Editorial Preface

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IJCINI Vol. 6, No. 1 is a regular issue on cognitive informatics, abstract intelligence, neural informatics, and cognitive computing. This issue encompasses five research papers on: 1) A Cognitive Framework for Core Language Understanding and its Computational Implementation; 2) Inference Algebra (IA): A Denotational Mathematics for Cognitive Computing and Machine Reasoning (II); c) Financial Data Modeling using a Hybrid Bayesian Network Structured Learning Algorithm; 4) Cognitive Weave Pattern Prioritization in Fabric Design: An Application-Oriented Approach; and 5) A Novel Approach for Designing Dynamical S-boxes using Hyperchaotic System.

The Editor-in-Chief would like to take this opportunity to report that the International Institute of Cognitive Informatics and Cognitive Computing (ICIC) is formally established (http://www.ucalgary.ca/icic/), which is hosted at University of Calgary, Canada, with Prof. Yingxu Wang as the funding president. Key member organizations include University of Alberta, Brown University, University of California (Berkeley), University of Calgary, Fudan University, Kyoto University, *MIT,* University of Rome, Stanford University, University of Toronto, Tsinghua University, and University of Vienna. 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 past 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.

IJCINI has been indexed in EI, DBLP, PsycINFO, CSA Illumina, CORE, and Google Scholar. IJCINI is well recognized in the fields of computing, artificial intelligence, and computational intelligence, as well as psychology and cognitive science. A number of special issues in IJCINI will be organized on *cognitive computing* and *computational intelligence*. Submissions to these special issues in particular, and/or to the regular issues in general, are welcome.

The Editor-in-Chief expects that readers of the *International Journal of Cognitive Informatics and Natural Intelligence* (IJCINI) will benefit from the latest 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, IGI Global, USA, and to thank Mehdi Khosrow-Pour (CEO and President of IGI), Jan Travers (Director of Intellectual Property and Contracts), Heather A. Probst (Senior Editorial Director), Jamie M. Wilson (Managing Editor), Chris Hrobak (Journal Production Manager), for their excellent professional support.

Yingxu Wang
Editor-in-Chief
IJCINI

*Yingxu Wang is professor of cognitive informatics and software science, President of International Institute of Cognitive Informatics and Cognitive Computing (ICIC), Director of Laboratory for Cognitive Informatics and Cognitive Computing, and Director of Laboratory for Denotational Mathematics and Software Science at the University of Calgary. He is a Fellow of WIF (UK), Fellow of ICIC, a P.Eng of Canada, a Senior Member of IEEE and ACM. 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, the Berkeley Initiative in Soft Computing (BISC) Lab at University of California, Berkeley in 2008, and MIT (2012), respectively. He is the founder and steering committee chair of the annual IEEE International Conference on Cognitive Informatics and Cognitive Computing (ICCI*CC). 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 Transactions on System, Man, and Cybernetics (Part A)*, and associate Editor-in-Chief of* Journal of Advanced Mathematics and Applications*. Dr. Wang is the initiator of a few cutting-edge research fields or subject areas such as Cognitive Informatics (CI, the theoretical framework of CI, neuroinformatics, the logical model of the brain (LMB), the layered reference model of the brain (LRMB), the cognitive model of brain informatics (CMBI), the mathematical model of consciousness, and the cognitive learning engine); Abstract Intelligence (αI); Cognitive Computing (such as cognitive computers, cognitive robots, cognitive agents, and cognitive Internet); Denotational Mathematics (i.e., concept algebra, inference algebra, semantic algebra, real-time process algebra, system 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, the coordinative work organization theory, and built-in tests (BITs)); basic studies in Cognitive Linguistics (such as the cognitive linguistic framework, the deductive semantics of languages, deductive grammar of English, and the cognitive complexity of online text comprehension). He has published over 130 peer reviewed journal papers, 220+ peer reviewed conference papers, and 18 books in cognitive informatics, cognitive computing, software science, denotational mathematics, 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.*