

Table of Contents

[Features](#)

[Board Representation](#)

[Search](#)

[Evaluation](#)

[See also](#)

[Forum Posts](#)

[2014](#)

[2015](#)

[2016](#)

[2017](#)

[2018](#)

[External Links](#)

[Chess Engine](#)

[Misc](#)

[References](#)

[What links here?](#)

[Home](#) * [Engines](#) * **ISA**

ISA, (Isa) ^[1]

a chess engine by [Daniel Anulliero](#), written in [C](#), and compliant to the [Chess Engine Communication Protocol](#). ISA's development started in 2014 using the [FirstChess](#) source by [Pham Hong Nguyen](#), and gradually evolved to an own engine with multiple [search](#) enhancements as well as [evaluation](#) features implemented over the time, also documented by its author's postings in [CCC](#). Isa was first public released in October 2016 as version 1.9.8 ^[2] with steady improvements and fixes in subsequent versions.

Features

[\[3\]](#)

Board Representation

- [Mailbox](#)
[8x8 Board](#)

Search

- [Iterative Deepening](#)
- [Principal Variation Search](#)
- [Transposition Table](#)
- [Selectivity](#)
 - [Null Move Pruning](#)
 - [Late Move Reductions](#)
 - [Check Extensions](#)
 - [Quiescence Search](#)
 - [Futility Pruning](#)
- [Move Ordering](#)
 - [Killer Heuristic](#)
 - [History Heuristic](#)
 - [Static Exchange Evaluation](#)
 - [MVV/LVA](#)

Evaluation

- [Evaluation Hash Table](#)
- [Tapered Evaluation](#)
- [Material](#)
 - [Bishop Pair](#)
- [Mobility](#)
- [Tempo](#)
- [Piece-Square Tables](#)
- [Pawn Structure](#)
 - [Backward Pawn](#)
 - [Doubled Pawn](#)
 - [Isolated Pawn](#)
- [Passed Pawn](#)
 - [Rule of the Square](#)
 - [Candidate](#)

- [Rooks on \(Semi\) Open Files](#)
- [Rook \(and Queen\) on Seventh](#)
- [King Safety](#)
[King Queen Tropism](#)
- [Endgame](#)
[KBNK](#)
[KBBK](#)

See also

- [FirstChess](#)
- [Given Name](#)
- [Yoda](#)

Forum Posts

2014

- [Tuning eval](#) by [Daniel Anulliero](#), [CCC](#), September 01, 2014 » [Automated Tuning](#)

2015

- [bad eval for passers ?](#) by [Daniel Anulliero](#), [CCC](#), February 23, 2015
- [about king attack](#) by [Daniel Anulliero](#), [CCC](#), August 27, 2015 » [King Safety](#)
- [high values of pst](#) by [Daniel Anulliero](#), [CCC](#), September 09, 2015 » [Piece-Square Tables](#)
- [A funny bug :-\)](#) by [Daniel Anulliero](#), [CCC](#), October 19, 2015
- [Some test résultats](#) by [Daniel Anulliero](#), [CCC](#), December 05, 2015

2016

- [Somethings wrong but where \(lol\)](#) by [Daniel Anulliero](#), [CCC](#), January 20, 2016
- [about hashtable](#) by [Daniel Anulliero](#), [CCC](#), March 04, 2016
- [hash eval, hash pawn or twice ?](#) by [Daniel Anulliero](#), [CCC](#), March 19, 2016 » [Evaluation Hash Table](#), [Pawn Hash Table](#)
- [Evaluate the pieces mobility](#) by [Daniel Anulliero](#), [CCC](#), April 25, 2016 » [Mobility](#)
- [Futlity pruning](#) by [Daniel Anulliero](#), [CCC](#), August 11, 2016 » [Futlity Pruning](#), [Reverse Futlity Pruning](#)
- [Isa version 1.9.8 release](#) by [Daniel Anulliero](#), [CCC](#), October 30, 2016
- [Re: Isa version 1.9.8 release](#) by [Daniel Anulliero](#), [CCC](#), December 10, 2016
- [Endgame bug in Isa](#) by [Daniel Anulliero](#), [CCC](#), December 15, 2016

2017

- [Isa 1.9.63 release](#) by [Daniel Anulliero](#), [CCC](#), February 23, 2017

- [Isa 1.9.68 release](#) by [Daniel Anulliero](#), [CCC](#), April 01, 2017
- [Isa 2.0.45 release](#) by [Daniel Anulliero](#), [CCC](#), May 25, 2017
- [Isa 2.0.61 release](#) by [Daniel Anulliero](#), [CCC](#), December 17, 2017

2018

- [Isa 2_0_64 Release](#) by [Daniel Anulliero](#), [CCC](#), April 01, 2018

External Links

Chess Engine

- [Isa](#) at [CCRL 40/40](#)

Misc

- [ISA - Wiktionary](#)
- [Isa from Wikipedia](#)
- [Isa \(Vorname\) from Wikipedia.de](#) (Given Name)
- [Industry Standard Architecture from Wikipedia](#)
- [Intelligent speed adaptation from Wikipedia](#)
- [International Society of Automation from Wikipedia](#)

References

1. [^] [Re: Isa version 1.9.8 release](#) by [Gabor Szots](#), [CCC](#), December 10, 2016
2. [^] [Isa version 1.9.8 release](#) by [Daniel Anulliero](#), [CCC](#), October 30, 2016
3. [^] Features based on [ISA 2_0_45.zip\ISA 2_0_45\ISA read me.odt](#)

What links here?

Page	Date Edited
Daniel Anulliero	Oct 3, 2017
Engine releases	Apr 23, 2018
Engines	Mar 10, 2018
ISA	Apr 2, 2018
Yoda	May 26, 2017

[Up one level](#)