

Table of Contents

Preface	VII
List of Referees	VIII
Authors Index	IX

Session 1A : Database System Performance (chairperson : Christer Hulten)

<i>Multiprocessor Hash-Based Join Algorithms</i>	151
D. DeWitt, R. Gerber (USA)	
<i>Some Experimental Results On Distributed Join Algorithms In A Local Network</i>	292
H. Lu, M. Carey (USA)	
<i>The Private Workspace Model Feasibility And Applications To 2PL Performance Improvements</i>	192
I. Gold, O. Shmueli, M. Hofri (Israel)	

Session 1B : User Interfaces (chairperson : Mario Schkolnick)

<i>G-Whiz, A Visual Interface For The Functional Model With Recursion</i>	209
S. Heiler, A. Rosenthal (USA)	
<i>Multirelations – Semantics And Languages</i>	251
A. Klausner, N. Goodman (USA)	
<i>Ariel – A Semantic Front-End To Relational DBMSs</i>	305
R. Mac Gregor (USA)	

Session 2A : Physical Organization A (chairperson : Bing Yao)

<i>File Processing Efficiency On The Content Addressable File Store</i>	282
C. Leung, K. Wong (Great Britain)	

Dynamic And Order Preserving Data Partitioning For Database Machines 358
E. Ozkarahan, M. Ouksel (USA)

Design Of A Signature File Method That Accounts For Non-Uniform Occurrence And Query Frequencies 165
C. Faloutsos, S. Christodoulakis (Canada)

Session 2B : Database Operational Issues
(chairperson : Peter Apers)

Updating Replicated Data During Communication Failures 49
B. Blaustein, C. Kaufman (USA)

On The Fly, Incremental, Consistent Reading Of Entire Databases 369
C. Pu (USA)

Understanding The Implications Of View Update Policies 316
C. Medeiros, F. Tompa (Canada)

Tutorial I : Knowledge Databases
(speaker : Istvan Orci)

Session 3A : Concurrency Control
(chairperson : Meichun Hsu)

Concurrency Control In B+ Trees Databases Using Preparatory Operations 331
Y. Mond, Y. Raz (Israel)

Pre-Analysis Locking : A Safe And Deadlock Free Locking Policy 270
G. Lausen, E. Soisalon-Soininen, P. Widmayer (West Germany/Finland)

Locking With Prevention Of Cyclic And Infinite Restarting In Distributed Database Systems 115
W. Cellary, T. Morzy (Poland)

Session 3B : Office Information Systems
(chairperson : Hans-Jochen Schneider)

An Object-Oriented Environment For OIS Applications 335
O. Niestrasz, D. Tschritzis (Greece)

The Type Concept In Office Document Retrieval 34
F. Barbic, F. Rabitti (Italy)

"Fill-In-The-Form" Programming 394
L. Rowe (USA)

Session 4A : Query Optimization A
(chairperson : Matthias Jarke)

Local And Global Query Optimization Mechanisms For Relational Databases 405
K. Satoh, M. Tsuchida, F. Nakamura, K. Oomachi (Japan)

A Time Bound On The Materialization Of Some Recursively Defined Views 219
Y. Ioannidis (USA)

Session 4B : Design Methodologies And Tools
(chairperson : Amilcar Sernadas)

A Tool For Modular Database Design 436
L. Tucherman, A. Furtado, M. Casanova (Brazil)

Database Design Tools : An Expert System Approach 82
M. Bouzeghoub, G. Gardarin, E. Metais (France)

The Mr Diagram -- A Model For Conceptual Database Design 376
R. Ramakrishnan, A. Silberschatz (USA)

Tutorial II : Information Management For Engineering Design
(speaker : Randy Katz)

Session 5B : Physical Organization B
(chairperson : Salvatore March)

Incremental File Reorganization Schemes 346
E. Omiecinski (USA)

Selective Deferred Index Maintenance & Concurrency Control In Integrated Information Systems 142
P. Dadam, V. Lum, U. Praedel, G. Schlageter (West-Germany)

Bit Transposed Files 448
H. Wong, F. Liu, F. Olken, D. Rotem, L. Wong (USA)

Session 5B : Knowledge-Based Management A
(chairperson : Robert Demolombe)

NetBook -- A Data Model To Support Knowledge Exploration 418
D. Shasha (USA)

Acommodating Exceptions In Databases And Refining The Schema By Learning From Them 72
A. Borgida, K. Williamson (USA)

Coping With Complexity In Automated Reasoning About Database Systems 426
T. Sheard, D. Stemple (USA)

Session 6A : Engineering Databases
(chairperson : Umesh Dayal)

A Model For CAD Transactions 25
F. Bancilhon, W. Kim, H. Korth (USA)

An Architecture And Data Model For CAD Databases 105
A. Buchmann, C. Perez de Celis (Mexico)

An Extensible Object-Oriented Approach To Databases For VLSI/CAD 13
H. Afsarmanesh, D. McLeod, D. Knapp, A. Parker (USA)

Panel Session 6B

Improving The Practice Of Database Design: What Can Research Offer ? What Research Is Needed ?
(chairperson : Peter Stocker)

Tutorial III : Parallel Computing And Database Mangement
(speaker : Bruce Hillyer)

Session 7A : Database Systems Theory
(chairperson : Kazimierz Subieta)

<i>Update Semantics For Incomplete Databases</i>	1
S. Abiteboul, G. Grahne (France)	
<i>Hit Data Model: Data Bases From The Functional Point Of View</i>	470
J. Zlatuska (Czechoslovakia)	
<i>Determining When A Structure Is A Nested Relation</i>	171
P. Fischer, D. Van Gucht (USA)	

Panel Session 7B

On Integrating AI And Database Technologies
(chairperson : Michael Brodie)

Session 8A : Knowledge Based Management B
(chairperson : Frank Manola)

<i>A Knowledge-Based Approach To Data Management For Intelligent User Interfaces</i>	96
C. Broverman, W. Croft (USA)	
<i>The Representation And Deductive Retrieval Of Complex Objects</i>	458
C. Zaniolo (USA)	
<i>Functional Dependencies In Logic Programs</i>	324
A. Mendelzon (Canada)	

Panel Session 8B

The Challenge Of Emerging Database Applications : Do We Need New Models ?
(chairperson : Sham Navathe)

**Session 9A : Performance Of Database Systems
(chairperson : Sven Tafvelin)**

<i>An Evaluation Of Buffer Management Strategies For Relational Database Systems</i>	127
H. Chou, D. DeWitt (USA)	
<i>An Efficient Implementation Of A Relational Data Base</i>	181
M. Furman (Poland)	
<i>Database Machine Morphology</i>	59
H. Boral, S. Redfield (USA)	

Panel Session 9B

*Engineering Databases : New Technology Or New Application ?
Peter Lockemann*

**Session 10A : Query Optimization B
(chairperson : Witold Litwin)**

<i>On Semantic Reefs And Efficient Processing Of Correlation Queries With Aggregates</i>	241
W. Kiessling (West Germany)	
<i>Data Constructors: On The Integration Of Rules And Relations</i>	227
M. Jarke, V. Linnemann, J. Schmidt (USA/West Germany)	
<i>Computing Queries From Derived Relations</i>	259
P. Larson, H. Yang (Canada)	

Panel Session 10B

*Databases In A Micro-Mainframe Environment
(chairperson : Dennis Tsichritzis)*