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Building Expert Systems Workshop—Sun. # 390 or Mon. # 395
Instructor: John D. McGregor, Dept. of Computer Studies, Murray State U.
Hands-on experience with an expert system development system—knowledge representation—evaluation criteria.

Knowledge-Based Expert Systems—Sun. # 320 or Mon. # 325
Instructors: Lois Boggess and Julia Hodges, Dept. of Computer Science, Mississippi State U.
Concepts and Techniques of AI and Data Base Management Systems (DBMS) as they interact in knowledge-based expert systems.

Architectures for AI Applications—Sun. # 380 or Mon. # 385
Instructor: Benjamin W. Wah, Dept. of Electrical and Computer Engineering, U. of Illinois at Urbana-Champaign.
Computer-design of support systems for AI applications—limitations in current techniques—technologies for implementation.

Natural Language Processing—Sun. # 315
Instructor: Michael Lebowitz, Dept. Computer Science, Columbia U.
Basic methods of Natural Language Processing—syntactic processing—semantic processing—generation techniques—Natural Language Processing generation in practical systems.

Machine Learning—Mon. # 950
Instructor: Michael Lebowitz, Dept. of Comp. Sci., Columbia Univ.
Study of systems that automatically extend their knowledge or improve performance over time—application of learning techniques—intelligent diagnostic and information systems—expert system development.

VLSI Circuit Layout—Sun. # 120 or Mon. # 125
Instructors: T.C. Hu, E. E. and Computer Science Dept. of UC San Diego and M.T. Shing, Computer Science Dept. at UC Santa Barbara.
Review of current literature and algorithms on layout and compacting PLA, Weinberger's Arrays—design of VLSI chips—CAD (computer-aided-design) tools. Attendees are encouraged to submit a problem to the instructors 15 days prior to the conference.

RISC Architecture—Sun. # 140 or Mon. # 145
Instructor: V.M. Milutinovic, School of Elec. Engr., Purdue U.
Reduced Instruction Set Computer (RISC) processors and related topics—advantages and drawbacks—case studies included (UC Berkeley RISC, Stanford MIPS, Ridge, Pyramid, etc.).

The UNIX Operating System—Sun. # 580
Instructor: John Carson, Dir. of the Information Systems Program—The George Washington U.
Introduction to the UNIX operating system—architecture and capabilities of the operating system—capabilities demonstration.

The "C" Programming Language—Mon. # 585
Introduction to the C language through examples and exercises.

Parallel and Concurrent Programming in Ada®—Mon. # 930
Instructor: George W. Cherry, President of Thought**Tools
The effective use of Ada® multitasking through examples and case studies.

Speech Recognition: From Isolated Digits to Natural Language Dictation—Sun. # 830
Technology of speech recognition and its applications—demonstrations—hands-on experiences—isolated-word versus connected-speech recognition.

Computer Vision from an AI Perspective—Mon. # 940
Instructors: John Kender and Takeo Kanade, Dept. Computer Science, Columbia U.
Expert vision systems—knowledge representation—indexing schemes—robotic navigation.

PROLOG & Knowledge Info. Processing—Sun. # 370 or Mon. # 375
Instructor: Douglas DeGroot, Y.P. (R&D) Quintus Computer Systems
Introduction and evaluation of PROLOG in expert system development and other AI applications—control component—application domains—writing PROLOG programs—exploring a simple PROLOG interpreter.

*AI Programming and Environments—Sun. and Mon. # 340
Overview/analysis of LISP development and application environments—rule-based applications—hands-on experience with an expert system development tool—reading and developing LISP code.

* Two day course

Computer Design

Concurrent Processing Architecture—Sun. # 160 or Mon. # 165
Instructor: Philip M. Neches, founder, and chief scientist of Teradata Corp.
Reviews of concurrent processing-computer systems—computing elements functioning in parallel—commercialization of concurrent processing technology.

*Fault-Tolerant Systems: Principles & Examples—Sun. and Mon. # 150
Instructors: Dhiraj Pradhan and Adit Singh, Dept. of Electrical and Computer Engineering, U. of Massachusetts at Amherst.
Factors that cause system failure—hardware and software to protect the systems—design techniques to enhance testability—models for evaluating effectiveness—case studies of several systems.

* Two day course

Programming Systems

*Hands-on Ada®—Sun. and Mon. # 560
Instructor: Helmut E. Thiess, Computer and Information Sciences Department at Towson State University.
The use of the Ada®programming language in a programming support environment. The attendees will gain modest familiarity with Ada® for use in their workplace, and have the opportunity to evaluate Ada® by hands-on building of software.

Appl'n. Generators/4th Generation Languages—Sun. # 650 or Mon. # 655
Instructors: Donald Chand, Dept. of Computer Information Systems, Bentley College and Sri Raghaban, Wang Institute.
Framework for understanding, studying and evaluating the AG/FGL, phenomenon—a taxonomy for classifying the approaches.

*Two day course
Software Engineering

The Road to Software Quality—Mon. # 635
Instructor: David Gelperin, President of Software Quality Engineering. What is good software? How do we verify its quality? Who is responsible for that quality?

