Fourth International Conference on Information and Knowledge Management
CIKM '95

November 28 - December 2, 1995

OMNI Inner Harbor Hotel
Baltimore, Maryland, USA

Sponsored by:

ACM SIGART and SIGIR
in cooperation with
AAAI, ACM SIGLINK, Bellcore, CACS/USL, NASA, NSF and UMBC

The Fourth International Conference on Information and Knowledge Management (CIKM '95) will provide an international forum for presentation and discussion of research on information and knowledge management, as well as recent advances on data and knowledge bases. CIKM'95 will bring together leading researchers and developers in a wide variety of scientific areas, with a common interest in improving information and knowledge management technologies. The CIKM conferences have become an effective and established forum for the discussion and dissemination of original and fundamental advances in the area, and to foster close international collaboration between the database, information retrieval, and artificial intelligence communities. An important part of the conference is the Workshops Program which focuses on timely research challenges and initiatives. The conference will feature keynote addresses, invited talks, presentation of technical papers, workshops, panels and social events. Several preconference tutorials will be offered on Tuesday, November 28.

TENTATIVE CONFERENCE SCHEDULE

Tuesday, November 28

7:30 am - 7:00 pm	Registration and check-in	
8:00 am - 12:00 noon	Tutorials *(see descriptions following this schedule)*	
12:00 pm - 1:00 pm	Lunch *(included in tutorial fee)*	
1:00 pm - 5:00 pm	Tutorials *(see descriptions following this schedule)*	

Wednesday, November 29

8:00 am - 5:00 pm	Registration and check-in	
8:40 am - 9:00 am	Opening session	
9:00 am - 10:00 am	Keynote Address:	Paul Young, Assistant Director, National Science Foundation
10:15 am - 11:45 am	Concurrent Sessions:	1) Data Mining 2) Indexing 3) Invited talk: *Research Problems in Data Warehousing* Jennifer Widom, Stanford University
11:45 pm - 1:00 pm	Lunch	
1:00 pm - 2:00 pm	Keynote Address:	*An Overview of the TSIMMIS System* Hector Garcia-Molina, Stanford University
2:15 pm - 4:15 pm	Concurrent Sessions:	1) Parallelism Mobile Environments 2) Interoperability 3) Query Processing
4:30 pm - 5:30 pm	Invited Talk:	*Enhancing Performance of Interoperable Database Systemss and the Role of Materialized Views* Nick Roussopoulos, University of Maryland College Park
7:00 pm - 9:00 pm	Conference Reception	

Thursday, November 30

8:00 am - 5:00 pm	Registration and check-in	
9:00 am - 10:00 am	Keynote address:	*Performance Evaluation Issues in Generalization* Benjamin Wah, University of Illinois, Urbana-Champaign
10:15 am - 11:45 am	Concurrent Sessions:	1) Information Retrieval I 2) Query Optimization 3) Invited Talks: *Mining Knowledge at Multiple Concept Levels* J.W. Han, Simon Fraser University, CA *Designing Electronic Catalogs for Business Value* Arie Segev, UC Berkeley
11:45 pm - 1:00 pm	Lunch	
1:00 pm - 2:00 pm	Keynote address:	*User-Centered Interfaces and Tools:* *A National Focus Area* Gary Strong, National Science Foundation
2:15 pm - 4:15 pm	Concurrent Sessions:	1) Distribution 2) Information Retrieval II 3) Uncertainty Invited Talk: Marc Damashek, U.S. Department of Defense
4:30 pm - 5:30 pm	Keynote Address:	*Intelligent Integration of Information (I3C) Program* Dave Gunning, ARPA
7:00 pm - 11:00 pm	Banquet Dinner Speaker:	Milton Halem, Chief, Space Data and Computing Division Earth and Space Sciences Directorate, NASA

Friday, December 1

8:00 am - 5:00 pm	Registration and check-in	
9:00 am - 10:00 am	Keynote Address:	*Research Directions in Database Security* Teresa Lunt, SRI/ARPA
10:15 am - 11:45 noon	Concurrent Sessions:	1) Collaboration and Workflow 2) Object Oriented and Rule Languages 3) Invited Talks
11:45 pm - 1:00 pm	Lunch	
1:00 pm - 2:00 pm	Keynote Address:	*An Extensible Knowledge Base Management System for Supporting Rule Based Interoperability among \ Heterogenous Systems* Stanley Su, University of Florida
2:15 pm - 4:15 pm	Concurrent Sessions:	1) Temporal and Spatial 2) Knowledge Base Reasoning and Representation 3) Scientific and Design DBS
4:30 pm - 6:00 pm	Plenary Closing Panel Chair: Larry Reeker, National Science Foundation *Funding Predictions and Research Challenges in Information and Knowledge Management*	
4:30 pm - 6:00 pm	Concurrent Workshop Sessions *(GIS and Intelligent Agents only)*	
7:00 pm - 9:00 pm	Maryland Science Center Tour and Reception *(included in conference and workshop fee)*	

Saturday, December 2

9:00 am - 10:30 am	Concurrent Workshop Sessions*
10:45 am - 12:15 pm	Concurrent Workshop Sessions*
12:15 pm - 1:30 pm	Lunch *(included in workshop fee)*
1:30 pm - 2:45 pm	Concurrent Workshop Sessions*
3:00 pm - 4:30 pm	Concurrent Workshop Sessions*

**See Workshop descriptions on following pages.*

PRE-CONFERENCE TUTORIALS

Optional pre-conference tutorials will be held on Tuesday, November 28, 1995. The fee for the following tutorials is $200 each which includes lunch. Register for TWO tutorials at the special fee of $375. Indicate your choice by number on the registration form.

