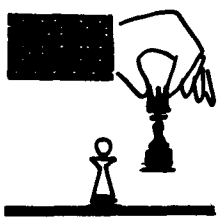
CHESS 11

FOURTH UNITED STATES COMPUTER CHESS CHAMPIONSHIP
from
ACM-73 NEWS RELEASE 11a

A record field of between twelve and sixteen teams will participate in the Fourth United States Computer Chess Championship. The tournament will be held as a special Event at the ACM's Annual Conference in Atlanta, Georgia. The first two rounds of play will be held on Sunday, August 26, the third round on the evening of August 27, and the final round on the evening of August 28.

Returning to defend their title is the team of Larry Atkin, Keith Gorlen, and David Slate. Their program has won the previous three tournaments without the loss of a game. Their program, called Chess 4.0, uses a CDC 6400 on the Northwestern University campus. Also entered are programs written by Jim Gillogly (PDP-10), George Arnold and Monty Newborn (Data General Supernova), Dennis Cooper and Ed Kozdrowicki (UNIVAC 1108), Ken Thompson (PDP-11/45), and Al Zobrist, Fred Carlson, and Charles Kalme (IBM 370/155). Many of the programs were developed at America's leading universities; included are Georgia Tech., MIT, Carnegie-Mellon, USC, U. Cal-Berkeley, Dartmouth, Texas A&M, and Columbia.

David Levy, an international Chess Master from England, will serve as tournament director. A panel discussion, moderated by Ben Mittman, is also scheduled during the ACM's conference. The tournament is being sponsored in part by Control Data Corporation, International Business Machine Corporation, Sperry-UNIVAC, and National Data Industries.



RECENT PAPERS ON CHESS 11c

SKILL IN CHESS
by
Herbert A. Simon and William G. Chase
Psychology Department, Carnegie-Mellon University
Pittsburgh, Pennsylvania
In AMERICAN SCIENTIST, Vol. 61, No. 4, pp. 394-403
July-August 1973

Experiments with chess-playing tasks and computer simulation of skilled performance throw light on some human perceptual and memory processes.

COKO: THE COOPER-KOZ CHESS PROGRAM
by
Edward W. Kozdrowicki
University of California at Davis
and
Dennis W. Cooper
Bell Telephone Laboratories
Whippany, New Jersey
Communications of the ACM, Vol, 16, No. 7, pp. 411-427
July 1973

COKO III is a chess player written entirely in Fortran. On the IBM 360-65, COKO III plays a minimal chess game at the rate of .2 sec cpu time per move, with a level close to lower chess club play. A selective tree searching procedure controlled by tactical chess logistics allows a deployment of multiple minimal game calculations to achieve some optimal move selection. The tree searching algorithms are the heart of COKO's effectiveness, yet they are conceptualy simple. In addition, an interesting phenomenon called a tree searching catastrophe has plagued COKO's entire development just as it troubles a human player. Standard exponential growth is curbed to a large extent by the definition and trimming of the Fischer set. A clear distinction between tree pruning and selective tree searching is also made. Representation of the chess environment is described along with a strategical preanalysis procedure that maps the Lasker regions. Specific chess algorithms are described which could be used as a command structure by anyone desiring to do some chess program experimentation. A comparison is made of some mysterious actions of human players and COKO III.