

## Six Wins Hex Tournament

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For the first time since 2000, three programs competed in the Hex competition – Six (version 0.5.2) by Gábor Melis; HexKriger by Rune Rasmussen, Cameron Browne, Auden Ellertsen, Ross Hayward, and Frederic Maire of the University of Queensland; and Wolve by Ryan Hayward, Broderick Arneson, Philip Henderson, Michael Johanson, Morgan Kan, Martin Mueller, and Geoff Ryan of the University of Alberta. The Wolve team was the only one able to travel to Torino (see photos below). Six was operated by Fredrik Niemelä of the Royal Institute of Technology in Stockholm with assistance from Jakub Pawlewicz of the University of Warsaw. HexKriger was operated by Broderick Arneson. The tournament consisted of two double-rounds, the first on May 29 and the second on May 30.

Six defended its gold medal from the 2003 and 2004 Olympiads (there was no Hex tournament in 2005) with a convincing 8-0 score. Wolve won the silver medal with a 3-5 score. While somewhat stronger than its predecessor Mongoose, Wolve still has some bugs to be worked out. A pondering error resulted in Day 1 blunders such as move 11 . c8 in Game 3 (instead of 11 . b8) and move 22 . f2 in Game 4 (instead of 22 . g2). HexKriger won the bronze medal with a 1-7 score. HexKriger learns from game to game, and its strength increased throughout the tournament. In Game 11, it won against Wolve and in Game 12, although eventually losing the game, by move 18 . b10 it had reached a winning state. Wolve recognized this and was fortunate to escape with a win.

Hopefully there will be even more Hex programs at the next Olympiad. It will be interesting to see how long Six can reign as the gold medal champion.

### Double-round 1.

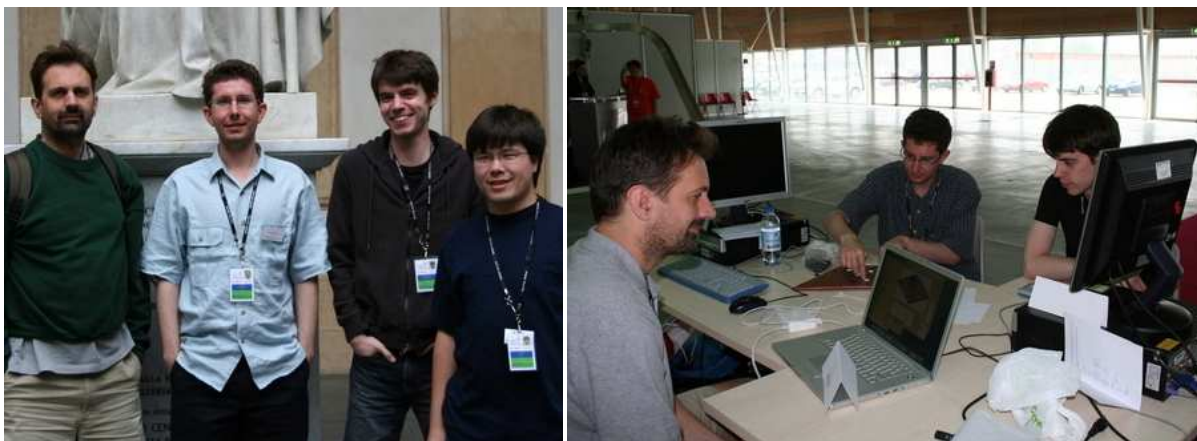
**Wolve-HexKriger 1-0** 1.a2 2.f6 3.c7 4.c9 5.b10 6.b9 7.d8 8.d5 9.i5 10.e6 11.b6 12.i3 13.c4 14.d7 15.c8 16.c5 17.b5 18.b7 19.c6 20.b3 21.d9 22.d3 23.c3 24.c10 25.d10 26.c11 27.d11 28.d1 29.c2 30.c1 31.b2 32.b1 33.a1