#1 **Digital Libraries** – 8:00 a.m. - 12:00 noon

Instructor: Professor Edward A. Fox, Department of Computer Science, Associate Director for Research, Computing Center, Virginia Tech, Blacksburg, VA

This tutorial will review current efforts in digital libraries and will include experience with building a digital library in computer science and applying it to education, application of information storage and retrieval, hypertext, hypermedia and multimedia technologies and requirements, architectures, design approaches, systems and projects.

#2 **Distributed Data and Object Management** – 8:00 a.m. - 12:00 noon

Instructor: M. Tamer Ozsu, Department of Computing Science, University of Edmonton, Alberta, Canada

The main objective of this tutorial is to provide an in-depth presentation of distributed data and object management technologies. The fundamental distributed data management techniques will be reviewed, their incarnation in object-oriented systems will be discussed as well as the particular problems of distributed object systems. This tutorial will also highlight the open problems and discuss the emerging standards in this area.

#3 **Task-Oriented User Interface Development –** 8:00 a.m. - 12:00 noon

Instructor: Chris Stary, Department for Information Systems, University of Technology, Vienna

This tutorial puts user interface design and task-oriented software development into the perspective of task-oriented user interfaces. The objective is to close the knowledge gap between developers and researchers who have already gained conceptual and practical experiences with task-oriented system development methods and those who have to seek advice from project to project since each user interface seems to be unique in its complexity, requirements and constraints.

#4 **Index Multimedia Databases** – 1:00 - 5:00 p.m.

Instructor: Christos Faloutsos, ATT&T Bell Laboratories, and University of Maryland College Park, Maryland

This tutorial surveys state-of-the-art methods for storing and retrieving multimedia data from large databases. Records may consist of formatted fields, text, images, voice, animation, etc. A sample query may be – in a collection of 2-d color images, find images that are similar to a sunset photograph. The idea is to use feature extraction functions which map an image into a point in feature space so that spatial access methods (SAMs) can be used to accelerate the search. This tutorial will examine the properties of good feature extraction functions, highlight subtle problems, and give solutions.

#5 **Multidatabase Systems** – 1:00 - 5:00 p.m.

Instructor: A. R. Hurson, Computer Science and Engineering Department, Pennsylvania State University, University Park, Pennsylvania

This tutorial explores issues associated with multidatabases and presents the current status if work in the field. It covers a wide range of theoretical, conceptual, and practical topics and addresses the needs of a wide range of audiences including researchers, database designers, practitioners, and users of database systems.

#6 **A Rule-Based Approach to ER Modeling for Relational Database and Object-Oriented Database Design** – 1:00 - 5:00 p.m.

Instructor: Dr. Il-Yeol Song, College of Information Science and Technology, Drexel University, Philadelphia, Pennsylvania

The Entity-Relationship (ER) model and its accompanying ER diagrams are widely used for database modeling and design. Many resources, however, provide only a definition of each modeling component and examples of the pre-built ER diagrams. Beginners in data modeling have a great deal of difficulty learning how to approach a given problem. This tutorial presents step-by-step guidelines a set of decision rules useful in building ER diagrams, and a case study problem. The tutorial will present a set of rules for translating ER diagrams, compare and contrast various approaches, and synthesize recent research results of translating ER diagrams into object-oriented schema for object-oriented database design.

WORKSHOPS
The fee for the following workshops is $225 each which includes lunch.

Geographic Information Systems – *Friday, December 1, 4:30 pm - Saturday, December 2, 4:30 pm*
In recent years computer processing of Earth observations through geographic information systems has attracted a great deal of attention from the industrial and research world. This workshop will provide a forum for disseminating original and fundamental research results in the areas of theoretical foundations, design, implementation and applications of GIS, as well as experience reports from application specialists.

Intelligent Information Agents – *Friday, December 1, 4:30 pm - Saturday, December 2, 4:30 pm*
This workshop will bring together researchers who are working on or interested in exploring the use of agent-oriented paradigms in information systems. Some of the topics relevant to this workshop include: agent communications and messaging languages; agent programming and scripting languages; security, privacy and authentication in agent systems; agent collaboration and integration; learning agents and trainable agents; information mediators and facilitators; agent-human interfaces; agents on the World Wide Web; information filtering, retrieval, gathering and monitoring; and applications in digital libraries, electronic commerce, education, etc.

New Paradigms for Information Systems – *Saturday, December 2, 9:00 am - 4:30 pm*
This workshop will focus on the increasing variety of interfaces between information systems and users. Topics relevant to this workshop include: virtual reality markup language (VRML); applications of Internet tools such as MUDs, MOOs, and IRCs;' and techniques of scientific visualization and their application to information visualization.

