

parameters. {The actual analyticity statement is more sophisticated since the interactions are parametrized by an infinite dimensional Banach space.} The proofs in Chapters 1–5 are elegant and complete but sometimes rather demanding of the reader.

In Chapter 6 the formalism of the first four chapters is partially extended to compact metrizable spaces with a Z' -action. An interesting wedding between the statistical mechanical formalism and topological dynamics is achieved. In Chapter 7 the richer formalism of Chapter 5 is extended to certain Z -actions on Smale spaces. Most detailed proofs in the last two chapters are omitted but complete references are given. Exercises, some of them quite difficult, are given at the end of each chapter. There are also complete bibliographical notes at the end of each chapter.

This is a beautiful but austere book. It is very much in the spirit of the Bourbaki treatise. We must compare this impression with the statement of the editor in the general preface to this Encyclopedia. It states: "Clarity of exposition, *accessibility to the nonspecialist* (italics added), and a thorough bibliography are required of each author." If a person can learn a subject for the first time by reading Bourbaki, then perhaps that person can learn the statistical mechanics of lattice systems by reading this book. In this reviewer's opinion most people will most profitably read Bourbaki and/or this book at the culmination of the learning process not at the beginning.

REFERENCES

I. R. B. Israel, *Convexity in the theory of lattice gases, with an introduction by A. S. Wightman*, Princeton Series in Physics, Princeton Univ. Press, Princeton, N. J., 1979.

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Modular forms and functions, by Robert A. Rankin, Cambridge University Press, Cambridge, London, New York, Melbourne, 1977, xiii + 384 pp., \$34.00.

Modular functions and Dirichlet series in number theory, by Tom M. Apostol, Graduate Texts in Mathematics, Number 41, Springer-Verlag, New York-Heidelberg-Berlin, 1976, x + 198 pp., \$14.80.

My first actual conversation with Mordell took place early in the 1960's, when we were introduced (by L. C. Young, I believe) in the lounge of the Mathematics Research Center in Madison, Wisconsin. Always interested in the work of young mathematicians—a phrase that applied to me then—Mordell asked about my research interests. To my answer he responded with surprise (possibly feigned, it occurred to me later; in any event the point is the same), saying in effect—I don't recall the exact words—"modular functions? I thought that was all settled years ago!"

That no mathematician, not even a Mordell in jest, could respond that way today is a measure of the extraordinary resurgence of interest that the field