Functional Test—Sun. # 530 or Mon. # 535
Instructor: William E. Howden, Comp. Sci. faculty, UC San Diego. Basic ideas of functional testing and analysis—tools and techniques to support function test.

Tools & Techniques for Life-Cycle Software Quality Assurance—Sun. # 510 or Mon. # 515
Instructor: Alfred R. Sorkowitz, Comp. Scientist, Dept. of the Navy. Commonly available tools and techniques for developing and maintaining quality software as well as increasing productivity of software professionals.

Computer Engineering

User Engineering and Active Prototyping—Sun. # 840 or Mon. # 845

* Two day course

Modeling and Measurement

Software Cost Estimation and Control—Mon. # 455
Instructor: Barry W. Boehm, Chief Engr. TRW Software Devel. Div. Techniques for estimating and controlling the costs of software development and maintenance—software project planning and control techniques; estimating software development costs; factors influencing software costs; and improvement of software productivity.

* Two day course

Computing Issues

Graphic Design for Computer Graphics—Sun. # 610
Instructor: Aaron Marcus, Aaron Marcus and Associates. Concepts, principles, methods and examples of screen, slide, and page design—use of typography, symbol and icon systems, color, spatial composition, animation, and sequencing in such applications as data-driven charts and forms, user interfaces, documentation, and program visualization.

Cultivating & Enhancing Creative Abilities—Sun. # 810 or Mon. # 815
Instructor: Dempsey George, an authority on Creativity, The Future, and Networking. Stir and cultivate creative potentials—learn "how to create new ideas," solve problems, make decisions, convert stress and worry into creative energy. Develop more self-confidence, and motivate yourself.
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<td>3E AL-3, Ses. 3</td>
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**Exhibit Hours:** 12 noon-5 pm

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**Exhibit Hours:** 12 noon-5 pm

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**Industrial Keynote:**

Kenneth Wilson, Nobel Laureate, Cornell University, Dept. of Physics
C. Gordon Bell, National Science Foundation

**Keynoters:**

- Willett: Token-Ring Local Area Networks
- Konta: Integrated Programming Environments
- Kessler: Issues in Code Generation
- White: Programming Languages
- Kant: Rule-Based Models and Applications
- Kincaid: Vector and Parallel Algorithms
- Doctor: Computer Graphics
- Okada: Super Computing Systems
- Reynolds: Application of Petri-Nets
- Rose: Expert systems Design-Test

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**Turing Lecture: 1986 ACM Turing Award Winner**
Artificial Intelligence (AI)

Session 1:

Chair: Dr. Elaine Kant, Schlumberger-Doll Research Center

Session 1: "Design Issues and Practice in AI Programming" (Rm. 2-H)

Session Chair: Nancy Martin, Safeset Systems Inc.


Session 2:

Chair: Prof. John Kender, Columbia U.

Session 1: "Approaches to Low and Middle-Level Vision" (Rm. 5-I)

Session Chair: Prof. John Kender, Columbia U.

Dr. Thomas Binford, Stanford U.; Prof. J.K. Aggarwal, U. of Texas at Austin; Dr. Robert Haralick, Machine Vision International

Session 2: "Model-Based High-Level Vision" (Rm. 6-I)

Session Chair: Prof. John Kender, Columbia U.


Robotics

Chair: Prof. Richard Paul, University of Pennsylvania

Session 1: "Robot Perception" (Rm. 6-G)

Session Chair: Prof. Kansen, Carnegie Mellon U.


Session 2: "Task-Level Robot Programming" (Rm. 7-G)

Session Chair: Prof. Tomas Lozano-Perez, MIT


Session 3: "Real-time Robot Programming" (Rm. 8-G)

Session Chair: Dr. Russell Taylor, IBM T.J. Watson Research Center


Supercomputing (SC)

Session 1:

Chair: Prof. K.P. Wang, U. of Southern California

Session 1: "Parallel Processing for AI" (Rm. 1-D)

Session Chair: Prof. K.P. Wang, U. of Southern California


Session 2: "Parallel Algorithms for Supercomputing" (Rm. 2-D)

Session Chair: Prof. Benjamin Wah, U. of Illinois at Urbana


Session 1:

Chair: Dr. Cleve Moler, INTEL Scientific Computers

Session 1: "Hypercube Computers" (Rm. 3-D)

Session Chair: Dr. Cleve Moler, INTEL

Dr. John Palmer, NCUBE

Session 1:

Chair: Prof. Daniel Siewiorek, Carnegie-Mellon U.

Session 1: "Multiprocessors II" (Rm. 4-D)

Session Chair: Dr. Zary Segall, Carnegie-Mellon U.

H. Muehlenbein, et al., GMD; S. Hariri and C.S. Raghavendra, USC; J. Herath, Keio U.-Japan

Session 2: "Multiprocessors II" (Rm. 5-D)

Session Chair: Dr. Pat McGehearty, Microelectronics & Computer Technology Corporation

W.M. Ching and P. Bose, IBM T.J. Watson Research Center; V. Lanin and D. Shasha, Courant Institute, New York U.

