



Acxiom Laboratory for Applied Research

2005

CONFERENCE ON APPLIED RESEARCH IN INFORMATION TECHNOLOGY

FRIDAY, FEBRUARY 18TH, 2005
UNIVERSITY OF CENTRAL ARKANSAS CAMPUS
CONWAY, ARKANSAS

Schedule

8:30 - 9:30 a.m. Check-In - BREWER-HEGEMAN CONFERENCE CENTER LOBBY

9:30-10:35 a.m. Welcome and Keynote – *Rooms 5A and B*

Welcome – **Dr. Ronald Toll**, Dean of the College of Natural Sciences and Mathematics, University of Central Arkansas

Conference Overview and Objectives – Dr. John Talburt, Acxiom Corporation and Director, Acxiom Laboratory for Applied Research

Introduction – Dr. Mary L. Good, Dean, University of Arkansas at Little Rock Donaghey CyberCollege

Morning Keynote Address:

Dr. Michael Pazzani, Director of the Information and Intelligent Systems Division, National Science Foundation

Dr. Pazzani received his Ph.D. in Computer Science from UCLA and is a full professor at the University of California, Irvine where he also served as department chair of Information and Computer Science. He has served as CEO of AdaptiveInfo, a company involved in personalization solutions for the mobile web. Pazzani has also published numerous papers in machine learning, personalization, information retrieval, and cognitive science, and he is a fellow of the American Association of Artificial Intelligence.

Announcements – Dr. John Talburt, Acxiom Corporation and Director, Acxiom Laboratory for Applied Research

10:35-11:00 a.m. NETWORKING BREAK – *Rooms 5A and B*

11:00-11:50 a.m. SESSION ONE (FOUR CONCURRENT TRACKS TO CHOOSE FROM)

Track 1: Invited Research Papers

Moderator: Pallavi Tadepalli, University of Mississippi
Location: *Room 1*

Session 1:

A: "Distributed Latent Semantic Indexing of Large Dynamic Document Collections"

Speaker: Benjamin Severs, University of Central Arkansas, Graduate Student

B: "A Modification of Boyer-Moore Pattern Matching Algorithm with Character Pairs"

Speaker: Paul Opala, University of Central Arkansas, Undergraduate Student

Track 2: Invited Research Papers

Moderator: Qiang Duan, University of Central Arkansas
Location: *Room 5B*

Session 1:

A: "Network Calculus-Based Delay Analysis for Buffered Crossbar Switches"

Speaker: Qiang Duan, University of Central Arkansas

B: "A Computational Simulation of Biological Neural Networks in the Sea Slug Tritonia Diomedea"

Speaker: Justin Michaels, University of Central Arkansas, Undergraduate Student

Track 3: Invited Research Papers

Moderator: Hong Jiang, University of Nebraska, Lincoln
Location: *Room 4A*

Session 1:

A: "Towards a Grid-based DBMS"

Speaker: Craig Thompson, Department of Computer Science and Computer Engineering,
University of Arkansas, Fayetteville

B: "The Object-based Distributed File System Built on Storage Area Network"

Speakers: Xuli Liu, Hong Jiang, and Lleen-Kiat Soh, All from the University of Nebraska, Lincoln

Track 4: Invited Research Papers

Moderator: Ningning Wu, University of Arkansas at Little Rock Donaghey CyberCollege
Location: *Room 4B*

Session 1:

A: "Mining Concept Associations for Knowledge Discovery in Large Textual Databases"

Speakers: Xiaowei Xu, University of Arkansas at Little Rock Donaghey CyberCollege

B: "Privacy-preserving Multivariate Linear Relationship Discovering"

Speaker: Ningning Wu, University of Arkansas at Little Rock Donaghey CyberCollege

12:00-12:50 p.m. Brown-Box Lunch Discussion Groups – *Pick up lunch in Rooms 5A & B* **(THREE SESSIONS TO CHOOSE FROM)**

Session A: Biometric Facial Recognition

Moderator: Russel Bruhn, University of Arkansas at Little Rock Donaghey CyberCollege
Featured speaker: Marc Yoder, V.P. Security Services and Chief Security Officer, TCC,
The Covenant Consortium
Location: *Room 5B*

