Preface

The present volume is the Proceedings of the International Conference on Probability and Number Theory, held at Kanazawa Yomiuri Kaikan, Kanazawa, Japan, during June 20 to 24, 2005. 21 overseas guests attended from Austria, France, Germany, Hungary, Israel, Lithuania, USA, and Spain. 35 talks were presented, while the poster session was also organized during the Conference. We express our heartfelt thanks to all the participants, whose support made the Conference really successful.

The interplay between probability theory and number theory produces many fascinating problems. For instance, the probabilistic theory of arithmetical functions is already one of the classical branches of number theory. The probabilistic value-distribution theory of zeta and L-functions has been extensively studied. The probabilistic aspect and the method of dynamical systems are also important in prime number theory, Diophantine approximations, partitions, uniform distribution of sequences and many other number-theoretic problems. Recently, the number of mathematicians who are interested in this research area has been steadily increasing.

In October 2001, at Kyushu University, the fourth-named editor organized a domestic symposium on this topic, and the attendants of this symposium felt strongly that the communication between the specialists of probability theory and number theory should be quite fruitful. This is the main reason why the Kanazawa Conference was proposed.

Fortunately the Conference was supported by many people. Professor Shunji Ito and Professor Satoshi Takanobu (both are of Kanazawa University) were members of the organizing committee of the Conference; the support and effort of them, with their collaborators and students, were indispensable for smooth operating of the Conference. Professor Tetsuya Hattori (Tohoku University) also helped the organizers a lot, especially on the management of the official web page of the Conference. We express our sincere gratitude to all the above mentioned people for their help. The Conference was financially supported by Japan Society for the Promotion of Science (JSPS), to which we are also indebted.

Kanazawa is one of the most beautiful cities in Japan, where the traditional atmosphere of Japanese old cities is still remaining. Kanazawa Yomiuri Kaikan was located just in front of the Kanazawa castle, and participants were rambling around the calm, comfortable castle area with enjoying mathematical discussions. On June 25, the next day after the Conference, a bus trip to Shirakawa-go was organized as an excursion. Many participants of the Conference also attended this excursion,