

Home

Acknowledgements

Authors Index

Table of Contents

Program

Keynotes

Tutorials

Special Sessions

Competitions

Organising Committee

Sponsors

The Mario AI Championship

Friday 20 August 15:05-15:55

Sergey Karakovskiy, Noor Shaker, Julian Togelius and Georgios N. Yannakakis

Competition webpage: <http://www.marioai.org>

The 2010 Mario AI Championship, the successor to the 2009 Mario AI Competition, will run in association with several major international conferences focusing on computational intelligence and games. The competition will consist of three tracks: Gameplay, Learning and Level Generation, with partly overlapping organizers.

In the Gameplay and Learning tracks (organized by Sergey Karakovskiy and Julian Togelius) competitors develop controllers for the player agent (Mario) in a version of the classic platform game Super Mario Bros. The Level Generation track (organized by Noor Shaker, Julian Togelius and Georgios N. Yannakakis) lets competitors submit level generators, that generate levels for the same game meant to be entertaining for particular players.

Papers

Peter A. Mawhorter and Michael Mateas. Procedural Level Generation Using Occupancy-Regulated Extension

Ms. Pac-Man Competition

Friday 20 August 16:20-16:50

Simon M. Lucas

Competition webpage: <http://dces.essex.ac.uk/staff/sml/pacman/PacManContest.html>

The aim of this competition is to provide the best software controller for the game of Ms Pac-Man. This is a great challenge for computational intelligence, machine learning, and AI in general. Unlike Pac-Man, Ms. Pac-Man is a non-deterministic game, and rather difficult for most human players. As far as we know, nobody really knows how hard it is to develop an AI player for the game. The world record for a human player (on the original arcade version) currently stands at 921,360. Can anyone develop a software agent to beat that?

Papers

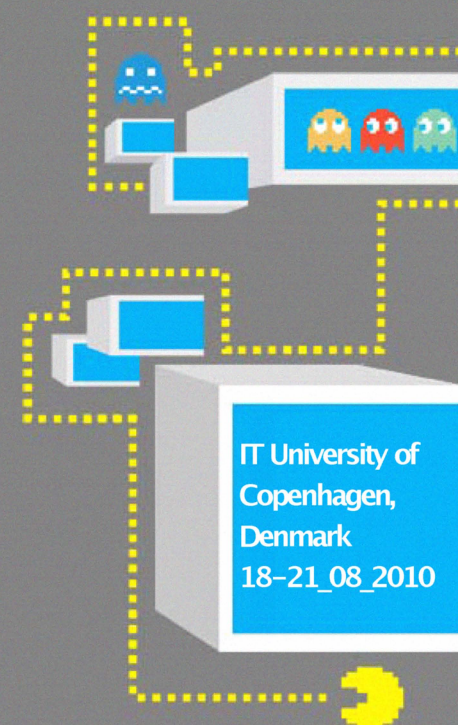
Nathaniel Bell, Xinghong Fang, Rory Hughes, Graham Kendall, Edward O'Reilly and Shenghui Oiu. Ghost Direction Detection and other Innovations for Ms. Pac-Man

Emilio Martin, Moises Martinez, Gustavo Recio and Yago Saez. Pac-mAnt: Optimization Based on Ant Colonies Applied to Developing an Agent for Ms. Pac-Man

2k Bot Prize

Friday 20 August 17:15-18:15

IEEE Catalog Number:
CFP10CIG-ART
ISBN: 978-1-4244-6297-1



Philip Hingston

Competition webpage: <http://botprize.org>

The aim of the contest is to see if a computer game playing bot can play like a human. In the contest, bots try to convince a panel of expert judges that they are actually human players.

Computers are superbly fast and accurate at playing games, but can they be programmed to be more fun to play – to play like you and me? People like to play against opponents who are like themselves – opponents with personality, who can surprise, who sometimes make mistakes, yet don't blindly make the same mistakes over and over. Can a computer be programmed to seem to have personality, fallibility and cunning?

Game Development Studio 2K Australia is offering a prize of \$7,000 cash plus a trip to their studio in Canberra for anyone who can create a bot to pass this "Turing Test for Bots".

Papers

[Philip Hingston. A New Design for a Turing Test for Bots](#)

StarCraft RTS AI Competition

Saturday 21 August 15:40-16:05

Mike Preuss and Johan Hagelbäck

Co-organiser: Ben Weber

Competition webpage: <http://ls11-www.cs.tu-dortmund.de/rtsc-competition/starcraft-cig2010>

Realtime Strategy (RTS) games are one of the major computer game genres and one of the few for which AI-based players (bots) have little chance to win against expert human players — if they are not allowed to cheat. StarCraft (by Blizzard) is one of the most popular RTS games of all time, and is known to be extremely well balanced.

This competition is tightly coupled to the [AIIDE StarCraft competition](#). The CIG competition, however, focuses on a reduced Terran faction (no air units) instead of Protoss. Submitted entries will play in Worldcup mode, 5 games in each tier, on a randomly selected new 64x64 (small) map that supports strategic behavior by design. A game is won if all buildings of the opposing faction are destroyed.

With this competition, we are interested in pushing the limits of what CI/AI techniques can do in RTS games. Therefore, we call for innovative entries, featuring new approaches and/or algorithms.

Show us what your bot can do!

2010 Simulated Car Racing Championship

Saturday 21 August 16:35-17:25

Daniele Loiacono, Pier Luca Lanzi and Martin Butz

Competition webpage: <http://cig.dei.polimi.it/>

Following on from the car racing competitions held in association with major conferences in the last three years, the 2010 simulated car racing championship invites submissions of controllers that drive a racing car around a number of tracks in competition with cars controlled by competitors' controllers.

We are also pleased to announce the latest addition to the Simulated Car Racing Competition, the [Demolition Derby Competition 2010](#). The goal of the competition is to develop an AI controller that successfully crashes other cars while keeping its own rear free.

The rules of the Demolition Derby Competition are simple: In a large circular arena, the controllers have to wreck each other by crashing into the rear of opponent cars while dodging other cars that are trying to hit them. The last car standing is declared the winner.

Controllers can be programmed in Java or C++; Windows as well as Linux is supported. Participation is free to everybody, participation to the actual conference event is not required. All you have to do is to send us your controller by the submission deadline (27th June 2010 or 8th August). For more information on rules, procedure, and submission dates please visit the official [Demolition Derby Competition 2010](#).

Papers

Jorge Muñoz, German Gutierrez and Araceli Sanchis. *A human-like TORCS controller for the Simulated Car Racing Championship*



IT University
of Copenhagen



IEEE Denmark

IGRA