

IRI 2010 Program

[[Program Overview](#)], [[Detailed Program](#)]

August 4, 2010

8:00 a.m. - 5:00 p.m.	Conference Registration
7:30 a.m. - 8:30 a.m.	Informal Meet & Greet - Coffee / Pastries
8:30 a.m. - 8:40 a.m.	Welcome, Conference Opening Remarks
8:40 a.m. - 9:40 a.m.	KEYNOTE(1): Dr. Lotfi Zadeh, <i>UC Berkeley, USA</i> Title: Precisiation of Meaning—Toward Computation with Natural Language
9:40 a.m. - 10:00 a.m.	Break
10:00 a.m. - 12:00 p.m.	Session A

Session A1: Automation, Integration and Reuse across Various Apps

Session Chair: Mark McKenney

027 A Message-Based Interoperability Framework with Application to Astrophysics

László István Etesi, André Csillaghy and Lin-Ching Chang, *The Catholic University of America, USA*

061 Effective API Navigation and Reuse

Awmy Alnusair⁽¹⁾, Tian Zhao⁽¹⁾ and Eric Bodden⁽²⁾

⁽¹⁾ *University of Wisconsin-Milwaukee, USA*

⁽²⁾ *Technische, Germany*

063 Empirical Evaluation of Active Sampling for CRF-based Analysis of Pages

Manabu Ohta⁽¹⁾, Ryohei Inoue⁽¹⁾ and Atsuhiko Takasu⁽²⁾

⁽¹⁾ *Okayama University, Japan*

⁽²⁾ *National Institute of Informatics, Japan*

102 Workflow Management of Simulation based Computation Processes in Transportation Domain

Qunzhi Zhou and Viktor Prasanna, *University of Southern California, USA*

Session A2: Data Mining and Knowledge Discovery I

Session Chair: Brandeis H. Marshall

003 Improving Query Suggestion by Utilizing User Intent

Shuo-En Tsai⁽¹⁾, Chia-Yu Tsai⁽²⁾, Shih-Wei Tu⁽²⁾ and Yi-Shin Chen⁽¹⁾

⁽¹⁾ *National Tsing Hua University, Taiwan*

⁽²⁾ *National Tsing-Hua University, Taiwan*

032 Evaluating the Impact of Data Quality on Sampling

Jason Van Hulse, Taghi Khoshgoftaar and Amri Napolitano, *Florida Atlantic University, USA*

040 Improving the Runtime of Clustering Algorithms with a Simple Check on the Minimum Distance

Alan Chia-Lung Chen, Shang Gao, Reda Alhajj, Panagiotis Karampelas, *University of Calgary, Canada*

009 A Comparative Study of Filter-based Feature Ranking Techniques

Huanjing Wang⁽¹⁾, Taghi Khoshgoftaar⁽²⁾ and Kehan Gao⁽³⁾

⁽¹⁾ *Western Kentucky University, USA*

⁽²⁾ *Florida Atlantic University, USA*

⁽³⁾ *Eastern Connecticut State University, USA*

12:00 p.m. - 1:30 p.m. Lunch

1:30 p.m. - 3:30 p.m. Session B

Session B1: Information Assurance I

Session Chair: Du Zhang

082 Active Learning with Neural Networks for Intrusion Detection

Naeem Seliya⁽¹⁾ and Taghi Khoshgoftaar⁽²⁾

⁽¹⁾ *University of Michigan – Dearborn, USA*

⁽²⁾ *Florida Atlantic University, USA*

059 Dynamic Multicast Height Balance Key Agreements for Secure Multicast Communication in Ad Hoc Networks

Hua-Yi Lin, Tzu-Chiang Chiang, Che-Yu Yang and Jia-Lin Chang, *China University of Technology, Taiwan, ROC., Taiwan*

093 Secure information exchange

Thouraya Bouabana-Tebibel, Sara Mehar and Rym Nesrine Guibadj, *ESI, Algeria*

096 Model Based Detection of Implied Scenarios in Multi Agent Systems

Mohammad Moshirpour, Abdolmajid Mousavi and Behrouz Far, *University of Calgary, Canada*

Session B2: Data Mining and Knowledge Discovery II
Session Chair: Mark McKenny

084 k-NN Based LS-SVM Framework for Long-Term Time Series Prediction

Zifang Huang and Mei-Ling Shyu, *University of Miami, USA*

004 Aggregating Music Recommendation Web APIs by Artist

Brandeis Marshall, *Purdue University, USA*

056 A Novel Feature Selection Technique for Highly Imbalanced Data

Taghi Khoshgoftaar⁽¹⁾, Kehan Gao⁽²⁾ and Jason Van Hulse⁽¹⁾

⁽¹⁾ *Florida Atlantic University, USA*

⁽²⁾ *Eastern Connecticut State University, USA*

050 Class Compactness for Data Clustering

Yuqing Song, *Institute of Computing Technology, Chinese Academy of Sciences, China*

3:30 p.m. - 4:00 p.m.

