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University of Illinois at Chicago
Herbert Weber
University of Bremen, West German
Victor R. Basili, Lecturer
Monday, November 7, 1983
9:00 a.m.-5:00 p.m.

Audience: Intended for software managers and software engineers who are looking for quantitative assistance in managing, controlling, estimating, evaluating, and contracting software development and maintenance.

Course Description: Presents a quantitative approach to software management and software engineering. Focuses on attributes that can be managed quantitatively, covering both product-oriented and process-oriented attributes. Utilizes a large set of models with emphasis on those areas where quantitative management can give the greatest payoff.

Victor R. Basili is a professor and chairman of the computer science department at the University of Maryland at College Park. A consultant to several organizations and government agencies, he has been active in the design and development of several software projects and is currently involved in the measurement and evaluation of software development at NASA's Goddard Space Flight Center. Basili received his PhD in computer science from the University of Texas at Austin in 1970.

Course Outline:
Introduction: quantitative software management • modeling, metrics
Resources Models: classes of models, empirical models of programming estimation and measurement • model validation studies • an approach to developing an empirical resource model specifically for the organization in which it will be used • theoretical dynamic modeling using the Rayleigh curve • various uses of resource models
Changes and Errors: the use of changes and errors in the characterization, estimation, and evaluation of software development • the use of error analysis in improving the software development process • error models for program evaluation and reliability • distribution by various classification schemes • metrics based on error and change
Product Measures: size, control and data structure metrics • cyclomatic complexity • software science • data bindings • span • metrics across time • example uses and effects of software metrics on technology transfer • quality assurance and contracting
Data Collection: establishing the environment • collecting the data • data validation analysis and result reporting

The IEEE Computer Society's Seventh International Computer Software & Applications Conference
November 7-11, 1983
The Palmer House
CHICAGO
The IEEE Computer Society's Seventh International Computer Software & Applications Conference
Kellogg S. Booth, Lecturer
Monday, November 7, 1983
9:00 a.m.-5:00 p.m.

Audience: Some experience with computing is desirable. The discussion will be designed for those new to the field, particularly those selecting their first computer graphics system. Emphasis will be on basic terminology and trends. Details of hardware and software will be presented but in terms meaningful to managers, programmers and users alike.

Course Description: Provides an overview of the fundamental issues in computer graphics with an emphasis on the tradeoffs and choices which must be made in the acquisition, implementation and use of both hardware and software. Particular attention will be paid to interactive systems and the design of effective user interfaces.

Kellogg S. Booth is an associate professor of computer science and director of the Computer Graphics Laboratory at the University of Waterloo, Canada. He was general co-chair for SIGGRAPH '83 and has presented short courses in computer graphics for IEEE, ACM/SIGGRAPH and others since 1977. Before joining the faculty at Waterloo he worked at Lawrence Livermore National Laboratory in their computer graphics group. A consultant for government and industry, his research interests include user interfaces, document preparation, and computer animation. He received a BS in mathematics from Caltech, an MA in computer science from UC Berkeley, and a PhD in electrical engineering from UC Berkeley.

Course Outline:
Hardware: raster and line-drawing systems • input devices • hardcopy • film and video • special VLSI implementations • graphics workstations
Software: device independence • software standards • display primitives • transformation • clipping • perspective • visible surface determination • shading and texturing • data structures • spline representations • applications
Ergonomics: psychological factors • color perception and use • design of user interfaces
Examples: "paint" systems • keyframe animation • surface modeling systems • graphics editors

John Cameron, Lecturer
Tuesday, November 8, 1983
9:00 a.m.-5:00 p.m.

Audience: Anyone technically involved in developing software: systems designers, systems analysts, programmers, software engineers, database designers, memory device designers for developing software, teachers of analysis, design and programming.

Course Description: The aim of this tutorial is to give an overview of the Jackson method of system development (JSD) and its subset, the Jackson method of structured programming (JSP). JSD addresses the technical aspects of almost the whole development and maintenance life-cycle for a large class of systems, including data processing, real-time and embedded systems. Emphasis will be on the ideas underlying the methods and the modes of thought they encourage. Small examples will be presented as illustrations. Participants should learn enough to be able to understand and appreciate the larger examples that will be included in the tutorial text.

