
Overall, the book provides a good historical survey of the active computer-chess programs and the matches they played up to 1982. There is an Appendix containing all the games from 1970 to 1981 at the North American Championships [sponsored by the Association for Computing Machinery (ACM)], and also a handy glossary of computer-chess terminology.

The book will be of interest to any chess player who wishes to become more computer-literate.

LITERATURE RECEIVED

COMPUTER CHESS TACTICS AND STRATEGY: A. Szabo, M.Sc. thesis, 1984
University of British Columbia
202-2233 Allison Road
Vancouver V6T 1T7 / CANADA

(Copies may be available from the author at request)

WE QUOTE THE ABSTRACT:

The design for a chess program is presented. The notions of tactics and strategy are used to define complementary ways of understanding any position. An association is made between tactics and brute force tree searching, and strategy and knowledge encoding. It is claimed that knowledge is best applied at the top of the tree as exemplified by TECH's positional presort rather than at the terminal nodes using complex evaluation functions.

The tactics part of the design is implemented by the program TECH3 which is described in terms of refinements to the minimax algorithm. The major refinements are the α - β algorithm, the quiescence search, and the transposition table. TECH3's performance on the problems in Reinfeld (1958) is 270 out of 300 which, modulo machine power, compares favourably with BELLE's. A comparison is also made with the knowledge-based tactics program, PARADISE.

Finally, the technology curve is developed as a tool for measuring the effectiveness of knowledge encoding (or strategy). In this respect NUCHESS is identified as the current best chess program.

MASHINA IGRAET V SHAKHMATY: [A Machine plays chess]
G.M. Adel'son-Vel'skiĭ, V.L. Arlazarov, A.R.
Bitman, M.V. Donskoĭ.
Akademiya Nauk SSSR
(Academy of Sciences of the USSR)

This booklet, comprising 207 pages of information, is a popular, but still closely-reasoned account of how computers play chess as explained to the Russian reader. Its information-packed pages seem astonishingly good buy at 0.75 roubles provided always you can obtain a copy and can read Russian with fair ease.

Chapter titles are:

1. The chess program - theory and practice;
2. A model of chess playing;
3. The struggle for superiority of pieces;
4. The programmers' study of chess;
5. On a converging path;
6. Machine, it is up to you now!

The title of a section in Chapter 4, "When a Machine is Stronger than Man", and the diagrams supplied are so appetizing that an English translation of this 1983 book seems urgently called for, the more so since the booklet was produced under the prestigious imprint of the Soviet Academy of Sciences and quotes Botvinnik at length. Some of its diagrams, moreover, are clearly concerned with famous instances of the endgame of a Queen with a g-Pawn vs. a Queen.



Photo by TF.

PION's pawns meeting OSTRICH's Newborn, whom they were to defeat under the blessing of Botvinnik's watchful gaze. The game is being watched closely by Ben Mittman and an international referee, who was not involved (New York, 1983).