REGISTRATION AND HOTEL INFORMATION
Conference participants are encouraged to register in advance of the conference. The pre-registration deadline is November 14, 1995. Late registration fees must be paid after November 14, 1995 and on-site at the conference. Registration includes coffee breaks, the conference banquet, the conference reception, and the reception and trip to the Maryland Science Center.

Four easy ways to register: 1) Phone (410) 455-2336 with credit card information; 2) FAX (410) 455-1074 with credit card information; Mail check made out to ACM-CIKM95 to: UMBC Continuing Education, 5401 Wilkens Avenue, Baltimore, MD 21228-5398; 4) E-Mail: KATHLEEN_VIRDEN@UMBCADMN.BITNET. You are not officially registered until payment has been received. All fees must be paid in U.S. dollars.

REFUND POLICY
Refunds, less a $25 processing fee, will be given only if requested in writing three days before the start of the conference. No refunds will be granted after the conference begins.

FEE SCHEDULE

	ACM MEMBER		**ACM NON-MEMBER**		**STUDENT**	
	Early	**Late**	**Early**	**Late**	**Early**	**Late**
Conference	$305	$355	$355	$405	$205	$230
One Tutorial	$200	$225	$200	$225	$200	$225
Two Tutorials	$375	$425	$375	$425	$375	$425
One Day Workshop	$185	$205	$210	$230	$100	$125
Day and A Half Workshop	$225	$250	$270	$300	$135	$150

LODGING
The Conference Center is The Omni Hotel, 101 West Fayette Street, Baltimore, MD 21201. Reservations at the special conference rate can be made by calling 1-800-THE-OMNI and mentioning the CIKM '95 Conference. After October 28, 1995, reservations will be accepted on a space available basis. If you are using a Purchase Order for payment of housing, the P.O. number should be sent to Credit Manager, Omni Hotel, at least 30 days before your arrival.

OMNI Rates: $75 - Single or Double. Extra person in the room is $20. Rates are subject to 12% Baltimore City and Maryland State taxes. Non-smoking rooms are available. Check-in is at 3:00 p.m.

MEALS
Beverages and snacks will be offered during the morning and afternoon breaks. During the conference, lunch is "on your own." There is a joint workshop luncheon on Saturday and a tutorial luncheon on Tuesday. The Conference Reception Wednesday, November 29 and the Workshop Reception Friday December 1 will feature hor'doeuvres, beverages, and a cash bar. The conference banquet is scheduled for Thursday, November 30.

WELCOME TO BALTIMORE
Baltimore, a city full of life, offers a wealth of events to please a diversity of tastes.

Downtown Baltimore and the famous Inner Harbor is located just a short walk on the overhead bridges from the Omni Conference site. A stroll around the Harbor will yield an evening of people-watching, shopping, and endless options for fantastic food from elegant dining to colorful outdoor cafes to an array of ethnic eateries.

November in Baltimore also provides opportunities to take in a play or concert, or visit an exhibit. Area maps and a complete listing of Baltimore events and restaurants will be given to you when you check-in at the conference.

MARYLAND SCIENCE CENTER
The Maryland Science Center's Museum and Davis Planetarium has been reserved on Friday, December 1, 1995. Shuttle bus service will be available for the short trip to Baltimore's Inner Harbor where a reception will greet conferees. Tour the Science Center Museum on your own where you will have the opportunity to push, pull, turn, and electrify hundreds of innovative hands-on exhibits. Part of the evening will be spent blasting off on a fantastic journey to another world in the Davis Planetarium. This will be a memorable event!

TRANSPORTATION
If you are arriving by plane, BWI ground transportation is located on the lower airport level near the baggage claim area. You can reach the Omni Hotel via: 1) BWI Ground Transportation (round trip $12; one way $8); 2) BWI Limousine Service; 3) BWI Taxi Service (approximately $15).

If you are arriving by car: From Interstate 95, take exit 53, Route 395 to Pratt Street. Turn right and continue three blocks to Charles Street. Turn left and proceed three blocks to Fayette Street. Turn left. The Omni Hotel is on your left. From Interstate 83, exit at St. Paul Street. Continue south on St. Paul to Fayette Street. Turn right and proceed three blocks to the Omni Hotel.

Parking: The Omni Inner Harbor Hotel parking garage rate for hotel guests is $9.00 per 24 hours. Additional parking information will be sent with your conference confirmation.

INFORMATION
If you have any questions about your registration, please call UMBC Continuing Education at (410) 455-2336, or FAX (410) 455-1074.

ON-LINE INFORMATION
Complete information on CIKM '95 is available on-line at the following World Wide Web and email locations:

email: cikm95@cacs.usl.edu
www: http://www.cs.umbc.edu/conferences/cikm/
www: http://www.cs.umanitoba.ca/~randal/cikm95.html

Contact Dr. Niki Pissinou, Program Co-Chair at (318)482-6604,-5791(fax); or Dr. E. K. Park, Program Co-Chair at (410)293-6806, eun@usna.navy.mil for CIKM 95 program related matters.