Session B: Voice-over Internet Protocol

Speakers: Seshadri Mohan, Chair, Department of Systems Engineering, University of
Arkansas at Little Rock Donaghey CyberCollege; Wayne Crolley, Area Manager-Design
Engineering, SBC Global Services; Charles Morse, Staff Manager, Network Planning,
ALLTEL communications, Inc.
Location: *Room 4A*

Session C: Radio Frequency Identification

Speaker: Bill Hardgrave, University of Arkansas, Fayetteville, Information Technology
Research Center
Location: *4B*

1:00- 2:00 p.m. Afternoon Keynote Address, Rooms 5A and B

Welcome – Dr. John Talburt, Acxiom Corporation and Director, Acxiom Laboratory for Applied Research

Introduction – Bill Hardgrave, Sam Walton College of Business, Information Technology Research Center, University of Arkansas, Fayetteville

Afternoon Keynote Address:

“What Does Your Organization Look Like From the Outside? – A Terrorist and Hacker Perspective”

Johnie Wood, Director, Security and Audits, J.B. Hunt Transport Services, Inc., Lowell, AR

Johnie Wood is responsible for Information Technology Security Services, Business Continuity, Privacy, Data Center Operations and Quality Assurance at J.B. Hunt Transport Services, Inc. He received his Bachelor's and Master's degrees in Criminal Justice Administration from Chapman College and Central Missouri State University, respectively.

He retired from the U. S. Air Force as a Major in 1990 after 24 years of service, initially serving as the Telecommunications and Computer Operations fields and 13 years as a Security Police Officer serving tours as a nuclear missile security officer, police inspector, Chief of Police, and Director of Security – Special Activities, Office of the Secretary of the Air Force.

After his Air Force career, he worked in the defense industry in Los Angeles, CA, and Colorado Springs, CO, managing security and technical teams, including providing security advisors to the satellite launch programs at both the eastern and western launch test ranges. His immediate position prior to joining J. B. Hunt in 1998 was as a Senior Regional Operations Director, Trident Data Systems, managing five security and technical teams including a penetration test team.

He has written numerous security articles and presented security-training classes both in the private and government sectors. He is currently the President of the Arkansas InfraGard Chapter.

Announcements - Dr. John Talburt, Acxiom Corporation and Director, Acxiom Laboratory for Applied Research

2:00- 2:20 p.m. BREAK – Room 5A and B

2:20-3:10 p.m. SESSION TWO (FOUR CONCURRENT TRACKS TO CHOOSE FROM)

Track 1: Invited Research Papers

Moderator: Yi Liu, University of Mississippi
Location: *Room 1*

Session 2:

A: "JAVA Components in BoxScript"

Speakers: Yi Liu and Conrad Cunningham, Both from the University of Mississippi

B: "Using Function Generalization with JAVA to Design a Consequential Framework"

Speakers: Pallavi Tadepalli and H. Conrad Cunningham, Both from the University of Mississippi

Track 2: Acxiom Sponsored Research

Moderator: Bob Ludwig, Acxiom Corporation
Location: *Room 5B*

Session 2:

"A Framework to Automate the Generation of BCDI Process Flows"

Speakers: Craig Thompson and Wing Ning Li, Both from the University of Arkansas, Fayetteville, Department of Computer Science and Computer Engineering, and Coskun Bayrak, University of Arkansas at Little Rock Donaghey CyberCollege

Track 3: Acxiom Sponsored Research

Moderator: Doug Hoffman, Acxiom Corporation
Location: *Room 4A*

Session 2:

"Unified Adaptive Model of the Acxiom Grid Architecture"

Speakers: Amy Apon, University of Arkansas, Fayetteville, Department of Computer Science and Computer Engineering; Baochuan Lu (UAF Graduate Student); and Xiaowei Xu and Mihail Tudoreanu, Both from the University of Arkansas at Little Rock Donaghey CyberCollege

