# The Computer Olympiads 1989-2021 

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#### Abstract

The Computer Olympiads have been held 24 times over the past 33 years. This series of events is an important landmark that demonstrates the progress of artificial intelligence technology applied to games.

This article presents comparative data on the Olympiads. Some entries contain partial information, while a few have conflicting answers. The author asks the ICGA community for help in ensuring that the data is complete and correct.


## 1. INTRODUCTION

The Computer Olympiad was created in 1989 by former ICGA President David Levy. At the time, the only regularly-scheduled games competitions for computers were for chess. The Olympiad idea expanded this to a rich variety of games, encouraging the expansion of AI research into new and challenging domains. The planned annual event would bring researchers, hobbyists and companies together to compete. Anyone could enter and compete for the gold, silver, and bronze medal in each event.

Since its inception, there have been 24 Computer Olympiads. Authoritative data on this long-running scientific event is, in some cases, unclear. This article presents statistics on the events. We are asking for your help in correcting any errors, of which there are undoubtedly some.
The Olympiad data in the following table comes primarily from two sources:

- Wikipedia: Computer Olympiad, https://en.wikipedia.org/wiki/Computer_Olympiad
- Chess Programming Wiki: Computer Olympiad (and individual Olympiad links), https://www. chessprogramming.org/Computer_Olympiad

There are various books and ICGA Journal articles that report on individual Olympiads (the numerous citations are not given here) that have been used for this report. In addition, there has been correspondence with some of the organizers of the events.
Note that some of the information reported here varies depending on the source used. We appreciate hearing from any readers who can make authoritative corrections to the table. Please contact jonathan@ualberta.ca.
Thank you.

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## 2. COMPUTER OLYMPIADS 1989-2021 DATA

A summary of the Olympiads can be found in Table 1.

## Legend

- \# = Olympiad Number (1-1989 to 24-2021)
- Location $=$ City/Country where the Olympiad was held
- \#P = Number of participants in the Olympiad
- \#C = Number of competitions in the Olympiad
- Games $=$ Games contested. Where applicable, the board size used for the game is given.


## Notes

- Some of the Olympiads had a co-located World Computer Chess Championship. Data on these events has been excluded from the table.
- Most Olympiads have a co-located computer games conference. Participants in the conference are not included in the Olympiad totals.


## Statistics

- Most number of games competed in an Olympiad is 24 (in 2019).
- Most number of participating programs in an Olympiad is 108 (in 2010).
- The game most contested in the Olympiads is Chinese Chess ( 22 times), followed by Go $9 \times 9$ (21 times), Amazons (19 times), Go $19 \times 19$ (18 times), and Draughts (18 times).
- Olympiad games that have solved: Checkers, Connect Four, and Nine Men's Morris.

Table 1
Computer Olympiads 1-24

| Year | \# | Location | \#P | \#C | Games |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1989 | 1 | London, United Kingdom | 44 | 15 | Awari, Backgammon, Bridge, Checkers, Chess, Chinese Chess, Connect Four, Dominoes, Draughts, Go $9 \times 9$, Go $19 \times 19$, Gomoku, Othello $8 \times 8$, Renju, Scrabble |
| 1990 | 2 | London, United Kingdom | 36 | 13 | Awari, Backgammon, Bridge, Chess, Chinese Chess, Go $9 \times 9$, Go $19 \times 19$, Gomoku, Othello $8 \times 8$, Qubic, Renju, Scrabble |
| 1991 | 3 | Maastricht, The Netherlands | 36 | 14 | Awari, Backgammon, Bridge, Chess, Chinese Chess, Draughts, Go $9 \times 9$, Go $19 \times 19$, Gomoku, Nine Men's Morris, Othello $8 \times 8$, Qubic, Renju, Scrabble |
| 1992 | 4 | London, United Kingdom | At least 37 | 13 | Awari, Backgammon, Bridge, Chess, Chinese Chess, Draughts, Gin Rummy, Go $9 \times 9$, Go $19 \times 19$, Gomoku, Othello $8 \times 8$, Renju, Scrabble |
| 1993-1999 |  | No Olympiads |  |  |  |
| 2000 | 5 | London, United Kingdom | 37 | 7 | Amazons, Awari, Chess, Go $19 \times 19$, Hex $11 \times 11$, Lines of Action, Shogi |
| 2001 | 6 | Maastricht, The Netherlands | 33 | 6 | Amazons, Chess, Chinese Chess, GIPF, Lines of Action, Shogi |
| 2002 | 7 | Maastricht, The Netherlands | 61 | 11 | Amazons, Backgammon, Bridge, Chess, Chinese Chess, Dots and Boxes, Draughts, Go $9 \times 9$, Go $19 \times 19$, Lines of Action, Shogi |

