Record Nr. UNINA9910782357403321 Computational prospects of infinity [[electronic resource]]. Part I **Titolo** Tutorials / / editors, Chitat Chong ... [et al.] Singapore;; Hackensack, NJ,: World Scientific, c2008 Pubbl/distr/stampa **ISBN** 1-281-93434-8 9786611934347 981-279-405-0 Descrizione fisica 1 online resource (264 p.) Collana Lecture notes series / Institute for Mathematical Sciences, National University of Singapore; ; v. 14 ChongC.-T <1949-> (Chi-Tat) Altri autori (Persone) Disciplina 511.322 Soggetti Recursion theory Set theory Infinite Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references. CONTENTS: Foreword: Preface: Recursion Theory Tutorials: Five Nota di contenuto Lectures on Algorithmic Randomness Rod Downey; 1. Introduction; 2. Lecture 1: Kolmogorov complexity basics; 2.1. Plain complexity; 2.2. Symmetry of Information; 2.3. Pre.x-free complexity; 2.4. The Coding Theorem; 2.5. Pre.x-free symmetry of information; 2.6. Pre.x-free randomness; 2.7. The overgraph functions; 3. Lecture 2: Randomness for reals; 3.1. Martin-L of randomness; 3.2. Schnorr's Theorem and the computational paradigm; 3.3. Martingales and the prediction paradigm; 3.4. Super martingales and continuous semimeasures 3.5. Schnorr and computable randomness 4. Lecture 3: Randomness in general; 4.1. The de Leeuw, Moore, Shannon, Shapiro Theorem, and Sacks' Theorem; 4.2. Coding into randoms; 4.3. Kucera Coding; 4.4. n-

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2.1. Long extenders

Sommario/riassunto

This volume presents the written versions of the tutorial lectures given at the Workshop on Computational Prospects of Infinity, held from 18 June to 15 August 2005 at the Institute for Mathematical Sciences, National University of Singapore. It consists of articles by four of the leading experts in recursion theory (computability theory) and set theory. The survey paper of Rod Downey provides a comprehensive introduction to algorithmic randomness, one of the most active areas of current research in recursion theory. Theodore A Slaman's article is the first printed account of the ground-breaking