

DATA MINING NEWS

Volume 6

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A Message from the Chair

Hi Everyone! First, I would like express my sincere gratitude to all of your strong supports to the DM Section this year! Over the last 10 years, the INFORMS Data Mining Section has grown dramatically to almost 300 members and become one of the most active communities in INFORMS. This growth has been due mostly to the efforts of the past advisory boards, section chairs, secretary-treasurers, council members, webmaster-newsletter editor, and session chairs. Of course, all this success cannot be achieved



without active participation of all the members in the DM section.

Last year, as the section chair, I was fortunate to work with Dr. Paul Brooks (Chair-Elect & Cluster Chair), Dr. Durai Sundaramoorthi (Secretary-Treasurer), four council members (Dr. Peter Qian, Mr. Louis Duclos-Gosselin, Dr. Cynthia Rudin, and Dr. Sung Won Han), and Dr. Mustafa Baydogan (webmaster-newsletter editors). Without their efforts, I could not have achieved such a successful year for our section.

This year's DM cluster had 30 technical sessions that covered a variety of topics including data-integrated simulation modeling, statistical modeling for adaptive dynamic programming, high dimensional statistical inference, data mining for business, integration of data mining and control charts, and so on. Special thanks go to Dr. Paul Brooks, the Cluster Chair for his efforts in putting together this comprehensive cluster. Also, credits should go to all session chairs who built successful sessions for the cluster this year. Dr. MK Jeong as a new Cluster Chair will take the lead in organizing the cluster for next year.

Dr. Peter Qian served as our DM representative to organize the student paper competition. I am grateful to Dr. Qian for his

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effort and hard work for the successful competition. Among 18 papers submitted, top four papers were selected for the presentation at the DM Best Student Paper Competition session. I would like to thank all the students who participated in the competition this year and I strongly recommend that the students keep participating in this wonderful opportunity in the future. I would like to give my warmest congratulations to four finalists, Yi-Hao Kao, Kaibo Liu, Theja Tulabandhula, and Shouyi Wang. The winner Kaibo Liu received a plaque and other three received certificates.

Another featured activity in DM is a workshop. We are fortunate to have Dr. Hui Yang, Dr. Daniel Zeng, and Dr. Erhun Kundakcioglu who invested a tremendous amount of time and effort to organize the workshop. This year, the DM, Artificial Intelligence (AI) and Health Applications (HA) Sections organized a joint one-day workshop on Saturday prior to the annual INFORMS meeting. The objectives of the workshop are (1) to present state-of-the-art research and practice of data mining and healthcare research and (2) to encourage collaborative and interdisciplinary research among members between these sections. Totally, 34 talks were presented.

I also would like to thank Dr. Mustafa Baydogan for his dedicated efforts to publish our annual newsletter and maintain and update our website.

Again, it has been a great pleasure to work with all the officers this year. I am sure that

the DM section will have another great year in 2013 with the new section officers.

Thanks much! Happy New Year!

Jing Li

Arizona State University

Review of 2012 INFORMS Annual Meeting

The 2012 INFORMS Annual meeting was held at Phoenix, AZ, from October 14 to October 17, 2012.

The Data Mining Section sponsored 30 sessions, chaired by Dr. Paul Brooks.



2012 Data Mining Business Meeting in Phoenix, AZ

Review of the 7th Workshop on Data Mining and Health Informatics

The Data Mining (DM), Artificial Intelligence (AI), and Health Applications (HA) Subdivisions of the Institute for Operations Research and Management Sciences (INFORMS) are jointly organizing the 7th Workshop on Data Mining and Health Informatics (INFORMS DM-HI 2012) on October 13, 2012 at Phoenix, AZ, in conjunction with the 2012 INFORMS Annual Conference. A total of 34 papers were selected for presenting in two parallel all-day sessions at the workshop. The detailed session information and abstracts are available on the INFORMS website

(<http://meetings2.informs.org/phoenix2012/dmhi.html>).

Prof. George Runger from Arizona State University and Prof. Eva K. Lee from Georgia Institute of Technology gave two special keynote talks on “Future Directions in Data Mining and Informatics” and “Clinical Informatics: A Machine Learning Framework for Classification in Medicine and Biology”.



