

WITS 2005
The 15th Workshop on Information Technologies and Systems
December 10 and 11, 2005
Harrah's Las Vegas, Nevada, USA

Final Program

Saturday, December 10, 2005

07:30 am - 08:00 am **Continental Breakfast and Registration (Las Vegas Room)**

8:00 am - 9:30 am **Parallel Sessions**

Session 1A: Service-Oriented Computing (Copper Room)
Chair: Sudha Ram, University of Arizona

A Clustering Based Approach for Facilitating Semantic Web Service Discovery

Sudha Ram, University of Arizona
Yousub Hwang, University of Arizona
Huimin Zhao, University of Wisconsin-Milwaukee

A Service Oriented Engine for Searching Deep Web

Chupeng Xie, University of Texas at Dallas

Resource Scheduling in Grid Computing Networks to Maximize Business Value

Subodha Kumar, University of Washington
Kaushik Dutta, Florida International University
Vijay Mookerjee, University of Texas at Dallas

Session 1B: Personalization (Silver Room)
Chair: Dongsong Zhang, University of Maryland Baltimore County

Adaptive and Personalized Interfaces for Mobile Web

Boonlit Adipat, University of Maryland Baltimore County
Dongsong Zhang, University of Maryland Baltimore County

Variance-Based Active Learning for Classifier Induction

Maytal Saar-Tsechansky, University of Texas at Austin
Hsuan-Wei Michelle Chen, University of Texas at Austin

Why Does Collaborative Filtering Work? - Recommendation Model Selection by Bipartite Graph Randomness Analysis

*** *Nominated for Best Paper Award* ***

Zan Huang, Pennsylvania State University
Daniel Zeng, University of Arizona

- 9:30 am - 9:45 am **Coffee Break**
- 9:45 am - 11:15 am **Parallel Sessions**
- Session 2A:** **Web Content Management (Copper Room)**
Chair: Weiguo (Patrick) Fan, Virginia Tech
- Building Web Collections for Vertical Markets*
Gautam Pant, University of Utah
- Querying the Semantic Web with Ginseng: A Guided Input Natural Language Search Engine*
Abraham Bernstein, University of Zurich
Esther Kaufmann, University of Zurich
Christian Kaiser, ERNI Consulting AG
- Contextual Web Search Based on Semantic Relationships*
Limin Zhang, University of Arizona
Sudha Ram, University of Arizona
Daniel Zeng, University of Arizona
- Session 2B:** **Security and Privacy (Silver Room)**
Chair: Kaushal Chari, University of South Florida
- An AI-Based Approach for Procurement Fraud Detection*
Kaushal Chari, University of South Florida
Johan Perols, University of South Florida
- Operational Models of Intrusion Prevention Systems*
Young Ryu, University of Texas at Dallas
Hyeun-Suk Rhee, University of Texas at Dallas
- Protecting Privacy against Classification Attacks in Data Mining*
Xiao-Bai Li, University of Massachusetts Lowell
Sumit Sarkar, University of Texas at Dallas
- 11:15 am - 11:30 am **Break**
- 11:30 am – 12:30 pm **Keynote Speech: Kumar Bhaskaran, IBM Research (Las Vegas Room)**
- 12:30 pm – 2:00 pm **Lunch (Las Vegas Room)**
- 2:00 pm – 3:30 pm **Parallel Sessions**

Session 3A:

Agent Systems (Copper Room)

Chair: Michael Mannino, University of Colorado at Denver

Learning Optimal Seller Strategies with Intelligent Agents: Application of Evolutionary and Reinforcement Learning

Riyaz Sikora, University of Texas at Arlington

Vishal Sachdev, University of Texas at Arlington

Information Fusion and Information Markets in Multi-Agent Systems

Johan Perols, University of South Florida

Manish Agrawal, University of South Florida

Maintaining a Diagnostic Knowledge-based System: A Control Theoretic approach

*** *Nominated for Best Paper Award* ***

Radha Mookerjee, University of Texas at Dallas

Vijay Mookerjee, University of Texas at Dallas

Wei Yu, University of Texas at Dallas

Session 3B:

Distributed Systems (Silver Room)

Chair: Roger Chiang, University of Cincinnati

Analysis of Topographical Leverage-driven Capacity Trading in Internet Storage Infrastructures

*** *Nominated for Best Paper Award* ***

Anna Ye Du, SUNY at Buffalo

Xianjun Geng, University of Washington

Ram Gopal, University of Connecticut

R. Ramesh, SUNY at Buffalo

Andrew Whinston, University of Texas at Austin

Evaluating Encapsulated-Hierarchical Instant Messaging System (E-HIMS) Using Media Synchronicity Theory (MST)