Table 1
(Continued)

| Year | \# | Location | \#P | \#C | Games |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2003 | 8 | Graz, Austria | 52 | 12 | Abalone, Amazons, Backgammon, Chinese Chess, Dots and Boxes, Draughts, Go $9 \times 9$, Go $19 \times 19$, Hex $11 \times 11$, Lines of Action, Poker, Shogi |
| 2004 | 9 | Ramat-Gan, Israel | 26 | 7 | Amazons, Chinese Chess, Go $9 \times 9$, Go $19 \times 19$, Hex $11 \times 11$, Lines of Action, Octi |
| 2005 | 10 | Taipei, Taiwan | 46 | 8 | Amazons, Chinese Chess, Clobber, Dots and Boxes, Go $9 \times 9$, Go $19 \times 19$, Pool, Shogi |
| 2006 | 11 | Turin, Italy | 49 | 12 | Backgammon, Chinese Chess, Clobber, Connect6, Draughts, Go $9 \times 9$, Go $19 \times 19$, Hex $11 \times 11$, Kriegspiel, Lines of Action, Pool, Shogi |
| 2007 | 12 | Amsterdam, The Netherlands | 46 | 10 | Amazons, Backgammon, Chinese Chess, Connect6, Draughts, Go $9 \times 9$, Go $19 \times 19$, Phantom Go, Shogi, Surakarta |
| 2008 | 13 | Beijing, China | 84 | 12 | Amazons, Chinese Chess, Connect6, Dots and Boxes, Draughts, Go $9 \times 9$, Go $19 \times 19$, Hex $11 \times 11$, Phantom Go, Pool, Shogi, Surakarta |
| 2009 | 14 | Pamplona, Spain | 48 | 12 | Amazons, Chinese Chess, Connect6, Draughts, Go $9 \times 9$, Go $19 \times 19$, Havannah, Hex $11 \times 11$, Kriegspiel, Lines of Action, Phantom Go, Shogi |
| 2010 | 15 | Kanazawa, Japan | 108 | 20 | Amazons, Chinese Chess, Chinese Dark Chess, Clobber, Connect6, Dots and Boxes, Draughts, Go $9 \times 9$, Go $13 \times 13$, Go $19 \times 19$, Havannah, Hex $11 \times 11$, Light Up, Nonogram, Nurikabe, Phantom Go, Quoridor, Shogi, Shogi (Mini), Surakarta |
| 2011 | 16 | Tilburg, The Netherlands | 74 | 18 | Amazons, Backgammon, Chinese Chess, Chinese Dark Chess, Clobber, Connect6, Dots and Boxes, Draughts, EinStein Würfelt Nicht, Go $9 \times 9$, Go $13 \times 13$, Go $19 \times 19$, Havannah, Hex $11 \times 11$, NoGo, Phantom Go, Shogi, Surakarta |
| 2012 |  | No Olympiad |  |  |  |
| 2013 | 17 | Yokohama, Japan | 79 | 15 | Amazons, Chinese Chess, Chinese Dark Chess, Clobber, Connect6, Draughts, Go $9 \times 9$, Go $13 \times 13$, Go $19 \times 19$, Hex $11 \times 11$, Lines of Action, Nonogram, Shogi, Shogi $5 \times 5$, Shogi (Chu), |
| 2014 |  | No Olympiad |  |  |  |
| 2015 | 18 | Leiden, The Netherlands | 73 | 16 | Amazons, Backgammon, Chinese Chess, Chinese Dark Chess, Clobber, Draughts, EinStein Würfelt Nicht, Go $9 \times 9$, Go $13 \times 13$, Go $19 \times 19$, Hex $11 \times 11$, Hex $13 \times 13$, Lines of Action, Shogi, Shogi (Mini), Shogi (Tori) |
| 2016 | 19 | Leiden, The Netherlands | 49 | 11 | Amazons, Backgammon, Chinese Chess, Chinese Dark Chess, Clobber, Draughts, EinStein Würfelt Nicht, Go $9 \times 9$, Go $13 \times 13$, Go $19 \times 19$, Shogi (Mini) |
| 2017 | 20 | Leiden, The Netherlands | 60 | 15 | Amazons, Breakthrough, Chinese Chess, Chinese Dark Chess, Draughts, EinStein Würfelt Nicht, Go $9 \times 9$, Go $13 \times 13$, Go $19 \times 19$, Hex $11 \times 11$, Hex $13 \times 13$, Lines of Action, Othello $8 \times 8$, Othello $10 \times 10$, Shogi |
| 2018 | 21 | Taipei, Taiwan | 103 | 22 | Amazons, Block Go, Breakthrough, Chinese Checkers, Chinese Chess, Chinese Dark Chess, Connect6, Curling (Digital), EinStein Würfelt Nicht, Go $9 \times 9$, Gomoku (Deep Learning), Gomoku (Outer-Open), Hex $9 \times 9$, Hex $13 \times 13$, Mahjong, Nonogram, Othello $8 \times 8$, Othello $10 \times 10$, Shogi (Dice), Shogi (Kyoto), Shogi (Mini), Surakarta |

