

Table of Contents

Invited Talk

| | |
|---|---|
| A Foolish Consistency: Technical Challenges in Consistency Management | 1 |
| <i>Anthony Finkelstein, University College London, United Kingdom</i> | |

Object Oriented, Object Relational I

| | |
|--|----|
| The BORD Benchmark for Object-Relational Databases | 6 |
| <i>Lee S.H., Kim S.J., Kim W.; USA</i> | |
| An Indexing Structure for Aggregation Relationship in OODB | 21 |
| <i>Xiao R., Dillon T.S., Rahayu W., Chang E., Gorla N.; P.R.C., Australia, USA</i> | |
| Deciding on the Equivalence of a Relational Schema and an Object-Oriented Schema | 31 |
| <i>Alhajj R.; United Arab Emirates</i> | |

Multimedia Databases I

| | |
|---|----|
| Semantics Reasoning Based Video Database Systems..... | 41 |
| <i>Tran D.A., Hua K.A., Vu K.; USA</i> | |
| Toward a User-Centered Image Retrieval System | 51 |
| <i>Ounis I.; United Kingdom</i> | |

Fundamentals for Applications I

| | |
|--|-----|
| Measuring for Database Programs Maintainability | 65 |
| <i>Piattini M., Martinez A.; Spain</i> | |
| Database Migration in WAN Environments: How Can It Earn Good Performance?..... | 79 |
| <i>Hara T., Tsukamoto M., Nishio S.; Japan</i> | |
| Dynamic Reconfiguration Algorithm: Dynamically Tuning Multiple Buffer Pools..... | 92 |
| <i>Martin P., Li H.-Y., Zheng M., Romanufo K., Powley W.; Canada</i> | |
| Assigning Tasks to Resource Pools: A Fuzzy Set Approach | 102 |
| <i>de Korvin A., Hashemi S., Quirchmayr G., Kleyle R.; Austria, USA</i> | |

Object Oriented, Object Relational II

| | |
|---|-----|
| Protocol for Taking Object-Based Checkpoints | 115 |
| <i>Tanaka K., Takizawa M.; Japan</i> | |
| From Object-Oriented to Aspect-Oriented Databases | 125 |
| <i>Rashid A., Pulvermueller E.; United Kingdom, Germany</i> | |
| Contextualization of OODB Schemas in CROME..... | 135 |
| <i>Caron O., Carré B., Debrauwer L.; France</i> | |

Multimedia Databases II

| | |
|--|-----|
| Quality-Based Synchronization Methods of Multimedia Objects | 151 |
| <i>Nemoto N., Tanaka K., Takizawa M.; Japan</i> | |
| Utilizing Fragmented Bandwidth in a Staggered Striping Multimedia System..... | 161 |
| <i>Pan Y., Hou W.-C.; USA</i> | |
| Subjective Retrieval System for Texture Images Based on Interactions of Orientation and Color | 171 |
| <i>Kobayashi Y., Kato T.; Japan</i> | |

Fundamentals for Applications II

| | |
|--|-----|
| Chasing Relational Database Constraints Backwards | 183 |
| <i>Coulondre S.; France</i> | |
| Using an Ordered Key Attribute in Database Design..... | 193 |
| <i>Ng W.; Hong Kong</i> | |
| Awareness in Interactive Database Applications..... | 203 |
| <i>Specht G., Harsdorf von Enderndorf P., Kahabka T., Peterander F.; Germany</i> | |

Workflow

| | |
|---|-----|
| WorkMan - A Transactional Workflow Prototype | 212 |
| <i>Puustjärvi J., Laine H.; Finland</i> | |
| Formalizing Workflows Using the Event Calculus | 222 |
| <i>Cicekli N.K., Yildirim Y.; Turkey</i> | |
| Gaining Control over Time in Workflow Management Applications | 232 |
| <i>Kafeza E., Karlapalem K.; Hong Kong</i> | |

| | |
|---|-----|
| Temporal Modeling of Workflows with Conditional Execution Paths | 243 |
| <i>Eder J., Gruber W., Panagos E.; Austria, USA</i> | |

Security Aspects

| | |
|--|-----|
| Verified Order-Based Transaction Scheduling Scheme for Multilevel Secure Database Management Systems | 254 |
| <i>Sohn Y., Moon S.; Korea</i> | |

| | |
|--|-----|
| Task-Role Based Access Control (T-RBAC) : An Improved Access Control Model for Enterprise Environment..... | 264 |
| <i>Oh S., Park S.; Korea</i> | |

| | |
|---|-----|
| Data Security for Distributed Meeting Systems | 274 |
| <i>Lee R., Kambayashi Y.; Japan</i> | |

| | |
|---|-----|
| A Comparison of Two Architectures for Implementing Security and Privacy in Cyberspace | 287 |
| <i>van de Riet R., Janssen W., Olivier M., Serban R.; The Netherlands, South Africa</i> | |

