# FOREWORD

Hopf algebras, a concept abstracted from Hopf's work on manifolds, unify the study of diverse fields of mathematics and physics. To mention some examples, they are connected to the study of quantum mechanics and super-symmetry in physics, and to algebraic or topological groups, automorphisms and derivations of algebras, $C^*$-algebras, universal enveloping algebras of Lie algebras and Lie super-algebras in mathematics.

This special issue is a comprehensive presentation of various aspects of current research in Hopf algebras. The papers in this issue emphasize new developments in:

- Quantum groups
- Combinatorics
- Actions of Hopf algebras and Galois theory
- Structure of finite-dimensional Hopf algebras

The idea of this issue evolved during the first international conference on Hopf algebras, sponsored by and held at Ben Gurion University of the Negev from January 8 to January 11, 1989, with partial support by the Israel Mathematical Union. The authors of most papers that appear in this volume participated in the conference and presented many of the ideas that appear here. It is hoped that this issue will be useful to research on this rapidly developing subject.

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