Foreword

For more than a decade, researches on association rule mining have attracted a huge interest from the data mining communities. Many advances in association rule mining have been proposed in recent years, including more efficient algorithms to process association rules, new data structures to speed up processing, new compression techniques to overcome the memory limitation problem, and so on. Many issues surrounding association rules have been discussed, including security, privacy, and incomplete and inaccurate data. Association rules have also been applied in various domains, including mobile mining, social networking, graph mining, etc.

However, most of the existing research on association rules has been focusing on establishing common patterns and rules; these are patterns and rules based on the majority, some of which may be either obvious or irrelevant. Unfortunately, not enough attentions have been given to mining rare association rules; these are outlier rules and patterns.

Rare association rules are critically important as in many cases they represent outstanding patterns, which cannot be easily discovered by traditional association mining algorithms. This book presents an interesting collection of recent advances in rare association rule mining. This book is certainly an invaluable resource to data mining researchers, especially to those who have strong interest in association rules.

I am pleased to be able to recommend this timely reference source to readers, be they researchers looking for future directions to pursue research in data mining, or practitioners interested in applying data mining concepts in practical situations.

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__David Taniar__ holds Bachelor, Master, and PhD degrees - all in Computer Science, with a particular specialty in Databases. His current research areas are in mobile databases, parallel databases, web databases, GIS, and data mining. He publishes extensively every year, including his recent co-authored book: High Performance Parallel Database Processing and Grid Databases (John Wiley & Sons, 2008). His list of publications can be viewed at the DBLP server (http://www.informatik.uni-trier. de/~ley/db/indices/a-tree/t/Taniar:David.html). He is a founding editor-in-chief of a number of international journals, including Intl J of Data Warehousing and Mining, Intl J of Business Intelligence and Data Mining, Mobile Information Systems, Journal of Mobile Multimedia, Intl J of Web Information Systems, and Intl J of Web and Grid Services. He is currently an Associate Professor at the Faculty of Information Technology, Monash University, Australia. He can be contacted at David.Taniar@ infotech.monash.edu.au.