Preface

It is our great pleasure to release this special issue on algorithmic number theory and its applications. Number theory has long been a field of pure mathematics, but because of recent development of information technology and information-oriented society, the situation has changed drastically, and number theory is now one of the most important areas for applications to information technology, especially to information security. We hope this special issue helps to understand the current status of this area. On behalf of the editorial board of JJIAM, we express our sincere thanks to Guest Co-editors Nakamula Ken of Tokyo Metropolitan University and Carl Pomerance of Dartmouth College, and to Okamoto Tatsuaki of NTT Information Sharing Platform Laboratories who first proposed this special issue and has been acted as a linker between the guest co-editors and the JJIAM editorial board.

Sugihara Kokichi
Area ⟨3⟩ Area Editor

Guest Editors' Preface

This is the first occasion for the research group JANT (Japan Algorithmic Number Theory) of Japan SIAM on algorithmic number theory and its applications to publish a special issue of the JJIAM. We are proud that the volume is compiled with original research papers on "algorithmic number theory" and its applications. Motivated by the recent development of this field and based on the activities of the research group JANT, we planned to collect advanced results on this topic from all over the world. Guest associate editors were assembled from experts of several branches of the field including Carl Pomerance as a guest co-editor. The call for papers was announced on July 20, 2006, with October 31, 2006 as the submission deadline. We are happy to report that enough quality papers were submitted in this short period of about three months.

We express our gratitude to all authors for their submissions. We also express our gratitude to all guest editors and referees for their serious discussions on submitted papers. We expect that all accepted papers will give important contributions to the future progress of algorithmic number theory.

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