

Monte-Carlo Tree Search for Artificial General Intelligence in Games

Citation for published version (APA):

Sironi, C. F. (2019). *Monte-Carlo Tree Search for Artificial General Intelligence in Games*. [Doctoral Thesis, Maastricht University]. Proefschriftmaken.nl || Uitgeverij BOXPress. <https://doi.org/10.26481/dis.20191113cs>

Document status and date:

Published: 13/11/2019

DOI:

[10.26481/dis.20191113cs](https://doi.org/10.26481/dis.20191113cs)

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

www.umlib.nl/taverne-license

Take down policy

If you believe that this document breaches copyright please contact us at:

repository@maastrichtuniversity.nl

providing details and we will investigate your claim.

Statements

belonging to the dissertation

*Monte-Carlo Tree Search
for Artificial General Intelligence in Games*

by Chiara Sironi

1. Propositional Networks make expressing game rules in a declarative language computationally feasible (this thesis, Chapter 4).
2. When biasing action selection during Monte-Carlo Tree Search, it is beneficial to shift from global to local information based on how often tree nodes are visited (this thesis, Chapter 5).
3. On-line tuning of search-control parameters is beneficial in unknown domains (this thesis, Chapter 6).
4. Search-control parameter randomization can improve search quality (this thesis, Chapter 7).
5. Monte-Carlo Tree Search is a promising technique to advance Artificial General Intelligence due to its wide applicability to real-world problems (Valorization).
6. The long term improvements of Artificial General Intelligence will surpass the short term gains of narrow AI.
7. The process of getting a Ph.D. is a suitable Turing test for Artificial General Intelligence.
8. Most of the intelligence of narrow AI programs actually comes from the programmers.
9. A program beating a human at an unknown game says nothing about the intelligence of the program or the human.
10. Many people have to fail for one person to succeed.
11. Every time a Dutch person eats a cold sandwich for lunch an Italian dies.