RoboGunners 3D Team
Qualification Material

Mosalam Ebrahimi
abcj960@city.ac.uk
Department of Computing, City University, London, UK

1.List of RoboCup related publications (not restricted to RoboCup Symposia)

M.A. Darvish, M. Ebrahimi, M.R. Shamshiri, "Pass Evaluating In Simulated Soccer Domain Using Ant-Miner (Ant Colony-based Data Mining) Algorithm". IADIS / ISA (Intelligent Systems and Agents) 2006 International Conference, part of MCCSIS 2006. April 2006

2. List of previous results

This team for the first time is participating this year. But one of the members, Mosalam, has participated in some national and international competitions:
RoboCup 2005, Osaka, with Arman team took 5th place
Iran Open 2006, Tehran, with Arman team took 3rd place

3.List of Work for the simulation community (Simulator work, committees, etc)

Mosalam is a member of the MC. The MC knows him with his nickname, Hesham.

4.Research proposal

Our research proposal is not ready yet. We are working on using neural-symbolic methods for function approximation in RL. Since the 3D server is not ready yet, for our tests we are using the keepaway benchmark. And before the end of March we will have a few papers including the TDP.

5.simple binary showing humanoid agent movement

You can find the binary along with this document.

In this short time, we thought the best way to have low level controls for our agent, is using GAs. We developed a very simple GA to find the best set of action for the agent, to maximize its speed. Since the agent does not have a gyro we could not have a parameter in the utility function for stabilizing the robot. Unfortunately the result is not satisfactory at all. The main reason is that the agent falls, and it seems after falling the dynamic formulas have a problem. Because of the lack of time we could not work more on it. The binary is the best behavior after a around 2 hours learning, and it shows the model is oversimplified in the utility function and it needs a simulated gyro.