An Excellent Addition to Your Library!

Released: June 2012



Developments in Natural Intelligence Research and Knowledge Engineering

Advancing Applications



ISBN: 9781466617438; © 2012; 381 pp. Print: US \$195.00 | Perpetual: US \$295.00 | Print + Perpetual: US \$390.00

Developments in Natural Intelligence Research and Knowledge Engineering: Advancing Applications

Yingxu Wang (University of Calgary, Canada)

Thought, comprehension, and intelligence are everyday concepts that are so pervasive through the lives of every human being that people scarcely think about them at all. These processes are so complex under the surface, however, that a fully developed scientific discipline is necessary to explore these topics.

Developments in Natural Intelligence Research and Knowledge Engineering: Advancing Applications covers the intricate worlds of thought, comprehension, intelligence, and knowledge through the scientific field of Cognitive Science. This groundbreaking reference contains research from global experts, covering topics that have been pivotal at major conferences covering Cognitive Science topics.

Topics Covered:

- Cognitive linguistics
- Cognitive processes of the brain
- Computational intelligence
- Hybrid (AI/NI) intelligence
- Intelligent foundations of computing
- Knowledge engineering
- Machine learning
- Natural intelligence
- Neural networks
- Software agent systems

Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal forclassroom use.

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 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), 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, 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, 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 120 peer reviewed journal papers, 220+ peer reviewed full conference papers, and 18 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.



www.igi-global.com

Publishing Academic Excellence at the Pace of Technology Since 1988