Dr. Eva Lee from Georgia Institute of Technology gave keynote talk on “Clinical Informatics: A Machine Learning Framework for Classification in Medicine and Biology” at the 7th Workshop on Data Mining and Health Informatics in 2012.

Program co-Chairs of this workshop are Hui Yang (University of South Florida), Daniel Zeng (University of Arizona), Erhun Kundakcioglu (University of Houston). Management Committee consists of Kwok-Leung Tsui (Georgia Institute of Technology), Tory Chen (University of Texas at Arlington), George Runger (Arizona State University) and Tom Au (AT&T Labs).



Dr. George Runger from Arizona State University gave keynote talk on “Future Directions in Data Mining and Informatics” at the 7th Workshop on Data Mining and Health Informatics in 2012.

Review of the 4th Annual INFORMS Data Mining Student Paper Award

There were an increased number of submissions to the INFORMS Data Mining Best Student Paper competition this year over past years. A total of 18 papers were submitted and these papers were evaluated by 12 reviewers.

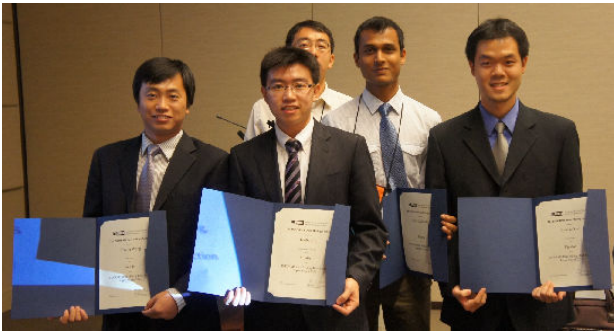
The top four papers were selected for the presentation at the 2012 INFORMS Annual Meeting in Phoenix, AZ. The information on the four finalists and their papers is as follows.

- Yi-Hao Kao: Learning a Factor Model via Regularized PCA, Stanford
- Kaibo Liu: Health Index Development Based on Sensory Data Fusion for Degradation Modeling and Prognostic Analysis, Georgia Tech

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- Theja Tulabandhula: Learning and Decision Making, MIT
- Shouyi Wang: Personalized Online Seizure Prediction Using An Adaptive Learning Approach, Rutgers

The winner of the Best Student Paper Award, Kaibo Liu at Georgia Tech, was announced at the Data Mining business meeting.



Student Paper Competition finalists with the competition chair at the Data Mining Business Meeting in Phoenix, AZ (from left: Mr. Shouyi Wang, Mr. Kaibo Liu, Prof. Peter Qian, Mr. Theja Tulabandhula, and Mr. Yi-Hao Kao)

The award was established in 2009 to increase the involvement of students in the section, facilitate networking among students with interest in data mining, and recognize excellent student work.

Announcements

Message from 2nd International Symposium on System Informatics and Engineering (ISSIE),

The School of Management, Xi'an Jiaotong University is proud to host the 2nd International Symposium on System Informatics and Engineering (ISSIE 2013) which will be held in Xi'an, China between July 8 - 9, 2013. The purpose of the Symposium is to bring together researchers and practitioners

interested in the theory and applications of system-driven data quality enhancement, knowledge discovery, and design/operation improvement in a wide range of domains and discipline. It will also offer participants an opportunity to look ahead into future trends.

The Symposium theme has been determined as "Big Data, Data Mining and Data Quality". Participants are encouraged to submit papers relevant to the Symposium theme and topics. The details are also provided on the meeting's website.

<http://som.xjtu.edu.cn/ISSIE2013/>

Schedule of Upcoming Annual INFORMS Meetings

2013

October 6-9, 2013
Minneapolis Convention Center
Hilton Minneapolis
Minneapolis, MN.

2014

November 16-19, 2014
Hilton San Francisco
San Francisco, CA.

