Record Nr. UNINA9910299991403321 Autore Deitmar Anton Titolo Principles of Harmonic Analysis / / by Anton Deitmar, Siegfried **Echterhoff** Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2014 **ISBN** 3-319-05792-8 Edizione [2nd ed. 2014.] Descrizione fisica 1 online resource (330 p.) Collana Universitext,, 0172-5939 Disciplina 515.2433 Soggetti Harmonic analysis Mathematics Visualization Applied mathematics **Engineering mathematics** Abstract Harmonic Analysis Applications of Mathematics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Nota di contenuto 1. Haar Integration -- 2. Banach Algebras -- 3. Duality for Abelian Groups -- 4. The Structure of LCA-Groups -- 5. Operators on Hilbert Spaces -- 6. Representations -- 7. Compact Groups -- 8. Direct Integrals -- 9. The Selberg Trace Formula -- 10. The Heisenberg Group -- 11. SL2(R) -- 12. Wavelets -- 13. p-adic numbers and adeles -- A. Topology -- B. Measure and Integration -- C: Functional Analysis. Sommario/riassunto This book offers a complete and streamlined treatment of the central principles of abelian harmonic analysis: Pontryagin duality, the Plancherel theorem and the Poisson summation formula, as well as their respective generalizations to non-abelian groups, including the Selberg trace formula. The principles are then applied to spectral analysis of Heisenberg manifolds and Riemann surfaces. This new edition contains a new chapter on p-adic and adelic groups, as well as a complementary section on direct and projective limits. Many of the supporting proofs have been revised and refined. The book is an

excellent resource for graduate students who wish to learn and