Session 3: "High-speed Techniques" (Rm. 6-D)

Session Chair: Dr. William Branley, IBM T.J. Watson Research Center

P.C. Barr and S. Krishnamoorthy, Framingham State College; C.Y. Chen and J.A. Abraham, U. of Illinois at Urbana; D.J. Schanin, Infinity Systems

Session 1:

Chair: Dr. C. Lee Giles, AFOSR/NE

Session 1: "Optical Computers" (Rm. 1-A)

Session Chair: Dr. John Cauffman, U. of Alabama

Dr. F.J. Leonberger, UT Research Center; Dr. Alan Huang. AT&T Bell Laboratories; Dr. Ravi Athale, BDM Corporation

Session 2: "New Directions in Optical Computing" (Rm. 2-A)

Session Chair: Dr. C. Lee Giles, AFOSR/NE

Dr. Demetri Psaltis, C.I.T.; Dr. John Neff and B. Kushner, DARPA/DSO; Dr. A.D. McAulay, Texas Instruments

Session 3: "Optical Interconnections for Computing" (Rm. 3-A)

Session Chair: Dr. John Neff, DARPA/DSO

Dr. Lynn Hutcheson, Cyber Optics Corporation; Dr. Alexander Sawchuck, USC, Image & Signal Processing Institute; Dr. D. Hartman, Bell Comm. Research

Session 5:

Chair: Michael Willett

Session 1: "Implementing A Token-Ring Local Area Network" (Rm. 4-A)

Session Chair: Michael Willett, IBM Corporation

Jane Munn and Jaylyn Winkler, IBM Corporation; Jim Carlo, Claire Hamner, Texas Instruments; Sunil Joshi, Advanced Micro Devices

Session 2: "Attaching to Token-Ring Local Area Networks" (Rm. 5-A)

Session Chair: Michael Willett, IBM Corporation

Charles Bass, Ungermann-Bass; Harry Saal, Nestar Systems; Judith Estrin, Bridge Communications; Howard Salwen, Proteon

Session 3: "Managing The Integration of Voice and Data" (Rm. 6-A)