**HexKriger-Wolve 0-1** 1.a2 2.f6 3.f8 4.h5 5.d6 6.d7 7.e6 8.e7 9.g5 10.g6 11.i5 12.i4 13.j4 14.j3 15.k3 16.j2 17.k2 18.k1 19.b8 20.c7 21.b7 22.c6 23.a6 24.b6 25.a7 26.b4 27.a4 28.b9 29.g2 30.c8 31.a9 32.a10

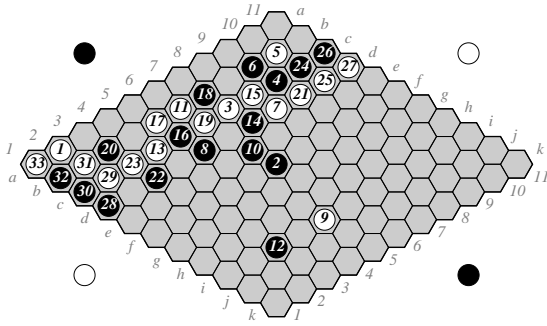
**Wolve-Six 0-1** 1.a2 2.SWAP 3.f6 4.h6 5.h8 6.c7 7.g7 8.b9 9.c6 10.d6 11.c8 12.b8 13.b10 14.c9 15.f3 16.b5 17.b3 18.d4 19.c10 20.e9 21.d2 22.e2 23.d3 24.e3 25.d9 26.e8 27.d8 28.e7 29.e6 30.d7

**Six-Wolve 1-0** 1.a3 2.f6 3.d7 4.e8 5.c9 6.b10 7.h7 8.c10 9.d9 10.d10 11.e9 12.c8 13.i4 14.i3 15.h4 16.h3 17.g4

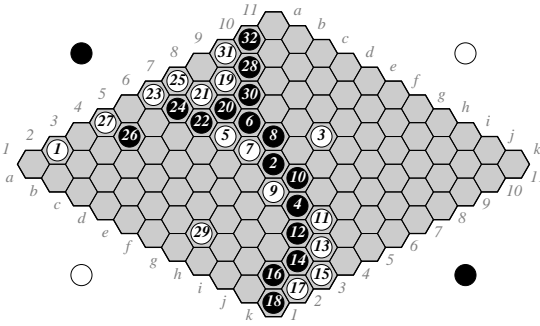
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Members of the Wolve team at the conference site and the Olympiad.



Game 1: Wolve-HexKriger 1-0.



Game 2: HexKriger-Wolve 0-1.

18.g7 19.h6 20.i5 21.g6 22.f2 23.g3 24.h1 25.h2 26.i1 27.j2 28.j3 29.i2 30.e11 31.g10 32.h8 33.g8 34.g9 35.e10 36.d11 37.f10

**HexKriger-Six 0-1** 1.a2 2.SWAP 3.f6 4.h6 5.h5 6.j4 7.i5 8.j5 9.i7 10.i6 11.g8 12.k6 13.j8 14.f7 15.e9 16.d9 17.k2 18.e7 19.d10 20.b10 21.a11 22.c10 23.i3 24.e6 25.f4 26.d5 27.e3 28.c4 29.b11 30.c11 31.d8 32.e8 33.e5 34.d6 35.c3 36.d2 37.d3 38.a4 39.j1 40.b4 41.a3 42.b3 43.d4 44.c5 45.c1 46.a1 47.b2 48.c2 49.d1 50.e1

**Six-HexKriger 1-0** 1.a3 2.SWAP 3.f6 4.f8 5.h5 6.g6 7.g5 8.c8 9.d5 10.b7 11.c7 12.e6 13.f4 14.g4 15.f5 16.e4 17.e5 18.j4 19.i6 20.i5 21.h6 22.k5 23.j7 24.k6 25.k7 26.j6 27.i7 28.c5 29.b8 30.c6 31.d6 32.a9 33.a8

