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Preface

The techniques of knowledge discovery and data mining (KDD) have rapidly developed along the significant progress of the computer and its network technologies in the last two decades. The attention and the number of researchers in this domain continue to grow in both international academia and industry. The Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD) is a worldwide representative international conference on the research areas of KDD. Under the current spread of KDD techniques in our society, PAKDD 2007 invited the organizers to an industrial track on KDD techniques and, moreover, called for enterprising proposals of workshops on novel and emerging topics in KDD studies. The PAKDD industrial track and the PAKDD workshops both attracted more than 350 paper submissions from 22 countries in total, of which only 81 high-quality papers were accepted after strict reviews. The conference provided many informal and vibrant opportunities for researchers and industry practitioners to share their research positions, original research results and practical development experiences on specific new challenges, emerging issues, new technology trends and solutions to real-world problems.

The objective of this volume is to offer the excellent presentations to the public, and to promote the study exchange among researchers worldwide. Sixty-two outstanding papers in the industrial track and the workshops were further selected, among the 81 paper presentations, under even more rigorous reviews by the organizers, and these papers were carefully brushed up and included in this post-proceedings volume.

The first part of this volume contains ten outstanding papers presented in the industrial track. This track was organized to attract papers on new technology trends and real-world solutions in different industry sectors. The succeeding chapters include papers selected from the three workshops of BioDM 2007, HPDMA 2007 and SSDU 2007. The 2nd BioDM Workshop on Data Mining for Biomedical Applications (BioDM 2007) aimed at attracting top researchers, practitioners and students from around the world to discuss data mining applications in the field of bioinformatics. There are many computationally challenging problems in the analysis of the diverse and voluminous data provided in the field, and the readers will find 11 challenging papers on these problems. The 2007 International Workshop on High-Performance Data Mining and Applications (HPMDA 2007) addressed high-performance data mining methods and applications from both algorithmic and system perspectives. It includes 25 papers on how to achieve efficient mining of useful information from the data available, as well as on the topics of parallel hardware platforms, clusters and large-scale distributed computing infrastructures. The 2007 International Workshop on Service, Security and Its Data Management for Ubiquitous Computing (SSDU 2007) was held to foster research in the areas of security and intelligence integration

into ubiquitous computing and data management technology. Sixteen papers discussing the many security risks and problems in the ubiquitous computing environment are included in the volume.

We hope this book contributes to the growth of the worldwide community of KDD researchers.

September 2007

Takashi Washio
Zhi-Hua Zhou

Organization and Editorial Board

The paper selection of the industrial track and the workshops was made by the Program Committee of each respective organization. After the paper selection, the book was edited and managed by the volume editors.

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