

21st Annual CSE Graduate Research Conference

Center for Tomorrow
Buffalo, NY 14260
Wednesday, March 26, 2008



University at Buffalo
The State University of New York

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cse@buffalo

Following 30 years of excellence as a Computer Science department, the CSE department was formed in 1998 through a merger of the CS department with computer engineering from the former ECE department. The department has 33 faculty members, over 500 undergraduate students and 250 graduate students, a third of whom are in the doctoral program. The department offers undergraduate degree programs in Computer Science and Computer Engineering, and masters and doctoral programs in Computer Science and Engineering.



The Graduate Student Association (GSA) is the representative body for graduate students at the State University of New York at Buffalo. GSA is one of six student governments at the University at Buffalo. These governments have seats on numerous University Committees ranging from the Recreation & Intramural Service Board to the President's Review Board on Promotions and Tenure. GSA representatives sit on these committees and represent the best interests of graduate students.



Graduate Indian Student Association (GISA) is a non-profit organization recognized by the Graduate Students Association at the University at Buffalo. GISA represent around 900 graduate students from India studying in the various departments at the University at Buffalo.

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PROGRAM AT A GLANCE

8:30 - 8:45 am	Breakfast
8:45 - 9:00 am	Opening Remarks (Dr. Bharat Jayaraman, CSE Chair)
9:00 - 10:15 am	Paper Presentations (Session I)
10:15 - 10:30 am	Coffee Break
10:30 - 11:45 am	Paper Presentations (Session II)
11:45 - 12:30 pm	Posters
12:30 - 1:45 pm	Invited Speaker (Gary F Dischner) / Luncheon Talk
1:45 - 3:00 pm	Paper Presentations (Session III)
3:00 - 3:15 pm	Coffee Break
3:15 - 4:00 pm	Invited Speaker (Michael D Moskal)
4:00 - 5:15 pm	Paper Presentations (Session IV)
5:15 - 5:30 pm	Closing Remarks and Prize Distribution
6:30 - 8:30 pm	Banquet (By invitation only)

INVITED SPEAKERS

Time: 12:30 pm - 1:30 pm

Gary F. Dischner

Certified Senior IT Architect, EI Practice - Distribution Sector, IBM

Easing Challenges in Embracing the On-Demand World

This talk will focus on Services Oriented Architecture highlighting the value that a framework delivers in the development of software. The talk will focus on several large SOA engagements and how they delivered on services based architecture to provide a flexible business model.

Biography

Mr. Dischner has had an exciting 30 year career in IT where he been able to experience the growth of the industry from punch card to a flexible IT industry with tools to allow business's to leverage IT to become part of the On-Demand world. During his time at IBM he has served on the Advisory Board for Morgan Stanley Dean Witter. The position allowed him to provide technology based recommendations to one of the largest financial institutions. He has also served as lead architect on several large engagements which delivered on the promise of an on-demand business model through the use of services based architecture. The first was the modernization of the election process for the state of Florida. This engagement was brought in early and under budget providing Florida flexible business architecture to meet the 21st century. The second engagement is delivering to the state of Pennsylvania a new and flexible unemployment insurance program. The engagement has taken advantage of several of IBM's key tools for delivering on the promise of service enablement.

Time: 3:15 pm - 4:00 pm

Michael D. Moskal

Vice President, CUBRC Information Exploitation Sector

Collaborative information technology development between UB and CUBRC

This talk will focus on the information technology development going on at CUBRC to support a wide variety of US Government agencies and how UB and CUBRC work collaboratively together to provide basic through advanced research services that address a variety of problems.

Biography

Mr. Moskal has over 23 years of experience in providing R&D services and information systems development for the Defense, Intelligence and Homeland Security communities. Mr. Moskal, currently serves as the Vice President of CUBRC's Information Exploitation Sector where he is responsible for technical oversight and operations for a \$12M/year business unit. Mr. Moskal holds a dual appointment as a Research Associate Professor within the UB School of Engineering and Applied Sciences. He holds an MBA from Canisius College in Buffalo and a B.S. in Industrial Technology from the State University of New York College at Buffalo. Mr. Moskal also serves as the Chief Information Officer for CUBRC where he is responsible for providing strategy development and technical management of CUBRC's information technology services and systems. CUBRC, which is headquartered in Buffalo, NY, has over 100 employees in 6 locations in the United States. Mr. Moskal joined CUBRC in 2002 after a 16 year career at the former Calspan Corporation and its successor company Veridian where he served as Operations Manager for Veridian's Chemical and Biological Defense Group, \$4.0M business unit with major operations in Buffalo, NY and Charlottesville, VA.