Break

4:00 p.m. - 5:00 p.m.

Talk:

Prof. Xindong Wu's keynote in absentia delivered by Prof. Taghi Khoshgoftaar, Florida Atlantic University

Title: **Data Mining for Ubiquitous Personalized Information Fusion**

6:00 p.m. - 8:00 p.m.

Reception and Poster Exhibition

Poster boards of size 30"x 40" will be provided for poster presentations. The authors should plan to bring posters of appropriate size(s) or slides accordingly. Please make sure that the fonts are adequately sized to ensure that the text is visible from reasonable distance.

Poster

1 Toward an Integrated System for Command and Control Net-Centric Web Services and Sustainment: Application to Homeland Security

Kevin Adams, Sandi Lehan, Marion Ceruti, Stuart Rubin and Jeff Waters, *Space and Naval Warfare Systems Center Pacific, USA*

17 An Information Model for Managing Domain Knowledge via Faceted Taxonomies

Hung-ju Chu and Randy Y.C. Chow, *University of Florida, USA*

29 A Context-Aware Proactive Source Code Search and Retrieval Tool

Eduardo Cruz Reis Santos, Fernando Cesar de Almeida, Eduardo Santana de Almeida, Silvio Romero de Lemos Meira, *Federal University of Bahia and RiSE, Brazil*

45 Building to Grid (B2G) at the California Smart Grid Center

Russ Tatro, Suresh Vadhva, Puneet Kaur, Niraj Shahpatel, Jeremy Dixon and Karim Alzanon, *California State University, Sacramento, USA*

46 Re-use of existing System Protection Concerns and Interconnection Rules for integration of Future Distributed Generation

Mohammad Vaziri, Suresh Vadhva, C. J. Hoffman and K. K. Yagnik, *California State University, Sacramento, USA*

47 Solar Energy in a Volume And Efficiency in Solar Power Generation

M. Yahyavi, Mohammad Vaziri and Suresh Vadhva, *California State University, Sacramento, USA*

053 Towards an Approach for Enterprise Application Integration Based on Specialized Services and Business Objects

Zakaria Maamar⁽¹⁾, Youcef Baghdadi⁽²⁾, Wathiq Mansoor⁽³⁾

(1) *Zayed University,*

(2) *Sultan Qaboos University*

(3) *American University in Dubai*

54 A Level Set Based Method of License Plate Localization

Yuqing Song, *Institute of Computing Technology, Chinese Academy of Sciences, China*

104 A Virtual Distributed Computing System based on Multi-Steps Task Allocation

Satoshi Takahashi⁽¹⁾ and Tokuro Matsuo⁽²⁾

(1) *University of Tsukuba, Japan*

(2) *Yamagata University, Japan*

107 Cost Forecast of Sheet Metal Parts using 3D CAD-Models in SME

Patrick Gugel and Holger Schrödl, *University of Augsburg, Germany*

119 Method of Identifying a Type 2 Membership Function and Application to Decision-Making Problems

Yoshiki Uemura, *Mie University, Japan*

August 5, 2010

7:30 a.m. - 8:30 a.m. **Breakfast (provided by conference)**

8:40 a.m. - 9:40 a.m. **KEYNOTE(2):**

Stuart Rubin, *SSC-PAC, San Diego, CA*

Title: **Computing with Words, Machine Learning, and Semantic Processing**

9:40 a.m. - 10:00 a.m. **Break**

10:00 a.m. - 12:00 p.m. **Session C**

Session C1: Biomedical & Healthcare Systems

Session Chair: Faruk Polat

036 Automatic Detection of Anomalies in Blood Glucose Using a Machine Learning Approach

Ying Zhu, *University of Ontario Institute of Technology, Canada*

100 A Supervised Machine Learning Approach of Extracting Coexpression Relationship among Genes from Literature

Richa Tiwari, Chengcui Zhang and Tamar Solorio, *The University of Alabama at Birmingham, USA*