**Double-round 2.**

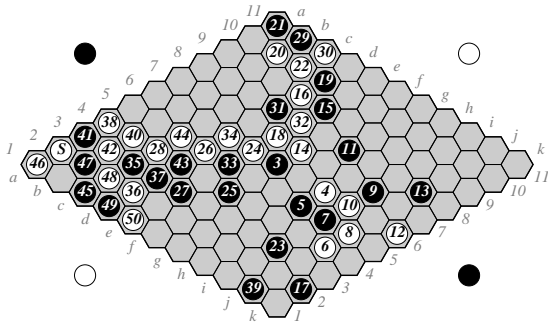
**HexKriger-Six 0-1** 1.a2 2.SWAP 3.f6 4.h6 5.h5 6.j4 7.i5 8.j5 9.i7 10.i6 11.g8 12.k6 13.j8 14.f7 15.e9 16.d9 17.k2 18.e7 19.d8 20.e8 21.c10 22.c9 23.b11 24.b9 25.d11 26.a11 27.h1 28.i3 29.a10 30.b10 31.j3 32.g6 33.i4 34.h2 35.g4 36.e5 37.f3 38.d4 39.d3 40.e3 41.e6 42.e4 43.c7 44.g5 45.h4 46.f5 47.f1 48.e2 49.e1 50.f2 51.a1 52.g1

**Six-HexKriger 1-0** 1.a2 2.f6 3.h6 4.h5 5.j4 6.i5 7.j5 8.i7 9.i6 10.g8 11.k6 12.j8 13.c8 14.e6 15.d6 16.d9 17.b10 18.b11 19.f7 20.e9 21.a11 22.e4 23.c5 24.b9 25.c9 26.d7 27.c7 28.d5 29.c6 30.d3 31.b4 32.b3 33.c3 34.c4 35.b5 36.d1 37.e2 38.a1 39.d2 40.e1 41.f1

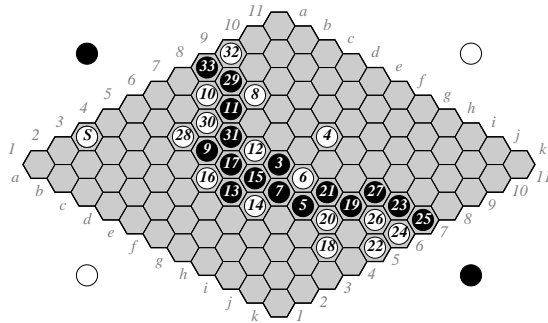
**Wolve-Six 0-1** 1.a2 2.SWAP 3.f6 4.h6 5.i3 6.g5 7.g4 8.h4 9.d7 10.j4 11.g7 12.h7 13.g9 14.i8 15.i9 16.h9 17.g11 18.h10 19.i7 20.j7 21.j6 22.h8 23.h11 24.g6 25.e11 26.i10 27.g2 28.k1 29.h3 30.j3 31.j2 32.k2 33.i11 34.f7 35.j10 36.e8 37.d10 38.f11 39.g10 40.e10 41.d11 42.f10 43.e9 44.f9 45.f8 46.g8

**Six-Wolve 1-0** 1.a3 2.f6 3.d7 4.c9 5.e8 6.e5 7.c6 8.c7 9.d6 10.c5 11.d5 12.e3 13.d4 14.d3 15.e4 16.e9 17.f8 18.f3 19.f4 20.h2 21.g3 22.f9 23.d9 24.c11 25.b7 26.b11 27.d10 28.d11 29.a11 30.g2 31.h3 32.j1 33.b4 34.a4 35.c1 36.b9 37.f10 38.a5 39.c4 40.e10 41.h8 42.g9 43.h9 44.g10 45.h10 46.g8 47.h7 48.g7 49.h6 50.g5 51.i4 52.i5 53.h5 54.h4 55.i3

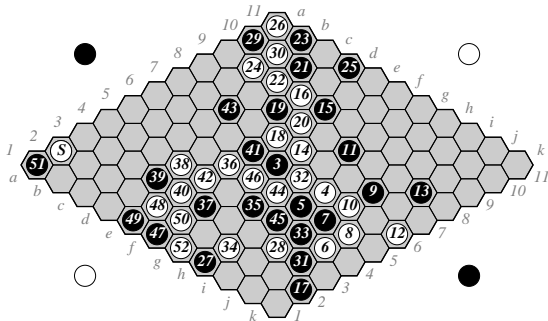
**HexKriger-Wolve 1-0** 1.a2 2.f6 3.f8 4.h5 5.e6 6.e7 7.i5 8.i4 9.j4 10.j3 11.g6 12.g5 13.d7 14.d8 15.c8 16.c9 17.k3 18.k2 19.a10 20.b9 21.a9 22.b8 23.a8 24.b10 25.a11 26.b7 27.a7 28.b6 29.a6 30.b4 31.b5 32.c4 33.c5 34.d4 35.e4 36.d5 37.c6 38.e5 39.f5 40.f2 41.e3 42.f4 43.g4 44.h3 45.i3 46.g3 47.h4 48.i2 49.a5 50.j2 51.a4 52.a3 53.b3 54.b2 55.c2



