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[Sandro Botticelli](#), [Pallas](#)
and [Centaur](#), 1482 ^[7]

Centaur (Russian: Кентавр), a chess program by primary author [Victor Vikhrev](#) and [Alexey Manjakhin](#). Centaur won the [First Soviet Computer-Chess Championship 1988](#) in [Ulan-Ude](#), and further competed at the [First International Chess-Computer Tournament in the USSR 1989](#) in [Moscow](#), at three [World Computer Chess Championships](#), the [WCCC 1989](#) in [Edmonton](#), the [WCCC 1992](#) in [Madrid](#), and the [WCCC 1999](#) in [Paderborn](#), four [World Microcomputer Chess Championships](#) ^[1], two [Uniform-Platform Computer Chess Championships](#), and three [Aegon Man-Machine Tournaments](#) ^{[2] [3] [4]}.

Centaur, along with some code units incorporated from [Mirage](#) by [Vladimir Rybinkin](#) and [Yuri Shpeer](#), further evolved to the [Dragon](#) analysis engine of [Convekta's Chess Assistant](#) database ^[5], not to confused with the original [Dragon](#) engine by Yuri Shpeer ^[6].

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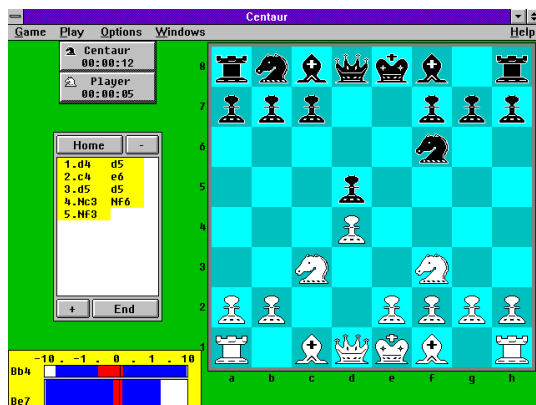
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Screenshot



Centaur Screen [\[8\]](#)

Photos & Games



[WCCC 1999](#): [Centaur](#) vs. [Mini](#), [Victor Vikhrev](#) and [Harald Prokop](#)

```
[Event "WCCC 1999"]
[Site "Paderborn, Germany"]
[Date "1999.06.19"]
[Round "7"]
[White "Centaur"]
[Black "Mini"]
[Result "0-1"]
```

```
1.e4 e5 2.Nf3 Nf6 3.Nxe5 d6 4.Nf3 Nxe4 5.d4 d5 6.Bd3 Nc6 7.O-
O Be7 8.Re1 Bg4 9.c4 Nf6
10.cxd5 Bxf3 11.Qxf3 Qxd5 12.Qxd5 Nxd5 13.Nc3 Ndb4 14.Be4 Nxd4 15.Bf4
Ne6 16.a3 Nd3
17.Bxd3 Nxf4 18.Bf5 Kf8 19.Rad1 g6 20.Be4 Ne6 21.Bd5 Nd8 22.Re2 c6 23.B
c4 b5 24.Bb3 f5
25.Rd7 Bf6 26.a4 a6 27.h3 Rb8 28.Red2 Bg5 29.f4 Bf6 30.axb5 axb5 31.Kh
2 Ke8 32.Rc7 h5
33.Rd6 Rf8 34.Nd1 Rb6 35.g3 Rb8 36.Rh7 c5 37.Bd5 c4 38.Rh6 Ke7 39.Ra6
Rc8 40.Rxg6 h4
41.gxh4 Rc5 42.Ra7+ Kd6 43.Bg2 Ne6 44.Kg3 b4 45.Ne3 c3 46.Ra6+ Kd7 47.
Bd5 Nc7 48.Rgxf6
Rxf6 49.Rxf6 Nxd5 50.bxc3 Nxf6 51.cxb4 Rc3 52.Kf2 Ke6 53.b5 Rb3 54.Nc4
Nh5 55.Nd2 Rxb5
56.Nf3 Rb2+ 57.Ke3 Rb3+ 58.Kf2 Kd5 59.Ng5 Nxf4 60.Nf3 Nxh3+ 61.Ke2 f4
62.Nd2 Re3+ 63.Kd1
Nf2+ 64.Kc1 Ne4 65.h5 Re1+ 66.Kb2 Re2 67.Kb3 Nxd2+ 68.Kb2 Kc4 69.h6 Nb
3+ 70.Ka3 Nc1
71.Ka4 0-1
```

Descriptions

1989

based on the [WCCC 1989](#) booklet ^[9]:

Centaur is a new chess-playing program with the heuristic search to consider the decisive series of moves. The algorithm is based on the probability logic and uses a fuzzy value of positions. The depth of the search is not limited. The whole information about all the series of moves is kept in [RAM](#) and is used to determine the decisive series of moves. Centaur features a low number of positions analyzed. This is compensated with thoroughness of the [position evaluation](#).