Animesh Animesh, University of Maryland

David Darcy, University of Maryland

Understanding the Impact of Network Impairment over Internet-Based Telemedicine Video Traffic

Bengisu Tulu, Claremont Graduate University

Samir Chatterjee, Claremont Graduate University

03:30 pm - 03:45 pm **Coffee Break**

03:45 pm - 05:15 pm **Parallel Sessions**

Session 4A: Conceptual Modeling (Copper Room)
Chair: Vijay Khatri, Indiana University

Meta Ontology for Describing Analysis Patterns in Conceptual Modeling
Merete Hvalshagen, Indiana University
Vijay Khatri, Indiana University
Changheon Lee, Indiana University

Query Driven Conceptual Browsing: A Semi-Automated Approach for Building and Exploring Concepts on the Web
Kinshuk Jerath, University of Pennsylvania
Balaji Padmanabhan, University of Pennsylvania

Understanding the Semantic Links among Heterogeneous Biological Data Sources
Sudha Ram, University of Arizona
Wei Wei, University of Arizona

Session 4B: Data Mining Techniques (Silver Room)
Chair: Praveen Pathak, University of Florida

A Novel Prospective Spatio-Temporal Analysis Approach: Periodic Support Vector Clustering
Wei Chang, University of Arizona
Daniel Zeng, University of Arizona
Hsinchun Chen, University of Arizona

Combining Probability Model and Web Mining Model: A Framework for Proper Name Transliteration
Yilu Zhou, University of Arizona
Feng Huang, University of Arizona
Hsinchun Chen, University of Arizona

Categorizing Fanatic Texts by Integrating Explanation Patterns with Naïve Bayes Classifier
Ahmad Almonayyes, Kuwait University

5:15 pm - 06:15 pm **WITS 2006 Organizing Meeting (Las Vegas Room)**

7:00 pm **WITS Dinner (Buffet at Asia)**

Sunday December 11, 2005

7:30 am - 8:00 am **Continental Breakfast and Registration (Las Vegas Room)**

8:00 am - 9:30 am **Parallel Sessions**

Session 5A: Economics-Based Design (Copper Room)
Chair: Alok Gupta, University of Minnesota

A Computational Approach to Predict Economic Regimes in Automated Exchanges

Wolfgang Ketter, University of Minnesota
John Collins, University of Minnesota
Maria Gini, University of Minnesota
Alok Gupta, University of Minnesota
Paul Schrater, University of Minnesota

Designing Internet-based Selling Mechanisms: Optimal Market Transparency Levels and Prices across Distribution Channels

Nelson F. Granados, University of Minnesota
Alok Gupta, University of Minnesota
Robert J. Kauffman, University of Minnesota

Optimal Bundling Strategy: Product Lifetime Value Consideration for Pricing & Production Planning

Seok-Joo Chang, University of Connecticut

Session 5B: Software Development (Silver Room)
Chair: Akhil Kumar, Pennsylvania State University

Exception Handling Using Task Substitution and Delegation in Resource-Driven Workflow Systems

Jianrui Wang, Pennsylvania State University
Akhil Kumar, Pennsylvania State University

Outsourcing Software Development: A Contract Theoretic Analysis

Conglei Zhang, University of Washington
Debabrata Dey, University of Washington
Ming Fan, University of Washington

Stability and Efficiency of Communication Networks in Open Source Software Development

Param Vir Singh, University of Washington
Yong Tan, University of Washington

9:30 am - 9:45 am **Coffee Break**

9:45 am - 11:15 am **Parallel Sessions**

Session 6A: System Analysis (Copper Room)
Chair: Subodha Kumar, University of Washington, Seattle

An Analysis of Open Content Systems

Ofer Arazy, University of Alberta

Raymond Patterson, University of Alberta

Coordinating User-Developer Efforts in Extreme Programming: A Control-Theoretic Approach

Subodha Kumar, University of Washington, Seattle

Anjana Susarla, University of Washington, Seattle

Vijay Mookerjee, University of Texas at Dallas

Evaluating Ontology Mapping Techniques: An Experiment in Public Safety Information Sharing

Siddharth Kaza, University of Arizona

Hsinchun Chen, University of Arizona

Session 6B: Autonomic Computing (Silver Room)
Chair: Atish Sinha, University of Wisconsin-Milwaukee

Adaptive Auctions: Learning to Adjust to Bidders

David Pardoe, University of Texas at Austin

Peter Stone, University of Texas at Austin

Maytal Saar-Tsechansky, University of Texas at Austin

Kerem Tomak, University of Texas at Austin

Automated Generation of Large-Scale Repositories of Reusable Artifacts

Tae Dong Han, University of Nevada, Vegas

Sandeep Puro, Pennsylvania State University

Veda C. Storey, Georgia State University

Winner Determination Problem: Experimenting with Local Search

Rajjog Singh, Indian Institute of Management Calcutta

Anup Sen, Indian Institute of Management Calcutta

11:15 am - 11:30 am **Break**

11:30 am - 12:30 pm **Panel on Design Science Research (Las Vegas Room)**

Jay Nunamaker (Chair)

