# LITERATURE RECEIVED

# PARALLEL GAME-TREE SEARCH WITH CONSPIRACY NUMBERS

*Maarten van der Meulen*

M.Sc. Thesis
Department of Mathematics and Computer Science
Free University, Amsterdam
The Netherlands
42 pages

We paraphrase the abstract:

"Conspiracy-number search (cn search) is an incremental min-max tree-growth algorithm. Experiments suggest that SSS*, a game-tree search algorithm superior to $\alpha-\beta$, is a special case of cn search. Also, we experimented with 4 parallel cn-search algorithms on a shared-memory MIMD machine: A) a parallel successor evaluation resulting in a speedup of 4.5 on 10 processors; B) dividing subtrees among slave processors achieving a speedup of 3.4; C) a combination of the previous two algorithms with a speedup of 6.3; D) simultaneous search of all processors in the stored game tree yielding a speedup of 4.6. Algorithm A suffers from the costly tree-traversal time in cn search. Algorithm B has a large synchronization overhead. Algorithm C reduces the disadvantages of both algorithms A and B. Algorithm D is degraded by the narrow trees grown by cn search, so processors mutually interfere excessively in the costly updating of nodes. Finally, we tested the strengths of the algorithms in a chess program."

# INFORMATION FOR CONTRIBUTORS

Contributors may be interested to know that the *ICCA Journal*, as of Vol. 10, No. 1, is a source for the Institute for Scientific Information® (ISI) for inclusion in the CompuMath Citation Index® (CMCI®), the Automatic Subject Citation Alert (ASCA®) and SCISEARCH®, ISI's on-line database. The Journal is also a source for the Information Company R.R. Bowker for inclusion in the International Serials Database which is a source for Ulrich's International Periodicals Directory and the DIALOG on-line service.

Being included in the CMCI®, the *ICCA Journal* is one of the 400 Journals in mathematics, computer science, statistics, operations research, and related disciplines which is abstracted and/or indexed and/or available as tearsheets; this means that the Journal now is accessible in (on-line) database form.

**Submission of material**

Contributions to the Journal are welcomed in any form, although preferably by E-mail or on a MS-DOS formatted 5.25 inch diskette. In case contributors prepare their manuscripts with high-quality wordprocessors, it should be noticed that text-files in VENTURA, TEX or TROFF format are processable directly by the Editors, thereby alleviating their task considerably.