a C^* -algebra—are added only as needed. Usually the reader is provided with counterexamples to demonstrate why these hypotheses are required. To offset the burden of maintaining complete generality the authors have been very careful to keep the group case highlighted throughout. Major results are often restated in the group case. There is even an entire chapter devoted to the theory of representations of compact group. Because of this blend of styles between that of a research encyclopedia and that of a textbook, these volumes will make an excellent reference for the student wishing to begin studying representation theory of Banach algebras, as well as for the expert who wishes to check the details of the Mackey normal subgroup analysis in the nonseparable case.

References

1. R. J. Blattner, On induced representations, Amer. J. Math. 83 (1961), 79-98.

2. J. M. G. Fell, An extension of Mackey's method to Banach *-algebraic bundles, Mem. Amer. Math. Soc. no. 90, Providence, R.I., 1969.

3. ____, Induced representations and Banach *-algebraic bundles, Lecture Notes in Math., vol. 582, Springer-Verlag, Berlin-Heidelberg-New York, 1977.

4. G. Frobenius, Über Relationen Zwischen den Charakteren einer Gruppe und denen ihrer Untergruppen, Sitzber. Preuss. Akad. Wiss. (1898), 501–515.

5. L. H. Loomis, *Positive definite functions and induced representations*, Duke Math. J. 27 (1960), 569–579.

6. G. W. Mackey, Imprimitivity for representations of locally compact groups. I, Proc. Nat. Acad. Sci. U.S.A. 35 (1949), 537-545.

7. ____, On induced representations of groups, Amer. J. Math. 73 (1951), 576-592.

8. ____, Induced representations of locally compact groups. I, Ann. of Math. (2) 55 (1952), 101–139.

9. ____, Unitary representations of group extensions. I, Acta Math. 99 (1958), 265-311.

10. M. Rieffel, Induced representations of C*-algebras, Adv. in Math. 13 (1974), 176-257.

11. ____, Review of induced representations and Banach *-algebraic bundles, Bull. Amer. Math. Soc. (N.S.) 1 (1979), 232-237.

12. M. Takesaki, Covariant representations of C^* -algebras and their locally compact automorphism groups, Acta Math. 119 (1967), 273–303.

13. Hermann Weyl, *The classical groups, their invariants and representations*, Princeton Univ. Press, Princeton, N.J., 1939.

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Combinatorial search, by Martin Aigner. Wiley-Teubner Series in Computer Science, 1988, 368 pp., \$44.95. ISBN-0-471-92142-4 (Wiley) ISBN-3-519-02109-9 (Teubner)

Popular combinatorial search problems involve such matters as "twenty questions," weighing to find a counterfeit coin, or locating a word in a dictionary. All these problems can be described using a simple model. Given a search domain consisting of a finite number of points with one

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