DESCRIPTION

A user-friendly introduction to metric and topological groups

*Topological Groups: An Introduction* provides a self-contained presentation with an emphasis on important families of topological groups. The book uniquely provides a modern and balanced presentation by using metric groups to present a substantive introduction to topics such as duality, while also shedding light on more general results for topological groups.

Filling the need for a broad and accessible introduction to the subject, the book begins with coverage of groups, metric spaces, and topological spaces before introducing topological groups. Since linear spaces, algebras, norms, and determinants are necessary tools for studying topological groups, their basic properties are developed in subsequent chapters. For concreteness, product topologies, quotient topologies, and compact-open topologies are first introduced as metric spaces before their open sets are characterized by topological properties. These metrics, along with invariant metrics, act as excellent stepping stones to the subsequent discussions of the following topics:

- Matrix groups
- Connectedness of topological groups
Exercises found throughout the book are designed so both novice and advanced readers will be able to work out solutions and move forward at their desired pace. All chapters include a variety of calculations, remarks, and elementary results, which are incorporated into the various examples and exercises.

*Topological Groups: An Introduction* is an excellent book for advanced undergraduate and graduate-level courses on the topic. The book also serves as a valuable resource for professionals working in the fields of mathematics, science, engineering, and physics.

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**ABOUT THE AUTHOR**

NELSON G. MARKLEY, PhD, was professor of mathematics at the University of Maryland for more than twenty-five years and also served as provost at Lehigh University. He has written numerous journal articles in the area of dynamical systems and is the author of Principles of Differential Equations, also published by Wiley.

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