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[Pavlov](#) and dog Monument ^[5]

RomiChess, (Romi)
a [WinBoard](#) compatible chess engine written by [Michael Sherwin](#) in [C](#), first released in June 2005 ^[1], version p3k is available as [open source](#) from [Jim Ablett's](#) WinBoard chess projects. RomiChess is famous for its [learning approach](#) ^[2], and uses [bitboards](#) as basic data structure, in particular [Sherwin Bitboards](#) to determine [sliding piece attacks](#) ^[3]. Its [search](#) is [alpha-beta](#) with [transposition table](#), [null move pruning](#) and [LMR](#) inside an [iterative deepening](#) framework with [aspiration windows](#). Romi's [evaluation](#) features an [oracle](#) approach of [pre-processing piece-square tables](#) at the [root](#) ^[4]. It played the [ACCA 2006](#) and [ACCA 2008](#) ACCA Americas' Computer Chess Championships, and the [WCRCC 2008](#) ACCA World Computer Rapid Chess Championship.

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Learning

As explained by [Michael Sherwin](#), RomiChess uses two types of [learning](#) ^[6]:

1. [Monkey see Monkey do](#). Romi remembers and incorporates winning lines regardless of which side played the moves into the [opening book](#) and can play them back instantly up to 180 [ply](#) if the stats for that line remain good.
2. [Pavlov's dog experiments](#) adapted to computer chess. Each sides moves are given a slight bonus if that side has won and the other sides moves are given a slight penalty. So, good moves can get a slight penalty and bad moves can get a slight bonus, however, through time those are corrected. These bonus/penalties are loaded into the [hash table](#) before each move by the computer. If Romi is loosing game after game then this will cause Romi to 'fish' for better moves to play until Romi starts to win.

Selected Games

[ACCA 2006](#), round 4, [Arasan](#) - [RomiChess](#) ^[7]

```
[Event "ACCA 2006"]
[Site "ICC"]
[Date "2006.11.08"]
[Round "4"]
[White "Arasan"]
[Black "RomiChess"]
[Result "1/2-1/2"]
```

```
1.d4 Nf6 2.c4 e6 3.Nc3 Bb4 4.Qc2 O-
O 5.a3 Bxc3+ 6.Qxc3 b6 7.Bg5 Bb7 8.e3 d6
9.Ne2 Nbd7 10.Qd3 c5 11.Nc3 Re8 12.Nb5 Qb8 13.dxc5 dxc5 14.Rd1 h6 15.B
```

h4 Ne5
16.Qd6 Ne4 17.Qxb8 Raxb8 18.Nxa7 Ng6 19.Bg3 Nxg3 20.hxg3 Red8 21.Rxd8+
Rxd8
22.Nb5 Ne5 23.Nc3 Kh7 24.f4 Ng4 25.e4 Kg8 26.Rg1 Nf6 27.e5 Ne4 28.Nxe4
Bxe4
29.Be2 Rd4 30.b4 Bd3 31.bxc5 bxc5 32.Kf2 Bxe2 33.Kxe2 Rxc4 34.Ra1 Ra4
35.Kd2
Kh7 36.Kc3 c4 37.Kc2 Kg6 38.g4 h5 39.Kc3 hxg4 40.g3 Kf5 41.Kd4 g5 42.f
xg5 Kxg5
43.Ra2 f6 44.exf6 Kxf6 45.Ke4 Ke7 46.Kf4 Kd6 47.Ke4 Kc5 48.Ke3 Ra7 49.
Ke4 c3
50.Kd3 Rf7 51.Kxc3 Rf3+ 52.Kc2 Rxg3 53.Ra1 Kc4 54.Kd2 Kd4 55.Ke2 Re3+
56.Kf2
e5 57.a4 Rf3+ 58.Kg2 e4 59.a5 e3 60.a6 e2 61.a7 Rf8 62.Kg3 Ke3 63.Ra3+
Kd4
64.Ra4+ Ke3 65.Ra3+ Kd2 66.Ra2+ Ke3 67.Ra3+ 1/2-1/2

See also

- [Given Name](#)

Forum Posts

2005 ...