1991

from [Don Beal's WMCCC 1991](#) report ^[10]:

Centaur is the outstanding exception in the current pattern. It uses a much more human like approach, and despite its eventual losses, actually played well most of the time. For instance, it had a draw against [Gideon](#) for a long time, only going astray in the endgame.

Written by Victor Vikhrev and Alexey Manjakhin, and winner of the first Moscow computer-chess tournament, this program is highly unconventional, and does not use [alpha-beta](#), [iterative search](#). Instead, it grows a [selective tree](#), kept fully in [memory](#), on a [best-first](#) basis. Position [evaluation](#) is not reduced to one number - instead a vector of values is produced from which 3 optimistic and 3 pessimistic evaluations are made under different assumptions. These 6 values determine a probability distribution of results for a position, which is used to guide tree growth and ultimately to choose a move. Victor Vikhrev describes his approach as intermediate between conventional programs and the even more selective approach of [Botvinnik's](#) program, [Pioneer](#).

1993

from [Don Beal's UPCCC 1993](#) report ^{[11] [12]}:

Written by Victor Vikhrev, a nuclear physicist in Moscow, as a major hobby over the past 30 years, plus Alexei Manjakhin. It is remarkable for being very different in design from all the other programs that do well in championships. It explores only a few future positions (instead of millions), but analyses them in more detail. In this

respect its thinking is more human-like than any other program. It scored 2 from 5 in the [last "unlimited machine" championship](#), and placed 17.

1999

from the [ICGA-site](#) ^[13]:

Centaur is a highly selective program, originated from [Kurchatov Institute](#) in [Moscow](#). It is a completely unique program. Despite the lightning speed of its hardware it only examines about 500 positions per second. Centaur has a rating of 2,266 at AEGON97.

Centaur uses 5 values for estimation of chess position (one realistic, two pessimistic and two optimistic). All 5 values of a position are saved in memory of computer and are used for choice of direction of investigation of position.

Last modification of Centaur uses some code units from program [Mirage](#), which is made in Russia. Principles of Centaur are described in [ICCA Journal](#) 1996, 2 ^[14]

See also

- [Cheiron](#)
- [Chiron](#)
- [Mythology](#)

Publications

- [Victor Vikhrev](#) (1996) *The Choice of a Research Direction*. [ICCA Journal, Vol. 19, No. 2](#)

Forum Posts

- [QMW computer chess](#) by [Don Beal](#), [rec.games.chess](#), August 19, 1993 » [UPCCC 1993](#)
- [Re: La Máquina Preservadora. Programas de Ajedrez](#) by Tibono, [Meca Foro](#), October 09, 2015 (Spanish)
- [Centaur](#) by [Fernando](#), [Hiarcs Forum](#), March 16, 2017

External Links

- [Centaur's ICGA Tournaments](#)
- [Кентавр](#) (Russian)
[Centaur](#), translated by [Google Translate](#)
- [Download Chess Programs](#) hosted by [Ed Schröder](#)
- [Advanced Chess from Wikipedia](#) (Centaur chess)
- [Centaur \(disambiguation\) from Wikipedia](#)
- [Centaur from Wikipedia](#) ([Greek mythology](#))

References

1. [^ Centaur's ICGA Tournaments](#)
2. [^ CSVN Aegon 1995 site](#)
3. [^ CSVN Aegon 1996 site](#)
4. [^ CSVN Aegon 1997 site](#)
5. [^ Chess Assistant - ChessOK](#)
6. [^ Заставить работать машину клиента! \[20\] - Конференция iXBT.com](#), September 01, 2009
7. [^ Renaissance Art - The Renaissance in Florence: Republican and Medici \(15th c.\)](#)
8. [^ Septober - Computerschach](#) by [Herbert Marquardt](#)
9. [^ Kings Move - Welcome to the 1989 AGT World Computer Chess Championship](#). Edmonton, Alberta, Canada, Courtesy of [Peter Jennings](#), from [The Computer History Museum](#), [pdf](#)
10. [^ Don Beal \(1991\). Report on the 11th World Microcomputer Chess Championship. ICCA Journal, Vol. 14, No. 2](#)
11. [^ Don Beal \(1993\). Report on the QMW 1993 Uniform-Platform Computer-Chess Championship. ICCA Journal, Vol. 16, No. 3](#)
12. [^ QMW computer chess](#) by [Don Beal](#), [rec.games.chess](#), August 19, 1993
13. [^ Centaur's ICGA Tournaments](#)
14. [^ Victor Vikhrev \(1996\) The Choice of a Research Direction. ICCA Journal, Vol. 19, No. 2](#)

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Aegon 1997	Apr 7, 2017
Alexey Manjakhin	Jan 7, 2016
Algir	Feb 17, 2013
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Cheiron	Jan 7, 2016
Chiron	Sep 24, 2017
Dragon (Chess Assistant)	Jul 30, 2013
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First International Chess-Computer Tournament in the USSR 1989	Apr 22, 2018

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