

Preface

Harmonic analysis lies in the fundamental level of modern mathematics, intimately connected to a wide range of mathematical research fields including the representation theory of groups, partial differential equations, analytic number theory, geometric measure theory, combinatorial incidence geometry, and additive combinatorics, spectral and scattering theory, ergodic theory, measure theory, and probability, differential geometry and mathematical physics etc.

In recent years, a large amount of developments appeared not only in the theory of harmonic analysis itself, but also in the application to those related areas, which are influenced substantially by the implements and techniques or even ideas from this subject. One of the distinguished topic, which is still fast developing currently, is a series of progress on the restriction theorem and oscillatory integral estimates, based on multilinear method.

With the progress of mathematic development in China, to promote the development and urge high level research to this subject, *Acta Mathematica Sinica* decides to publish a special issue, which dedicated to an overview of recent development of harmonic analysis and its applications, presented invited papers from young experts who had contributed to this subjects and related topics, with an aim to summarize the latest results and foresee possible further investigations.

The organizer,

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