069 Linked Data based Semantic Similarity and Data Mining

Hao Sheng, Huajun Chen, Tong Yu and Yelei Feng, *College of Computer Science, Zhejiang University, China*

023 A Nettee for Pattern Matching with Flexible Wildcard Constraints

Youxi Wu⁽¹⁾, Xindong Wu⁽²⁾, Fan Min⁽³⁾ and Yan Li⁽⁴⁾

(1) *Hebei University of Technology, China*

(2) *University of Vermont, USA*

(3) *University of Electronic Science and Technology of China, China*

(4) *Hebei University of Technology, China*

Session C2: Semantic Web and Emerging Applications

Session Chair: Seung-Yun Kim

042 Searching for Individual Entities: a Query Analysis

Barbara Bazzanella, Heiko Stoermer and Paolo Bouquet, *University of Trento, Italy*

091 Light-weight Semantics and Bayesian Classification: A Hybrid technique for dynamic Web Service Discovery

Omar Shafiq, Reda Alhajj, Jon G. Rokne and Ioan Toma, *University of Calgary, Canada*

116 eCultura, a Semantically-Enriched Web-Based Approach to Manage Cultural Contents

Carlos M. Comejo, Iván Ruiz-rube and Juan Manuel Doderó, *Universidad de Cádiz, Spain*

083 A Framework Based Approach for Unified Detection of Aspect Weaving Problems

Kun Tian, Kang Zhang and Kendra Cooper, *University of Texas at Dallas, USA*

12:00 p.m. - 1:30 p.m. **Lunch**
1:30 p.m. - 3:30 p.m. **Session D**

Session D1: Information Assurance II
Session Chair: Seung-Yun Kim

115 Inconsistencies in Information Security and Digital Forensics

Du Zhang, *California State University, USA*

057 BaRMS: A Bayesian Reputation Management Approach for P2P Systems

Xuelian Long and James Joshi, *University of Pittsburgh, USA*

114 On the Composition of Access Control Management in Multidomain Environment

Walid Tfalli, Abedlghani Chibani and Yacine Amirat, *University Paris Est, LISSI Lab, Creteil, France*

022 Resistant Image Watermarking in the Phases of the Complex Hadamard Transform Coefficients

Roumen Kountchev⁽¹⁾, Stuart Rubin⁽²⁾, Mariofanna Milanova⁽³⁾, Vladimir Todorov⁽⁴⁾ and Roumiana Kountcheva⁽⁴⁾

⁽¹⁾ *Technical University of Sofia, Bulgaria*

⁽²⁾ *Space and Naval Warfare Systems Center, San Diego, CA, USA*

⁽³⁾ *University of Arkansas, Little Rock, USA*

⁽⁴⁾ *T&K Engineering Co., Bulgaria*

Session D2: Multimedia Systems
Session Chair: Christian Wagner

101 Direction Clustering for Characterizing Movement Patterns

Wenjun Zhou, Hui Xiong, Yong Ge, Jannite Yu, Hasan Ozdemir and K.C. Lee, *Rutgers University, USA*

109 Integration of Global and Local Information in Videos for Key Frame Extraction

Dianting Liu⁽¹⁾, Mei-Ling Shyu⁽¹⁾, Chao Chen⁽¹⁾ and Shu-Ching Chen⁽²⁾

⁽¹⁾ *University of Miami, USA*

⁽²⁾ *Florida International University, USA*

095 Object Tracking by Chiaroscuro Patterns

Yuqing Song, *Institute of Computing Technology, Chinese Academy of Sciences, China*

103 A Three-Dimensional Geographic and Storm Surge Data Integration System for Evacuation Planning

Jairo Pava, Fausto Fleites, Fang Ruan, Kasturi Chatterjee, Shu-Ching Chen and Keqi Zhang, *Florida International University, USA*

3:30 p.m. - 4:00 p.m. **Break**
4:00 p.m. - 6:00 p.m. **Panel Session**

Pannel Session: Title: Information Re-Use and Integration for the Public Sector
Session Chair: Gordon Lee

