

Table of Contents

[Description](#)

[Namesakes](#)

[External Links](#)

[References](#)

[What links here?](#)

[Home](#) * [Engines](#) * **AI Chess**

AI Chess, (A.I. Chess)

was [Marty Hirsch's](#) first chess program and predecessor of [MChess](#). AI Chess played the [ACM 1988](#), the [WCCC 1989](#) and the [WMCCC 1989](#) ^[1].

Description

given in the [WCCC 1989](#) booklet ^[2]:

A.I. Chess uses a fairly complicated algorithm combining full-width search, [selective search](#), and a "layered" [quiscence search](#) which behaves differently at different levels in the search tree. The program performs an [iterative](#) full-width search using a modified form of the [Principal-Variation-Search](#) (PVS) algorithm. On top of this, it does a combined selective/quiscence analysis. A.I. Chess has the unusual feature of sometimes re-searching a "[quiscence node](#)" with a full-width investigation.

The quiscence search incorporates a detailed "threat analysis" and therefore, the program spots many combinations long before a contrasting "[brute force](#)" approach would find them. The gain (from needing less full-width plies) seems to exceed the loss in speed by a significant amount.

[Position evaluation](#) starts by considering if the side to move is threatened with [pawn promotion](#), [check](#), or [double attack](#), or has [trapped](#), [pinned](#), or [skewered](#) pieces. Penalties similar to swap-off scores are imposed if the position is too deep to merit a re-search.

[Scores](#) are then added for other [tactical patterns](#), pressure on pieces and pawns, development, [King safety](#), [passed pawns](#), [pawn structure](#), [outposts](#), and [mobility](#).

Some types of [endgame positions](#) are scored differently, by [pattern recognition](#) processing. The program is alert to simplifications, and to tactics involving passed pawns.

Namesakes

- [AI Chess](#) by [Glenn Whitwell](#), a [C++](#) Chess Learning project in conjunction of a Computer Science Third Year Project from the [University of Nottingham](#)
- [AI Chess Project](#) by [Mikolaj Franaszczuk](#), Fall 2003

External Links

- [AI Chess' ICGA Tournaments](#)

References

1. [^](#) [AI Chess' ICGA Tournaments](#)
2. [^](#) [Kings Move - Welcome to the 1989 AGT World Computer Chess Championship](#). Edmonton, Alberta, Canada, Courtesy of [Peter Jennings](#), from [The Computer History Museum](#), [pdf](#)

What links here?

Page	Date Edited
ACM 1988	Dec 5, 2017
AI Chess	Jan 7, 2016
Engines	Mar 10, 2018
Marty Hirsch	Dec 13, 2016
MChess	Feb 26, 2018
Mephisto Almeria	Sep 1, 2017
Quickstep	Jan 8, 2016
WCCC 1989	Dec 5, 2017
WMCCC 1989	Oct 27, 2016

[Up one level](#)