John Cameron has been with Michael Jackson Systems Limited since 1977 developing, teaching, consulting and (peripherally) building software tools for JSP and JSD. He is jointly responsible with Michael Jackson for the development of JSD from JSP. He received his MA in mathematics from Cambridge, England in 1973 and worked on simulations of communication networks for Silicon, a British software company, before joining MJUSL.

Course Outline:
Scope of JSP and JSD
Method as an organising and ordering of development decisions: specification and implementation decisions decisions about the subject matter and the functionality
Notations used for JSD specifications
Outline of the JSD method: processes describing the subject matter; incrementally elaborating the specification • implementation issues — transformations, scheduling, data storage and access
Small examples: the Widget Warehouse Company (data processing) • the Elevator (real-time control) • comparison of the two systems
Why JSD? • why subject matter first; why processes and not data as the modelling tool • why transformations in implementation • why stepwise refinement is inadequate
The JSP programming method: steps of the method: a small example • different data structures of the same data for different problems • program inversion and its uses • reference to larger, varied examples
Questions and Discussion

C.S. George Lee, R.C. Gonzalez, and King-Sun Fu, Lecturers
Tuesday, November 8, 1983
9:00 a.m.-5:00 p.m.

Audience: Professional engineers, computer scientists, and managers who are interested in robotics research and the use of industrial robots in manufacturing and automation.

Course Description: This tutorial presents an overview of robotics and covers concepts, mathematical tools and methodologies necessary for the analysis of the operation of industrial robots. It will provide the attendees with a thorough understanding of robot arm accuracy and repeatability; robot arm kinematics, dynamics, and control; simple trajectory planning and execution; existing robot control languages; sensing and robotic vision; and robot planning and intelligent control.

C.S. George Lee is assistant professor at electrical and computer engineering at the University of Michigan, Ann Arbor, where he teaches robotics, programming languages and data structures, and control theory. His current research interests include advanced control for multirobot assembly system, robotic force sensing and control, and adaptive control.

R.C. Gonzalez is IBM Professor of Electrical Engineering and Computer Science at the University of Tennessee, Knoxville. His current research interests include robotic sensing and vision, visual feedback control for robots, and pattern recognition.

King-Sun Fu is Goss Distinguished Professor of Engineering and Professor of Electrical Engineering at Purdue University. His current research interests include pattern analysis, computer vision and machine learning.

Course Outline:
Introduction: Robot arm configuration • Accuracy and repeatability
Robot Arm Kinematics, Dynamics, and Control: Homogeneous transformation matrices • Kinematic equation • Inverse kinematics solution • Derivation of robot arm dynamics • Various robot arm control algorithms • Force sensing and control • Robot control languages
Trajectory Planning: Planning of a 4-3-4 trajectory • Straight line trajectory planning and calculation
Computer Vision: Vision systems for robots • Image processing techniques • Shape analysis and recognition • Stereo and 3D vision
Robot Planning and Intelligent Control: Robot problem-solving • Learning in robot planning
TUESDAY, November 8, 1983

5:30-7:00 p.m.  Preconference Cocktail Reception

WEDNESDAY, November 9, 1983

9:00 a.m.-10:30 a.m.

OPENING SESSION:
Welcome—C.V. Ramamoorthy, General Chairman
Awards Presentation—Oscar Garcia, President, IEEE Computer Society
Overview of Program—N.L. Marselos, Program Chairman
Keynote Address—Richard D. DeLaurer, Under Secretary of Defense for Research and Engineering

10:30 a.m.-11:00 a.m.  Break

11:00 a.m.-12:30 p.m.

SESSION 1: SOFTWARE METRICS
Chairperson: R. Lawler, Boeing Aerospace Co.
An Approach to Measuring Program Complexity
F.B. Bastani, University of Houston
Structural Approach Towards Software Reliability Evaluation
R. Moawad and M. Hassan, Military Technical College, Cairo, Egypt
Some Measurement Problems Detected in the Analysis of Software Productivity Data and Their Statistical Consequences
J.L. Romeu and S.A. Glos-Soler, IIT Research Institute, Rome, New York

SESSION 2: SOFTWARE DESIGN AND MODELING
Chairperson: R.H. Thayer, California State University
Prototyping of Switching Software
K. Hasui, S. Morita, Y. Fuji, N. Aritaka, Fujitsu Laboratories Limited, Japan
Appropriate Technology: Adapting an Automatic Design Method for Hand Use
C.A. Brown, GTE Laboratories; P.W. Purdom, Indiana University
Display-Oriented Structure Manipulation in a Multi-Purpose System

