

## Editorial

I-Chen Wu

*Department of Computer Science, National Chiao Tung University, Taiwan*

*E-mail: [icwu@cs.nctu.edu.tw](mailto:icwu@cs.nctu.edu.tw)*

The annual ICGA events have become one of the most important activities for computer game researchers and developers. This year (2018), the events were held in Taiwan and in Sweden. More specifically, the Tenth International Conference on Computers and Games (CG 2018) and the 21st Computer Olympiad took place in New Taipei City, Taiwan during July 7–13. The 24th World Computer Chess Championship (WCCC 2018), as well as the 8th World Chess Software Championship (WCSC 2018) and the 2018 World Computer Speed Chess Championship (WSCC 2018), took place in Stockholm, Sweden during July 13–19. The chess events were held alongside the 27th International Joint Conference on Artificial Intelligence and the 23rd European Conference on Artificial Intelligence (IJCAI-ECAI-18). We are pleased to see the ICGA events being associated with such a top conference.

In this issue, we include five reports related to the ICGA 2018 events. The first is the daily report on CG 2018. The second to the fourth reports consist of the results of WCCC 2018, WCSC 2018, and WSCC 2018 respectively. The fifth is from Frank Schneider, who participated the chess events in Stockholm and would like to share his perspective on the events. In addition, I would like to thank Jaap van den Herik for his excellent keynote speech in CG 2018, and elaborating the contents into a review article in this issue. The article titled *Computer chess: From idea to DeepMind* gives a thorough review on the development of computer chess. With the success of DeepMind's AlphaZero algorithm, Jaap expects the next milestone for chess to be determining the theoretical value of chess itself.

In addition to the reports and the review article, we are trying for the first time to include the conference proceedings of CG 2018 into the ICGA Journal. The proceedings are separated into two issues, i.e., this issue (September 2018) and the coming issue (December 2018). Nine oral presentation papers in the first day of CG 2018 (July 9) and a poster paper are included in this issue. The poster paper, by Xiali Li *et al.*, is titled *Strategies Research based on Chess Shape for Tibetan JIU Computer Game*. All eleven of the remaining oral presentation papers in the second day (July 10) will be include in the next coming issue.

Two contributions in this issue are both extensions of conference papers. The first contribution, by Jos W.H.M. Uiterwijk, is extended from a work published in the Fifteenth International Conference on Advances in Computer Games (ACG 2017). In this work, a new strategy called *Set Matching* is presented to prove positions in  $k$ -in-a-Row games as draws. Several interesting patterns, as well as both 8-in-a-Row and 9-in-a-Row on infinite boards, can be proven to be draws by the proposed strategy.

The second contribution, by Ching-Nung Lin *et al.*, is extended from a work presented in CG 2018. Since we already include this extended version, the original version by Yen *et al.* is excluded from the conference proceedings. In this work, a simplified version of Go called Block Go is studied. They

1 use deep neural networks and Monte-Carlo tree search in their program called ILEP, which was the 1  
2 winner of the Block Go tournament in the 20th Computer Olympiad in 2017. 2

3 In addition, we also include two reports on the Top Chess Engine Championship (TCEC). The first is 3  
4 by Nelson Hernandez, who provides valuable insight into how and why at TCEC, the convention is to 4  
5 pit chess engines against each other with specific opening positions. The second, authored jointly by 5  
6 Guy Haworth and Nelson Hernandez, gives a detailed account of TCEC11, which took place starting 6  
7 on January 3rd, 2018. 7  
8

9 I-Chen Wu 9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48

UNCORRECTED PROOF