



Recollections of Stanford CS 1969--1973

Ronald L. Rivest





CS 110

Bob Floyd

ALGOL W (REVISED)

LANGUAGE DESCRIPTION	pp. 1 to 65
ERROR MESSAGES	pp. 66 to 75
NUMBER REPRESENTATION	pp. 76 to 89
DECK SET-UP	pp. 90 to 91
GRAMMATICAL DESCRIPTION	pp. 92 to 103



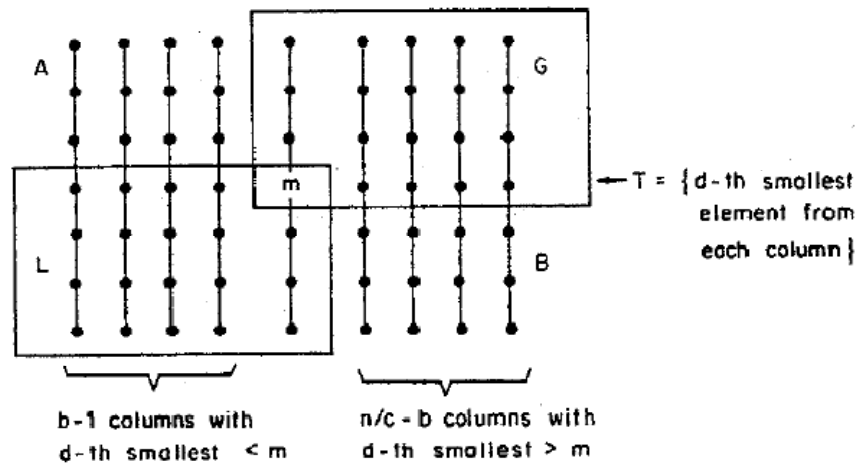
COMPUTER SCIENCE DEPARTMENT
STANFORD UNIVERSITY
SEPTEMBER 1969



Algorithms
Programming; Algol W
Advice...

Time Bounds for Selection*

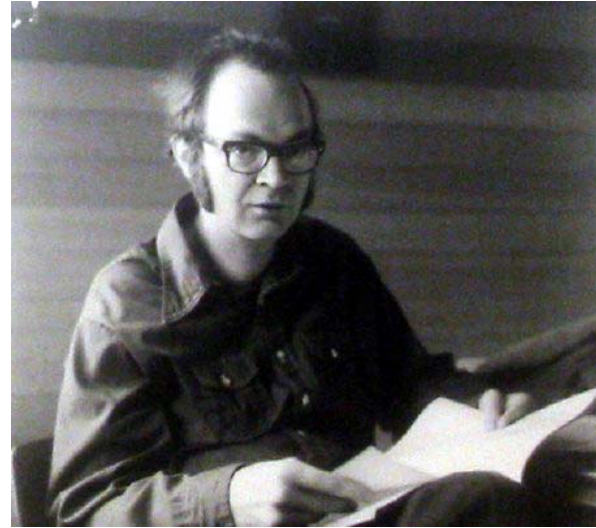
MANUEL BLUM, ROBERT W. FLOYD, VAUGHAN PRATT,
RONALD L. RIVEST, AND ROBERT E. TARJAN



4th STOC (1972)

$$P(n) \leq \frac{66n}{21} + P\left(\frac{n}{21}\right) + n + P\left(\frac{31n}{42}\right)$$

Donald E. Knuth



Optimal binary
search trees

O-notation

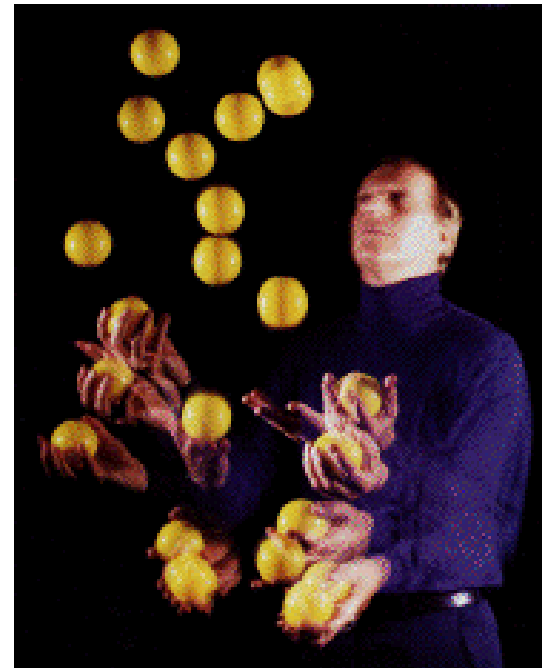
The Art of Computer Programming...

