# Preliminary Schedule Workshop on Analytical Challenges in Reinforcement Learning MPI Tübingen

July 30 – August 3, 2007

Organizers: Peter Auer, Jan Peters

July 24, 2007

#### **Participants**

Peter Auer, Marc Deisenroth, Thomas Jaksch, Shie Mannor, Francisco Melo, Remi Munos, Gerhard Neumann, Ronald Ortner, Jan Peters, Berhard Schölkopf

#### Lunch, coffee breaks, dinner

#### Lunch break 12:30–14:00

Lunch will be served in the MPI cafeteria.

Coffee breaks will be around 10:30 and 16:00.

**Dinner** will be outside MPI at local restaurants.

#### Monday, 30.7.2007

Time	Plan
9:30	Welcome and Introduction:
	Analysis of reinforcement learning
	Presentation and discussion of topics
14:00	Current research topics and background of participants
	Discussion

### Tuesday 31.7.2007

Time	Plan
9:00	Tutorial: On-line regret analysis for reinforcement learning
	Discussion
14:00	What are the right parameters for describing the difficulty
	of a reinforcement learning problem?

## Wednesday 1.8.2007

Time	Plan
9:00	Tutorial: Continuous state and action spaces in reinforcement learning
	Open problems and discussion
14:00	Analyzing some special cases (e.g. regions with linear dynamics,
	exploration in kernel spaces)

### Thursday 2.8.2007

Time	Plan
9:00	Tutorial: "Autonomous rewards" in reinforcement learning
	Discussion
14:00	Modeling curiosity and predictability

### Friday 3.8.2007

Time	Plan
9:00	Discussion of further topics
14:00	Wrap up