Session Chair: William G. Hooper, Price Waterhouse

K. Conley, Monsanto Company
Software Systems (SS)
SS-1: Software Engineering
Chair: Prof. Laszlo Belady, MCC
Session 1: "New Software Design Modes" (Rm. 3-C)
Session Chair: Prof. Laszlo A. Belady, MCC
Gerald Weinberg, Weinberg and Weinberg.
Session 2: "Object-Oriented Software" (Rm. 2-C)
Session Chair: Dr. Clarence Ellis/Drs. Ted Biggerstaff, MCC
Dr. Gail Curry, Sequent Computer Inc.; Ken Doyle, et al., Apple
Computer; Prof. Alan Bornig, U. of Washington; Prof. Stan Zdonik, Brown U.
Session 3: "Applications of Ada to Large System Development" (Rm. 9-B)
Session Chair: Dr. C. Robert Morgan, Mass. Comp. Assoc.
David Loveman, Mass. Comp. Assoc., Walker Royce, TRW
SS-2: UNIX
Co-Chairs: Prof. Domenico Ferrari, U. of California at Berkeley; Dr. Luis Felipe Cabrera, IBM San Jose Research Lab.
Session 1: "UNIX: The Wave of The Past?" (Rm. 8-C)
Session Chair: Dr. L.F. Cabrera, IBM Research
William N. Joy, Sun Microsystems; Richard Rashid, Carnegie Mellon U.;
Doug McIlroy, AT&T Bell Laboratories; Keith Lantz, Stanford U.
SS-3: Programming Languages, Compilers and Environments
Chair: Dr. John R. White, Xerox—Palo Alto Research Center
Session 1: "Software Development Environment Issues" (Rm. 4-H)
Session Chair: Dr. Barry Boehm, TRW
S. Squires, DARPA; S. Redwine, Inst. of Def. Anal.; V. Basili, U. of Maryland; M. Penedo, TRW
Session 2: "Integrated Programming Environments" (Rm. 5-B)
Session Chair: Dr. Chandra M. R. Kintala, AT&T Bell Laboratories
L. Druffel, Rational Inc.; W. Scacchi, USC; S. Reiss, Brown U.
Session 3: "Issues in Code Generation" (Rm. 6-B)
Session Chair: Dr. Peter Kessler, Xerox—Palo Alto Research Center
Robert Henry, U. of Washington; Christopher Fraser, U. of Arizona;
Michael Powell, Digital Equipment Corporation
Session 4: "Programming Languages" (Rm. 7-B)
Session Chair: Dr. John R. White, Xerox—Palo Alto Research Center
Taylor and M. Uchiyama, Columbia U.; C. C. Genet, Grumman Corp.
Session 5: "Hypertext" (Rm. 1-B)
Session Chair: Prof. Andrei van Dam, Brown U.
Norman Meyrowitz, Brown U.; Dr. Frank Halase, Xerox Parc; Dr.
Mayer Schwartz, Tektronix, Inc.
Algorithms (AL)
AL-1: Artificial Intelligence Algorithms
Chair: Prof. T. A. Marsland, U. of Alberta
Session 1: "Computer Chess Techniques" (Rm. 3-H)
Session Chair: Prof. T. A. Marsland, U. of Alberta
T. A. Marsland, N. Srimani, and J. Schaeffer, U. of Alberta; Hans
Berliner, Carnegie Mellon U.; Ken Thompson, AT&T Bell Laboratories;
Monroe Newborn, McGill U.; Dave Levy, Chess Master. London; Robert
Hyatt, U. of So. Miss.
AL-2: Numerical Methods
Chair: Dr. David R. Kincaid, U. of Texas at Austin
Session 1: "Vector and Parallel Algorithms" (Rm. 7-D)
Session Chair: Dr. David Kincaid, U. of Texas at Austin
Eugene L. Wachspress, U. of Tennessee; Graham F. Carey, U. of Texas at
Austin; John R. Rice, Purdue U.; O. G. Johnson, U. of Houston
Session 2: "Finite Element Methods—A Tutorial" (Rm. 8-D)
Session Chair: Linda J. Hayes, U. of Texas at Austin
David M. Young, J. Tinsley Oden, and Steven R. Kennedy, U. of Texas at
Austin; George S. Dulikravich, Pennsylvania State U.
AL-3: General Algorithms
Chair: Prof. Paul Purdom, Indiana U.
Session 1: "Searching" (Rm. 1-E)
Session Chair: Prof. Cynthia Brown, Northeastern U.
L. Finkelstein, Northeastern U.; D. Carlson, U. of Massachusetts at
Amherst; R. Archuleta and H. D. Shapiro, U. of New Mexico
Session 2: "Data Structures" (Rm. 2-E)
Session Chair: Prof. Michael Loui, U. of Illinois
I. Munro and O. Celis, Waterloo U.; F. B. Bastani, et al., U. of Houston;
B. Abramson and M. M. Young, UCLA
Session 3: "Optimization" (Rm. 3-E)
Session Chair: Prof. Larry Ruzzo, U. of Washington
J. Biswas and D. Matula, U. of Texas at Austin; T. J. Marlowe, Seton
Hall U.; D. Armbruster, Institut fur Informatik—Stuttgart
Modeling & Measurement (MM)
MM-1: Performance Modeling and Measurement
Chair: Dr. Stephen Lavenberg, IBM Thomas J. Watson Research Ctr.
Session 1: "Performance Modeling Methods" (Rm. 2-G)
Session Chair: Dr. Stephen Lavenberg, IBM T. J. Watson Res. Ctr.
K. Ryu and A. Thomasian, Burroughs Corp.
Session 2: "Performance Studies" (Rm. 1-G)
Session Chair: Dr. Stephen Lavenberg, IBM T. J. Watson Res. Ctr.
M. S. Lakshmi, O. R. LaMaire, W. W. White, P. S. Yu, S. Balsamo, and Y.
H. Lee, IBM T. J. Watson Research Center; D. Ferrari and S. Zhou, UC
Berkeley
Session 3: "Performance Modeling Workstations" (Rm. 3-B)
Session Chair: Dr. Stephen Lavenberg, IBM T. J. Watson Res. Ctr.
J. B. Sinclair and S. Madara, Rice U.; J. F. Kurose, et al., U. of
Massachusetts; B. Melamed, AT&T Bell Laboratories
MM-2: The State of the Art of Capacity Management in MVS Systems
Chair: Mr. Kenneth Kolence, Kolence Associates
Session 1: "Capacity Management 1" (Rm. 3-G)
Session Chair: Kenneth Kolence, Kolence Associates
Dr. J. P. Buzen, BGS Systems; Dr. Brian J. Smith, IBM GPD
Session 2: "Capacity Management 2" (Rm. 4-G)
Session Chair: Kenneth Kolence, Kolence Associates
Phillip C. Howard, Applied Computer Research; Dr. Tachen Lo,
McDonnell Douglas; Dr. C. U. Smith, L&S Computer Technology.
Session 3: "The Insularity of Performance Evaluation" (Rm. 5-G)
Session Chair: Prof. Domenico Ferrari, U. of California at Berkeley
Kenneth Kolence, Kolence Associates; Dr. Brian J. Smith, IBM San Jose;
Mario Marino, Marino Associates; Dr. James C. Browne, U.T. at Austin
Computing Issues (LAC and STAN)
LAC-1: Legal and Professional Concerns
Chair: Arthur Parry, The Wyatt Company
Session 1: "Legal/Professional" (Rm. 1-C)
Session Chair: Dr. Alex Hoffman, Consultant
Topics: Contracts, Copyrights, Professionalism
STAN-1: Standards
Chair: Laurel Kaleda, IBM Corporation
Session 1: "Standardization—Where Should It Be By 2000?" (Rm. 4-C)
Session Chair: Laurel Kaleda, IBM Corporation
J. De Balsi, IBM; S. Sherr, ISO/IEC; J. Burroughs, NBS; H. Wood,
IEEE, and F. Buckley, RCA.
Computer Design (CD)

CD-1: Fault-tolerant Computing
Chair: Prof. John Meyer, U. of Michigan
Session 1: "Commercial Applications" (Rm. 4-E)
Session Chair: Dr. Wing N. Toy, AT&T Bell Laboratories

W. N. Toy and G. F. Clement, Bell Labs.; J. P. Kelly, Ford; J. Machulda, Triconix; D. E. Morgan, Motorola; J. H. Wensley, August Systems

Session 2: "Evaluation" (Rm. 5-E)
Session Chair: Prof. Kiskor S. Trivedi, Duke U.

