

# **ISCA 2nd International Conference on Information Reuse and Integration 2000**

**Honolulu, Hawaii, USA  
1-3 November 2000**

**Editors:**

**S.N.J. Murthy  
S-C. Chen**

**ISBN: 978-1-61839-841-3**

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2000) by the International Society for Computers and Their Applications  
All rights reserved. Reproduction in any form without the written consent of ISCA is prohibited.

Original ISBN: 1-880843-36-6 (Out of Print)  
Reprint ISBN: 978-1-61839-841-3

Printed by Curran Associates, Inc. (2012)

For permission requests, please contact the International Society for Computers and Their Applications  
at the address below.

International Society for Computers and Their Applications  
975 Walnut Street, Suite 132  
Cary, NC 27511-4216

Phone: (919) 467-5559  
Fax: (919) 467-3430

[isca@ipass.net](mailto:isca@ipass.net)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2634  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# **INTERNATIONAL SOCIETY FOR COMPUTERS AND THEIR APPLICATIONS**

## **2<sup>nd</sup> International Conference on Information Reuse and Integration**

**November 1 - 3, 2000  
Sheraton Princess Kaiulani Hotel, Honolulu, Hawaii, USA**

### **TECHNICAL PAPER INDEX**

#### **SESSION 1: ENGINEERING FOR REUSE**

<b>1. Integrating Component Frameworks</b> Marc Sihling (Technische Universität München) .....	1
<b>2. Information Reuse and Integration with Fuzzy Cognitive Structures</b> Benjoe A. Juliano (California State University, Chico) .....	5
<b>3. A Framework for Integrating Ensemble Classifiers and Scientific Database Technologies</b> R. S. Renner (California State University, Chico) .....	9
<b>4. The Opportunity for Formal Models of Integration</b> J. Payton, R. Gamble, S. Kimsen, and L. Davis (University of Tulsa) .....	13

#### **SESSION 2: KNOWLEDGE ACQUISITION AND MANAGEMENT**

<b>1. Supporting Knowledge Re-Use with Knowledge Asset Mind Maps</b> Freimut Bodendorf and Sascha Uelpenich (University of Erlangen-Nuremberg) .....	19
<b>2. Knowledge Management for Database Interoperability</b> Naphtali D. Riske (Florida International University), Rukshan I. Athauda (Microsoft Corporation), Jun Yuan, Shu-Ching Chen (Florida International University) .....	23
<b>3. Third-Generation Expert Systems</b> Stuart H. Rubin (Space and Naval Warfare Systems Center and Central Michigan University), Jayaram Murthy (Central Michigan University), Marion G. Ceruti (Space and Naval Warfare Systems Center), Mariofanna Milanova (University of Porto), Zachary C. Ziegler and Robert J. Rush, Jr. (Space and Naval Warfare Systems Center) .....	27
<b>4. Relational Tensors for Conceptual Discovery</b> Stuart H. Rubin (Space and Naval Warfare Systems Center and Central Michigan University) .....	35
<b>5. Software Project Control Optimization</b> Jacob Sukhodolsky (Saint Louis University) and Waleed W. Smari (University of Dayton) .....	42

### **SESSION 3: DATA MINING AND KNOWLEDGE DISCOVERY**

1. **Towards a Framework for Large Itemsets Generation in Association Rules Mining**  
Paul J. Fortier, Denis Mukhin (UMass-Dartmouth) and Arturo J. Sánchez-Ruiz (University of North Florida) ... 48
2. **Finding Similarity in Financial Time Series Databases**  
Fei Wu, Veronique Plihon, and Georges Gardarin (University of Versailles) ..... 54
3. **Using Active Networks in Parallel Mining of Association Rules**  
Qin Ding and William Perrizo (North Dakota State University) ..... 58
4. **Mining Database Semantic Relationships**  
Mei-Ling Shyu (University of Miami) and Shu-Ching Chen (Florida International University) ..... 62

