CALL FOR PAPERS – ICCI 2007

The 6th IEEE International Conference on Cognitive Informatics

August 6-8, 2007, Mont Blue Hotel (Caesars Palace), Lake Tahoe, California, USA

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SPECIAL SESSION/WORKSHOP PROPOSALS
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THEME

Natural Intelligence and Autonomic Computing

Cognitive Informatics (CI) is a cutting-edge and transdisciplinary research area that tackles the fundamental problems shared by modern informatics, computing, AI, cybernetics, cognitive science, neuropsychology, medical science, systems science, software engineering, knowledge engineering, philosophy, linguistics, economics, management science, and life sciences. CI is a transdisciplinary enquiry on the internal information processing mechanisms and processes of the natural intelligence – human brains and minds – and their engineering applications in computing and ICT industries.

The development and the cross fertilization between the aforementioned science and engineering disciplines have led to a whole range of extremely interesting new research areas known as CI.

Following the first five successful conferences on Cognitive Informatics (ICCI’02 through ICCI’06), the 6th IEEE International Conference on Cognitive Informatics (ICCI’07) focuses on the theme of Neural Informatics and Autonomic Computing. The objectives of ICCI’07 are to draw attention of researchers, practitioners and graduate students to the investigation of cognitive mechanisms and processes of human information processing, and to stimulate the international effort on cognitive informatics research and engineering applications.

SCOPE

Original papers are invited from multidisciplinary perspectives on subject areas including, but not limited to, the following:

Natural Intelligence (NI)

- Informatics models of the brain
- Cognitive processes of the brain
- Internal information processing mechanisms
- Theories of natural intelligence
- Intelligent foundations of computing
- Descriptive mathematics for NI
- Abstraction and means
- Ergonomics
- Informatics laws of software
- Knowledge representation
- Models of knowledge and skills
- Language acquisition
- Cognitive complexity of software
- Distributed intelligence
- Computational intelligence
- Emotions/motivations/attitudes
- Perception and consciousness
- Hybrid (AI/NI) intelligence

Autonomic Computing (AC)

- Imperative vs. autonomous computing
- Reasoning and inferences
- Cognitive informatics foundations of AC
- Memory models
- Informatics foundations of software engineering
- Fuzzy logic
- Knowledge engineering
- Pattern recognition
- Agent technologies
- Artificial intelligence
- Software agent systems
- Decision theories
- Problem solving
- Machine learning
- Intelligent Internet
- Web contents cognition
- Nature of software
- Quantum computing

Neural Informatics (NeI)

- Neuroscience foundations of information processing
- Cognitive models of the brain
- Functional modes of the brain
- Neural models of memory
- Neural networks
- Neural computation
- Cognitive linguistics
- Neuropsychology
- Bioinformatics
- Biosignal processing
- Cognitive signal processing
- Gene analysis and expression
- Cognitive metrics
- Neural signal interpretation
- Visual information representation
- Visual information interpretation
- Sensational cognitive processes
- Human factors in systems

PAPER SUBMISSION

An electronic copy of paper in PDF format in English should be submitted via
http://www.enel.ucalgary.ca/ICCI2007 by March 5, 2007 with detailed information of author(s). Full papers should be around 10 pages in length in IEEE double column format as posted in the web site. Short papers that report industrial experience, case studies, work in progress, or graduate students’ research may also be considered. The proceedings of ICCI’07 will be published by IEEE CS Press. Selected papers will be published in the International Journal of Cognitive Informatics and Natural Intelligence (IJCI&NI) or IEEE TSMC.

IMPORTANT DATES

Full paper submission due: March 5, 2007
Notification of acceptance: April 9, 2007
Camera-ready copy due: May 18, 2007
Conference presentation: August 6-8, 2007