1. Record Nr. UNINA9910791958903321 Autore Neeman Amnon Titolo Triangulated categories / / by Amnon Neeman Pubbl/distr/stampa Princeton, New Jersey:,: Princeton University Press,, 2001 ©2001 **ISBN** 0-691-08685-0 1-4008-3721-9 Descrizione fisica 1 online resource (461 p.) Collana Annals of Mathematics Studies: Number 148 Disciplina 512/.55 Soggetti Categories (Mathematics) 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 and index. Nota di contenuto Front matter -- Contents -- 0. Acknowledgements -- 1. Introduction -- Chapter 1. Definition and elementary properties of triangulated categories -- Chapter 2. Triangulated functors and localizations of triangulated categories -- Chapter 3. Perfection of classes -- Chapter 4. Small objects, and Thomason's localisation theorem -- Chapter 5. The category A(S) -- Chapter 6. The category x (Sop, Ab) -- Chapter 7. Homological properties of x(Sop,b) -- Chapter 8. Brown representability -- Chapter 9. Bousfield localisation -- Appendix A. Abelian categories -- Appendix B. Homological functors into [AB5] categories -- Appendix C. Counterexamples concerning the abelian category A() -- Appendix D. Where is the homotopy category of spectra -- Appendix E. Examples of non-perfectly-generated categories -- Bibliography -- Index Sommario/riassunto The first two chapters of this book offer a modern, self-contained exposition of the elementary theory of triangulated categories and their "ients. The simple, elegant presentation of these known results makes these chapters eminently suitable as a text for graduate students. The remainder of the book is devoted to new research, providing, among other material, some remarkable improvements on Brown's classical representability theorem. In addition, the author introduces a class of triangulated categories"--the "well generated triangulated categories"

-- and studies their properties. This exercise is particularly worthwhile

in that many examples of triangulated categories are well generated, and the book proves several powerful theorems for this broad class. These chapters will interest researchers in the fields of algebra, algebraic geometry, homotopy theory, and mathematical physics.