

Call for papers

Special Session on Natural Computing in Infrastructure Engineering and Management



2nd Indian International Conference on
Artificial Intelligence
IITCAI - 05

December 20-22, 2005
Pune, India



Session Chair
Sudhirkumar Barai PhD

<http://softcomputing.tripod.com/nciem.html>

Session Objectives

Natural computing is inspired by natural processes for the solution of problems that are resistant to traditional methods. Natural Computing includes Neural networks, Evolutionary algorithms, Molecular computing, Quantum computing, Cellular Computing, DNA computing and other computing techniques. Natural computing has become broad, with contributions from researchers in mathematics, physics, computer science, linguistics, neuroscience, biology, psychology, cognitive science and various engineering disciplines. Natural Computing has been successfully applied in the various fields of Infrastructure Engineering and Management. The proposed session invites papers related to natural computing applications in Infrastructure engineering and Management. Papers highlighting new, unusual and hybrid approaches are particularly encouraged.

The natural computing application topics are:

- Structural engineering - Structural analysis, design, diagnostics and control problems, Structural health monitoring, Structural material behavior modeling etc.
- Geo-technical engineering- Liquefaction potential assessment, Slope stability, Piles design, etc.
- Transportation engineering - Bridge management systems, Pavement management systems Pavement behavior models, Intelligent transport systems, Railways maintenance etc.
- Construction automation- Automated inspection, Risk analysis and decision making, Supply chain management, Construction process reengineering, Procurement management, Environment management, and Safety management etc.
- Geographic Information Systems (GIS), Global Positioning Systems, Remote Sensing etc.

The topics are not exhaustive and submissions of the paper, which falls within the session theme, may be considered.

Important Dates

- June 1st, 2005 – Draft papers due
- July 15th, 2005 – Notification of acceptance
- August 15th, 2005 - Camera ready papers and pre-registration due
- December 20-22, 2005 – Special Session at IITCAI-05

Review Process

The papers will go through the review process to maintain high standard. Each paper will have at least two independent reviews, which have to meet scientific standards.

Paper Submission

Authors are encouraged to submit the papers for the session. The papers can be submitted as an email attachment to Session Chair. The papers should be in WORD, PDF, or PS format and should be formatted according to the **Springer Lecture Notes** instructions. The length of a paper should not exceed 20 pages. The first page of the paper should contain the title, name(s) of the authors, affiliations, the postal and email addresses, and at least 3 keywords appropriate to the content of the paper. Further information regarding the paper submission can be obtained from the session chair or access the conference website <http://www.iiconference.org>.

Paper Publication

All Accepted papers will be published in the conference proceedings of the IITCAI-05, under the title of the session. A few selected papers of exceptional quality will be nominated for consideration for possible publication in the **Journal of Applied Soft Computing (JASC)**. The conference papers would have to be revised and enhanced in quality for consideration for publication in the JASC.

Award

There will be a best paper award of IITCAI-05. The program committee members will take part in deciding the best paper. The award includes a cash prize (in USA dollars) and a certificate. In addition, the author(s) of the best paper will be invited to take part in the next IITCAI conference and their picture will be posted in the conference website (if they agree). The purpose of the award is to recognize, encourage, and promote high quality research work.

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