

ANTS 2010

Seventh International Conference on Swarm Intelligence

September 8–10, 2010. Brussels, Belgium

Call for papers prepared on February 19, 2010. Version: v2.5
Up-to-date information at <http://iridia.ulb.ac.be/ants2010>

Scope of the Conference

Swarm intelligence is a relatively new discipline that deals with the study of self-organizing processes both in nature and in artificial systems. Researchers in ethology and animal behavior have proposed many models to explain interesting aspects of social insect behavior such as self-organization and shape-formation. Recently, algorithms and methods inspired by these models have been proposed to solve difficult problems in many domains.

An example of a particularly successful research direction in swarm intelligence is **ant colony optimization**, the main focus of which is on discrete optimization problems. Ant colony optimization has been applied successfully to a large number of difficult discrete optimization problems including the traveling salesman problem, the quadratic assignment problem, scheduling, vehicle routing, etc., as well as to routing in telecommunication networks. Another interesting approach is that of **particle swarm optimization**, that focuses on continuous optimization problems. Here too, a number of successful applications can be found in the recent literature. **Swarm robotics** is another relevant field. Here, the focus is on applying swarm intelligence techniques to the control of large groups of cooperating autonomous robots.

ANTS 2010 will give researchers in swarm intelligence the opportunity to meet, to present their latest research, and to discuss current developments and applications. The three-day conference will be held in Brussels, Belgium, on September 8–10, 2010.

Relevant Research Areas

ANTS 2010 solicits contributions dealing with any aspect of swarm intelligence. Typical, but not exclusive, topics of interest are:

- Behavioral models of social insects or other animal societies that can stimulate new algorithmic approaches.
- Empirical and theoretical research in swarm intelligence.
- Application of swarm intelligence methods, such as ant colony optimization or particle swarm optimization, to real-world problems.
- Theoretical and experimental research in swarm robotics systems.

Publication Details

Conference proceedings will be published by Springer in the LNCS series, as those of the last four editions of the ANTS Conference. The journal *Swarm Intelligence* will publish a special issue dedicated to ANTS 2010 that will contain extended versions of the best research works presented at the conference. Further details will soon be published on the web site.

Conference Location

Salle Dupréel, Building S, Campus du Solbosch, Université Libre de Bruxelles, Av. Jeanne 44, 1050 Brussels, Belgium.

Best Paper Award

A best paper award will be presented at the conference. Continuing the tradition of the ANTS Conference Series, the prize winner will receive a sculpture of an ant expressly created for the ANTS Conference by the Italian sculptor Matteo Pugliese.



Further Information

Up-to-date information will be published on the web site <http://iridia.ulb.ac.be/ants2010/>. For information about local arrangements, registration forms, etc., please refer to the above-mentioned web site or contact the local organizers at the address below.

Conference Address

IRIDIA CP 194/6
Université Libre de Bruxelles
Av. F. D. Roosevelt 50
1050 Bruxelles, Belgium

Tel +32-2-6502729
Fax +32-2-6502715
<http://iridia.ulb.ac.be/ants2010>
email: ants@iridia.ulb.ac.be

Important Dates

Submission deadline	March 7, 2010
Notification of acceptance	April 30, 2010
Camera ready copy	May 14, 2010
Conference	September 8–10, 2010

ANTS 2010 Conference Committee

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