- 9:00 - 9:20 am (Session I)** *Integrating Syntactic and Semantic Tools in Sfy: A Case Study in Lexical Acquisition*, Paul M. Heider
Presented by: Paul M. Heider
- 9:25 - 9:45 am (Session I)** *Strictly Nonblocking f-cast d-ary Multi-log Networks under Fanout and Crosstalk Constraints*, Yang Wang, Hung Q. Ngo and Xiaohong Jiang (Tohoku University, Japan)
Presented by: Yang Wang
- 9:50 - 10:10 am (Session I)** *On the Semantics and Evaluation of Top-k Queries in Probabilistic Databases*, Xi Zhang and Jan Chomicki
Presented by: Xi Zhang
- 10:30 - 10:50 am (Session II)** *ABC: An Efficient Geographic Forwarding Scheme with Routing Hole Bypassing for Sensor Networks*, Taekkyeun Lee, Chunming Qiao, Murat Demirbas and Jinhui Xu
Presented by: Taekkyeun Lee
- 10:55 - 11:15 am (Session II)** *Detecting Cheating Aggregators and Report Dropping Attacks in Wireless Sensor Networks*, Mohit Virendra, Qi Duan and Shambhu Upadhyaya
Presented by: Mohit Virendra
- 11:20 - 11:40 am (Session II)** *Geometric Spanner of Segments*, Yang Yang, Yongding Zhu, Jinhui Xu and Naoki Kato (Kyoto University, Japan)
Presented by: Yongding Zhu
- 1:45 - 2:05 pm (Session III)** *3-D Liver Segmentation Using Markov Random Fields on High Performance Graphics Processing Units*, Vidyananth Balu, Suryaprakash Kompalli and Vipin Chaudhary
Presented by: Vidyananth balu
- 2:10 - 2:30 pm (Session III)** *A Probabilistic Framework for Keyword Spotting in Handwritten Document Images*, Haigu Cao, Anurag Bhardwaj and Venu Govindaraju
Presented by: Anurag Bhardwaj
- 2:35 - 2:55 pm (Session III)** *A Novel Gaussian Sum Filter Method for Accurate Solution to Nonlinear Filtering Problem*, Gabriel Terejanu, Puneet Singla, Tarunraj Singh and Peter D. Scott
Presented by: Gabriel Terejanu
- 4:00 - 4:20 pm (Session IV)** *On The Contraction of Preference Relations*, Denis Mindolin and Jan Chomicki
Presented by: Denis Mindolin
- 4:25 - 4:45 pm (Session IV)** *A Two-Level Probabilistic Model for Lumbar Anatomy Detection*, Raja S Alomari, Vipin Chaudhary and Jason J. Corso
Presented by: Raja S Alomari
- 4:50 - 5:10 pm (Session IV)** *Distributed Target Tracking for Mobile Sensor Networks*, Xuming Lu and Murat Demirbas
Presented by: Xuming Lu

Poster Session (11:45 am—12:30 pm)

- 1) ***Synthesis of Feature-Level Biometric Data***, Roman V. Yampolskiy
Presented by: Roman V. Yampolskiy
- 2) ***SNePS Agent for QPR Suicide Prevention Method***, Ali Patrice Seyed
Presented by: Ali Patrice Seyed
- 3) ***Coordinated Locomotion of Mobile Sensor Networks***, Seokhoon Yoon, Onur Soysal, Murat Demirbas, Chunming Qiao
Presented by: Seokhoon Yoon
- 4) ***Belief Based Reinforcement Learning in Data Fusion***, Carlos M. Lollett and Peter D. Scott
Presented by: Carlos M. Lollett
- 5) ***Using Contextual Cues for Belief Set Swapping in Large-Scale KRR Systems***, Michael Kandefer
Presented by: Michael Kandefer
- 6) ***VM Based OS Independent Cluster provisioning system***, Bhagyashree Bantwal and Damien Jose
Presented by: Bhagyashree Bantwal
- 7) ***Web-based Architecture to Enable Multi-user Medical Annotations and Teleradiology Applications***, Neville Mehta and Suryaprakash Kompalli
Presented by: Neville Mehta
- 8) ***Abstract/Concrete Noun Discrimination Using Probabilistic LSA***, Roelant Ossewaarde
Presented by: Roelant Ossewaarde
- 9) ***MWMAC : A QoS-Aware Medium Access Control Protocol for Multihop Wireless Networks***, Ruchika Mehresh, Mohit Virendra and Shambhu Upadhyaya
Presented by: Ruchika Mehresh
- 10) ***Overcoming Variability Challenges in Clock Distribution Networks in sub-65nm***, Ashok Narasimhan and Ramalingam Sridhar
Presented by: Ashok Narasimhan
- 11) ***Socially Relevant Computing: Course Design Process***, Rishi Sharma, Varun Nikhil G Chopra, Jesse Thomson, Mahammad I Husain and Michael Buckley
Presented by: Mohammad Iftexhar Husain
- 12) ***Identification of Forgeries in Handwritten Election Petition***, Veshnu Ramakrishnan, Manavendar Malgireddy and Sargur Srihari
Presented by: Veshnu Ramakrishnan