- [Cycle V-2005 final result 10. Bundesliga- games - RomiChess Proto 1a !](#) by [Karl-Heinz Söntges](#), [CCC](#), June 17, 2005
- [Gauntlets Liste B 5' + 5" RomiChess Proto 2k - report and games](#) by [Karl-Heinz Söntges](#), [CCC](#), December 03, 2005
- [RomiChess && learning or the emperor has no clothes](#) by [Michael Sherwin](#), [Winboard Forum](#), May 19, 2006 ^[8]
- [New RomiChess released \(WBEC site\)](#) by [Michael Sherwin](#), [CCC](#), January 31, 2008
- [Question\(s\)/tips/discussion about RomiChess](#) by [Martin Thoresen](#), [CCC](#), April 06, 2008
- [The simple truth ...](#) by [Michael Sherwin](#), [CCC](#), May 18, 2008
- [Normalizing the eval](#) by [Michael Sherwin](#), [CCC](#), June 04, 2009
- [RomiChess useing Dann Corbit's smooth formula for 'R'](#) by [Michael Sherwin](#), [CCC](#), December 30, 2009
- [Re: Did people try replacing LMR by pruning](#) by [Michael Sherwin](#), [CCC](#), December 31, 2009

2010 ...

- [Romichess bug \(Michael?\)](#) by [Miguel A. Ballicora](#), [CCC](#), August 28, 2010
- [Re: Positional learning](#) by [Michael Sherwin](#), [CCC](#), December 18, 2010

2015 ...

- [I've been fiddling with my chess engine](#) by [Michael Sherwin](#), [CCC](#), November 29, 2016
- [What is causing this problem?](#) by [Michael Sherwin](#), [CCC](#), August 16, 2017 » [Move Ordering](#)
- [RomiChess P3M](#) by [Graham Banks](#), [CCC](#), August 22, 2017
- [Update on null move and LMR](#) by [Michael Sherwin](#), [CCC](#), October 01, 2017 » [R](#)
- [RomiChess P3n released](#) by [Graham Banks](#), [CCC](#), October 05, 2017
- [AlphaGo Zero And AlphaZero, RomiChess done better](#) by [Michael Sherwin](#), [CCC](#), December 07, 2017 » [AlphaZero](#)
- [Understanding the power of reinforcement learning](#) by [Michael Sherwin](#), [CCC](#), December 12, 2017
- [I can't believe that so many people don't get it!](#) by [Michael Sherwin](#), [CCC](#), December 18, 2017
- [Training with RomiChess in console mode](#) by [Michael Sherwin](#), [CCC](#), January 01, 2018

External Links

Chess Engine

- [RomiChess](#) from [WBEC Ridderkerk](#)
- [RomiChess P3k 64-bit](#) in [KCEC](#)
- [RomiChess P3kLD](#) in [CCRL 40/4](#)
- [RomiChess P3k 32-bit](#) in [CCRL 40/40](#)

Misc

- [Romi \(disambiguation\)](#) from [Wikipedia](#)
- [Return on marketing investment](#) from [Wikipedia](#)
- [5162. Romi/Romih - Chess Notes](#) by [Edward Winter](#)
- [6019. Who? \(C.N. 6006\) - Chess Notes](#) by [Edward Winter](#)
- [Max Romih](#) from [Wikipedia](#)
- [Pavlov's Dog](#) - Of Once and Future Kings, [Pampered Menial](#) (1975), [YouTube](#) Video

References

1. [^](#) [RomiChess](#) from [WBEC Ridderkerk](#)
2. [^](#) [RomiChess && learning or the emperor has no clothes](#) by [Michael Sherwin](#), [Winboard Forum](#), May 19, 2006
3. [^](#) [Modified old 64 bit attack getter](#) by [Michael Sherwin](#), [CCC](#), December 06, 2009
4. [^](#) [Normalizing the eval](#) by [Michael Sherwin](#), [CCC](#), June 04, 2009
5. [^](#) Monument of [Ivan Pavlov](#), in the Union Scientific Research Institute of Experimental Pathology and Therapy, Academy of Medical Sciences, [Sukhumi](#), [Abkhazia](#), [Classical conditioning from Wikipedia](#)
6. [^](#) [Re: Positional learning](#) by [Michael Sherwin](#), [CCC](#), December 18, 2010

7. [^ The 2006 First Annual ACCA Americas' Computer Chess Championships - Results](#)
8. [^ The Emperor's New Clothes](#) by [Hans Christian Andersen](#)

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ACCA 2008	Jul 14, 2014
AlphaZero	Feb 10, 2018
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Depth Reduction R	Oct 4, 2017
Eigenmann Endgame Test	Jun 1, 2017
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Martin Thoresen	Apr 29, 2015
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