Subject Index 1962-1967

APPLICATIONS AND EXPERIMENTS

Laboratory data-taking system
Algorithm for gear-train problem
Concordance generator
Algorithms for traffic-signal control
Computer-aided linkage analysis
Automatic dictionary and machine-readable
text

Cole, 2, Sept.-Dec., 240 ApSimon, 3, 1, 95 Scharfenberg, 3, 1, 104 Yardeni, 4, 2, 148 Bitonti, 4, 3, 200

Galli, 6, 3, 192

COMPILERS AND ASSEMBLERS

Assembly program and language FORTRAN compiler COBOL compiler 1401 FORTRAN compiler Macro language design for SYSTEM/360

Talmadge, 2, June, 162 Larner, 2, Sept.—Dec., 311 Dorrance, 2, Sept.—Dec., 322 Haines, 4, 1, 73 Freeman, 5, 2, 62

COMPUTER SYSTEMS AND ANALYSIS

Computer for language interpretation

SYSTEM/360

I Logical structure

II Implementations

Stevens, 3, 2, 119

Stevens, 3, 2, 136

Amdahl, 3, 2, 144

Padegs, 3, 2, 165

Pormal description

Floating-point addition

Channel interference

Design characteristics of the 9020 System

Microprogram control in SYSTEM/360

Meggitt, 3, 1, 68

Blaauw, 3, 2, 119

Blaauw, 3, 2, 181

Falkoff, 3, 2, 198

Sweeney, 4, 1, 31

Chang, 4, 2, 162

Blakeney, 6, 2, 80

Tucker, 6, 4, 222

LANGUAGES

Assembly program and language Macro language design for system/360 SIMSCRIPT Talmadge, 2, June, 162 Freeman, 5, 2, 62 Dimsdale, 3, 1, 57

MANAGEMENT INFORMATION SYSTEMS

Economic evaluation of management information systems Construction of minimal project networks Project evaluation and selection

Boyd, 2, March, 2 Dimsdale, 2, March, 24 Dimsdale, 2, Sept.-Dec., 200

MANUFACTURING PLANNING AND CONTROL

Requirements generation Church, 2, Sept.-Dec., 268 Fabrication and assembly operations Baker, 4, 2, 87 Calica, 4, 2, 94 Control system Long-range planning III Matrix methods for configuration data Loewner, 4, 2, 105 Production planning (linear Dzielinski, **4**, 2, 122 Calica, **4**, 3, 225 Gorenstein, **4**, 3, 241 programming) Production order sequencing Sequencing control VII Production planning (adaptive control) Shapiro, 4, 3, 250

MATHEMATICAL METHODS AND PROGRAMS

Trim problem
Construction of minimal project networks
Minimization of transportation costs
Statistical classification techniques
Algorithm for gear-train problem
Interpretive program for matrix arithmetic
Computer control of digital plotter
Matrix methods for configuration data
Discrete dynamic programming algorithms
Computation of e* with large tables
Statistical analysis of series of events
Merge-sort analysis by matrix techniques
Kernel analysis of elliptical partial
differential equations
Calculation of critical paths for large
networks

Gomory, 1, Sept., 77 Dimsdale, 2, March, 24 Maranzana, 2, June, 129 Kossack, 2, June, 136 ApSimon, 3, 1, 95 Branin, 4, 1, 2 Bresenham, 4, 1, 25 Loewner, 4, 2, 105 Held, 4, 2, 136 Spielberg, 5, 2, 102 Lewis, 5, 4, 202 Radke, 5, 4, 226

Hahn, 5, 4, 248

Montalbano, 6, 3, 163

MICROPROGRAMMING

Computer for language interpretation Microprogram control in system/360 Meggitt, 3, 1, 68 Tucker, 6, 4, 222

MULTIPROCESSING SYSTEMS

Multiprocessing approach to large computer system Directly coupled multiprocessing system Reliability of polymorphic systems Application-oriented multiprocessing system (9020)

Baldwin, 1, Sept., 64 Smith, 2, Sept.-Dec., 218 Welch, 4, 1, 43

(9020)
I Introduction
II Design characteristics
III Control program
IV Error analysis program
V Diagnostic monitor
VI Intended application programs

Keeley, 6, 2, 78 Blakeney, 6, 2, 80 Devereaux, 6, 2, 95 Lancto, 6, 2, 103 Suda, 6, 2, 116 Seward, 6, 2, 124

OPERATING SYSTEMS

Integrated programming and operating system I System considerations and the

monitor
II Assembly program and language
III Expanded function of the loader
IV FORTRAN compiler
V COBOL compiler
VI Implementation on the 7040/44
Functional structure of 0s/360
I Introductory survey
II Job and task management
III Data management
Macro language design for system/360
DOS/360 AND TOS/360
Function and design
Data management concepts
Internal data management for DOS/360
Gemini real-time operating system

Noble, 2, June, 153
Talmadge, 2, June, 162
Hedberg, 2, Sept.—Dec., 298
Larner, 2, Sept.—Dec., 311
Dorrance, 2, Sept.—Dec., 322
White, 3, 1, 79
Mealy, 5, 1, 3
Witt, 5, 1, 12
Clark, 5, 1, 30
Freeman, 5, 2, 62

