**ADVANCE PROGRAM**

The 4th International Conference
**ENTITY-RELATIONSHIP APPROACH**


**Major Theme: The Use of ER Concept in Knowledge Representation**

**Sponsored by:**

- **IEEE Computer Society**
  - TC on Database Engineering cooperation with University of Illinois
  - TC on Machine Intelligence with Louisiana State University
  - TC on Office Automation with Purdue University

**Preconference Tutorials**

Monday, October 28, 1985

8:00 - 8:30 am  Registration

8:30 - 12:00 am  Morning Parallel Session I

**Session IA: ER Modeling: A tool for Analysis and Design**

**Instructor:** Leslie Hazelton, IBM

**Course Description:** Participants will be introduced to the ER Modeling Approach. Topics to be discussed include: Why has the ER approach succeeded while previous design documentation techniques have not? For example, ER Diagrams will be contrasted with Data Flow diagram techniques. How do you collect ER information? ER analysis techniques will be contrasted with BSP techniques.

**Session IB: Artificial Intelligence and Expert Systems**

**Instructor:** George Otto, AT&T Bell Labs

**Course Description:** Artificial Intelligence has been developing as a field for the last 30 years. During that time numerous additions have been made to enable computers to appear intelligent, but few of the resulting approaches were both significant and cost effective. Recently, one branch of Artificial Intelligence, Expert Systems, has begun attracting the attention of industry because it offers increased quality and reduced cost in numerous applications. Dr. Otto's presentation will cover both Artificial Intelligence in general and Expert Systems in particular.

1:30-5:00 pm  Afternoon Parallel Session II

**Session II A: The Analyst's Round Table**

**Instructor:** Rodney P. Zimmerman

**Course Description:** "How can you introduce the ER approach into your Organization?" is the subject of this tutorial. Specific topics include: (1) Role of the ER approach in planning, systems analysis and tool building. (2) How do project teams perform analyses? Do teams operate much differently during analysis than during programming? If so, how do these differences effect the needs for management, training, motivation, and automated tools to support the ER approach?

**Session II B: Database Design**

**Instructor:** C. R. Carlson, Illinois Institute of Technology

**Course Description:** The goal of database design is to organize databases for effective processing. Usually the complexity in size of the problem make it a difficult task. A database design methodology will be presented which sub divides the design process into small, well-defined and easily performed steps. Participation will be provided with the concepts and techniques needed to perform each step. What each technique does, and does not, accomplish will also be discussed.
Session IIC. Panel Discussion
Mapping Specifications to Formalisms
Leader: J. F. Souza, IBM System Research Institute
Panelists: Peter Chen, Louisiana State University
          Sharon S. Salvador, Boston University
          Roger C. Schank, Yale University
3:00-3:30 pm  Coffee Break
3:30-5:30 pm  PARALLEL SESSION III
Session IIIA. Applications
An Integrated System for the Design and Documentation of Data Base Applications
Fabrizio Massimo Ferrara
The Information Resource Dictionary System
Alan Goldfine
The Entity-Relationship Approach as a Tool for Application Analysis
Martin E. Modell
Management Databases Study
Radu Anton Eftime

Session IIIB. Data Base Design Methods
Leader: Robert Carlson
A Specific Model for Information Systems
R. E. Cooley
A Methodology for Translating a Conventional File System into an E-R Model
Kathi Hoghead Davis and Adarsh K. Arora
Executable Entity-Relationship Specifications for Database Schema Design
Scott M. Staley and David C. Anderson
The Translation of a Cobol Data Structure to an Entity-Relationship Type Conceptual Schema
Erik G. Nilsson

Session IIIC. Panel Discussion
Knowledge Engineering and its Implications
Leader: Ross A. Overbeek, Argonne National Lab
Panelists include: Amril Nigan, IBM Corporation
          Earl Sacerdoti, Teknowledge
3:30-10:00 pm  EVENING PANEL SESSION Micro Databases: How Far Do They Go?
Leader: Rodney P. Zimmerman
Software vendors will demonstrate their micro DBMS products and their solutions to a case study. The case study includes E-R diagrams and notes about their interpretation and translation to working systems.
10:00-10:30 am  **Coffee Break**

10:30-12:30 am  **PARALLEL SESSION IV**

**Session IV A. Expert Systems**
Chairman: Ajesh K. Anoma
Conceptual Data Modelling of an Expert System
James P. Held and John V. Carlis
Representing Rules Through Modelling Entity Behavior
Paul Feldman and Guy Fitzgerald
Expert System for Translating an Entity-Relationship Diagram into Databases
H. Briand, H. Habrias, and J. F. Hue

**Session IV B. Theory II**
Chairman: Tok-Ching Ling
A Universal Relation Assumption Based on Entities and Relationships
L. J. Brady
The F1 Formalism, An Extension of the E-R Model Using the First Order Logic
J. Caillau, R. Jacquart, and P. Michel
The Use of E-R Abstractions for Knowledge Representation
Amilcar Serradas and Cristina Serradas

**Session IV C. Panel Discussion**
**Practical Application of E-R Approach**
Leader: Martin Modell, Merrill Lynch
Panelists: Suresh Gadgil, Merrill Lynch
Tom Meurer, ETA International
Harold Paskel, Goldman Sachs
Elizabeth White

12:00-1:30 pm  **LUNCHEON**