



CALL FOR PAPERS – ICCI 2010



9th IEEE International Conference on Cognitive Informatics

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SPECIAL SESSION/WORKSHOP PROPOSALS

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THEME

Cognitive Computing and Cognitive Communications

Cognitive Informatics (CI) is a cutting-edge and transdisciplinary research area that tackles the fundamental problems shared by modern informatics, computing, AI, cybernetics, computational intelligence, cognitive science, neuropsychology, medical science, systems science, software engineering, telecommunications, 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 cognitive computing, computational intelligence, as well as the information/communication technology and software 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 eight successful conferences on Cognitive Informatics (ICCI'02 through ICCI'09), the 9th IEEE Int'l Conference on Cognitive Informatics (ICCI'10) focuses on the theme of **Cognitive Computing and Cognitive Communications**. ICCI'10 welcomes researchers, practitioners, and graduate students to join the international cognitive informatics and cognitive computing initiative toward the investigation of cognitive mechanisms and processes of human information processing, and the development of next generation computers that learn and think.

SCOPE

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

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| <p>Cognitive Computing</p> <ul style="list-style-type: none"> • Informatics models of the brain • Cognitive processes of the brain • Internal information processing mechanisms • Theories of natural intelligence • Intelligent foundations of computing • Denotational mathematics • Abstraction and means • Ergonomics • Informatics laws of software • Knowledge representation • Models of knowledge and skills • Formal linguistics • Cognitive complexity and metrics • Distributed intelligence • Semantic computing • Emotions/motivations/attitudes • Perception and consciousness • Hybrid (AI/NI) intelligence | <p>Computational Intelligence</p> <ul style="list-style-type: none"> • Imperative vs. autonomous computing • Reasoning and inferences • Cognitive informatics foundations • Robotics • Informatics foundations of software engineering • Fuzzy/rough sets/logic • Knowledge engineering • Pattern and signal recognitions • Autonomic agent technologies • Memory models • Software agent systems • Decision theories • Problem solving theories • Machine learning systems • Distributed objects/granules • Web contents cognition • Nature of software • Granular computing | <p>Neural Informatics</p> <ul style="list-style-type: none"> • Neuroscience foundations of information processing • Cognitive models of the brain • Cognitive communications • 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 semantics • Sensational cognitive processes • Human factors in systems |
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PAPER SUBMISSION

An electronic copy of paper in PDF format in English should be submitted via <http://www.easychair.org/conferences/?conf=icci2010> by Feb. 28, 2010 with detailed information of author(s). Full papers should be around 6-8 pages in length in IEEE double column format as posted in the web site. Short papers (4-5 pages) that report industrial experience, case studies, work in progress, or graduate students' research may also be considered. The proceedings of ICCI'10 will be published by IEEE CS Press and indexed by EI and DBLP. Selected papers will be published in *International Journal of Cognitive Informatics and Natural Intelligence (IJCINI)*, *IEEE Trans. on Systems, Man, and Cybernetics*, or *International Journal of Software Science and Computational Intelligence (IJSSCI)*.

IMPORTANT DATES

Special session/workshop proposal submission due:	Jan. 31, 2010
Full paper submission due:	Mar. 22, 2010
Notification of acceptance:	April 16, 2010
Camera-ready copy due:	May 10, 2010
Conference presentation:	July 7-9, 2010