Session 3: "Testing" (Rm. 6-E)
Session Chair: Prof. Edward J. McCluskey, Stanford U.
K.A. Hua and J.A. Abraham, U. of Illinois; S. Mourad et al., Stanford U.; T. Kirkland and M. Mercer, U. of Texas at Austin

CD-2: VLSI Design and Test: Theory and Practice
Chair: Mr. Jerome M. Kurtzberg, IBM T.J. Watson Research Center
Session 1: "VLSI Techniques of Design Automation" (Rm. 1-F)
Session Chair: Prof. Sheldon Aker, U. of Massachusetts at Amherst
T.A. Qinniri and H.A. Herzberg, AT&T Bell Laboratories; M. E. Breuer and X. Zhu, U. of Southern California; G.C. Gopalakrishnan, SUNY

Session 2: "Expert Systems for Design and Test" (Rm. 7-I)
Session Chair: Dr. Pradip Bose, IBM T.J. Watson Research Center

Session 3: "Design Languages" (Rm. 8-B)
Session Co-Chairperson: Drs. Pei Hsiu, U. of Texas at Arlington and Anthony Gargaro, CSC

Dr. Gerald Fisher, IBM Research; Prof. Joe Urban, U. of Southwestern Louisiana; Dr. D. Luckham, Stanford U.; Prof. Kai Hwang, U. of California

Session 4: "VLSI Research in Universities" (Rm. 2-F)
Session Chair: Prof. Timothy N. Trick, U. of Illinois at Urbana
Prof. R. Zippel, MIT; Prof. J. Shen, Carnegie-Mellon U.; Prof. J. A. Abraham, U. of Illinois at Urbana; Prof. Carlo Sequin, U.C. at Berkeley

Session 5: "VLSI Fault Tolerant Goals" (Rm. 3-F)
Session Chair: Prof. Dhiraj K. Pradhan, U. of Massachusetts at Amherst
Prof. Edward J. McCluskey, Stanford U.; Dr. Allen Anderson, MIT; Dr. Jeffrey Fried, GTE Laboratories; Dr. Israel Koren, Technion Institute of Technology; Dr. Hideo Kikuchi, NTU; Dr. Gabriele Saucier, LCS

CD-3: Computer Graphics
Chair: Prof. Michael Wozny, Rensselaer Polytechnic Institute
Session 1: "Computer Graphics Standards" (Rm. 9-E)
Session Chair: Prof. Michael J. Wozny, Rensselaer Polytechnic Institute
Dr. David Vanderschel and Chris Nelson, Nova Graphics International; Salim Abi-Edzi, Rensselaer Polytechnic Institute

Session 2: "Computer Geometry" (Rm. 7-E)
Session Chair: Dr. Louis Doctor, Raster Technologies, Inc.

Education (ED)

ED-1: New Technology in Education
Chair: Dr. Lionel V. Baldwin, President, National Technological U.
Session 1: "Technical Education By Satellite" (Rm. 2-B)
Session Chair: Dr. Lionel V. Baldwin, NTU
John T. Fitch, Associate Director, Association for Media-Based Continuing Education for Engineers (AMCEE); Prof. Frederic J. Mowl, Purdue U.; Prof. Sartaj Sahni, U. of Minnesota

Session 2: "Computers in Education" (Rm. 4-B)
Session Chair: Arthur S. Melmed, Consultant
Dustin H. Heuston, Chairman, WICAT Systems, Inc.; Prof. Bruce A. Sherwood, Carnegie-Mellon U.; Prof. Alan Leagold, U. of Pittsburgh

Computer Developments in Japan (ID)

ID-1: Computer Developments in Japan
Chair: Prof. Ryoiichi Mori, U. of Tsukuba
Session 1: "Fifth Generation Computers I: Language Arch." (Rm. 4-F)
Session Chair: Dr. Koichi Furukawa, ICOT
J. Tanaka, et al., ICOT; H. Masuzawa, et al., Fujitsu; T. Kurokawa, et al., IBM Japan; Y. Kyokai, et al., U. of Tokyo

Session 2: "Fifth Generation Computers II: Applications" (Rm. 5-F)
Session Chair: Prof. Naemura, U. of Tokyo
H. Kaneko, et al., NEC; T. Saito, Toshiba; H. Maejima, Hitachi

Session 3: "Advanced Microcomputer Developments" (Rm. 6-F)
Session Chair: Prof. Iwao Morishita, U. of Tokyo
N. Kaneko, et al., NEC; T. Saito, Toshiba; H. Maejima, Hitachi

Session 4: "Supercomputing Systems" (Rm. 7-F)
Session Chair: Yoshihiko Okada, ElectroTechnical Laboratory
K. Miura, Fujitsu America; C. Konno, Hitachi; M. Tsukagoshi, NEC; T. Higuchi, ETL

