1. Record Nr. UNINA9910454415703321

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Titolo	An introduction to the classification of amenable C-algebras [[electronic resource] /] / Huaxin Lin
Pubbl/distr/stampa	Singapore ; ; River Edge, NJ, : World Scientific, c2001
ISBN	1-281-95143-9 9786611951436 981-279-988-5
Descrizione fisica	1 online resource (333 p.)
Disciplina	512.55
Soggetti	C*-algebras Banach algebras Electronic books.
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 (p. 307-316) and index.
Nota di contenuto	Preface; Contents; Chapter 1 The Basics of C*-algebras; 1.1 Banach algebras; 1.2 C*-algebras; 1.3 Commutative C*-algebras; 1.4 Positive cones; 1.5 Approximate identities, hereditary C*-subalgebras and quotients; 1.6 Positive linear functionals and a Gelfand-Naimark theorem; 1.7 Von Neumann algebras; 1.8 Enveloping von Neumann algebras and the spectral theorem; 1.9 Examples of C*-algebras; 1.10 Inductive limits of C*-algebras; 1.11 Exercises; 1.12 Addenda; Chapter 2 Amenable C*-algebras and K-theory; 2.1 Completely positive linear maps and the Stinespring representation 2.2 Examples of completely positive linear maps2.3 Amenable C*-algebras; 2.4 K-theory; 2.5 Perturbations; 2.6 Examples of K-groups; 2.7 K-theory of inductive limits of C*-algebras; 2.8 Exercises; 2.9 Addenda; Chapter 3 AF-algebras and Ranks of C*-algebras; 3.1 C*-algebras of stable rank one and their K-theory; 3.2 C*-algebras of lower rank; 3.3 Order structure of K-theory; 3.4 AF-algebras; 3.5 Simple C*-algebras; 3.6 Tracial topological rank; 3.7 Simple C*-algebras with TR(A) < 1; 3.8 Exercises; 3.9 Addenda; Chapter 4 Classification of Simple AT-algebras; 4.1 Some basics about AT-algebras

4.2 Unitary groups of C*-algebras with real rank zero4.3 Simple AT-algebras with real rank zero; 4.4 Unitaries in simple C*-algebra with RR (A) = 0; 4.5 A uniqueness theorem; 4.6 Classification of simple AT-algebras; 4.7 Invariants of simple AT-algebras; 4.8 Exercises; 4.9 Addenda; Chapter 5 C*-algebra Extensions; 5.1 Multiplier algebras; 5.2 Extensions of C*-algebras; 5.3 Completely positive maps to Mn(C); 5.4 Amenable completely positive maps; 5.5 Absorbing extensions; 5.6 A stable uniqueness theorem; 5.7 K-theory and the universal coefficient theorem
5.8 Characterization of KK-theory and a universal multi-coefficient theorem5.9 Approximately trivial extensions; 5.10 Exercises; Chapter 6 Classification of Simple Amenable C*-algebras; 6.1 An existence theorem; 6.2 Simple AH-algebras; 6.3 The classification theorems; 6.4 Invariants and some isomorphism theorems; Bibliography; Index

Sommario/riassunto

The theory and applications of C * -algebras are related to fields ranging from operator theory, group representations and quantum mechanics, to non-commutative geometry and dynamical systems. By Gelfand transformation, the theory of C * -algebras is also regarded as non-commutative topology. About a decade ago, George A. Elliott initiated the program of classification of C * -algebras (up to isomorphism) by their K -theoretical data. It started with the classification of AT -algebras with real rank zero. Since then great efforts have been made to classify amenable C * -algebras, a class of C