
Preface

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Biographical notes: Chao-Lin Liu is a distinguished Professor at the National Chengchi University, an executive committee member of TAAI, an editorial board member of both *Behaviormetrika* (Japan) and the *International Journal of Computational Linguistics and Chinese Language Processing* (Taiwan). He received a Doctoral Degree in EECS from the University of Michigan in USA and a Master's Degree and a Bachelor's Degree, both in EE, from the National Tsing Hua University in Taiwan. His research interests include artificial intelligence, probabilistic reasoning and decision support, natural language processing and applications, information retrieval and knowledge management, intelligent tutoring systems, and intelligent transportation systems.

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This special issue contains a collection of papers that were presented in the 13th TAAI Conference on Artificial Intelligence and Applications that was held at the Tamkang University in Taiwan in November 2008. TAAI stands for Taiwanese Association for Artificial Intelligence which is the major academic society focused on the research and advancement of Artificial Intelligence in Taiwan.

Papers included in this special issue report applications of artificial intelligence in intelligent transportation systems, communication systems, Web search problems, biomedical problems, and general clustering problems. Chang et al. applied clustering techniques to analyse and predict the demands for taxi services in Taipei, Taiwan. A successful prediction of traffic demands can improve the efficiency and effectiveness of the transportation system. Liu et al. introduced a genetic algorithm that considered multiple factors in the selection process, and applied the enhanced algorithm to optimise the placement of base stations for mobile communication systems. Tsay et al. combined classification and heuristic search techniques to find the mapping between two categories, hoping to improve the efficiency of category-constrained search requests. Kuo et al. employed both clustering techniques and k -nearest-neighbour methods to extract the information hidden in the microarray data. Hoping to deploy psychotherapy services via the internet, Shie et al. collected patients' physiological data via the internet, and applied the data in treating mental disorders. Tsai and Sung proposed a new member of the DBSCAN-related algorithms, and they showed that the new algorithm improved the efficiency of DBSCAN and its descendants.

We would like to thank 21 anonymous experts who helped us review the seven papers that were submitted for this special issue. We also thank Miss Min-Hua Lai, who is affiliated with the Department of Computer Science of the National Chengchi University, for her helping the communication between the reviewers and the authors. Finally we thank the Editor-in-Chief for his strong support of the special issue for the conference.