SESSION 3: PROGRAM TRANSPORTABILITY
Chairperson: L.M. Duvall, IIT Research Institute
Methods for Transporting Programs
S. Leong, H. Mehrooz, P.A.D. de Maine, Auburn University
A Portable Hybrid Mumps Development System Host
K.C. O'Kane, University of Tennessee
Advances in Compiler Technology
S.L. Graham, University of California at Berkeley

SESSION 4: PANEL—DEPARTMENT OF DEFENSE SOFTWARE INITIATIVE
Chairperson: E. Lieblein, Department of Defense
J. Fox, Software A&E
V. Mall, Department of Defense
J. Manley, Computing Technology Transition
R. Yeh, University of Maryland

SESSION 5: PANEL—MANAGEMENT OF SOFTWARE MAINTENANCE
Chairperson: R. Martin, National Bureau of Standards
N. Chapin, Infosci
J. McCall, Science Applications, Inc.
W. Osborne, National Bureau of Standards
N. Zvegintzov, Consultant

SESSION 6: NETWORKS
Chairperson: A.J. Bowles, C.A.C.I. Atlantic Ltd.
An Adaptive Hierarchical Routing Algorithm
C.V. Ramamoorthy, W.T. Tsai, University of California at Berkeley
An Adaptive Token Ring Network Serving Real-Time Traffic
B.G. Kim, Wright State University
Fast Connectivity Analysis Algorithms for Dynamic Computer Networks
Y.W. Ma, C.M. Chen, University of Pennsylvania

SESSION 7: SOFTWARE TOOLS AND WORKSTATIONS
Chairperson: M. Alford, TRW Defense and Space Group
A Work Station for Information System Development
B.I. Blum, The Johns Hopkins University
The Module Generator
F.E. Cross, COMARCO, Simutech Division
Some Experiences of Interactive Graphics on a Single User Workstation
H.S. Woodgate, International Computers Limited, England
UPM: A Formal Tool for Developing Enterprise Models
C.R. Carlson, Standard Oil of Indiana; A.K. Arora, Illinois Institute of Technology

SESSION 8: PANEL—CHILL LANGUAGE
Chairperson: C. Chang, Bell Telephone Laboratories
R. Bourgonjon, Philips, Netherlands
P. Oosterhaven, IIT, West Germany
K. Rekdal, RUNIT, Norway
A. Runik, GTE

SESSION 9: KNOWLEDGE BASE SYSTEMS
Chairperson: V. Kobler, BMD Advanced Technology Center
Representation and Use of Judgmental Knowledge
J.D. Johannes, University of Alabama
An Intelligent Communication Assistant for Databases
G. Jakobson, V. Shakd, S. Rowley, GTE Laboratories
RUBRIC: A System for Rule-Based Information Retrieval
B.P. McCune, R.M. Tong, J.S. Dean, D.G. Shapiro, Advanced Information & Decision Systems
Autonomous Vehicle Control: An Overview of the Hughes Project
B. Bullock, D. Keirsey, J. Mitchell, T. Nussmeier, D. Tseng, Hughes Research Laboratory

SESSION 10: DATA BASE DESIGN AND APPLICATIONS
Chairperson: T. Chow, Bell Telephone Laboratories
Productivity Tools for a Database Management System
J.A. Wald and P.G. Sorenson, University of Saskatchewan, Canada
Goal Programming Approach to Database Design
H.K. Jain, Syracuse University
Update Sets Approach to Databases
S. Jajodia and P.A. Ng, University of Missouri-Columbia
Dedicating General Database Software for Specific Applications
F.J. Ploster, Kernforschungszentrum Karlsruhe GmbH, West Germany

12:30 p.m.-2:00 p.m.  Lunch Break
2:00 p.m.-3:30 p.m.