Panel Members: Reda Alhajj, *University of Calgary, Canada*

Shu-Ching Chen, *Florida International University, USA*

James Joshi, *University of Pittsburgh, USA*

Gordon Lee, *San Diego State University, USA*

Stuart Rubin, *SPAWAR Systems Center, USA*

Mei-Ling Shyu, *University of Miami, USA*

Lofti Zadeh, *University of California, Berkeley, USA*

6:30 p.m. - 9:30 p.m. **Banquet**

August 6, 2010

7:30 a.m. - 8:30 a.m. **Breakfast**
8:30 a.m. - 10:00 a.m. **Session E**

Session E1: Data Integration / Human-Machine Information Systems
Session Chair: Brandeis H. Marshall

078 User Centered Design of Context Aware Cell Phones in Human-centric Systems

Ashish Godbole and Seung-yun Kim, *Shepherd University, USA*

064 An Integrated Evaluation Model of User Satisfaction with Social Media Services

Chorng-Shyong Ong and Min-Yuh Day, *National Taiwan University, Taiwan*

097 Geometric and Thematic Integration of Spatial Data into Maps

Mark McKenney, *Texas State University, USA*

086 A Fuzzy Ontology-based Semantic Data Integration System

Cristiane Yaguinuma, Gustavo Afonso, Vinícius Ferraz, Sérgio Borges and Marilde Santos, *Federal University of São Carlos, Brazil*

Session E2: Service Oriented Architecture / Web Services

Session Chair: Awny Alnusair

076 A Gateway-based Framework for Finding and Accessing Mobile Web Services

Qusay H. Mahmoud, Thanh Ngo, *University of Guelph, Canada*

070 A Service-Based Approach for Next-Generation Product Lifecycle Management

Stefan Silcher, Jorge Minguez, Thorsten Scheibler and Bernhard Mitschang, *Universitaet Stuttgart, Germany*

035 Estimating Difference of Web Services

Qianhui Liang⁽¹⁾ and Stuart H. Rubin⁽²⁾

⁽¹⁾ *Singapore University, Singapore*

⁽²⁾ *SPAWAR Systems Center (SSC), USA*

033 An Adaptive Middleware Framework for Scientific Computing at Extreme Scales

Arzu Gosney, Christopher Oehmen, Adam Wynne and Justin Almquist, *Pacific Northwest National Laboratory, USA*

10:00 a.m. - 10:30 a.m. Break

10:30 a.m. - 12:00 p.m. Session F

Session F1: AI & Decision Support Systems

Session Chair: James Marshall

072 MUS-Based Generation of Arguments and Counter-arguments

Philippe Besnard⁽¹⁾, Eric Gregoire⁽²⁾, Cedric Piette⁽²⁾ and Badran Raddaoui⁽²⁾

⁽¹⁾ *CNRS, IRIT, Universite Paul Sabatier, France*

⁽²⁾ *Universite Lille-Nord de France, Artois, France*

087 A Case-based Data Warehousing Courseware

Manashree Kulkarni, Meiliu Lu and Du Zhang, *California State University Sacramento, USA*

074 AMTEA: Tool for Creating and Exploiting Annotations in the Context of Economic Intelligence (Competitive Intelligence)

Olusoji Okunoye^(1,2), Amos David⁽¹⁾ and Charles Uwadia⁽²⁾

⁽¹⁾ *Equipe SITE-LORIA, France*

⁽²⁾ *University of Lagos, Nigeria*

062 Optimal Replacement Policy with Age-Based Inspection Scheme for Condition-Based Maintenance

Hamid Reza Golmakani and Fahimeh Fattahipour, *Tafresh University, Iran*

Session F2: Component Based Design

Session Chair: Wen Yu

098 Component Search and Reuse: An Ontology-based Approach

Awny Alnusair and Tian Zhao, *University of Wisconsin-Milwaukee, USA*

117 A Stochastic Time Series Generator with Adaptive Software Architecture

Ognjen Sobajic, Nesa Ilich, Mahmood Moussavi and Behrouz Far, *University of Calgary, Canada*

021 A Requirements Engineering Process for Software Product Lines

Danuza Neiva, Fernando Cesar de Almeida, Eduardo Santana de Almeida and Silvio Lemos Meira, *Federal University of Bahia and RiSE, Brazil*

073 Ontology based Knowledge Modeling and Reuse Approach in Product Redesign

Xijuan Liu⁽¹⁾, David Rosen⁽²⁾ and Zhonghai Yu⁽¹⁾

⁽¹⁾ *Shanghai Dianji University, China*

⁽²⁾ *Georgia Institute of Technology, USA*

12:00 p.m. - 1:30 p.m. Lunch

1:30 p.m. - 3:30 p.m. Session G

Session G1: Soft Computing/Knowledge Discovery, Acquisition and Management
Session Chair: Cristina Ribeiro

