# ERLARS 2011
## Evolutionary and Reinforcement Learning for Autonomous Robot Systems

| **Organising Committee** | **Call for Papers** |
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## 4th International Workshop on Evolutionary and Reinforcement Learning for Autonomous Robot Systems, ERLARS 2011

held at the HTW University of Applied Sciences
in Berlin, Germany, on December 9/10 2011

### Objectives

Learning is essential for an autonomous robot system. The range of unexpected situations it can handle while performing its task depends on its ability to adapt. Recent developments have taken autonomous robots beyond industrial settings, for example at home as toys and cleaners. However, production models usually interact with their environment following a fixed control strategy, which limits their range of application. More adaptable robots require control strategies that learn more and better from interactions with their environment.

The ERLARS workshop addresses the challenge to develop efficient and versatile learning architectures for autonomous robot systems, with the main focus on adequate evolutionary and reinforcement learning algorithms.

### Relevant Topics

Papers are invited on all aspects of learning methods for the control of autonomous robot systems, including, but not limited to:

- Model-free visual servoing
- Mobile robot navigation by means of reinforcement learning
- Combining offline- and online learning methods for robot control
- Reinforcement learning by evolutionary algorithms of neural network-based and other robot controllers
- Hybrid systems that combine modelling and parameter estimation by reinforcement learning
- Learning from scratch and cascaded learning architectures
- Knowledge-based reinforcement learning
- Developmental and epigenetic robotics
- Balancing exploration and exploitation of acquired knowledge
- Simulated environments for autonomous robot learning scenarios

### Important Dates

- October 16 2011: Paper submissions due
- November 4 2011: Notification of paper acceptance
- November 14 2011: Camera ready paper submission
- December 9/10 2011: Workshop takes place

Information for authors and submission on the website http://www.erlars.org/

Information/Contact: E-Mail: erlars2011@erlars.org – Website: http://www.erlars.org/