Session 5: "Interworking Systems" (Rm. 8-F)
Session Chair: Kenji Naemura, NTT Educational Communications Labs.
M. Kurata, NTT; K. Mori, Hitachi, Ltd; M. Yoshida, Oki Electric

Operating Systems & Data Bases (OSDB)

OSDB-1: Operating Systems
Chair: Dr. James Peterson, MCC
Session 1: "Applications of Petri-Nets" (Rm. 7-H)

Session 2: "Security and Protection in Computer Systems" (Rm. 8-H)
Session Chair: Dr. James Peterson, MCC

OSDB-2: "Distributed Operating Systems"
Chair: Dr. Jack Stankovic, Carnegie-Mellon U.
Session 1: "Distributed Operating Systems" (Rm. 5-H)
Session Chair: Dr. Jack Stankovic, Carnegie Mellon U.
R. Rashid, Carnegie Mellon U.; Dr. Ahmed Elzatz, Bell Labs.; R. Koo and S. Touge, Cornell U.; P. Chrysanthis, U. of Mass. at Amherst

Session 2: "Distributed Databases" (Rm. 6-H)
Session Chair: Prof. Hector Garcia-Molina, Princeton U.

OSDB-3: Data Bases
Chair: Dr. Anil Nagam, IBM T.J. Watson Research Center
Session 1: "Data Bases" (Rm. 1-H)
Session Chair: Dr. Anil Nagam, IBM T.J. Watson Research Center

Education (ED)

ED-2: Software-Engineering Education
Chair: Prof. Norman Gibbs, Carnegie-Mellon U.
Session 1: "How Universities Educate Software Engineers" (Rm. 8-A)
Session Chair: Prof. Richard Fairley, Wang Inst. of Grad. Studies
James Comer, Texas Christian U.; Peter Freeman, UC at Irvine

Session 2: "Software Engineering Education in Companies" (Rm. 9-A)
Session Chair: Dr. S.E. Smith, IBM Corporate Technical Institutes
Ileen Birkwood, HP; Prof. D. Clayton, AT&T Bell Labs.
**CONFERENCE AND TRAVEL INFORMATION**

To obtain additional Registration Forms or for further information contact FJCC '86, Registration Office, 1950 Stemmons Freeway, Dallas, TX 95201; Phone 1-800-722-FJCC.

**Dallas**

Dallas is a music town, a theater town, a nightlife town, a conference town, a friendly town. Of the 45,000 businesses located in Dallas and the surrounding area, nearly 400 of these are headquarters or regional facilities for leading electronic and information processing companies. Dallas is the place to be November 2-6 for the Fall Joint Computer Conference, when thousands of professionals will be gathering at INFOMART to Explore the Knowledge-Based Society.

**INFOMART**

The world's first market center for the information processing industry! Inspired by London's Crystal Palace at the 1851 Great Exhibition, this soaring, glass-vaulted building, provides under one roof, a fabulous high-tech setting for a fabulous, not-to-be-missed, high-tech event ... FJCC '86.

**Transportation from Dallas/Ft. Worth Airport**

Complete information on transportation to the conference Hotels (all located within the Dallas Market Center area) is posted on a Transportation Information Board located at or near your arrival gate. Additional information concerning pick-up points at the airport is available in the baggage claim area.

Most commercial bus, mini-bus, or van service costs are approximately $8-10 and take about 35 minutes. Taxi fare runs about $21 plus tip. Three or more persons sharing a cab can be as cost effective as the commercial bus service.

**Exhibits**

Educational and technical exhibits will complement the Conference technical program, highlighting the technological basis of the latest products, and services in the computing field. The exhibits will be open in the Infomart during the hours of 12 noon to 5 pm, Monday thru Thursday, November 2-6.

For complete details on reserving booth space, contact David McKeever, INFOMART, (214) 746-3500.

**Exhibitor Technical Forums**

Key Vendors will provide chief scientists or other senior engineering personnel to discuss and explain the technology embedded in their principal product offerings.

**What to Wear**

You can expect the temperatures in Dallas, in November, to be in the 60's or low 70's. Although the skies in November are generally clear, precipitation could be expected in the evening or at night.

**Travel Services**

Wyndham Travel has been appointed FJCC travel coordinator. For special air fares or a specially reduced rate of $29 per day on rental cars from National, (unlimited mileage) call the FJCC Travel Desk at 1-800-972-1163. From Canada call collect 214-655-6248.

A 50% discount on FJCC shuttle transportation from Dallas/Fort Worth and Love field airports to your hotel is available when you purchase your airline ticket thru the FJCC Travel Desk.

**Tax Deductibility**

Expenses of attending professional meetings, such as registration fees and costs of technical publications, have been held to be tax deductible as ordinary and necessary business expenses for U.S. citizens.

**Proceedings**

Proceedings are included in the full Conference & Exhibits registration, and will be available at the Conference.

**Program Highlights**

**Keynote/Plenary Sessions**

Tuesday and Wednesday mornings, November 4 and 5, 8:30-9:30 am will be our opening Conference plenary sessions. There will be an Industrial Keynote on Tuesday; and on Wednesday, Kenneth Wilson, Nobel Laureate of Cornell University and C. Gordon Bell, NSF will speak.