Bender, 6, 1, 2 Cenfetelli, 6, 1, 22 Ricour, 6, 1, 38 Mueller, 6, 3, 150

PATTERN RECOGNITION

Linear decision functions

Griffin, 2, Sept.-Dec., 248

PROCESS CONTROL

Optimal control of nonlinear processes Laboratory data-taking system

Mugele, 1, Sept., 2 Cole, 2, Sept.-Dec., 240

PROGRAMMING NOTATION AND DOCUMENTATION

Tables, flow charts, and program logic Programming notation in systems design Formal description of SYSTEM/360 Microprogram control in SYSTEM/360 Montalbano, 1, Sept., 51 Iverson, 2, June, 117 Falkoff, 3, 2, 198 Tucker, 6, 4, 222

QUEUING

Technique to control waiting time in a queue Queuing model for a simple case of time sharing

Shapiro, 4, 1, 53 Chang, 5, 2, 115

REAL-TIME SYSTEMS AND ANALYSIS

Programming considerations for the 7750 Recovery for computer switchover Dynamic storage allocation for real-time systems

Laboratory data-taking system

Testing real-time system programs

Testing real-time system programs
Queuing model for time sharing
Real-time systems in perspective
Application-oriented multiprocessing system

(9020)
I Introduction
II Design characteristics
III Control program
IV Error analysis program
V Diagnostic monitor
VI Intended application programs
Gemini real-time operating system

Sternad, 2, March, 57 Nagler, 2, March, 76

Witt, 2, Sept.-Dec., 230 Cole, 2, Sept.-Dec., 240 Ginzberg, 4, 1, 58 Chang, 5, 2, 115 Aron, 6, 1, 49

Keeley, 6, 2, 78 Blakeney, 6, 2, 80 Devereaux, 6, 2, 95 Lancto, 6, 2, 103 Suda, 6, 2, 116 Seward, 6, 2, 124 Mueller, 6, 3, 150

SIMULATION

GPSS—General purpose systems simulator
Systems engineering
Generation of input data
Systems simulation
General purpose digital simulator—applications
I Description of the simulator
II Telephone intercept system
III Urban traffic
IV Integrated steel mill
SIMSCRIPT
GPSS III—Expanded general purpose

Gordon, 1, Sept., 18
Smith, 1, Sept., 33
Yagil, 2, Sept.—Dec., 288
Blake, 3, 1, 14
Efron, 3, 1, 22
Velasco, 3, 1, 35
Blum, 3, 1, 41
Boyd, 3, 1, 51
Dimsdale, 3, 1, 57

simulator
Role of digital simulation in teleprocessing
Two continuous modeling programs

Herscovitch, 4, 3, 174 Seaman, 5, 3, 175 Brennan, 6, 4, 242

SORTING AND MERGING

Merge-sort analysis by matrix technique

Radke, 5, 4, 226

STATISTICAL METHODS AND PROGRAMS

Statistical classification techniques Statistical analysis of series of events Kossack, 2, June, 136 Lewis, 5, 4, 202

STORAGE ALLOCATION AND ADDRESSING

File organization and addressing
Random addressing
Intrinsically addressed system
Dynamic storage allocation for real-time
system
Expanded function of the loader
Storage requirements for data exchange
Dynamic program relocation
Replacement algorithms for virtual-storage
Analysis of auxiliary storage activity

Buchholz, 2, June, 86 Heising, 2, June, 112 Griffith, 2, Sept.-Dec., 182

Witt, 2, Sept.—Dec., 230 Hedberg, 2, Sept.—Dec., 298 Delgalvis, 3, 1, 2 McGee, 4, 3, 184 Belady, 5, 2, 78 Seaman, 5, 3, 158

SYSTEM DESIGN AND EVALUATION

Economic evaluation of management information systems
Sequential data processing design
Project evaluation and selection
Merge-sort analysis by matrix techniques
Kernel analysis of elliptic partial differential equations
Evaluation of redundancy in a parallel algorithm

Boyd, 2, March, 2 Turnburke, 2, March, 37 Dimsdale, 2, Sept.-Dec., 200 Radke, 5, 4, 226

Hahn, 5, 4, 248

Shedler, 6, 3, 142

SYSTEM TECHNIQUES

Tables, flow charts, and program logic
Modifying 1620 ADD table
Programming for the 7750
Laboratory data-taking system
Technique to control waiting-time in a queue
Algorithms for traffic-signal control
Kernel analysis of elliptic partial differential
equations

Montalbano, 1, Sept., 51 Gerson, 1, Sept., 82 Sternad, 2, March, 57 Cole, 2, Sept.—Dec., 240 Shapiro, 4, 1, 53 Yardeni, 4, 2, 148

Hahn, 5, 4, 248

TELEPROCESSING

Programming for the 7750
Teleprocessing system design
I Characteristic problems
II Approximating optimal network
III Analysis of request-queued buffer pool

IV Analysis of auxiliary storage activity
V Estimating channel interference

VI Role of digital simulation Conventions for data communication Sternad, 2, March, 57

Margopoulos, 5, 3, 134 Esau, 5, 3, 142 Bricault, 5, 3, 148 Seaman, 5, 3, 158 Gay, 5, 3, 171 Seaman, 5, 3, 175 Eisenbies, 6, 4, 267