Preface

From February 18 to 23, 2006, with the support from our distinguished speakers and participants, the Conference on L-Functions was successfully held at Nishijin Plaza, Fukuoka, Japan. This volume is an invaluable limited collection of the works related to the conference.

The aim of the conference is to provide a common platform for mathematicians working on L-functions to communicate with each other more effectively. To a certain degree, this has been fulfilled: More than 130 participants attended the conference. We are also quite encouraged by the fact that many many young researchers and students were present. In fact, much more has been achieved – Not only our lectures cover numerous topics related to L-functions, they also reflect the current, most advanced and extremely important aspects of L-functions.

Each volume should send its clear message to the readers. Ours is as follows: On one hand, the theory of L-functions has already become very much diverse and is naturally embedded into various branches of mathematics; on the other hand, the theory is also pretty much integrated. Accordingly, in this volume we collect the papers of Bruggeman, Ibukiyama and Kim related to automorphic forms; the algebraic theory of Hida on $\mathcal{L}$-invariant of p-adic L-functions; the analytic results of Jutila, Motohashi and Suzuki on the circle method, Sieve method and the Riemann Hypothesis of rank 3 zeta; the conjecture of Kaneko on multiple zeta values; the articles of Matsumoto *et al.* on zeta functions of root systems and of Wakayama *et al.*'s on spectral zeta functions; the paper of Murty on a special class of L-functions, and the geometric approach of Weng to L-functions.

The conference was sponsored by JSPS and a COE program at the Graduate School of Mathematics, Kyushu University, Japan in relation with Akito Futaki, Ryoichi Kobayashi, Iku Nakamura, and Mitsuhiro T. Nakao, among others. We express our gratitude to them. Clearly, without the help from a large group of students, the conference would not run so smoothly. Thank them all, our dear young fellows.

The Editors