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12:30 p.m.-2:00 p.m.  Lunch Break
2:00 p.m.-3:30 p.m.
SESSION 11: IMAGES AND GRAPHICS
Chairperson: R.B. Grafton, Office of Naval Research
Picture Processing for Geographical Data Base Systems
K. Mori, T. Kaneko, O. Okuda, T. Wakanb, YoKosuka Electrical
Communication Laboratory, NTT, Japan
AIQL: A Graphics Query Language for Software Maintenance
environment
S.S. Yau and J.P. Tsai, Northwestern University
An Automatic Database Generator in a Medical Pictorial Environment
G. Stephanek, S.K. Chang, Illinois Institute of Technology
Half-Tone Representation of 3-D Objects Illuminated by Area Sources or
Polyhedron Sources
T. Nishita, E. Nakamme, Hiroshima University, Japan

SESSION 12: PANEL—CHILL LANGUAGE
Chairperson: T. Haque, ITT Europe
R. Bourgonen, Philips, Netherlands
R. Conroy, ITT
H. Gutfeldt, Hasler, Switzerland
E. Reithmaier, Siemens, Germany
D. Teichroew, University of Michigan

SESSION 13: ROBOTICS
Chairperson: L. Siklosy, University of Illinois at Chicago
Holistic Approach to the Design and Analysis of Versatile Robot
languages
K.G. Shin, R.A. Volz, V. Rajlich, University of Michigan
A Formal Semantic Approach to the Specification of an Interactive
Manipulator Control in Cartesian Coordinate System
A.J. Koivo, R. Kunkel, T.H. Guo, Purdue University

SESSION 14: SPECIFICATIONS AND DOCUMENTATION
Chairperson: C. Davis, BMD Advance Technology Center
the "Diversion" Concept in Interactive Computer System Specifications
S. Wartik, A. Pyster, TRW Inc.
Nonprocedural-Dataflow Specification of Concurrent Programs
N. Prywe, B. Szymanski, Y. Shi, University of Pennsylvania
PD: A Humanized Documentation Technology
M. Azuma, T. Tabata, Y. Oki, NEC Corporation, Japan

SESSION 15: GRAPH THEORY AND ANALYSIS OF ALGORITHMS
Chairperson: A. Hawkes, Sargent and Lundy Engineers
The Design of Optimal Systolic Algorithms
G. Li, B.W. Wah, Purdue University
Structured Graphs and Spanning Trees
L. De Flori, J.S. Deogun, University of Nebraska
New Algorithms for the LCS Problem
W.J. Hsu, M.W. Du, National Chiao Tung University, Taiwan

SESSION 16: PANEL—VISUALIZATION OF USER-INTERFACES
Chairperson: T. Ichikawa, Hiroshima University, Japan
S. Chang, Illinois Institute of Technology
C. Ellis, Xerox Corp.
D. Tsichritzis, University of Toronto
M. Zloof, Thomas J. Watson Research Center, IBM

THURSDAY, November 10, 1983
9:00 a.m.-10:30 a.m.
PLENARY SESSION A: PANEL—RESEARCH AND DEVELOPMENT IN AUTOMATION
Chairperson: B.A. Boley, Northwestern University
Panelists:
J. Bauman, IBM Corporation
N. Caplan, National Science Foundation
E. Glauberson, Office of Naval Research
J. Hancock, Purdue University
P. Ockerman, Unimation, Inc.
K. Togino, Matsushita Research Institute, Japan

10:30 a.m.-11:00 a.m. Break

SESSION 17: SOFTWARE TESTING AND VERIFICATION
Chairperson: M. Brandstad, National Bureau of Standards
Environmental Testing Techniques for Software Certification
M.S. Karasik, Yeatch, Rich & Nadler
Static Detection of Ada Programming Errors Through Joint Analysis of
Data Flow and Value Range
R. Hosoya and H. Hotta, NT&T, Japan
A Test Logic Generation Method for Layered Protocol Implementations
T. Araki, K. Takada, S. Yoshitake, NT&T, Japan

SESSION 18: SOFTWARE AND HARDWARE ARCHITECTURE
Chairperson: D.A. Schmitt, Bell Telephone Laboratories
Extensions of Ada for SIMD Parallel Processing
C. Cline and H.J. Siegel, Purdue University
SPRING: A High Level Language Architecture in Ada Environment
N. Nishi, H. Tsubotani, T. Ichikawa, Hiroshima University, Japan
A Virtual Terminal Specification and Rationale
S.L. French, Texas Instruments Incorporated
Optimal Redundancy in VLSI Circuits
K. Kant, Northwestern University