099 Identification of Monotone Measures Using Genetic Algorithms

Bo Guo, *University of Nebraska at Omaha, USA*

112 The Power of Genetic Algorithm in Automated Assessment of School Readiness

Iyad Suleiman, Tamer Salman, Shang Gao, Faruk Polat, Maha Arslan, Reda Alhajj and Mick Ridley, *University of Calgary, Canada*

048 Visual Information Retrieval from 2D Shapes by Bipolar Matching

Yuqing Song, *Institute of Computing Technology, Chinese Academy of Sciences, China*

118 Knowledge-Based Feedback of IPS² Use Information

Günter Seliger and René Gegusch, *Technische Universität Pascalstr, Germany*

006 Adaptive fuzzy control of a class of nonlinear time-delay systems with input nonlinearity

Shabnam Pourdehi, Dena Karimipour, Navid Noroozi and Fereidoon Shabaninia, *Shiraz University, Iran*

Session G2: Fuzzy/Neural Systems
Session Chair: Fereidoon Shabani

043 Multiple fuzzy neural networks modeling on sparse data based on a nonparametric regression technique

Cruz Vega Israel and Wen Yu Liu, *CINVESTAV, Mexico*

066 Fuzzy Composite Concepts based on Human Reasoning

Christian Wagner and Hani Hagra, *University of Essex, United Kingdom*

071 Neural modeling with automatic structure selection

Xiaoou Li and Wen Yu, *CINVESTAV-IPN, Mexico*

088 A Fuzzy XML Database System: Data Storage and Query Processing

Ying Jin and Sangeetha Veerappan, *California State University, Sacramento, USA*

008 Fuzzy Sliding Mode Control Algorithm and Extended Kalman Filter for Nonlinear Chemical Reactors

Ehsan Moshksar, Faridoun Shabaninia and Navid Noroozi, *Shiraz University, Iran*

3:30 p.m. - 4:00 p.m. Break

4:00 p.m. - 6:00 p.m. Session H

Session H1: Information Reuse
Session Chair: Manabu Ohta

049 Methodology to associate the Product Design and Project Management processes in a common platform

Citlali Gutiérrez Estrada, Sergio Díaz Zagal, Eréndira Rendón Lara, Celso Hernández Tenorio and Rafael Cruz Reyes, *Instituto Tecnológico de Toluca, Mexico*

025 An Experimental Investigation of Reusable Requirements Retrieval

Anas Mahmoud and Nan Niu, *Mississippi State University, USA*

067 Entity Re-use in a Large News Corpus

Angela Fogarolli, Heiko Stoermer and Barbara Bazzanella, *University of Trento, Italy*

013 Progress Towards a NASA Earth Science Reuse Enablement System (RES)

James J. Marshall⁽¹⁾, Robert R. Downs⁽²⁾ and Chris A. Mattmann⁽³⁾

⁽¹⁾ *INNOVIM / NASA Goddard Space Flight Center, USA*

(2) *Columbia University, USA*

(3) *NASA Jet Propulsion Laboratory / University of Southern California, USA*

012 Combining Feature Modeling and Object Oriented Concepts to Manage the Software Variability

Victor T. Sarinho and Antônio L. Apolinário

State University of Feira de Santana, Brazil

Session H2: Data Mining and Heuristic Optimization

Session Chair: Min-Yu Day

014 Determining Result Quality for Vertical Result Merging

Brandeis Marshall, Purdue University, USA

058 A Chinese fuzzy autocompletion approach

Yelei Feng, Huajun Chen and Hao Sheng, Zhejiang University, China

019 Hybrid Ant Colony Optimization for Intensification and Diversification

Masaya Yoshikawa and Shimohigashi Yoshiaki, Meijo university, Japan

068 Tag Grid: supporting collaborative and fuzzy multidimensional queries of tagged datasets

Ken Q. Pu and Russell Cheung, University of Ontario Institute of Technology, Canada

Ying Jin and Sangeetha Veerappan, California State University, Sacramento, USA

110 Sentence Level Fact Based Search Engine: News Fact Finder

*Cristina Ribeiro, Ricardo Salmon, Swathi Amarala and Christina Hamada
University of Waterloo, Canada*