FIFTH ANNUAL ACM SYMPOSIUM ON THEORY OF COMPUTING

April 30 to May 2, 1973

The Fifth Annual ACM Symposium on Theory of Computing, sponsored by the ACM Special Interest Group on Automata and Computability Theory and cosponsored by the Computer Science Department of the University of Texas, will be held at the

Chariot Inn
7300 North International Highway
Austin, Texas 78752
(512) 452-9371

The motel (which some may remember from the 1967 SWAT meeting) "is very pleasant, with a beautiful swimming pool in the courtyard." Early May temperature in Austin is usually 60-80°F. There have been 110 rooms tentatively reserved for the symposium, but the number of rooms must be guaranteed by April 21, so early registration is advised. A courtesy car from the inn may be summoned by using a special telephone at the Austin Airport.

A welcome party will be held on the evening of April 29, and the registration desk will be open from 6-10 PM that evening. A boat ride on scenic Lake Austin has been arranged for the evening of May 1. The boat ride each way takes about one hour. Cocktails and live entertainment will be provided on the boat. A barbecue dinner will be served at Green Shore on Lake Austin. (This event is included in your registration fee.)

Advance registration fees for the Symposium are

$32 for members of ACM and SIGACT
$35 for members of ACM or SIGACT
$40 for nonmembers
$25 for authors

Registration at the Conference is $5 additional. Students may attend the technical sessions for no charge. The registration fee includes a copy of the Symposium Proceedings, as well as lunch Monday and Tuesday, and dinner Tuesday evening. Additional copies of the Proceedings may be purchased at the Conference for $7 each.

Advance registration should be directed to the local arrangements chairman

Professor Raymond Yeh
Department of Computer Science
University of Texas
Austin, Texas 78752

Professor Yeh can also furnish additional information about the Symposium.

The Program Chairman for the Conference is Alfred V. Aho, and Publicity Chairman is Jeffrey D. Ullman.

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Tentative Program

Monday, April 30, 1973

Session 1: R.L. Constable, Chairman

Word Problems Requiring Exponential Time
A.R. Meyer and L.J. Stockmeyer
MIT

On the Time and Tape Complexity of Languages
H.B. Hunt
Cornell University

Jump PDA's, Deterministic Context-Free Languages, Principal AFDL's and Polynomial Time Recognition
Sheila Greibach
UCLA

An Observation of Time-Storage Trade Off
S.A. Cook
University of Toronto

Elementary Bounds for Presburger Arithmetic
Derek C. Oppen
University of Toronto

Approximation Algorithms for Combinatorial Problems
David S. Johnson
MIT

Session 2: Raymond Strong, Chairman

Towards Mechanical Verification of Properties of Roundoff Error Propagation
Webb C. Miller
IBM

An Unusual Application of Program-Proving
Mitchell Wand
MIT

Fast On-Line Integer Multiplication
M.J. Fischer and L.J. Stockmeyer
MIT

Duality in Determining the Complexity of Noncommutative Matrix Multiplication
J.E. Hopcroft and J. Musinski
Cornell University

On the Optimal Evaluation of a Set of Bilinear Forms
R.W. Brockett and D. Dobkin
Harvard University

Texting Flow Graph Reducibility
Robert Tarjan
Cornell University

Tuesday, May 1, 1973

Session 3: Allan Borodin, Chairman

Type Two Computational Complexity
Robert L. Constable
Cornell University

Polynomial Time Reducibility
Richard E. Ladner
University of Washington

Sets that Don't Help
N. Lunch, A. Meyer and M. Fischer
MIT

Analysis of Algorithms, A Case Study: Determinants of Polynomials
S.C. Johnson and W.M. Gentleman
University of Waterloo

Fast Computation of GCD's
Robert Moenck
University of Toronto

The Computational Complexity of Algebraic Numbers
H.T. Kung
Carnegie-Mellon University

Session 4: M.A. Harrison, Chairman

Attributed Translations
P.M. Lewis, D.J. Rosenkrantz and R.E. Stearns
GE Research and Development Center

The Lane Tracing Algorithm for Constructing LR(k) Parsers
David Pager
University of Hawaii

Complete Register Allocation Problems
Ravi Sethi
Pennsylvania State University

Context-Free Error Correction by Evaluation of Algebraic Power Series
Tim Teitelbaum
Carnegie-Mellon University

Tree Transductions and Families of Tree Languages
Brenda S. Baker
Harvard University

Neighborhood Search Algorithms for Finding Optimal Traveling Salesman Tours Must be Inefficient
P. Weiner, S.L. Savage and A. Bagchi
Yale University

Wednesday, May 2, 1973

Session 5: Robert Floyd, Chairman

From Algebras to Programming Languages
Eric G. Wagner
IBM Research Center

Correct and Optimal Implementations of Recursion in a Simple Programming Language
Jean Vuillemin
IRIA

Analysis of Structured Programs
S.R. Kosaraju
Johns Hopkins University

On Finding Lowest Common Ancestors in Trees
A.V. Aho, J.E. Hopcroft and J.D. Ullman
Bell Laboratories, Cornell University and Princeton University

Classes of Semigroups and Classes of Sets
Samuel Eilenberg
Columbia University

Computing Permutations with Double-Ended Queues, Parallel Stacks, And Parallel Queues
Vaughan Pratt
MIT