

## Preface

IDT (Intelligent Decision Technologies) seeks an interchange of research on intelligent systems and intelligent technologies which enhance or improve decision making in industry, government and academia. The focus is interdisciplinary in nature, and includes research on all aspects of intelligent decision technologies, from fundamental development to the applied system.

It constitutes a great honor and pleasure for us to publish the works and new research results of scholars from the First KES International Symposium on Intelligent Decision Technologies (KES IDT'09), hosted and organized by University of Hyogo in conjunction with KES International (Himeji, Japan, April, 2009). The symposium was concerned with theory, design, development, implementation, testing and evaluation of intelligent decision systems. Its topics included intelligent agents, fuzzy logic, multi-agent systems, artificial neural networks, genetic algorithms, expert systems, intelligent decision making support systems, information retrieval systems, geographic information systems, and knowledge management systems. These technologies have the potential to support decision making in many areas of management, international business, finance, accounting, marketing, healthcare, military applications, production, networks, traffic management, crisis response, and human interfaces.

In addition to this preface, this book contains 62 chapters, each based on a paper selected from a large number submitted for consideration for the symposium, from various countries from all over the world. Each paper was peer reviewed by at least two independent referees. The best were finally accepted based on the recommendations of the reviewers, in some cases after required revisions had been undertaken by the authors.

The book is organized as follows. Chapters 1 – 15 are devoted to Engineering of IDTs for Knowledge Management Systems, ; Chapters 16 and 17 are devoted to Intelligent Data Processing Techniques for Decision Making, ; Chapters 18, 19, 20, 21, 22, 23, 24 and 60 are devoted to Decision Making in a Dynamic Environments, ; Chapters 25 and 26 are devoted to Decision and Health, Chapters 27, 28, 29, 30 and 31 are devoted to Foundations and Applications of Intelligent Systems, ; Chapters 32, 33, 34 and 35 are devoted to Non-Classical Logics for Intelligent Decision Technologies, ; Chapters 36, 37, 38, 39 and 40 are devoted to Knowledge - Based Interface Systems, ; Chapters 41, 42 and 43 are devoted to IDT Based Anomaly Detection, ; Chapters 44, 45, 46, 47, 48 and 49 are devoted to Knowledge-Based Software Engineering and Medical Decision Support Systems, ; Chapters 50, 51, 52, 53 and 54 are devoted to Rough Sets and Decision

Making, ; Chapters 55, 56, 57, 58, 59, 61 and 62 are devoted to Decision Making in a Changing Financial and Social Environment.

We wish to express our sincere gratitude to the plenary speakers, invited session chairs, delegates from all over the world, the authors of various chapters and reviewers for their marvelous contributions. For their sponsorship with the symposium, we express our great thanks to Himeji City and Himeji Convention Bureau. We would like to express our sincere thanks to Mr. Peter Cushion of KES International for his help with organizational issues. We would also like to express our special thanks to all of the Springer-Verlag editorial team members for their editorial support. Last, we would like to express our gratitude to the Local Organizing Committee and students at University of Hyogo for their assist.

We hope and believe that this volume will contribute to ideas for novel research and the advanced in the work of researchers, practitioners, professors and research students who are interested in knowledge-based and intelligent engineering systems.

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