**Turing Award/Plenary Session**

Thursday morning, 8:30-9:30, will be the session during which the ACM's most prestigious citation, the Turing Award, will be announced. The Turing Award Lecture is always an outstanding technical presentation of interest to a wide variety of people.

**Conference Registration**

All persons attending the conference are required to register and pay the appropriate fee. You may register in advance and save the on-site fee, by using the form in this program. A check or money order, in U.S. currency, payable to FJCC '86 must be included with this form, or the proper credit card authorization must be filled out. Refund requests must be received in writing by October 17, 1986.

On-Site Registration will take place during the following hours at both the Infomart in the main lobby and at the Anatole Hotel on the mezzanine; pre-registrants who did not receive their registration packets may pickup these materials at the Infomart:

- Saturday & Sunday, November 1 & 2 - 12 noon to 5 PM
- Monday, 7:30 AM to 10 PM
- Tuesday-Thursday, November 2 thru 6 - 9 AM to 5 PM

**Conference Location**

All conference activities will be held at either the INFOMART, Dallas, Texas, or Loew's Anatole Hotel, 2201 Stemmons Freeway, Dallas, TX 15201, 214-748-1200. Activities scheduled for the Anatole include the daily Keynote/Plenaries, 8:30-9:30 Tuesday thru Thursday; the Technical Program, 9:30-5:15 Tuesday thru Thursday; Poster Sessions (for last minute submitted papers), 9:30-5:15 Tuesday thru Thursday; and the North American Chess Championship Tournament.

INFOMART will be the site of the exhibits, 9:30 am to 5 pm, Monday thru Thursday, the Exhibitor Technical Forums, the Professional Education Program Courses (PEP) 9:30-5:30 Sunday and 8:30-4:30 Monday; and the World Micro-Chess Championship matches.

Both the Anatole and INFOMART will house an FJCC '86 Conference Information Center.

**EXHIBITORS**

A partial list of some 150 planned exhibitors as of July 15, 1986

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Company Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allyn &amp; Bacon, Inc.</td>
<td>Gold Hill Computers</td>
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<tr>
<td>Arthur Andersen</td>
<td>Grid Systems</td>
</tr>
<tr>
<td>A.D. Little, Inc.</td>
<td>IBM</td>
</tr>
<tr>
<td>Arthur Young</td>
<td>IMSL, Inc.</td>
</tr>
<tr>
<td>Autocad, Autodesk, Inc.</td>
<td>Inference</td>
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<td>AVCO Electronics</td>
<td>LISF</td>
</tr>
<tr>
<td>Benjamin/Cummings</td>
<td>Lee Data Corp.</td>
</tr>
<tr>
<td>Boeing Computer Services</td>
<td>Liebert Corporation</td>
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<tr>
<td>Burroughs</td>
<td>Microsoft</td>
</tr>
<tr>
<td>CPT</td>
<td>Mint Systems Corporation</td>
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<td>Cadre Technologies</td>
<td>NCR</td>
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<tr>
<td>Canstar Communications Div.</td>
<td>Novell</td>
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<td>Career Research Systems, Inc.</td>
<td>Printronics, Inc.</td>
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<tr>
<td>Dallas Digital</td>
<td>RCA American Communications, Inc.</td>
</tr>
<tr>
<td>DataTimes</td>
<td>Symbolics, Inc.</td>
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<td>Epson America, Inc.</td>
<td>Teknowledge</td>
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<td>Expert Systems Int'l.</td>
<td>Texas Instruments</td>
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<td>Gartner Group</td>
<td>Westinghouse Electronics</td>
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<td>Xerox</td>
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**FALL JOINT COMPUTER CONFERENCE—2-6 NOVEMBER 1986**

**REGISTRATION FORMS**

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**FJCC '86 CONFERENCE REGISTRATION FORM**

<table>
<thead>
<tr>
<th>NAME (last)</th>
<th>(first)</th>
<th>(M)</th>
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<td>POSITION</td>
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<tr>
<td>ADDRESS</td>
<td>CITY</td>
<td>STATE</td>
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<tr>
<td>PHONE</td>
<td>MAIL LIST RESTRICTIONS: □ NO RESTRICTION □ PROFESSIONAL SOCIETY USE ONLY</td>
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TO QUALIFY FOR MEMBER OR STUDENT MEMBER DISCOUNT, ENTER ACM OR IEEE-CS MEMBER NUMBER:

<table>
<thead>
<tr>
<th>FJCC '86 CONFERENCE</th>
<th>ADVANCE REGISTRATION</th>
<th>REGULAR/ON-SITE REGISTRATION</th>
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<tr>
<td>(INFORMART, Dallas)</td>
<td>(Before Oct. 18, 1986)</td>
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<tr>
<td>FULL CONFERENCE &amp; EXHIBITS</td>
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<tr>
<td>Member</td>
<td>$150</td>
<td>$200</td>
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<td>Non-Member</td>
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<td>250</td>
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<tr>
<td>Student</td>
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<td>Includes Conference Proceedings</td>
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<td>ONE DAY ONLY</td>
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<tr>
<td>Member</td>
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<tr>
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<tr>
<td>Circle Day:</td>
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<tr>
<td>MON</td>
<td>TUE</td>
<td>WED</td>
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<tr>
<td>EXHIBITS ONLY</td>
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<tr>
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<th>JOB FUNCTION</th>
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<tr>
<td>□ Management 01</td>
<td>□ Banking/Fin. 14</td>
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<tr>
<td>□ Project Leader 02</td>
<td>□ Comp. Sys. Reseller 15</td>
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<tr>
<td>□ Systems Analyst 03</td>
<td>□ Consulting 16</td>
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<tr>
<td>□ Software Engineer 04</td>
<td>□ DP Services 17</td>
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<tr>
<td>□ Programmer 05</td>
<td>□ Education 18</td>
</tr>
<tr>
<td>□ Data Base Manager 06</td>
<td>□ Engr./Arch. Svcs. 19</td>
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<td>□ Mtg. Comm. Eng. 07</td>
<td>□ Gov't 20</td>
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<tr>
<td>□ Univ./Coll. Eng. 08</td>
<td>□ Info. Sys. Mfg. 21</td>
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<tr>
<td>□ Pri./Sec. Educator 09</td>
<td>□ Med/Health Care 22</td>
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<tr>
<td>□ Research 10</td>
<td>□ Petrochem. 23</td>
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<td>□ Administrator 11</td>
<td>□ Retail 24</td>
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<tr>
<td>□ Consultant 12</td>
<td>□ Transportation 25</td>
</tr>
<tr>
<td>□ Other</td>
<td>□ Other</td>
</tr>
</tbody>
</table>

A check or money order made payable in US funds to FJCC '86, for the full amount of the registration must accompany your registration form. The following credit card authorization may also be used.

- □ VISA □ AMER. EXP. □ MC Exp. Date: Signature: Date:

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**FJCC '86 HOTEL RESERVATION FORM**

Mail this form to: FJCC Housing Bureau, Dallas Convention Bureau, 1507 Pacific Avenue, Dallas, TX 75201 - Telephone: 214-954-1440. All reservations at Conference Hotels must be made through the FJCC Housing Bureau. Room requests must be received by October 1, 1986.

To receive special "Conference Rates," our staff must make a reservation for you at the hotels listed below. Please indicate hotel choice by writing the numbers 1, 2, 3, and 4. IMPORTANT: Phone requests will NOT be honored.

FJCC Housing Bureau will acknowledge receipt of your hotel reservation request. Confirmation of your hotel reservation will be sent directly from the hotel. Please review your hotel confirmation closely for specific deposit requirements of each hotel. Deposits for rooms should be sent directly to the hotel after your receive your confirmation, and are required if you plan on arriving after 6 PM. Deposits will be refunded by the hotel if you cancel at least 48 hours in advance of the arrival date. Hotels will not guarantee availability of your room beyond 6:00 PM unless a one night's deposit has been sent to the hotel. DO NOT SEND DEPOSIT TO THE FJCC HOUSING BUREAU.

Cancellations and changes in reservations should be made in writing to the FJCC Housing Bureau until October 1. After October 3, cancellations and changes should go directly to the hotel.

<table>
<thead>
<tr>
<th>Choice</th>
<th>Hotel</th>
<th>Single</th>
<th>Double</th>
<th>Triple</th>
<th>Suite</th>
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<tbody>
<tr>
<td>1.</td>
<td>Loews Anatole</td>
<td>$90</td>
<td>$104</td>
<td>$120</td>
<td>Available Upon Request</td>
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<tr>
<td>2.</td>
<td>Marriott Market Center</td>
<td>$75</td>
<td>$85</td>
<td>$ 85</td>
<td>Available Upon Request</td>
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<tr>
<td>3.</td>
<td>Wyndham*</td>
<td>$85</td>
<td>$100</td>
<td>$115</td>
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<td>4.</td>
<td>Viscount</td>
<td>$48</td>
<td>$52</td>
<td>$ 58</td>
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9% tax is applicable to all above rates. Block of rooms available only from October 30th through November 4th.

<table>
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<tr>
<th>NAME (last)</th>
<th>(first)</th>
<th>(M)</th>
</tr>
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<tbody>
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<td>STREET ADDRESS</td>
<td>CITY</td>
<td>STATE</td>
</tr>
<tr>
<td>BUSINESS PHONE</td>
<td>Check-in Date/Time:</td>
<td>Check-out Date/Time:</td>
</tr>
</tbody>
</table>

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Please send registration form with payment to FJCC '86, Registration Office, 1507 Steamer Freeway, Dallas, TX 75201. Phone: 1-800-722-FJCC. Advance registration discounts are available to all registrants, received with full payment, post-marked on or before October 16.

Attendees who have pre-registered for the Conference or the Professional Education Program and who have not received their conference credentials by mail may pick up their conference credentials beginning on Saturday, November 1 at 12 Noon until 5 PM at Infomart/main lobby counter. Please bring your registration acknowledgment with you to save time in line. Notices of cancellation must be received in writing at the FJCC Registration office NO LATER than October 17, 1986 in order to qualify for a refund. Allow 10 weeks after the Conference for processing of refunds.

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(CACR)