

1. Record Nr.	UNINA9911022455703321
Autore	Ippoliti Emiliano
Titolo	The Heuristic View : Logic, Mathematics, and Science // edited by Emiliano Ippoliti, Fabio Sterpetti
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
ISBN	3-031-94709-6
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (331 pages)
Collana	Synthese Library, Studies in Epistemology, Logic, Methodology, and Philosophy of Science, , 2542-8292 ; ; 502
Altri autori (Persone)	SterpettiFabio
Disciplina	501
Soggetti	Science - Philosophy Mathematics - Philosophy Knowledge, Theory of Logic Analysis (Philosophy) Philosophy of Science Philosophy of Mathematics Epistemology Analytic Philosophy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1 The Heuristic View: Historical Roots and Emerging Perspectives (Emiliano Ippoliti, Fabio Sterpetti) -- 2 The Two Paradigms of Logic (Carlo Cellucci) -- 3 Lakatos' Contribution to the Philosophy of Mathematics (Donald Gillies) -- 4 Lakatos, Cellucci, and Heuristic Philosophy of Mathematics (Otavio Bueno) -- 5 Problem-Driven Mathematical Explanations in Science (Alan Baker) -- 6 Deductive Theories and Non-Deductive Knowledge (Alexander C. Paseau) -- 7 Mathematics as Objective Knowledge: Discovering How to Make the World Intelligible (Lorenzo Magnani) -- 8 Identifying Multiple Levels of Heuristic Reasoning Used in Scientific Model Construction: A Framework Grounded in Imagistic Processing (John J. Clement) -- 9 The Efficient Market Hypothesis: A Heuristic Appraisal (Emiliano Ippoliti) -- 10 From Physics to Metaphysics: Aristotle's Heuristic Path (Diana Quarantotto) -- 11 There Is a Logician at the Desk! A New Profile for an

Old Category of Scholars (Miriam Franchella) -- 12 Teaching Mathematics and the Two-Language Problem: Toward Heuristic Reasoning Being the Praxis of the Mathematics Classroom Experience (Marshall Gordon) -- 13 The Heuristic View and Anti-Exceptionalism about Logic (Fabio Sterpetti).

Sommario/riassunto

This volume offers a series of thought-provoking analyses that explore non-mainstream perspectives on knowledge acquisition and scientific discovery. A central theme across many of the contributions is the heuristic conception of method, a view that finds its philosophical roots in Imre Lakatos's work in the philosophy of mathematics and, more distantly, in Platonic notions of philosophical inquiry. Knowledge acquisition is frequently conceptualized as a form of problem-solving, and problem-solving is typically regarded as a rational endeavor. However, the dominant view in the philosophy of science has long held that scientific discovery resists systematic explanation in terms of logic and rationality. If an alternative account of discovery grounded in these terms can be developed, it would represent a significant theoretical advancement. The essays collected in this book critically assess the promise and limitations of such non-standard accounts, and they investigate the possibility of framing scientific discovery within a logical and rational framework. This volume will be of particular interest to scholars in the philosophy of science, epistemology, philosophy of mathematics, and philosophy of logic, as well as to scientists engaged in theoretical inquiry and graduate students working in these or related areas.
