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Nota di bibliografia	Includes bibliographical references and index.
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. $SL_2(\mathbb{R})$ -- 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 understand harmonic analysis and for researchers seeking to apply it.