Track 4: Invited Research Papers

Moderator: Yu Sun, University of Central Arkansas
Location: *Room 4B*

Session 2:

A: "A PID-based Rate Control Algorithm for Video Coding"

Speaker: Yu Sun, University of Central Arkansas

B: "E2 Plug in Architecture"

Speaker: Minh Vu, University of Arkansas, Fayetteville, Department of Computer Science and Computer Engineering

3:20- 4:10 p.m. SESSION THREE (FOUR CONCURRENT TRACKS TO CHOOSE FROM)

Track 1: UCA Tour

Moderator: Dr. Chenyi Hu, University of Central Arkansas
Location: Meet in *Room 1*

Session 3:
Guided Tour of the UCA Campus and New Technology Building

Track 2: Acxiom Sponsored Research

Moderator: David Scott, Acxiom Corporation
Location: *5B*

Session 3:
"Grid Node Failover and Partitioning"
Speakers: Dale Thompson, Amy Apon, and Craig Thompson, All from the University of Arkansas, Fayetteville, Department of Computer Science and Computer Engineering

Track 3: Invited Research Papers

Moderator: Wing Ning Li, University of Arkansas, Fayetteville, Department of Computer Science and Computer Engineering
Location: *Room 4A*

Session 3:
A: "Introduction to Shibboleth"
Speaker: Amy Apon, University of Arkansas, Fayetteville, Department of Computer Science and Computer Engineering, and Kurt Landrus (UAF Graduate Student)

B: "Parallelization of Data Mining Algorithms on Computing Grids"
Speakers: J. Warren and Wing Ning Li, Both from the University of Arkansas, Fayetteville, Department of Computer Science and Computer Engineering

Track 4: Invited Research Papers

Moderator: Xiaowei Xu, University of Arkansas at Little Rock Donaghey CyberCollege
Location: *Room 4B*

Session 3:
A: "Data Mining of Microarray Databases for the Analysis of Environmental Factors on Corn and Maize"
Speaker: Richard Segall, Arkansas State University

B: "Removing Redundancy and Inconsistency in Memory-Based Collaborative Filtering"
Speakers: Xiaowei Xu, Mutlu Mete (Graduate Student), and Nurcan Yuruk (Graduate Student), All from the University of Arkansas at Little Rock Donaghey CyberCollege

Acknowledgments

Conference Sponsors:

The Axiom Laboratory for Applied Research 2005 Conference on Applied Research in Data Engineering has been sponsored by:

The Axiom Laboratory for Applied Research

The University of Arkansas at Little Rock Donaghey College of Information Science and Systems Engineering (CyberCollege)

The University of Arkansas, Fayetteville, Department of Computer Science and Computer Engineering

The University of Central Arkansas, Department of Computer Science

The Information Systems Department, Sam M. Walton College of Business, University of Arkansas, Fayetteville

The Information Technology Research Center, Sam M. Walton College of Business, University of Arkansas, Fayetteville

Conference Planning Committee:

Chenyi Hu, University of Central Arkansas – Conference CoChair for Research Papers

Qiang Duan, University of Central Arkansas – Conference CoChair for Panel Discussions

Ningning Wu, University of Arkansas at Little Rock Donaghey CyberCollege – Conference CoChair for Panel Discussions

Keith Jones, Axiom Corporation – Axiom Programming Contest Chair

Judy Camp, Program Manager, Axiom Laboratory for Applied Research

Bill Hardgrave, Sam Walton College of Business, Information Technology Research Center, University of Arkansas, Fayetteville

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Yu Sun, University of Central Arkansas
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Craig Thompson, University of Arkansas, Fayetteville
Dale Thompson, University of Arkansas, Fayetteville
Han-Chieh Wei, University of Central Arkansas
Ningning Wu, University of Arkansas at Little Rock Donaghey CyberCollege
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Conference on-line registration and website design by **Yanbin Ye** and **Jim Gilliam**, Acxiom Corporation, and **Judy Camp**, Program Manager, Acxiom Laboratory for Applied Research.

ALAR is an Arkansas Center of Applied Technology in Information Technology as designated by the Arkansas Science and Technology Authority