

SEAL'08 Call for Papers



<http://www.cs.rmit.edu.au/seal08/>

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Important dates

Paper submission:

14 July 2008 (extended)

Acceptance Notification:

18 August 2008

Camera Ready Due:

8 September 2008

Conference sessions:

7 - 10 December 2008

Aim and Scopes

Evolution and learning are two fundamental forms of adaptation. **SEAL'08** is the seventh biennial conference in the highly successful series that aims at exploring these two forms of adaptation and their roles and interactions in adaptive systems. Cross-fertilisation between evolutionary learning and other machine learning approaches, such as neural network learning, reinforcement learning, decision tree learning, fuzzy system learning, etc., will be strongly encouraged by the conference. The other major theme of the conference is optimisation by evolutionary approaches or hybrid evolutionary approaches. The topics of interest to this conference include but are not limited to the following:

1. Evolutionary Learning

- Fundamental Issues in Evolutionary Learning
- Co-Evolutionary Learning
- Modular Evolutionary Learning Systems
- Classifier System
- Collective Intelligence
- Representation Issues in Evolutionary Learning
- Artificial Immune Systems
- Interactions Between Learning and Evolution
- Credit Assignment
- Swarm Intelligence
- Comparison between Evolutionary Learning and Other Learning Approaches

2. Evolutionary Optimisation

- Combinatorial Optimisation
- Numerical/Function Optimisation
- Hybrid Optimisation Algorithms
- Comparison of Algorithms
- Nature-Inspired Algorithms (ant colony optimisation, particle swarm optimisation, memetic algorithms, simulated annealing, etc.)

3. Hybrid Learning

- Evolutionary Artificial Neural Networks
- Evolutionary Fuzzy Systems
- Evolutionary Reinforcement Learning
- Evolutionary Clustering
- Evolutionary Decision Tree Learning
- Evolutionary Unsupervised Learning
- Genetic Programming
- Other Hybrid Learning Systems
- Developmental Processes

4. Adaptive Systems

- Complexity in Adaptive Systems
- Evolutionary Robotics
- Evolvable Hardware and Software
- Artificial Ecology
- Evolutionary Games
- Self-Repairing Systems
- Evolutionary Computation Techniques in Economics, Finance and Marketing

5. Theoretical Issues in Evolutionary Computation

- Computational Complexity of Evolutionary Algorithms
- Self-Adaptation in Evolutionary Algorithms
- Convergence and Convergence Rate of Evolutionary Algorithms

6. Real-World Applications of Evolutionary Computation Techniques

Publications

All accepted papers which are presented at the conference will be included in the conference proceedings, published as LNCS (Lecture Notes in Computer Science) by Springer. Selected best papers will be invited for further revisions and extensions for possible publications by two journal special issues (**Soft Computing** and **Evolutionary Intelligence**).