2012 IEEE Conference on Computational Intelligence and Games (IEEE CIG 2012)

11-14 September 2012, Granada (Spain)

IEEE Computational Intelligence Society

http://geneura.ugr.es/cig2012/

Call for Papers

EXTENDED DEADLINE: April, 29th

Games have proven to be an ideal domain for the study of computational intelligence as not only are they fun to play and interesting to observe, but they provide competitive and dynamic environments that model many real-world problems. Additionally, methods from computational intelligence promise to have a big impact on game technology and development, assisting designers and developers and enabling new types of computer games. The 2011 IEEE Conference on Computational Intelligence and Games brings together leading researchers and practitioners from academia and industry to discuss recent advances and explore future directions in this ever changing field.

Papers

Regular papers

Topics of interest include (not limited to) the following:

* Learning in games
* Coevolution in games
* Neural-based approaches for games
* Fuzzy-based approaches for games
* Player/Opponent modelling in games
* CI/AI-based game design
* Multi-agent and multi-strategy learning
* Applications of game theory
* CI for Player Affective Modelling
* Intelligent Interactive Narrative
* Imperfect information and non-deterministic games
* Player satisfaction and experience in games
* Theoretical or empirical analysis of CI techniques for games
* Comparative studies and game-based benchmarking
* Computational and artificial intelligence in:
    o Video games
    o Board and card games
    o Economic or mathematical games
    o Serious games
    o Augmented and mixed-reality games
    o Games for mobile platforms

The conference will consist of a single track of oral presentations, tutorial and workshop/special sessions, and live competitions. The proceedings will be placed in IEEE Xplore, and made freely available on the conference website after the conference.

Competition papers

Following on from last year's successful competition track, IEEE CIG also this year invites submission for competition papers, i.e. papers that relate to submissions to one of the competitions associated with IEEE CIG 2012.

These papers will be fully peer-reviewed with the same stringency as all other CIG papers and, if accepted, will be published as full papers in the proceedings. The papers will be reviewed in a short time frame by a small group of dedicated reviewers, and due to time limits no extensions can be granted.

The main restriction is that each paper needs to describe a submission to one of the competitions associated with IEEE CIG 2012. The focus of the paper can be on the architecture of the submission, comparative studies, underlying ideas etc., but the software described must enter one of the competitions. As with regular papers, at least one author of a successful paper needs to attend the conference and present the paper.

CIG 2012 competitions are ideally targeted to the whole community of computational intelligence. The competitions involve well-known (or not so) games, defining a set of rules and objectives for determining the score of each player. There are confirmed a number of competitions:

- Simulated Car Racing Championship
- StarCraft Competition
- Physical Travelling Salesman Problem
- Ms Pac-Man vs Ghost Team Competition
- Ms Pac-Man Screen Capture Competition
- Mario AI Championship: Level Generation Track
- Mario AI Championship: Turing Test Track

Tutorials

CIG 2012 tutorials and Special Sessions are ideally targeted to the whole community of computational intelligence and games and should give a state-of-the-art description of a thriving field of research inside or related to computational intelligence and games.

The tutorials will take place during the main technical program. The confirmed set of tutorials to be developed during the conference is:

- Encoding and Generating Videogame Mechanics (by Mark J. Nelson)

- Evolutionary Computation in Games: Dealing With Uncertainty (by Paolo Burelli)

- Affect in Games (by Kostas Karpouzis)

Special Sessions

CIG 2012 will also include special sessions.

- Computational Creativity in Games

- Monte Carlo Tree Search for Games

- Computational Intelligence in Racing Games

Keynote speakers

There are two confirmed keynote speakers:

* Jeff Orkin
* Gillian Smith

Important dates

Regular papers
Submission: ~~15 April~~ **29 April,** 2012
Decision Notification:
        ~~1 June~~ 15 June, 2012
Camera-Ready Submission:
        ~~15 June~~ 1 July, 2012

Competition papers
Submission: ~~1-15~~ **20 May**, 2012
Decision Notification: 15 June, 2012
Camera-Ready Submission: 1 July, 2012

Registration
Opens on 21 May, 2012.

Conference dates
11-14 September, 2012

Organization team

General Chair : Antonio J. Fernández Leiva
Program Co-Chairs: Simon Lucas
                Sung-Bae Cho
                Magy Seif El-Nasr
Publicity Chair: Antonio M. Mora
Social Media Chair: Juan J. Merelo
Finance Chair: Pedro A. Castillo
Proceedings Co-Chairs: Mike Preuss
                Anna I. Esparcia
Competitions Chair: Julian Togelius
Special Sessions and Tutorials Chair:
                Georgios Yannakakis
Local Chairs:
•   Antonio J. Fernández Leiva
•   Antonio M. Mora
•   Juan J. Merelo
•   Carlos Cotta
•   Pedro A. Castillo
•   Raúl Lara Cabrera