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Ribbit Logo ^[1]

Ribbit,

a computer chess program written at the [University of Waterloo](#) by a team of the undergraduate students [Ron Hansen](#), [Jim Parry](#), [Russell Crook](#), later joined by [Gary Calnek](#). Ribbit was one of the strongest programs in the mid 70s, tied second place at the [WCCC 1974](#) and was winner of the [ACM 1974](#) a few months later with a last round win against [Chess 4.2](#). Its successor, called [Treefrog](#) became second one year later at the [ACM 1975](#).

Ribbit was written in [Fortran](#) and ran on a [Honeywell 66/60](#) 36-bit [mainframe computer](#).

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Authors

- [Gary Calnek](#)
- [Russell Crook](#)
- [Ron Hansen](#)
- [Jim Parry](#)

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Photos



[Hansen](#), [Perry](#) and [Slate](#), [Chess 4.0](#) vs Ribbit, [WCCC 1974](#) ^[2]

Quotes

Jonathan Schaeffer

From [Jonathan Schaeffer \(1997, 2009\)](#). [One Jump Ahead](#). 1. This Was Going to Be Easy, pp. 7
My time at Waterloo greatly benefited from the presence of [Ron Hansen](#).
He was author of Ribbit (later called Treefrog), one of the strongest
chess programs around. He generously gave me a copy of his program,

which I used to learn how to write a chess program... Hansen's program was written in a computer programming language called [Fortran](#). For my master's thesis, I translated it into the Z programming language (similar to the well known [C](#) programming language).

Alejandro López-Ortiz

From *An Introduction to Computer Chess* ^[3]:

From the team of undergrads who authored Ribbit, [Ron Hansen](#) went on to write his master thesis on computer chess, and eventually [Prof. Van Emden](#) became an expert in computer chess and endgames.

George Atkinson

[George Atkinson](#) in *Chess and Machine Intuition* ^[4]:

During the first decade of the [computer chess championship](#), [Chess X.X](#) failed to win only twice. On the first occasion, in [1974](#), Chess 4.2 was upset by Ribbit, a Canadian program by [Jim Parry](#), [Ron Hansen](#), and [Russell Crook](#) of the [University of Waterloo](#). Ribbit had unexpectedly reached the final after opponents failed to press their advantages. In previous encounters, Ribbit had lost twice to Chess 4.X, but now avenged these losses in the deciding game of the championship by employing a standard tactic of human masters: the prepared opening line...

Games vs Chess 4.0

[WCCC 1974](#)

```
[Event "WCCC 1974"]
[Site "Stockholm, Sweden"]
[Date "1974.08.05"]
[Round "1"]
[White "Chess 4.0"]
[Black "Ribbit"]
[Result "1-0"]
```

```
1. e4 c5 2. Nf3 d6 3. d4 cxd4 4. Nxd4 Nf6 5. Nc3 a6 6. Be2 e5 7. Nb3 N
c6
```

8. O-O Be7 9. Bg5 Be6 10. Qd2 O-O
11. Rad1 Rc8 12. Bxf6 gxf6 13. Kh1 Qd7
14. Nd5 Bd8 15. Qe3 f5 16. Qg3+ Kh8 17. f3 Rg8 18. Qf2 fxe4 19. fxe4 Rg7
20. c4 Qe8 21. Ne3 Qd7 22. Nc5 Qe7 23. Nxe6 Qxe6 24. Nf5 Rg8 25. Nxd6 Rc7
26. Nxf7+ Kg7 27. Qg3+ Qg6 28. Qxg6+ hxg6 29. Nxd8 Nxd8 30. Rd6 Nf7
31. Rd5 Rf8 32. c5 Rc6 33. Rd7 Rxc5 34. Rxb7 a5 35. b3 Rc6 36. Ra7 Rf6
37. Rxf6 Kxf6 38. Ra6+ Kg7 39. Rxa5 1-0

[ACM 1974](#)

[Event "ACM 1974"]
[Site "San Diego, USA"]
[Date "1974.11.12"]
[Round "4"]
[White "Ribbit"]
[Black "Chess 4.2"]
[Result "1-0"]

1. e4 c5 2. c3 d5 3. exd5 Qxd5 4. d4 cxd4 5. cxd4 Nc6 6. Nf3 Bg4 7. Nc3 Qd6
8. d5 Nb4 9. Bb5+ Bd7 10. Bxd7+ Kxd7 11. Be3 Qa6 12. Ne5+ Ke8 13. a3 Qd6
14. Qa4+ Nc6 15. dxc6 bxc6 16. Nxc6 e5 17. Nxa7+ Qd7 18. Qxd7+ Kxd7
19. Rd1+ Ke6 20. O-O Nf6 21. b4 Be7 22. h3 h5 23. Rfe1 h4 24. Rd3 e4
25. Bd4 Rhe8 26. Bxf6 Bxf6 27. Rxe4+ Kf5 28. Rxe8 Rxe8 29. g4+ hxg3
30. fxg3 Re1+ 31. Kf2 Rc1 32. g4+ Kg6 33. Ne4 Be5 34. b5 Rc2+ 35. Kf3 Rh2
36. Nf2 Bf6 37. Rd6 Kh7 38. Rd5 Bb2 39. Kg3 Rxf2 40. Kxf2 Bxa3 41. b6 Bc1
42. b7 Bf4 43. Nc6 Bc7 44. Rd7 Bf4 45. Rxf7 Bd6 46. b8=Q Bxb8 47. Nxb8 Kg6
48. Rf5 Kh6 49. Nd7 g6 50. Rf6 Kg5 51. Kg3 Kh6 52. Ne5 Kg7 53. g5 Kg8
54. Nxg6 Kh7 55. h4 Kg8 56. h5 Kg7 57. h6+ Kh7 58. Ne5 Kh8 59. g6 Kg8
60. Kg4 Kh8 61. Rf8# 1-0

External Links

- [Ribbit's ICGA Tournaments](#)
- [Ribbit](#) from [Canadian Chess - Topics](#) by [David Cohen](#)
- [Computer Chess and Canada](#) by [David Cohen](#), 2005

- [Ribbit \(programme d'échecs\) from Wikipedia.fr](#) (French)
- [The chess games of Ribbit](#) from [chessgames.com](#)
- [An Introduction to Computer Chess](#) by [Alejandro López-Ortiz](#), 1993
- [Ribbit from Wikipedia](#)

References

1. [^ Waterloo@50](#) (pdf) 2007, Photo courtesy of Peter Ponzo, Copyright 1992, The beaver is the mascot for CS at [University of Waterloo](#)
2. [^ Hansen, Perry and Slate at 1st World Computer Chess Championship in Stockholm](#), Photo by [Monroe Newborn](#), hosted by [The Computer History Museum](#)
3. [^ An Introduction to Computer Chess](#) by [Alejandro López-Ortiz](#), 1993
4. [^ George Atkinson](#) (1998). [Chess and Machine Intuition](#). (Intellect Ltd.) pp 67

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ACM North American Computer Chess Championship	Jun 13, 2015
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Freedom	Dec 28, 2017
Gary Calnek	Oct 20, 2017
Honeywell 6000	Jan 19, 2018
Jim Parry	Jan 7, 2016
Jonathan Schaeffer	Jan 29, 2018
Kches6	Jan 2, 2018
Maarten van Emden	May 23, 2016
Master	Dec 28, 2017
Papa	Jan 11, 2018
Peter Kent	Jan 7, 2016
Planner	Sep 24, 2012
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Ron Hansen	Jan 7, 2016
Russell Crook	Dec 3, 2012
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