, and the Unity of Science, , 2214-9783 ; ; 42
Disciplina	511.3
Soggetti	Mathematics - Philosophy Mathematical logic Philology Machine theory Logic Philosophy of Mathematics Mathematical Logic and Foundations Formal Languages and Automata Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and indexes.
Nota di contenuto	Brouwer, Dummett and the bar theorem -- Creative subject and bar theorem -- Natural intuitionistic semantics and generalized Beth semantics -- Connection between the principle of inductive evidence and the bar theorem -- On the Brouwerian concept of negative continuity -- Classical and intuitionistic semantical groundedness -- Brouwer's equivalence between virtual and inextensible order -- An intuitionistic notion of hypothetical truth for which strong completeness intuitionistically holds -- Propositions and judgements in Martin-Löf -- Negationless Intuitionism -- Temporal and atemporal truth in intuitionistic mathematics -- Arbitrary reference in mathematical reasoning -- The priority of arithmetical truth over arithmetical provability -- The impredicativity of the intuitionistic meaning of logical constants -- The intuitionistic meaning of logical constants and fallible models.

This book examines the role of acts of choice in classical and intuitionistic mathematics. Featuring fifteen papers – both new and previously published – it offers a fresh analysis of concepts developed by the mathematician and philosopher L.E.J. Brouwer, the founder of intuitionism. The author explores Brouwer's idealization of the creative subject as the basis for intuitionistic truth, and in the process he also discusses an important, related question: to what extent does the intuitionistic perspective succeed in avoiding the classical realistic notion of truth? The papers detail realistic aspects in the idealization of the creative subject and investigate the hidden role of choice even in classical logic and mathematics, covering such topics as bar theorem, type theory, inductive evidence, Beth models, fallible models, and more. In addition, the author offers a critical analysis of the response of key mathematicians and philosophers to Brouwer's work. These figures include Michael Dummett, Saul Kripke, Per Martin-Löf, and Arend Heyting. This book appeals to researchers and graduate students with an interest in philosophy of mathematics, linguistics, and mathematics.

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