SESSION 19: PANEL—HUMAN FACTORS TECHNOLOGY TRANSFER
Chairperson: D.A. Grimes-Farrow, Bell Telephone Laboratories
B. Curtis, ITT
W. Knowles, California State University at Northridge
D. Meister, U.S. Navy Personnel Research and Development Center
J. Walker, Bell Telephone Laboratories

SESSION 20: PANEL—FAULT TOLERANT SOFTWARE
Chairperson: J. Goldberg, SRI, Inc.
E. Fourtigue, NASA Langley Research Center
K. Kim, University of Florida
H. Hecht, SoHar Inc.
D. Morgan, Digital Equipment Corp.
T. Schwab, Bell Telephone Laboratories

3:30 p.m.-4:00 p.m. Break

SESSION 21: SOFTWARE MANAGEMENT
Chairperson: M. Fagan, IBM Corporation
A Total Approach to a Solution for the Maintenance Problems Through
Configuration Management
K. Bannai, M. Suzuki, T. Terano, Central Research Institute of Electric
Power Industry, Japan
Integrated Development and Project Management Support System
R.J. Lauber and P.R. Lempp, University of Stuttgart, West Germany
PROMPT—A Project Management Planning and Tracking System
D.E. Harvey and N.P. Ippolito, Bell Laboratories
Monitoring Software Development through Dynamic Variables
C.W. Doerflinger and V.R. Basili, University of Maryland

SESSION 22: DATA BASE ANALYSIS AND MODELS
Chairperson: J.R. North, Western Electric Co. Inc.
A Practical Approach to Computer Assisted Initial View Modeling
G. Lausen, W. Stuckey, University of Karlsruhe, West Germany
The Use of the Nested Block Method for Computing Joins
M.R. Scalas, P. Tiberio, Universita Degli Studi di Bologna, Italy
Operators for Non-First-Normal-Form Relations
P.C. Fischer, S.J. Thomas, Vanderbilt University

2:00 p.m.-3:30 p.m.
12:30 p.m.-2:00 p.m. Lunch Break
SESSION 23: PANEL—MODELING AND DATA ANALYSIS IN SOFTWARE ENGINEERING: THEORY AND PRACTICE
Chairperson: A. Goel, Syracuse University
V. Bassi, University of Maryland
B. Curtis, ITT
A. Sukert, General Electric Co.
U. Sumita, University of Rochester, New York

SESSION 24: PANEL—PLANNING AND SIMULATION IN ROBOTICS AND AUTOMATION
Chairperson: J.C. Lin, University of Illinois at Chicago
M. Fox, Carnegie-Mellon University
S. Harmon, Naval Ocean Systems Center
T. Lozano-Perez, M.I.T.
A. Meysetl, University of Florida
R. Paul, Purdue University

FRIDAY, November 11, 1983

9:00 a.m.-10:30 a.m.
PLENARY SESSION B: PANEL—SOFTWARE DEVELOPMENT PROCESS IN INDUSTRY: PAST, PRESENT, AND FUTURE
Chairperson: S.S. Yau, Northwestern University
Panelists:
J. Frame, ITT
K. Fugino, NEC, Japan
W. Griffin, GTE Laboratories
W. Humphrey, IBM
B. Wonsiewicz, Bell Laboratories

10:30 a.m.-11:00 a.m. Break

11:00 a.m.-12:30 p.m.
SESSION 25: SPECIFICATION AND TESTING
Chairperson: A. Pyster, TRW Inc.
Specification and Testing of Abstract Data Types
P. Jalote, University of Illinois at Urbana-Champaign
Testing Programs Against a Formal Specification
H.M. Sneed, Software Engineering Service; M. Majoros, SZAMALK, Hungary
The Use of Graphic Aids for Requirement Specification of Process Control Systems
W.K. Epple, M.D. Hagemann, M.A. Klump, U. Rembold, Universitat Karlsruhe, West Germany

SESSION 26: DISTRIBUTED COMPUTER SOFTWARE
Chairperson: N. Schneiderwind, Naval Postgraduate School
Work Distribution in a Distributed System with a Fully-Connected Topology
D.D. Sharp Jr. and P.L. Crews, North Texas State University
Adaptive File Allocation in Star Computer Network
C.T. Yu and C.H. Chen, University of Illinois at Chicago; M.K. Siu and K. Lam, Hong Kong University
Optimization Algorithms for Processing Simple Queries in Star Networks
K. Sugihara, J. Miyao, T. Kikuno, N. Yoshida, Hiroshima University, Japan

