Call for Papers

Special Issue on Computer Chess Tournaments: The 50-Year Experiment

Special issue editor: Jonathan Schaeffer[1]

From August 31 to September 2, 1970, six computer programs competed in a computers-only chess tournament. The spectacle was held in New York City, as part of the Association for Computing Machinery's (ACM) 25th National Conference. The response from participants and the media was tremendous, leading to 25 years of ACM sponsorship. These events were the catalyst for the rapid progress in computer chess strength, culminating in the 1996 and 1997 exhibition matches between World Chess Champion Garry Kasparov and IBM's chess machine DEEP BLUE.

Even though today's top chess programs have super-human playing strength, computer chess tournaments continue to this day. The 2019 World Championship took place in Macau in August, 2019 (as part of the IJCAI conference). *These 50 years of competitions represent the longest ongoing experiment in the history of computer science.*

Being first, the computer chess events were the inspiration for the plethora of computer competitions the have happened subsequently across the entire field of computer science. From Computer Olympiads (games), to the Loebner Prize (Turing Test), to DARPA Grand Challenges (self-driving cars), computer science research has been motivated by and accelerated through friendly (and not-so-friendly) contests.

This special issue on *Computer Chess Tournaments: The 50-Year Experiment* marks a broadening of scope for the ICGA Journal. As well as including papers that provide scientific analysis and insights, this special issue welcomes papers that recount the history and experiences of the early years of computer chess competitions. Since the ICGA has played an important role in this ongoing experiment – initially as the ICCA, the International Computer Chess Association – we have a responsibility to assess the scientific benefits and preserve the historic record of this milestone in the history of computer chess, artificial intelligence, and computer science.

Topics for this special issue include but are not limited to:

- First-hand accounts of early computer chess tournaments.
- Understanding how computer chess tournaments influenced competitions in other disciplines.
- Analysis of trends from the competitions.
- Data analysis of the competitions (e.g., program speed, ratings, machine capabilities, memory size).
- Lessons learned from the competitions.
- Understanding non-scientific contributions from the competitions (e.g., media impact, public awareness, education).

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- Documenting historic artifacts, including source code, papers, pictures, first-hand accounts, etc.

Authors should follow standard *ICGA Journal* style and identify their papers for this special issue. Submissions for full articles should be 8 to 12 pages long. Short notes of 3 to 6 pages are also invited.

- **Deadline for submissions:** March 1, 2020
- **Notification of acceptance:** May 1, 2020
- **Final copy due:** July 1, 2020
- **Publication:** Volume 42, Number 3/4, 2020 (September/December 2020)