Fundamentals for Applications III

| | |
|---|-----|
| Organizations and Collective Obligations | 302 |
| <i>Royakkers L., Dignum F.; The Netherlands</i> | |

| | |
|--|-----|
| Information Retrieval with Conceptual Graph Matching | 312 |
| <i>Montes-y-Gómez M., López-López A., Gelbukh A.; Mexico</i> | |

| | |
|--|-----|
| Approximate Pattern Matching in Shared-Forest | 322 |
| <i>Vilares M., Ribadas F.J., Darriba V.M.; Spain</i> | |

XML

| | |
|---|-----|
| A Data Model for Temporal XML Documents | 334 |
| <i>Amagasa T., Yoshikawa M., Uemura S.; Japan</i> | |

| | |
|---|-----|
| Blind Queries to XML Data | 345 |
| <i>Damiani E., Tanca L.; Italy, USA</i> | |

| | |
|--|-----|
| XML and Meta Data Based EDI for Small Enterprises..... | 357 |
| <i>Wöß W.; Austria</i> | |

Advanced Databases I

| | |
|--|-----|
| Optimal Page Ordering for Region Queries in Static Spatial Databases | 366 |
| <i>Cho D.-S., Hong B.-H.; South Korea</i> | |

| | |
|--|-----|
| A Multi-channel Dissemination System Based on Time-Series Clustering Mechanism for On-Line News Articles..... | 376 |
| <i>Matsumoto K., Sumiya K., Uehara K.; Japan</i> | |

Query Aspects I

| | |
|--|-----|
| Optimizing Queries in Extended Relational Databases..... | 386 |
| <i>Maher M., Wang J.; Australia</i> | |

| | |
|---|-----|
| Reducing the Location Query Cost Based on Behavior-Based Strategy | 397 |
| <i>Jin M.-H., Horng J.-T., Wu H.-K., Liu B.-J.; Taiwan</i> | |

| | |
|--|-----|
| Extending RDBMS for Allowing Fuzzy Quantified Queries..... | 407 |
| <i>Tineo Rodríguez L.J.; Venezuela</i> | |

Knowledge Aspects I

| | |
|--|-----|
| Knowledge Decay in a Normalised Knowledge Base | 417 |
| <i>Debenham J.; Australia</i> | |

| | |
|--|-----|
| A Structured Testing Methodology for Knowledge-Based Systems | 427 |
| <i>El-Korany A., Rafea A., Baraka H., Eid S.; Egypt</i> | |

| | |
|---|-----|
| Semantic Verification of Rule-Based Systems with Arithmetic Constraints | 437 |
| <i>Ramírez J., de Antonio A.; Spain</i> | |

Data Warehouses I

| | |
|--|-----|
| View Selection in OLAP Environment | 447 |
| <i>Qiu S. G., Ling T.W.; Singpaore</i> | |

| | |
|--|-----|
| Storage Management of a Historical Web Warehousing System..... | 457 |
| <i>Cao Y., Lim E.-P., Ng W. K.; Singapore</i> | |

| | |
|---|-----|
| Range-Max/Min Query in OLAP Data Cube | 467 |
| <i>Li H.-G., Ling T.W., Lee S.Y.; Singapore</i> | |

Advanced Databases II

| | |
|--|-----|
| Temporal Databases with Null Values | 477 |
| <i>Park M., Leinen H.-H.; Germany</i> | |
| Improving Temporal Joins Using Histograms..... | 488 |
| <i>Sitzmann I., Stuckey P.J.; Australia</i> | |
| Providing Topically Sorted Access to Subsequently Released Newspaper Editions or: How to Build Your Private Digital Library | 499 |
| <i>Rauber A., Merkl D.; Austria</i> | |

Query Aspects II

| | |
|--|-----|
| Cost Estimation for Large Queries via Fractional Analysis and Probabilistic Approach in Dynamic Multidatabase Environments..... | 509 |
| <i>Zhu Q., Motheramgari S., Su Y.; USA</i> | |
| Lazy Query Enrichment: A Method for Indexing Large Specialized Document Bases with Morphology and Concept Hierarchy | 526 |
| <i>Gelbukh A.F.; Mexico</i> | |
| Extending the Re-use of Query Results at Remote Client Sites | 536 |
| <i>Robinson J., Lowden B.G.T.; United Kingdom</i> | |

