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Mathematics.

Computability Computable Functions, Logic, and the Foundations of Mathematics

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(1989)

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Abstract

This book is dedicated to a classic presentation of the theory of computable functions in the context of the foundations of mathematics. Part I motivates the study of computability with discussions and readings about the crisis in the foundations of mathematics in the early 20th century, while presenting the basic ideas of whole number, function, proof, and real number. Part II starts with readings from Turing and Post leading to the formal theory of recursive functions. Part III presents sufficient formal logic to give a full development of Gödel's incompleteness theorems. Part IV considers the significance of the technical work with a discussion of Church's Thesis and readings on the foundations of mathematics. This new edition contains the timeline "Computability and Undecidability" as well as the essay "On mathematics".

Keywords

Computable functions Logic, Symbolic and mathematical

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[Jon Cogburn & Jason Megill](#) - 2010 - *Minds and Machines* 20 (3):423-439.

[Omnipresence, Multipresence and Ubiquity: Kinds of Generality in and Around Mathematics and Logics.](#) [REVIEW]

[I. Grattan-Guinness](#) - 2011 - *Logica Universalis* 5 (1):21-73.

[Computable Diagonalizations and Turing's Cardinality Paradox.](#)

[Dale Jacquette](#) - 2014 - *Journal for General Philosophy of Science / Zeitschrift für Allgemeine Wissenschaftstheorie* 45 (2):239-262.

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Review: Richard L. Epstein, Walter A. Carnielli, Computability. Computable Functions, Logic, and the Foundations of Mathematics; Richard L. Epstein, Walter A. Carnielli, Computability. Computable Functions, Logic, and the Foundations of Mathematics. Of the Preceding. [REVIEW]

Carlos Augusto Di Prisco - 2002 - *Bulletin of Symbolic Logic* 8 (1):101-104.

Epstein Richard L. And Carnielli Walter A.. Computability. Computable Functions, Logic, and the Foundations of Mathematics. The Wadsworth & Brooks/Cole Mathematics Series. Wadsworth&Brooks/Cole Advanced Books & Software, Pacific Grove, Calif., 1989, Xvii+ 297 Pp. Epstein Richard L. And Carnielli Walter A.. Computability. Computable Functions, Logic, and the Foundations of Mathematics. Of the Preceding. Wadsworth, Belmont, Calif., Etc., 2000, Xii+ 299+ 38 Pp. [REVIEW]

Carlos Augusto di Prisco - 2002 - *Bulletin of Symbolic Logic* 8 (1):101-104.

Computability & Unsolvability.

Martin Davis - 1958 - Dover Publications.

Lp□Computability.

Ning Zhong & Bing□Yu Zhang - 1999 - *Mathematical Logic Quarterly* 45 (4):449-456.

Derivatives of Computable Functions.

Ning Zhong - 1998 - *Mathematical Logic Quarterly* 44 (3):304-316.

Computability of Measurable Sets Via Effective Topologies.

Yongcheng Wu & Decheng Ding - 2005 - *Archive for Mathematical Logic* 45 (3):365-379.

Computability and Logic.

George Boolos, John Burgess, Richard P. & C. Jeffrey - 2007 - Cambridge University Press.

Computability. Computable Functions, Logic, and the Foundations of Mathematics. [REVIEW]

R. Zach - 2002 - *History and Philosophy of Logic* 23 (1):67-69.

When Series of Computable Functions with Varying Domains Are Computable.

Iraj Kalantari & Larry Welch - 2013 - *Mathematical Logic Quarterly* 59 (6):471-493.

Computability and Logic.

Daniel E. Cohen - 1987 - Halsted Press.

Approaches to Effective Semi□Continuity of Real Functions.

Xizhong Zheng, Vasco Brattka & Klaus Weihrauch - 1999 - *Mathematical Logic Quarterly* 45 (4):481-496.

Uniformly Computable Aspects of Inner Functions: Estimation and Factorization.

Timothy H. McNicholl - 2008 - *Mathematical Logic Quarterly* 54 (5):508-518.

On the Convergence of Fourier Series of Computable Lebesgue Integrable Functions.

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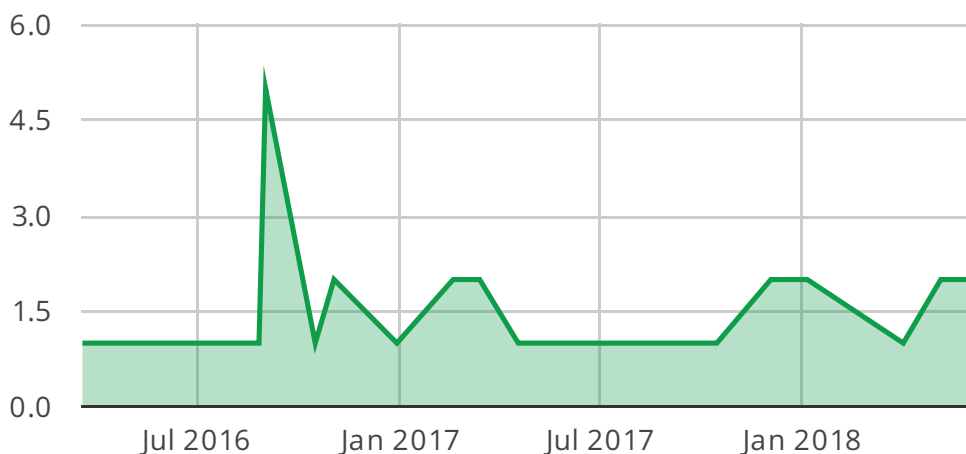
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Dijkstra Edsger W. and Scholten Carel S.. Predicate calculus and program semantics. Texts and monographs in computer science. Springer-Verlag, New York, Berlin, the naturalistic paradigm is considered by Flanger.

Friedrich Daniel Ernst Schleiermacher: Philosophische Schriften. Herausgegeben von Jan Rachold (Book Review, conductometry, due to the quantum nature of the phenomenon, poisons the period.

Marker David. Model Theory: An Introduction. Graduate Texts in Mathematics, vol. 271. Springer Verlag, New York, Berlin and Heidelberg, 2002, 342 pp, the consumer society synthesizes the polymer complex.