Table 1
(Continued)

| Year | \# | Location | \#P | \#C | Games |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2019 | 22 | Macau, China | 88 | 24 | Amazons, Block Go, Breakthrough, Chinese Checkers, Chinese Chess, Chinese Dark Chess, Connect6, Dots and Boxes, Draughts, EinStein Würfelt Nicht, Go $9 \times 9$, Gomoku (Outer-Open), Hex $11 \times 11$, Hex $13 \times 13$, Mahjong, NoGo, Nonogram, Othello $8 \times 8$, Othello $10 \times 10$, Othello $16 \times 16$, Shogi $5 \times 5$, Shogi (Dice), Shogi (Kyoto), Shogi (Mini), Surakarta |
| 2020 | 23 | Online | 65 | 21 | Amazons, Breakthrough, Chinese Checkers, Chinese Dark Chess, Clobber, Connect6, Dots and Boxes, Draughts, EinStein Würfelt Nicht, Go $9 \times 9$, Gomoku (Outer Open), Havannah, Hex $13 \times 13$, Honeymoon Bridge, Mahjong, Nonogram, Othello $8 \times 8$, Othello $10 \times 10$, Shogi (Mini), Surakarta |
| 2021 | 24 | Online | 60 | 22 | Amazons, Brazilian Draughts, Breakthrough, Canadian Draughts, Chinese Chess, Chinese Dark Chess, Connect6, Draughts, EinStein Würfelt Nicht, Go $9 \times 9$, Gomoku (Outer-Open), Havannah $8 \times 8$, Havannah $10 \times 10$, Hex $11 \times 11$, Нex $13 \times 13$, Hex $19 \times 19$, Mahjong, Nonogram, Othello $8 \times 8$, Shogi (Mini), Surakarta, Sylver Coinage |


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