Celebrating Member Achievements

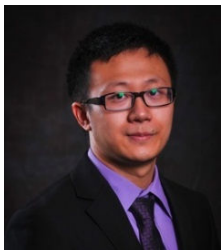


Jing Li, Assistant Professor of Industrial Engineering in School of Computing, Informatics, and Decision Systems Engineering at the Arizona State University, received the following

grants:

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- + Grant: "CAREER: Transfer Learning Based Quality Improvement in Spatially-Temporally Complex Systems," NSF
- + Grant: "Big Data in Large Communication Networks – Mining and Visualization," US Army Electronic Proving Ground
- + Ph.D. graduate: Shuai Huang (2012), "Novel Statistical Models for Complex Data Structures," Ph.D. Dissertation, Arizona State University, Advisor: Jing Li



Shuai Huang joined the Industrial and Management Systems Engineering at University of South Florida as an assistant professor.

Paul Brooks was promoted over the summer, 2012. He is now an associate professor in the Department of Statistical Sciences and Operations Research at Virginia Commonwealth University.



Victoria Chen, Professor of the Department of Industrial and Manufacturing Systems Engineering at the University of Texas at Arlington has the following

achievements:

- + Promotion: Interim Department Chair (As of Sep 1, 2012)

- + Grant (joint with the University of Oklahoma): "EPAS/AIS Collaborative Research: Adaptive Design for Controllability of a System of PHEV Charging Stations." with J. K. Allen (PI, U Oklahoma), W.-J. Lee (UT Arlington), F. Mistree (U Oklahoma), and J. M. Rosenberger (UT Arlington), National Science Foundation EECs-1128871/1128826, \$416,431.
- + Ph.D. student: Pin Kung (August 2012), Title: Multivariate Modeling for Green Building Decisions.

+ INFORMS Sessions:

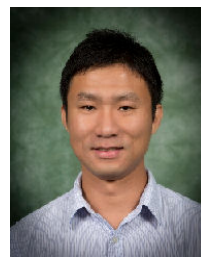
1- Joint Clusters: Data Mining / Computational Stochastic Optimization
Session Information: Sunday Oct 14, 13:30 - 15:00

Title: Towards Statistical Parsimony in Adaptive Dynamic Programming

2- Cluster: Energy, Natural Resources and the Environment / Energy

Session Information: Tuesday Oct 16, 08:00 - 09:30

Title: Evaluating the Controllability of a System of Plug-in Hybrid Electric Vehicle Charging Stations



Chun-An (Joe) Chou joined the Systems Science and Industrial Engineering Department at Binghamton University – SUNY as an assistant professor

Kaibu Liu, Ph.D. student at Georgia Institute of Technology, received the Gilbreth Memorial Fellowship from Institute of Industrial Engineers (IIE) in 2012.

Section Officers (2011 – 2012)

Chair

Jing Li

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Vice Chair

Paul Brooks

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Council Members

Peter Qian

University of Wisconsin-Madison

Louis Duclos-Gosselin

Sinapse

Cynthia Rudin

MIT

Sung Won Han

Hoffmann-La Roche

Advisory Board Members

Susan Albin

Rutgers University

Russ Barton

Pennsylvania State University

George Runger

Arizona State University

Kwei Tang

Purdue University

Janet Twomey

Wichita State University

Jeff Wu

Georgia Institute of Technology

Former Chair

Kwok Tsui (2003-2004)

Georgia Institute of Technology

Tom Au (2004-2005)

AT&T Lab

Tory Chen (2005-2006)

University of Texas at Arlington

Andrew Kusiak (2006-2007)

University of Iowa

Wei Jiang (2007-2008)

Stevens Institute of Technology

Xiaoming Huo (2008-2009)

Georgia Institute of Technology

Rong (Winnie) Duan (2009-2010)

AT&T Lab

Seoung Bum Kim (2010-2011)

Korea University

Webmaster/Newsletter Editor

Mustafa Baydogan

Arizona State University

Let's Share Your Achievements

Please send your achievements –
appointment, awards, grants, promotions,
and others to Mustafa Baydogan at

mbaydoga@asu.edu

Data Mining Section Website

Please visit our website at

<http://dm.section.informs.org/>.