Bibliography on Sorting joint paper

Phyllis Winkler

Knuth's Seminar

NP-Completeness;
Traveling Salesman
Problem



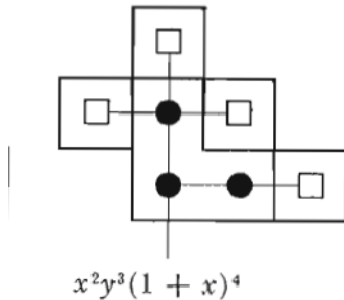
Dick Karp

Ron Graham

David Klarner



Polyominoes



$$\lim_{n \rightarrow \infty} (t(n))^{1/n} = \theta \leq 4.649551.$$

Wooden puzzles

(3)1x1x3 + (29)1x2x2
or 25 Y's into 5x5x5 cube



Vasek Chvatal

Combinatorics

Perfect Graph Conjecture

Linear Programming

Mexico





Other CS faculty...

- Zohar Manna
- John McCarthy
- John Herriott
- Jerry Feldman
- Gene Golub
- Ed Feigenbaum
- George Forsythe

Computing

- Punch cards...
- Wylbur...
- SAIL...



Operating
Systems

B. Randell
Editor

WYLBUR: An Interactive Text Editing and Remote Job Entry System

Roger Fajman and John Borgelt
Stanford University Computation Center





Fellow students...

- Vaughan Pratt
- Leo Guibas
- Bob Tarjan
- Dick Sites
- Doug Brotz
- Mike Fredman
- Giles Kahn
- Jean Vuillemin
- Malcolm Newey
- Denny Brown
- Barbara Ryder
- ...

SAIL Cart Project

- Bruce Baumgart
- "Find the road"
- PDP-10 assembler
- midnight hours...
- (draft deferment;
for a while...)





Teaching

- TA positions
- Summer Algol W course
 - Notes from Bob Floyd
 - Special TV room



California





Gail



Thesis

ANALYSIS OF ASSOCIATIVE RETRIEVAL ALGORITHMS

A DISSERTATION

SUBMITTED TO THE DEPARTMENT OF COMPUTER SCIENCE

AND THE COMMITTEE ON GRADUATE STUDIES

OF STANFORD UNIVERSITY

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

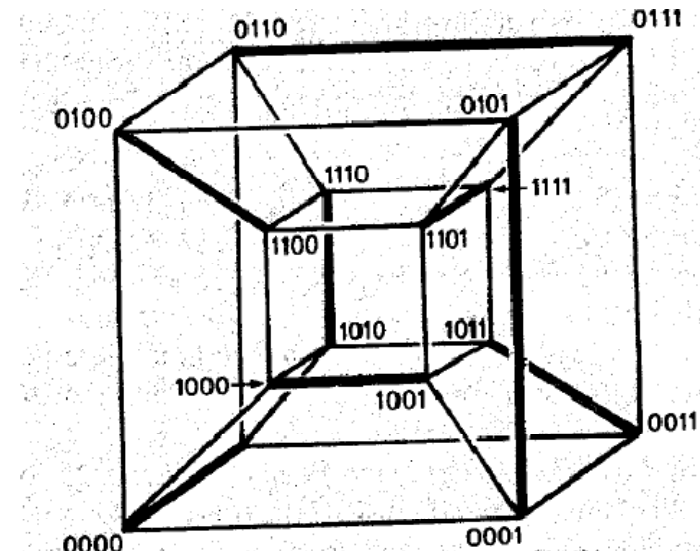


FIG. 1. A perfect matching on $\{0, 1\}^4$

Privacy concerns... (shades of Google!)

Economics

- \$300/month NSF Fellowship
- \$125/month rent in Escodido Village
- Gas was 28 cents/gallon
- Food stamps (!)



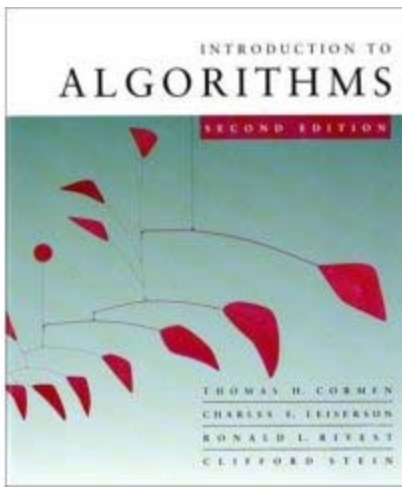
Politics

- Unpopular war...
- Unpopular president...
- The draft...
- George McGovern 1972 election
- "Computer security"....



Then on to...

- France
- MIT
- RSA
- Kids
- Textbook...





Thanks!