EDITORIAL PREFACE

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IJSSCI Vol. 3, No. 4 is a special issue on best papers of the 2011 IEEE International Conference on Cognitive Informatics and Cognitive Computing (ICCI*CC’11). This issue includes four award winning papers on: 1) “A Formal Knowledge Representation System (FKRS) for the Intelligent Knowledge Base of a Cognitive Learning Engine”; 2) “Qualitative Reasoning Approach to a Driver’s Cognitive Mental Load”; 3) “Inconsistency-Induced Learning: A Step toward Perpetual Learners”; and 4) “Toward Automatic Answers in User-Interactive Question Answering Systems”. In addition, two regular papers are presented on: 5) “Intelligent Fault Recognition and Diagnosis for Rotating Machines using Neural Networks”; and 6) “The Formal Design Models of Tree Architectures and Behaviors”, which is included in the special column on “Formal Software Design Models, Patterns, and Frameworks.”

The Editor-in-Chief would like to take this opportunity to report that the 2012 IEEE International Conference on Cognitive Informatics and Cognitive Computing (ICCI*CC’12) will be held in Kyoto, Japan during August 22-24, 2012. Over the last decade, CI and CC have been established as an exciting research field, which has already created and attracted millions of entries over the Internet and related research communities. The theme of ICCI*CC’12 will be on “eBrain and Cognitive Computers”. The ICCI*CC series is fully sponsored by both the IEEE Computer Society and Computational Intelligence Society.

IJSSCI has been indexed in DBLP and Google Scholar on research papers published in the emerging fields of software science, theoretical software engineering, computational intelligence, and cognitive computing. A number of special issues in IJSSCI will be organized on cognitive computing, computational intelligence, software science, and theoretical foundations of software engineering. Submissions to these special issues in particular, and/or to the regular issues of IJSSCI in general, are welcome.

The Editor-in-Chief expects that readers of the International Journal of Software Science and Computational Intelligence (IJSSCI) will benefit from the papers presented in this issue in order to aware the recent advances in this field. I would like to thank the authors, members of the board of editors, and invited reviewers for their great contributions to this issue. I would like to acknowledge the publisher of IJCINI, Ideal Group Global (IGI) Publishing, USA, and to thank Mehdi Khosrow-Pour (President of IGI), Jan Travers (Director of Intellectual Property and Contracts), and the editorial staff of IGI, Chris Hrobak and Jamie Wilson for their excellent professional support.

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Editor-in-Chief
IJSSCI
Yingxu Wang is professor of cognitive informatics, cognitive computing, and software engineering, President of International Institute of Cognitive Informatics and Cognitive Computing (IICICC), and Director of the Cognitive Informatics and Cognitive Computing Lab at the University of Calgary. He is a Fellow of WIF, a P.Eng of Canada, a Senior Member of IEEE and ACM, and a member of ISO/IEC JTC1 and the Canadian Advisory Committee (CAC) for ISO. He received a PhD in Software Engineering from the Nottingham Trent University, UK, and a BSc in Electrical Engineering from Shanghai Tiedao University. He has industrial experience since 1972 and has been a full professor since 1994. He was a visiting professor on sabbatical leaves in the Computing Laboratory at Oxford University in 1995, Dept. of Computer Science at Stanford University in 2008, and the Berkeley Initiative in Soft Computing (BISC) Lab at University of California, Berkeley in 2008, respectively. He is the founder and steering committee chair of the annual IEEE International Conference on Cognitive Informatics (ICCI). He is founding Editor-in-Chief of International Journal of Cognitive Informatics and Natural Intelligence (IJCINI), founding Editor-in-Chief of International Journal of Software Science and Computational Intelligence (IJSSCI), Associate Editor of IEEE Trans on System, Man, and Cybernetics (Part A), associate Editor-in-Chief of Journal of Advanced Mathematics and Applications, and Editor-in-Chief of CRC Book Series in Software Engineering. Dr. Wang is the initiator of several cutting-edge research fields or subject areas such as cognitive informatics, abstract intelligence, cognitive computing, cognitive computers, denotational mathematics (i.e., concept algebra, inference algebra, system algebra, real-time process algebra, granular algebra, and visual semantic algebra), software science (on unified mathematical models and laws of software, cognitive complexity of software, and automatic code generators, coordinative work organization theory, built-in tests (BITs), and deductive semantics of languages), the layered reference model of the brain (LRMB), the mathematical model of consciousness, and the reference model of cognitive robots. He has published over 110 peer reviewed journal papers, 220+ peer reviewed full conference papers, and 16 books in cognitive informatics, software engineering, and computational intelligence. He is the recipient of dozens international awards on academic leadership, outstanding contributions, research achievement, best papers, and teaching in the last three decades.