graduate student and the postdoctoral or research investigator (in such areas as theoretical physics and mathematics).

One of its strengths is that it has a large degree of detail in its presentation. The authors start with an extensive discussion of the required mathematical background. For mathematically oriented physicists as well as mathematicians, this should provide real insight into the issues that are confronted in the manifest supersymmetrically formulated field theories as applied to proposed theories of nature.

After devoting a quarter of the book to a thorough discussion of the mathematical setting (number fields, functions, groups, and the like), the authors begin the task of introducing nonquantum superfield theory. This treatment is brisk and comparable to that of other books at the intermediate to advanced level. The authors continue, however, in what becomes the hallmark of this book, by treating in unusual detail such topics as Kähler geometry, infinitesimal gauge superfield variations and K and Λ Yang–Mills gauge groups. The book presents many more details than did *Superspace*, but a few topics, such as variant representations and irreducible super P forms, have been ignored. Quantization is carried out via modern methods involving path integrals and functional differentiation, appropriately generalized to superspace.

One nice discussion includes a demonstration of the subtle nature of the superfield nonrenormalization theorem, which has often been misunderstood. The section on supergravity is a real gem, containing derivations and proofs within the context of the Lie algebraic descriptions of supergravity and gravity, which have until now appeared only in the research literature, and the section includes a very clear discussion of more standard topics. Also presented is a nice discussion of higher spin superfields (a topic of great importance in the still-developing field of manifest supersymmetrical string theory).

The book ends on a high note, looking at issues of the effective action in curved superspace. The authors confirm by their presentation that they are among the most knowledgeable in this field—a field that is also of great importance to the manifest supersymmetrical string theory of the future. My only criticism of *Ideas and Methods of Supersymmetry and Supergravity* is that, like *Superspace*, its bibliography could be more detailed. This would have provided a fine capstone to an already excellent work.

S. JAMES GATES
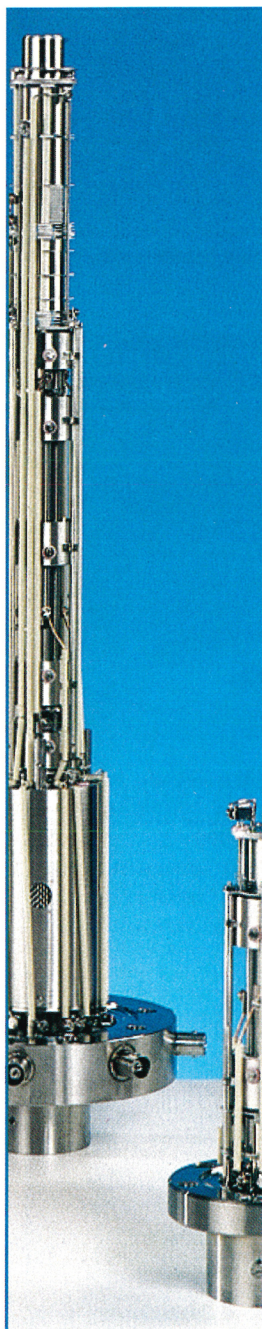*University of Maryland*
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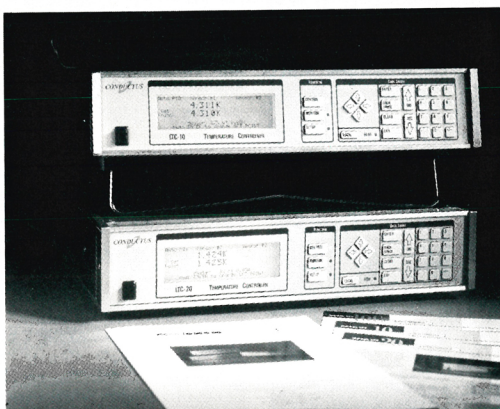
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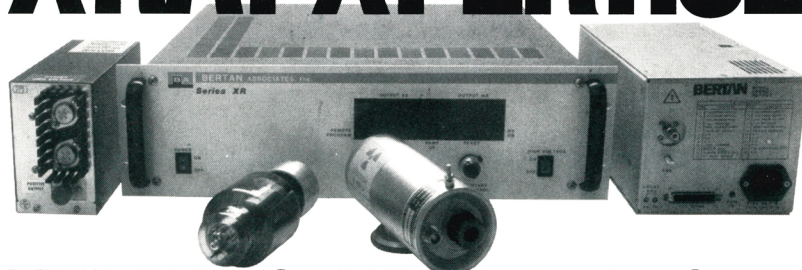
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