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International Journal of Cognitive Informatics and Natural Intelligence

An official publication of the Information Resources Management Association!

BACKGROUND

Conventional computers are aimed at stored-program-controlled data processing based on mathematical logic and Boolean algebra. The future-generation computers are aimed at cognitive and perceptive concept/knowledge processing based on contemporary denotational mathematics. The latest advantages in many information/knowledge-based disciplines have led to the establishment of cognitive informatics (CI) and neural informatics (NeI). CI is a transdisciplinary enquiry of cognitive and information sciences that investigates into the internal information processing mechanisms and processes of the brain and natural intelligence. NeI is a new interdisciplinary enquiry of the biological and physiological representation of information and knowledge in the brain at the neuron level and their abstract mathematical models. The theories of CI and NeI are intended not only to explain the nature and mechanisms of computing, but also shed light on developing future-generation computers that think and feel.

CALL FOR ARTICLES

Original manuscripts are solicited for *IJCINI.* Some topics are (but not limited to):

- Informatics models of the brain
- Imperative vs. autonomous computing
- Neuroscience foundations of information processing
- Cognitive processes of the brain
- Reasoning and inferences
- Cognitive models of the brain
- Internal information processing mechanisms
- Cognitive informatics foundations of AC
- Functional modes of the brain
- Theories of natural intelligence
- Memory models
- Neural models of memory
- Intelligent foundations of computing
- Informatics foundations of software engineering
- Neural networks
- Descriptive mathematics for NI
- Fuzzy logic
- Neural computation
- Abstraction and means
- Knowledge engineering
- Cognitive linguistics
- Ergonomics
- Pattern recognition
- Neuropsychology
- Informatics laws of software

- Agent technologies
- Bioinformatics
- Knowledge representation
- Artificial intelligence
- Biosignal processing
- Models of knowledge and skills
- Software agent systems
- Cognitive signal processing
- Language acquisition
- Decision theories
- Gene analysis
- Cognitive complexity of software
- Problem solving
- Gene expression
- Distributed intelligence
- Machine learning
- Neural signal interpretation
- Computational intelligence
- Intelligent Internet
- Visual information representation
- Emotions/motivations/attitudes
- Web contents cognition
- Visual information interpretation
- Perception and consciousness
- Nature of software
- Sensational cognitive processes
- Hybrid (AI/NI) intelligence
- Quantum computing
- Human factors in systems
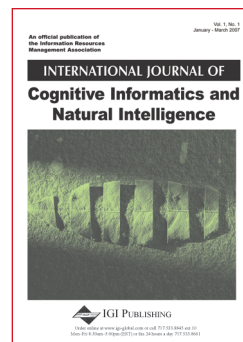
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