

Preface

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Published online: 6 March 2015
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As machine intelligence has deep effects on human life, engineers have been challenged with exquisite and complex problems and experiments when using information processing and intelligent systems. With the motivation of new possibility, many researchers have proposed the innovative technologies of information processing and intelligent systems, which contribute greatly to setting up the new paradigms that affect society and privacy. Intelligent systems and information processing are basic elements to integrate the concepts of machine intelligence, internet of things, fuzzy logic, and autonomous control. In recent decades, these technologies have made great progress in the field of the third industrial revolution called as a popular term. Under the trends to develop remarkable machine intelligence, we would like to introduce a high quality of articles presenting experimental results by using the intelligent system and information processing.

The objective of this issue is focused on applying the technologies and theories of the intelligent systems to a variety of industries, that is, hand gesture, disease symptoms, image segmentation, text categorization, sliding-mode control, banking system, robotics manipulators, bootstrap techniques, job-shop scheduling, Maglev vehicles, deviations estimators, language reasoning, and air conditioners.

This special issue of *Soft Computing Journal* contains the extended versions of excellent papers selected and presented in the 14th International Symposium on Advanced Intelligent Systems (ISIS 2013) which was held at Daejeon, Korea, on November 13–16, 2013. ISIS is an annual conference which provides vast opportunities for the researchers and engineers to share, disseminate, and enlarge their ideas on various theoretical and practical aspects of intelligent systems.

The current topics included in this special issue are selected based on the additional rigorous review process and specially focused on the state-of-the-art technologies on advanced intelligent system and information processing researches. The 13 papers compiled in this book are representative for the broad range of methods and applications of intelligent systems.

1. Max–min hand cropping method for robust hand region extraction in the image-based hand gesture recognition.
2. An intelligent approach to discovering common symptoms among depressed patients.
3. Overlapped latent Dirichlet allocation for efficient image segmentation.
4. Normalized table-matching algorithm as approach to text categorization.
5. Design of sliding-mode control based on fuzzy disturbance observer for minimization of switching gain and chattering.
6. A decision rule-based soft computing model for supporting financial performance improvement of the banking industry.
7. Biologically inspired deoxyribonucleic acid soft computing for inverse kinematics solver of five-DOF robotic manipulators.
8. The statistical inferences of fuzzy regression based on bootstrap techniques.

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9. Application of local clustering organization to reactive job-shop scheduling.
10. Optimal design of electromagnet for Maglev vehicles using hybrid optimization algorithm.
11. Fuzzy logistic regression with least absolute deviations estimators.
12. Oxymoron generation using an association word corpus and a large-scale N -gram corpus.
13. Study on application of a neuro-fuzzy models in air conditioning systems.

We hope to help readers gain useful information from the articles and create an innovative and novel concept or theory in intelligent systems. Thank you.