RULES FOR THE 2022 WORLD COMPUTER CHESS CHAMPIONSHIPS

Vienna, July 23ᵗʰ-29ᵗʰ, 2022

The Board of ICGA

This year the ICGA's three World Computer Chess Championship tournaments for computer programs will take place in Vienna, Austria during the period July 23ᵗʰ-29ᵗʰ 2022. The events will be held alongside the annual IJCAI artificial intelligence conference (https://ijcai-22.org). In addition, the ICGA's Computer Olympiad will be taking place online during this period (https://icga.org/?page_id=3468).

The three tournaments are the World Computer Chess Championship (WCCC), the World Chess Software Championship (WCSC), and the World Computer Chess Speed Championship (games interspersed during the whole period). All entries must be "original" programs in accordance with Tournament Rule 2 below. The exact playing dates will be communicated when the number of participants is known. This allows us to be able to schedule the WCSC so that it is held over a two-day period.

We are appreciative of the support from IJCAI (International Joint Conference on Artificial Intelligence). The electronic chess boards and clocks used will be sponsored by Digital Game Technology (DGT).

Here we provide the rules and other information on all three world championships.

Entry forms are available at https://icga.org/?page_id=121.

2022 WORLD COMPUTER CHESS CHAMPIONSHIP (WCCC)

EVENT RULES

1. The 2022 World Computer Chess Championship is the 26th in a series of World Computer Chess Championships (starting in 1974). The rules for the event are given below.

2. The tournament format will be all-play-all in case there are 8 or less participants. If there are more than 8 participants, the tournament will be a 7-round Swiss.

3. The winner of the tournament will be awarded (1) a replica of the Shannon Trophy; and (2) the title of 2022 World Computer Chess Champion. The original of the Shannon Trophy is kept permanently at ICGA headquarters in the Netherlands.

4. Unless otherwise specified, the rules of play are identical to the latest release of the FIDE Laws of Chess. Regarding claiming a draw based on threefold repetition or the 50-move rule, the computer (program) must make the claim. If any rule concerns arise, the Tournament Director has the right to make the final decision (with due respect to the Committee of Appeal).

5. Each game is played on a chessboard with a chess clock provided by the Tournament Committee.

6. At the end of each game both competitors are required if requested to send in a game listing to the Tournament Director in electronic (PGN) form.

7. The Tournament Director will be Jan Krabbenbos. He has the power to designate assistants with the appropriate power to decide in cases of dispute.

8. In the event of any rule disputes, or changes necessitated by circumstances at the time, the Tournament Director's decision shall be final (with due respect to the Committee of Appeal).

9. The members of the Committee of Appeal will be agreed upon during the participants' meeting. Jonathan Schaeffer will be the chairman.

10. The entry fee for the 26th WCCC is €50. In addition, at least one member of each team must be a 2022 ICGA member (on-line membership fee €20).

The acceptance or rejection of an entry will be determined by the ICGA President in consultation with the Tournament Director on June 15th, 2022. Applicants who apply to register on or after June 15th will be notified as soon as possible regarding the acceptance or otherwise of their application. Any entry received on or after June 15th, 2022, will be subject to a penalty, doubling the €50 entry fee.

TOURNAMENT RULES

1. Each entry is a computing system and one or more humans who programmed it. In the computer system there is no restriction on the hardware. At least one of the program developers should attend the WCCC to operate the program, otherwise (i.e., for operators who are not developers of the program they are operating) the entry fee for the program is doubled.

2. Each program must be the *original* work of the entering developers, possibly with the inclusion of game playing code and/or data from other sources for which the entering developers have a legal right of use. Developers whose code is derived from or includes (1) game-playing code; and/or (2) data written by or obtained from others, must name (a) all the other developers of whom they are aware; and (b) the source of such code and/or data, in their tournament registration details.