SESSION 27: PANEL—CURRENT AND FUTURE TRENDS IN SOFTWARE ENVIRONMENTS FOR COMPUTER INTEGRATED MANUFACTURING
Chairperson: J. Ramamohan, Ohio State University
Panelists: (to be announced)

SESSION 28: DISTRIBUTED DATA BASE
Chairperson: G. Heblinger, Western Electric Co., Inc.
On A Specification and Performance Evaluation Model for Multicomputer Database Machines
G. Schiffer, S. Seehusen, H. Weber, University of Bremen, West Germany; P. Scheuermann, Northwestern University
Time and Cost Evaluation Schemes of Multiple Copies of Data in Distributed Database Systems
Transaction Optimization in a Distributed Database Testbed System
P.A. Dwyer, Honeywell Inc.; A.R. Hevner, University of Maryland
An Unified Query-By-Example DML
Y. Hsieh, University of Kentucky

12:30 p.m.-2:00 p.m. Lunch Break

2:00 p.m.-3:45 p.m.
SESSION 29: SOFTWARE DEVELOPMENT ENVIRONMENT
Chairperson: J. Caveno, Rome Air Development Center
Overview of DCDS: Distributed Computing Design System
M.W. Alford, TRW Inc.
DACOM: A Design and Configuration Management System
P.J. Hawley, University of Washington
An Approach to Incremental Program Modification
S.S. Yau, C.K. Chang, R.A. Nicholl, Northwestern University
Analysis of a Prototype Ada Integrated Methodology
P. Crews, D. Ward, G. Mungel, North Texas State University and General Dynamics

SESSION 30: SOFTWARE PERFORMANCE
Chairperson: B. DeWolf, Charles Start Draper Lab., Inc.
Load Shedding in a Microprocessor Based Telecommunications Switch
D. Noton and A. Bailey, Harris Corporation
Design and Evaluation of Dynamic Resources Manager
H. Kubo, N. Ono, T. Doine, NEC Corporation, Japan
Virtual Memory Support for Branch-and-Bound Algorithms
B.W. Wah and C.F. Yu, Purdue University
Parallel Sorting and Data Partitioning by Sampling
J.S. Huang, Institute of Information Science, Taiwan; Y.C. Chow, University of Florida

SESSION 31: PANEL—IMPROVING SOFTWARE MANAGEMENT VISIBILITY
Chairperson: M. Azuma, NEC Corporation, Japan
A. Berglund, Tandum Computers Inc.
K. Fugino, NEC, Japan
G. Heidenrich, SOFQUAL Corp.
G. Murine, Metriqs Inc.

SESSION 32: PANEL—QUANTIFYING THE ANALYSIS OF SOFTWARE REQUIREMENTS
D. Hocking, AIRMICS
P. Powell, National Bureau of Standards
B. Rzepka, RADC/COEE
D. Teichrow, University of Michigan
W. Vanderer, Higher Order Software, Inc.
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<th>Advance Registration</th>
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<td>Member</td>
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Students must be IEEE Student members and must show IEEE Student membership card at the door to pick up registration package.** Must indicate which tutorial(s) for the registration.

TUTORIALS

Circle Appropriate Tutorial Numbers (only one tutorial per day)

- Monday, November 7, 1983
  1. Models and Metrics for Software Management and Engineering
  2. Computer Graphics
- Tuesday, November 8, 1983
  3. JSP and JSD: The Jackson Approach to Software Development
  4. Robotics

NOTE:
- Requests for refunds must be received in writing no later than October 21, 1983.
- Tutorial registration fee includes luncheon and bound text of the selected tutorial.
- COMPSAC registration fee includes one copy of the conference proceedings, and two complimentary beverage tickets for each of the COMPSAC-hosted parties, Tuesday and Wednesday nights. (Student registration fee does not include beverage tickets.)
- Limited attendance. Register early—avoid disappointment.
- Registration desk will be open at The Palmer House beginning Sunday evening, 4:00-7:00 p.m., November 6, 1983. The registration desk will be open until 7:00 p.m. on November 8. The registration desk will be open from 8:00 a.m. to 4:00 p.m., November 7-10, and 8:00 a.m. to 2:00 p.m., November 11.
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