

BIONETICS 2009

4th International Conference on Bio-Inspired Models of Network, Information, and Computing Systems

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Sponsored by ICST, technically co-sponsored by IEEE Computer Society and Create-Net
Avignon, France, December 8-10, 2009

Technology is taking us to a world where myriads of heavily networked devices interact with the physical world in multiple ways, and at multiple scales, from the global Internet scale down to micro and nano-devices. Many of these devices are highly mobile and autonomous, and must adapt to the surrounding environment in a totally unsupervised way. The fundamental research challenge is the design of robust decentralized computing systems, capable of operating under changing environments and noisy input, and yet exhibit the desired behavior and response time, under constraints such as energy consumption, size, and processing power. These systems should be able to adapt and learn how to react to unforeseen scenarios as well as to display properties comparable to social entities. Biological systems are able to handle many of these challenges with an elegance and efficiency still far beyond current human artifacts. Based on this observation, bio-inspired approaches have been proposed in the past years as a strategy to handle the complexity of such systems. The goal is to obtain methods on how to engineer technical solutions which have similar high stability and efficiency as biological entities often have. The BIONETICS conference aims at bringing together researchers and scientists from several disciplines in computer science and engineering where bio-inspired methods are investigated. We are soliciting high-quality original papers in the following areas including but not limited to these topics:

- **Bio-Inspired mathematical models, methods and tools**
- **Bio-inspired algorithms and mechanism**
- **Bio-inspired technical systems**
- **Bio-inspired information and communication systems (ICT)**

PAPERS: The conference invites original technical papers that have not been previously published and are not currently under review for publication elsewhere. Contributions addressing all areas related to bio-inspired technologies are solicited.

SUBMISSION INSTRUCTIONS: All paper, poster, panel, and workshop submissions will be handled electronically. Please visit the conference website <http://www.bionetics.org> for detailed submission requirements and procedures.

PUBLICATION: All submitted papers and posters will be rigorously reviewed by technical program committee members and the reviewers they invite. All accepted papers will be published by Springer in the Lecture Notes of ICST (LNICST) series. A selected number of best papers will be considered for publication in Elsevier **Performance Evaluation** journal and in Inderscience **Journal International Journal on Autonomous and Adaptive Communications Systems**.

IMPORTANT DATES

Paper Submission Due Date	July 5 th , 2009 extended
Notification of Acceptance	August 21 th , 2009
Camera Ready Versions Due	September 20 th , 2009