Record Nr. UNINA9910438158403321 Autore Murty M. Ram Titolo The mathematical legacy of Srinivasa Ramanujan // M. Ram Murty, V. **Kumar Murty** New York, : Springer, 2012 Pubbl/distr/stampa **ISBN** 1-283-69784-X 81-322-0770-X Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (184 p.) Disciplina 510.92 Soggetti Mathematicians - India Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Preface -- Chapter 1. The Legacy of Srinivasa Ramanujan -- Chapter 2. Nota di contenuto The Ramanujan tau function -- Chapter 3. Ramanujan's conjecture and I-adic representations -- Chapter 4. The Ramanujan conjecture from GL(2) to GL(n) -- Chapter 5. The circle method -- Chapter 6. Ramanujan and transcendence -- Chapter 7. Arithmetic of the partition function -- Chapter 8. Some nonlinear identities for divisor functions -- Chapter 9. Mock theta functions and mock modular forms --Chapter 10. Prime numbers and highly composite numbers -- Chapter 11. Probabilistic number theory -- Chapter 12. The Sato-Tate conjecture for the Ramanujan tau-function -- Bibliography -- Index. Sommario/riassunto Srinivasa Ramanujan was a mathematician brilliant beyond compare. There is extensive literature available on the work of Ramanujan, but what is more difficult to find in the literature is an analysis that would place his mathematics in context and interpret it in terms of modern developments. The 12 lectures by G. H. Hardy, delivered in 1936, served this purpose at the time they were given. This book presents Ramanujan's essential mathematical contributions and gives an informal account of some of the major developments that emanated from his work in the 20th and 21st centuries. It contends that his work is still having an impact on many different fields of mathematical

research. The book examines some of these themes in the landscape of 21st-century mathematics. These essays, based on the lectures given by the authors, focus on a subset of Ramanujan's significant papers

and show how these papers shaped the course of modern mathematics. $% \left(1\right) =\left(1\right) \left(1\right)$