Hadronic Press Monographs in Mathematics Number 1

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ALGEBRAS

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ABOUT THE TOPIC

Lie's theory, with its diversification into algebras, groups and geometries, constitutes one of the most fundamental branches of contemporary mathematics.

In applied mathematics, Lie's theory is equally fundamental. For instance, contemporary physical theories (such as classical mechanics, statistical mechanics and quantum mechanics) constitute different realizations of Lie's theory beginning from their most fundamental dynamical part, the time evolution.

This book deals with a generalization of Lie algebras (beyond grading-supersymmetric extensions) which was proposed by A. A. Albert in 1948 under the name of Lie—admissible algebras, and subsequently developed by a number of mathematicians and theoreticians.

The contents of this book is therefore of fundamental relevance for pure as well as applied mathematics. On the former grounds, the Lie—admissible algebras permit the broadening of the mathematical structure of all branches of mathematics dealing with Lie algebras. On the latter grounds, the Lie—admissible algebras permit the generalization of physical theories for a deeper understanding of nature.

The book is authored by one of the foremost mathematical leaders in the field.

The book is indispensable for all mathematicians interested in fundamental advances, as well as for all theoreticians interested in the broadening of the structure of contemporary physical theories.

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