    Programs which are discovered to be undeclared derivatives of others may be designated invalid by the Tournament Director if he is convinced, after seeking advice if he feels that to be necessary, that the closeness of derivation is of such a level as to constitute unfair competition. A listing and an executable version of all game-related code and data running on the system must be available on demand to the Tournament Director prior to the start of and during the tournament. The Tournament Director has the right to submit the executable version of a program for testing for similarity with other known programs, and/or to submit the listing to an expert or experts of his choosing for examination, also to determine similarity. Under all circumstances the Tournament Director will take all reasonable steps to ensure that any such listing and/or executable are treated as being strictly confidential.

    The entering developers must keep a copy of the source code and data of their entry until at least one year following the date of conclusion of the tournament. This requirement is needed for entries to be able to respond accurately to any questions about the source code that might be raised after the event by the Tournament Director.

    In case you are using neural networks in any form, we request participants to inform the organisation about the way the neural networks are being used in the program.

3. Participants are required to attend an organisational meeting prior to the start of the tournament. Operational rules (such as members of the Committee of Appeal) will be finalized at that meeting.

4. The format of the tournament follows from rule 2 of the Event Rules (WCCC) above. The rate of play will generally be determined by the Tournament Director according to the number of programs entered and any other relevant factors. The 26th World Computer-Chess Championship (WCCC) is assumed to be an all-play-all tournament in which the rate of play will be all moves in 1 hour 45 minutes plus an increment of 15 seconds per move. The increment starts at move 1, i.e., the clock should be used during opening-book play.

5. An operator may ask the Tournament Director to stop the clocks at most twice during a game because of hardware problems or network problems. The operator can ask the Tournament Director for permission to restart the program. When restarting after a failure of any kind, the operator must reset all parameters as closely as possible to their values at the time the game was interrupted. Play must resume after at most a fifteen-minute delay. If operators using a remote computer can clearly establish that the network problems are not in their own computing system, but in the communication network, the Tournament Director can permit additional delay.

6. An operator error made when starting a game or in the middle of a game can be corrected only with the approval of the Tournament Director. If an operator enters an

incorrect move, the Tournament Director must be notified immediately. Both clocks will be stopped. The game must then be backed up to where the error occurred. Clocks will be corrected and the settings at the time when the error occurred will be reinstated using whatever information is available. Both sides may then adjust their program parameters with the approval of the Tournament Director. The Tournament Director may allow certain program parameters to be changed.

7. All monitors must be positioned so that the operator's activities are clearly visible to the opponent. An operator may only: [a] enter moves, [b] respond to a request from the computer for clock information, and [c] under supervision of the (assistant) Tournament Director synchronize the computer clock to the normal chess clock. Misuse of this rule will result in a penalty decided by the Tournament Director. If an operator needs to enter other information, it must be approved ahead of time by the Tournament Director. The operator may not query the system to see if it is alive without the permission of the Tournament Director.

8. A team must receive permission from the Tournament Director to change from one computing system to another.

9. Tie-breaking:

   (a) If precisely two participants are tied for first place, two play-off games of 30 minutes plus 15 seconds per move per side are to be played. Should that match be drawn, then another two play-off games are to be played as given in the table below until there is a winner.

   (b) If more than two participants have an equal number of points, a tie-ranking order is defined as follows. The dominant ranking is by the Sonnenborn-Berger scores. The two participants ranked most highly by the tie-ranking order will then play off as in (a) above. An analogous tie-breaking procedure applies for establishing the second place and, if necessary, the third place. If the Sonnenborn-Berger scores do not result in a proper tie-break ranking for the first place, the tournament director will decide on the format of the play-off.

Play-off Match	Time control
1 (2 games)	30 minutes plus 15 seconds per move
2 (2 games)	15 minutes plus 15 seconds per move
3 (2 games)	5 minutes plus 5 seconds per move
4 (1 game)	Armageddon, white 6 minutes plus 10 seconds per move, black 3 minutes plus 5 seconds per move

10. For the play-off procedure for the first place as given in rule 9, the colour assignment is drawn by lots before each of the matches played.

2022 WORLD CHESS SOFTWARE CHAMPIONSHIP (WCSC)

EVENT RULES

1. The 2022 World Chess Software Championship is the 10th in a series of World Chess Software Championships. The rules for the event are given below.