### **SESSION 4: INFORMATION ORGANIZATION AND RETRIEVAL - I**

1. **An Implementation of Database Integration Strategies**  
Kemmel Scopim, Marcos Sunye, and Renato Katsuragawa (Federal University of Parana) ..... 66
2. **On Database Integration over Intelligent Networks**  
Naphtali Rische, Jun Yuan, Jinyu Meng, Shu-Ching Chen (Florida International University), and Ouri Wolfson (University of Illinois at Chicago) ..... 70
3. **Using XML for Information and Knowledge Management in the Organisation**  
Albert F. Bokma and Andrew J. Slade (University of Sunderland) ..... 76
4. **A System for Continuous, Real-Time Search and Retrieval of Georeferenced Objects**  
Debra Lee Davis-Chu, Nagarajan Prabakar and Naphtali Rische (Florida International University) ..... 82

### **SESSION 5: INFORMATION ORGANIZATION AND RETRIEVAL - II**

1. **Dynamic Mosaicking of Heterogeneous Digital Images**  
Andriy Selivonenko, Nagarajan Prabakar, Naphtali Rische and Debra Lee Davis-Chu (Florida International University) ..... 86
2. **Querying Structured Documents based on Human Visual Memory**  
Soichiro Hidaka, Hiroyuki Kato, Keizo Oyama (National Institute of Informatics) ..... 91
3. **Automated Generation of Distributed Components for Generic Retrieval and Management of Information**  
Stefaan Vanhastel, Filip De Turck, Filip Vandermeulen, Giovanni Mels, Piet Demeester (Ghent University) .... 95
4. **Wireless Sensor Networks: Some Information Theory and Network Issues**  
Mohiuddin Ahmed and Gregory Pottie (University of California, Los Angeles) ..... 99

## **SESSION 6: NEURAL SYSTEMS, INTELLIGENT TRAINING AND TUTORING, AND LEGAL AND ETHICAL ISSUES**

1. **Concept Map-based Tool to Automate the Knowledge Acquisition Process**  
*Injoo Jeong (East-West University) and Martha W. Evens (Illinois Institute of Technology)* ..... 103
2. **Genetic Optimization of Neural Network Preprocessing in a Financial Prediction Application**  
*Ashraf M. Abdelbar and M. Mohy Mahmoud (American University in Cairo)* ..... 107
3. **Using Neural Networks for Clustering on RSI Data and Related Spatial Data**  
*Kaushik Das, William Perrizo, Qin Ding (North Dakota State University)* ..... 111
4. **A Behavioral Study on Computing Ethics**  
*Awad H. Khalil (The American University in Cairo)* ..... 117

## **SESSION 7: MODELING AND SIMULATION**

1. **Performance Tuning a Generic Database System by Data Striping**  
*Wolfgang Diestelkamp and Lars Lundberg (University of Karlskrona/Ronneby)* ..... 121
2. **Towards a Communication Based Approach for Enterprise Modelling Integration**  
*Remigijus Gustas (Karlstad University)* ..... 125
3. **Toward the Development of Performance Evaluation and Visualization Tools for Collaborative Enterprises**  
*Waleed W. Smari (University of Dayton), Luis M. Concha, Jong S. Hwang (Air Force Research Laboratory)* ..... 130
4. **Distributed Simulation of a SS7 Signaling Network**  
*Ramesh K. Kame, Alexander L. Wijesinha, and Mahendra Patel (Towson University), Arun K. Sood, and Robert Simon (George Mason University)* ..... 137

## **SESSION 8: WEB-BASED SYSTEMS AND MULTIMEDIA**

1. **Introducing Schema into Web**  
*Vincenza Carchiolo, Alessandro Longheu, Michele Malgeri (Università di Catania)* ..... 141
2. **Web Searching with Distributed Index Agent**  
*Long Yan, Wei Sun and Lian Mo (Florida International University)* ..... 145
3. **A Reusable E-commerce Prototype with Java Implementation**  
*Gongzhu Hu and Yangjie Cheng (Central Michigan University)* ..... 151
4. **A VR Component Architecture for Visual Multi-User Applications**  
*Martin Leissler, Andreas Müller, Matthias Hemmje, Erich Neuhold (GMD - German National Research Center for Information Technology)* ..... 155
5. **Angle-Free Face Recognition for Plainly Rotated Face Images Using Principal Component Analysis**  
*Y. B. Joo and J. Jin (University of New South Wales)* ..... 162