Knowledge Aspects II

| | |
|--|-----|
| Discovering and Representing InterSchema Semantic Knowledge in a Cooperative Multi-Information Server Environment | 548 |
| <i>Tawil A.-R.H., Gray W.A., Fiddian N.J.; United Kingdom</i> | |
| A Description Logics-Like Model for a Knowledge and Data Management System | 563 |
| <i>Roger M., Simonet A., Simonet M.; France</i> | |
| An Ontology Driven Approach to Ontology Translation | 573 |
| <i>Mihoubi H., Simonet A., Simonet M.; France</i> | |

Data Warehouses II

| | |
|---|-----|
| A Temporal Object-Oriented Data Warehouse Model | 583 |
| <i>Ravat F., Teste O.; France</i> | |

Process-Oriented Requirement Analysis Supporting the Data Warehouse
Design Process - A Use Case Driven Approach..... 593
List B., Schieffer J., Tjoa A M.; Austria

On Data Warehouse and GIS Integration..... 604
Kouba Z., Matoušek K., Mikšovský P.; Czech Republic

Advanced Databases III

Semi-automatic Extraction of Hyponymies and Overlappings from
Heterogeneous Database Schemes 614
Palopoli L., Saccà D., Terracina G., Ursino D.; Italy

Constraint Satisfaction for Reconciling Heterogeneous Tree Databases..... 624
Kitakami H., Nishimoto M.; Japan

A Mobile Agent Carrier Environment for Mobile Information Retrieval 634
Wang T.I.; R.O.C.

Query Aspects III

A Skew-insensitive Algorithm for Join and Multi-join Operations on Shared
Nothing Machines 644
Bamha M., Hains G.; France

An Interface to Databases for Flexible Query Answering:
A Fuzzy-Set Approach 654
Loo G.S., Lee K.-H.; New Zealand

Lattice-Structured Domains, Imperfect Data and Inductive Queries..... 664
Rice S., Roddick J.F.; Australia

Analysis and Design

Preprocessing of Requirements Specification 675
Kroha P.; Germany

Analysing Enterprises: The Value Cycle Approach..... 685
Griffioen P.R., Elsas Ph.I., van de Riet R.P.; The Netherlands

Ontological Design Patterns: Metadata of Molecular Biological Ontologies,
Information and Knowledge..... 698
Reich J.R.; United Kingdom

Data Mining, Knowledge Discovery

| | |
|---|-----|
| Exploiting the Duality of Maximal Frequent Itemsets and Minimal Infrequent Itemsets for I/O Efficient Association Rule Mining | 710 |
| <i>Loo K.K., Yip C.L., Kao B. Cheung D.; Hong Kong</i> | |

| | |
|---|-----|
| Data Mining Using Query Flocks with Views | 720 |
| <i>Yetisgen M., Toroslu I.H.; Turkey</i> | |

| | |
|--|-----|
| A KDD Experience Factory: Using Textual CBR for Reusing Lessons Learned..... | 730 |
| <i>Bartlmae K., Lanquillon C.; Germany</i> | |

| | |
|--|-----|
| Completing Missing Values Using Discovered Formal Concepts | 741 |
| <i>Ben Yahia S., Arour K., Jaoua A.; Tunesia, Saudi Arabia</i> | |

Advanced Databases IV

| | |
|--|-----|
| Extending Datalog with Deductive Databases | 752 |
| <i>Liu M.; Canada</i> | |

| | |
|---|-----|
| Design and Implementation of the OLOG Deductive Object-Oriented Database Management System..... | 764 |
| <i>Li X., Liu M.; Canada</i> | |

Query Aspects IV

| | |
|--|-----|
| On Multi-dimensional Sorting Orders..... | 774 |
| <i>Aref W.G., Kamel I.; USA</i> | |

| | |
|---|-----|
| Scalable Visual Hierarchy Exploration | 784 |
| <i>Stroe I.D., Rundensteiner E.A., Ward M.O.; USA</i> | |

| | |
|---|-----|
| A Knowledge Based Paradigm for Querying Databases | 794 |
| <i>Bresciani P., Nori M., Pedot N.; Italy</i> | |

