General Intelligence in Game-Playing Agents (GIGA'13)

(http://giga13.ru.is)

General Information

Artificial Intelligence (AI) researchers have for decades worked on building game-playing agents capable of matching wits with the strongest humans in the world, resulting in several success stories for games like chess and checkers. The success of such systems has been partly due to years of relentless knowledge-engineering effort on behalf of the program developers, manually adding application-dependent knowledge to their game-playing agents. The various algorithmic enhancements used are often highly tailored towards the game at hand.

Research into general game playing (GGP) aims at taking this approach to the next level: to build intelligent software agents that can, given the rules of any game, automatically learn a strategy for playing that game at an expert level without any human intervention. In contrast to software systems designed to play one specific game, systems capable of playing arbitrary unseen games cannot be provided with game-specific domain knowledge a priori. Instead, they must be endowed with high-level abilities to learn strategies and perform abstract reasoning. Successful realization of such programs poses many interesting research challenges for a wide variety of artificial-intelligence sub-areas including (but not limited to):

- knowledge representation and reasoning
- heuristic search and automated planning
- computational game theory
- multi-agent systems
- machine learning

The aim of this workshop is to bring together researchers from the above sub-fields of AI to discuss how best to address the challenges of and further advance the state-of-the-art of general game-playing systems and generic artificial intelligence.

The workshop is one-day long and will be held onsite at IJCAI during the scheduled workshop period August 3rd-5th (exact day is to be announced later).

Information for Authors

The workshop papers should be submitted online (see workshop webpage). Submitted papers must adhere to the IJCAI paper formatting instructions and not exceed 8 pages (including references). The papers must present original work that has not been published elsewhere. However, submissions of papers that are under review elsewhere are allowed, in particular we welcome papers submitted to the main technical track of IJCAI'13 or AAAI'13. All papers will be peer reviewed and non-archival working notes produced containing the papers presented at the workshop.

Important dates:

- Paper submission: April 20th, 2013
- Acceptance notification: May 20th, 2013
- Camera-ready papers due: May 30st, 2013
- Workshop date: August (3rd, 4th, or 5th) 2013

If you are interesting in attending the conference without submitting a paper please send a short statement of interest to either one of the organizers listed below before May 30st.

Workshop Organizers

Organizers:

- Yngvi Björnsson, Reykjavik University
- Michael Thielscher, University of New South Wales

Program Committee:

- Tristan Cazenave, University of Paris-Dauphine
- Stefan Edelkamp, University of Bremen
- Hilmar Finnsson, Reykjavik University
- Michael Genesereth, Stanford University
- Lukasz Kaiser, University of Paris-Diderot
- Gregory Kuhlmann, Apple Inc.
- Abdallah Saffidine, University of Paris-Dauphine
- Torsten Schaub, University of Potsdam
- Stephan Schiffel, Reykjavik University
- Sam Schreiber, Google Inc.
- Nathan Sturtevant, University of Denver
- Mark Winands, Maastricht University