Gordon B. Davis, Alan R. Hevner, John King, Stuart Madnick

12:30 pm - 02:00 pm **Lunch (Las Vegas Room)**

02:00 pm - 03:30 pm **Parallel Sessions**

Session 7A:

Business Applications (Copper Room)

Chair: Vijay Mookerjee, University of Texas at Dallas

A Unified Market Segmentation Method for Generating Pareto Optimal Solutions Sets

*** *Nominated for Best Paper Award* ***

Ying Liu, University of Arizona
Sudha Ram, University of Arizona
Robert Lusch, University of Arizona

Optimizing Information Acquisition in Sequential Decision Making under a Budget Constraint

Radha Mookerjee, University of Texas at Dallas
Milind Dawande, University of Texas at Dallas
Vijay Mookerjee, University of Texas at Dallas

Leveraging Network Effects for Predictive Modelling in Customer Relationship Management

Christine Kiss, TU Muenchen
Martin Bichler, TU Muenchen

Session 7B:

Network Management (Silver Room)

Chair: Karthik Kannan, Purdue University

A Measure for Integration and its Application to Sensor Networks

*** *Nominated for Best Paper Award* ***

Jeffrey V. Nickerson, Stevens Institute of Technology
Stephan Olariu, Old Dominion University

On Profitability and Efficiency of Wireless Mesh Networks

Fang Fang, University of Texas at Austin
Lili Qiu, University of Texas at Austin
Andrew Whinston, University of Texas at Austin

A Mechanism for Allocating Objects in a Network of Symmetric Caches

*** *Nominated for Best Paper Award* ***

Mohit Tawarmalani, Purdue University
Karthik Kannan, Purdue University
Prabuddha De, Purdue University

3:30 pm - 5:00 pm

Prototype Demo Session (Foyer A)

Coordinator: Daniel Zeng, University of Arizona

oPlexus -- A Distributed Platform for IS research and Education

Yun Huang, Mei Lin, Andrew Whinston, University of Texas at Austin;
Alok Gupta, University of Minnesota, Twin Cities

VersaTutor -- A Constraint-Based Intelligent Tutor Authoring System
Viswanathan Kodaganallur, Rob R. Weitz, David Rosenthal, Seton Hall
University, New Jersey, USA

Self-Organized, Adaptive Information Integration for Web-Based Resources
Art Vandenberg, Vidya Rangaswamy, Seema Metikurke, Guangzhi Zheng,
Lei Li, Vijay K. Vaishnavi, Georgia State University; Sham Navathe,
Georgia Institute of Technology; Christopher D. Shaw, Diane Gromala,
Simon Fraser University

BPSimilar: A Process Modeling Support System to Enhance Process Agility
Radhika Jain, Balasubramaniam Ramesh, Georgia State University

PathFinder: Finding Shortest Paths between Relevant Web Pages
Chupeng Xie, University of Texas at Dallas

Web Fact Seeking Meta Engine for Business Information Needs
Dmitri Roussinov, Arizona State University

CIDRIS Data Collection Software
Marc Degnan, Paulo Goes, Jim Marsden, University of Connecticut

CSS -- A Semantic Relationship-Based Contextual Search System
Limin Zhang, Sudha Ram, Daniel Zeng, University of Arizona

Privacy Protection in Data-Oriented Services
Jingquan Li, Texas A&M University-Kingsville

*TacTex-05: Winner of the 2005 Trading Agent Competition - Supply Chain
Management Scenario*
David Pardoe, Peter Stone, University of Texas at Austin

*Mobilize Internet Clients Seamlessly over Broadband Wireless Network --
Towards the Future M-Commerce*
Jiashan Huang, Tongsen Wang, Fumin Zou, Xinhua Jiang, Fujian
University of Technology; Zhangxi Lin, Texas Tech University

*A Virtual Field Experiment System for Studying Risk Relief Service
Adoption on Online Auction Market*
Zhangxi Lin, Bo Xu, Texas Tech University

*iRDQL - Imprecise Queries Using Similarity Joins for Retrieval in
Ontologies*
Abraham Bernstein, Christoph Kiefer, University of Zurich

*BioPortal: A Scalable Information Sharing and Analysis Environment for
Disease Informatics*
Daniel Zeng, Hsinchun Chen, Wei Chang, University of Arizona

5:00 pm - 6:00 pm

WITS Board Meeting (Copper Room)