2. If the number of participants is four or less a double all-play-all tournament will be played. If there are 5 to 8 participants, the tournament will be an all-play-all format. If the number of participants is more than 8 the tournament will be a 7-round Swiss.

3. The winner of the tournament will be awarded (1) a trophy; and (2) the title of 2022 World Chess Software Champion.

4-9. Identical to the Event Rules of the WCCC.

10. The entry fee for the WCSC is €50 if it is the participant's only tournament. If the participant is also in the WCCC then their entry fee for the WCSC will be €25. In addition, at least one member of each team must be a 2022 ICGA member (on-line membership fee €20).

The acceptance or rejection of an entry will be determined by the ICGA President in consultation with the Tournament Director on June 15th, 2022. Notification of acceptance will be given as soon as possible, as per the conditions for the WCCC.

TOURNAMENT RULES

The tournament rules for this championship are the same as for the WCCC with due substitutions and except for the following.

Rule 4 should be read as follows.

The format of the tournament is assumed to be an all-play-all tournament (depending on the number of participants, see rule 2 of the Event Rules WCSC), in which the rate of play will be all moves in 45 minutes plus an increment of 15 seconds per move. The increment starts at move 1, i.e., the clock should be used during opening-book play.

Rule 9 should be read as follows.

Tie-breaking:

(a) If precisely two participants are tied for first place, two play-off games of 20 minutes plus an increment of 15 seconds per move are to be played Should that match be drawn, then another two play-off games are to be played as given in the table below until there is a winner.

(b) If more than two participants have an equal number of points, a tie-ranking order is defined as follows. The dominant ranking is by the Sonnenborn-Berger scores. The two participants ranked most highly by the tie-ranking order will then play off as in (a) above. An analogous tie-breaking procedure applies for establishing the second place and, if necessary, the third place. If the Sonnenborn-Berger scores do not result in a proper tie-

break ranking for the first place, the tournament director will decide on the format of the play-off.

Play-off Match	Time control
1 (2 games)	20 minutes plus 15 seconds per move
2 (2 games)	10 minutes plus 10 seconds per move
3 (2 games)	5 minutes plus 5 seconds per move
4 (1 game)	Armageddon, white 6 minutes plus 10 seconds per move, black 3 minutes plus 5 seconds per move

2022 WORLD COMPUTER SPEED CHESS CHAMPIONSHIP

The tournament rules for this championship are the same as for the WCCC with due substitutions and except for the following.

1. The tournament will be a double round all-play-all tournament if the number of participants is 6 or less.
2. The time limit for the 2020 World Computer Speed Chess Championship will be 5 minutes + 5 seconds per move added per program per game.
3. An operator error (e.g., playing an illegal move) immediately leads to losing the game after the clock has been pressed.
4. Hardware problems and network problems are to be remedied in the allotted time frame.
5. The entry fee for the Speed Chess Championship is free provided that the program participates in either the WCCC or the WCSC.

Moreover, the rules 4, 5, 6, 7, 8, and 10 of the WCCC apply.

Rule 9 should be read as follows.

Tie-breaking:

(a) If precisely two participants are tied for first place, two play-off games of 5 minutes plus an increment of 5 seconds per move are to be played. Should that match be drawn, then another two play-off games are to be played as given in the table below until there is a winner.

(b) If more than two participants have an equal number of points, a tie-ranking order is defined as follows. The dominant ranking is by the Sonnenborn-Berger scores. The two participants ranked most highly by the tie-ranking order will then play off as in (a) above. An analogous tie-breaking procedure applies for establishing the second place and, if necessary, the third place. If the Sonnenborn-Berger scores do not result in a proper tie-break ranking for the first place, the tournament director will decide on the format of the play-off.

Play-off Match	Time control

1 (2 games)	5 minutes plus 5 seconds per move
2 (2 games)	5 minutes plus 5 seconds per move
3 (1 game)	Armageddon, white 6 minutes plus 10 seconds per move, black 3 minutes plus 5 seconds per move