

IEEE Transactions on Games - Special Issue on Evolutionary Computation for Game-playing

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Call for Papers

Games are an ideal domain to study computational intelligence methods because they provide reproducible, dynamic and competitive environments suitable for testing new search algorithms or machine learning concepts. Evolutionary computation approaches have been applied to games in different ways, such as planning game actions, evolving game strategies, co-evolution, automatic agent tuning, automatic game design (in particular, automatic game parameter tuning). There have already been some examples of applying evolutionary algorithms to game playing in a planning environment and to policy optimisation in a learning environment.

This Special Issue will focus on evolutionary computation for game-playing. We invite the submission of papers about high quality work on applying evolutionary computation approaches to game-playing. Examples include, but are not limited to:

- co-evolution in games;
- Rolling horizon evolutionary algorithms;
- Multi-objective evolutionary algorithms;
- Neuroevolution;
- Evolving game strategies;
- Automatic agent parameter tuning;
- Automatic game testing.

Regular papers, short papers and surveys are invited to this special issue. Authors should follow normal ToG guidelines for their submissions (<https://cis.ieee.org/publications/t-games/tciaig-information-for-authors>), but clearly identify their papers for this special issue during the submission process. Extended versions of previously published conference or workshop papers are welcome, provided that the journal paper is a significant extension, and is accompanied by a cover letter explaining the additional contribution.

For author information and page length limit, please see <https://cis.ieee.org/publications/t-games/tciaig-types-of-contributions>.

Important dates

Submission Deadline: 29 February 2020

Notification of Acceptance: 1 May 2020

Final copy due: 15 June 2020

Expected publication: September 2020