Using the Web I

| | |
|--|-----|
| Performance Analysis of Web Database Systems | 805 |
| <i>Zhu Y., Lü K.; United Kingdom</i> | |

| | |
|---|-----|
| WDBQS : A Unified Access to Distant Databases Via a Simple Web-Tool | 815 |
| <i>Sallaberry C., Andonnof E., Belloir N.; France</i> | |

| | |
|---|-----|
| Performance Issues of a Web Database..... | 825 |
| <i>Li Y., Lü K.; United Kingdom</i> | |

Indexing

| | |
|--|-----|
| Improving the Performance of High-Energy Physics Analysis through Bitmap Indices..... | 835 |
| <i>Stockinger K., Duellmann D., Hoschek W., Schikuta E.; Switzerland, Austria</i> | |

| | |
|---|-----|
| A Fast Convergence Technique for Online Heat-Balancing of Btree Indexed Database over Shared-Nothing Parallel Systems..... | 846 |
| <i>Feelilf H., Kitsuregawa M., Ooi B.-C.; Japan, Singapore</i> | |

| | |
|---|-----|
| Indexing Semistructured Data Using PATRICIA Tree | 859 |
| <i>Wu L.-C., Horng J.-T., Liu B.-J., Wang C.-Y., Chen G.-D.; Taiwan</i> | |

Applications I

| | |
|--|-----|
| MegaStore: Advanced Internet-Based E-Commerce Service for Music Industry..... | 869 |
| <i>Benabdelkader A., Afsarmanesh H., Hertzberger L.O.; The Netherlands</i> | |

| | |
|--|-----|
| Supporting Public Browsing of an Art Gallery Collections Database..... | 879 |
| <i>Bechhofer S., Drummond N., Goble C.; United Kingdom</i> | |

| | |
|--|-----|
| DIMS: Implementation of a Federated Information Management System for PRODNET II..... | 889 |
| <i>Garita C., Ugur Y., Frenkel A., Afsarmanesh H., Hertzberger L.O.; The Netherlands</i> | |

Using the Web II

| | |
|---|-----|
| A Formal Treatment of the SACReD Protocol for Multidatabase Web Transactions | 899 |
| <i>Younas M., Egelstone B., Holton R.; United Kingdom</i> | |

| | |
|--|-----|
| Generic Architecture of Web Servers Supporting Cooperative Work..... | 909 |
| <i>Rykowski J., Wiczerzycki W.; Poland</i> | |

| | |
|--|-----|
| Internet Search Technologies & XML | 919 |
| <i>Montebello M., Ciappara R.; Malta</i> | |

Distributed Aspects

| | |
|---|-----|
| Distributed Storage and Revocation in Digital Certificate Databases | 929 |
| <i>Lopez J., Mana A., Ortega J.J., Troya J.M.; Spain</i> | |

| | |
|--|-----|
| Fine Grained Replication in Distributed Databases: A Taxonomy and Practical Considerations | 939 |
| <i>Weippl E., Essmayr W.; Austria</i> | |

| | |
|--|-----|
| A Change Impact Analysis Approach for CORBA-Based Federated Databases..... | 949 |
| <i>Deruelle L., Bouneffa M., Melab N., Basson H., Goncalves G., Nicolas J.C.; France</i> | |

Applications II

| | |
|--|-----|
| A Qualitative Formalization of Built Environments..... | 959 |
| <i>Bittner T.; Canada</i> | |

| | |
|--|-----|
| Experimenting NUMA for Scaleable CDR Processing..... | 970 |
| <i>Derks W.L.A., Dijkstra S.J., Enting H.D., Jonker W., Wijnands J.E.P.; The Netherlands</i> | |

| | |
|--|-----|
| SPICE: A Flexible Architecture for Integrating Autonomous Databases to Comprise a Distributed Catalogue of Life..... | 981 |
| <i>Jones A.C., Xu X., Pittas N., Gray W.A., Fiddian N.J., White R.J., Robinson J., Bisby F.A., Brandt S.M.; United Kingdom</i> | |

Multimedia Databases I - continuation

| | |
|---|-----|
| MISE: The MediaSys Image Search Engine | 993 |
| <i>Andr s F.,Dessaigne N., Martinez J., Mouaddib N., Ono K., Schmidt D.C., Tosukhowong P.; Japan, France, USA</i> | |

| | |
|---------------------------|------|
| Author Index | 1003 |
|---------------------------|------|

Database and Expert Systems Applications

11th International Conference, DEXA 2000 London, UK,

September 4-8, 2000 Proceedings

Ibrahim, M.; Küng, J.; Revell, N. (Eds.)

2000, XIX, 1012 p., Softcover

ISBN: 978-3-540-67978-3