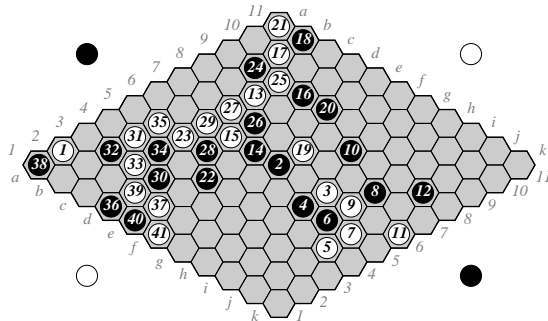
Game 5: HexKriger-Six 0-1.



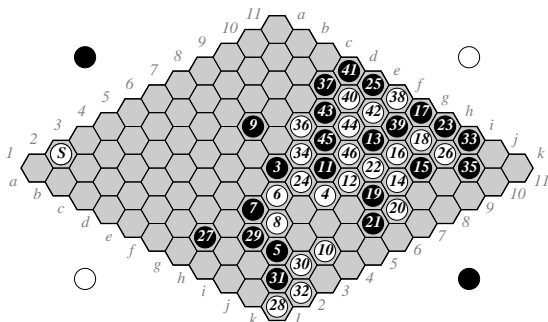
Game 6: Six-HexKriger 1-0.



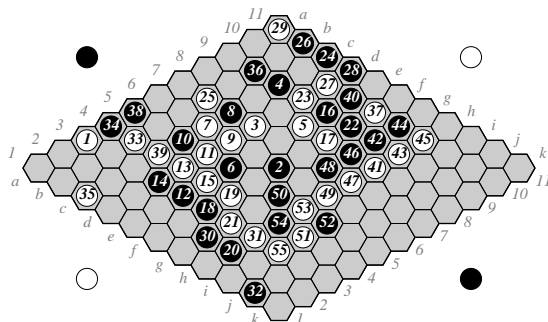
Game 7: HexKriger-Six 0-1.



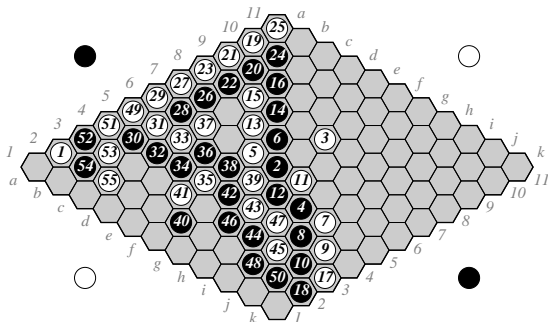
Game 8: Six-HexKriger 1-0.



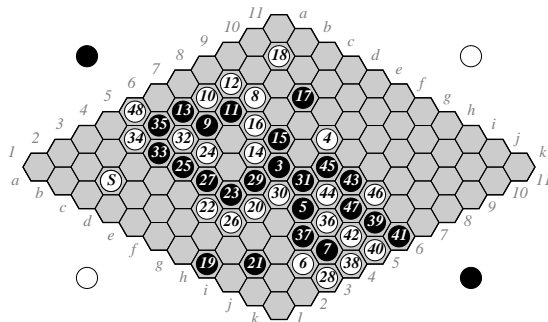
Game 9: Wolve-Six 0-1.



Game 10: Six-Wolve 1-0.



Game 11: HexKriger-Wolve 1-0.



Game 12: Wolve-HexKriger 1-0.