12ᵗʰ Data Mining & Decision Analytics (DMDA) Workshop
October 21, 2017
INFORMS 2017, Houston, TX

The Data Mining (DM) section of the Institute for Operations Research and Management Sciences (INFORMS) is organizing the 12ᵗʰ INFORMS Workshop on Data Mining and Decision Analytics on **October 21, 2017** in Houston, TX in conjunction with the 2017 INFORMS Annual Conference.

TOPICS OF INTEREST

Workshop topics may include all areas of data mining, machine learning, and decision making with data that fall in one or more of the following categories:

- Large-Scale Data Analytics and Big Data
- Data-Driven Decision-Making
- Visual Analytics
- Web Analytics/Web Mining
- Classification, Clustering, and Feature Selection
- Text mining
- Reliability & Maintenance
- Bayesian Data Analytics

- Healthcare Analytics
- Simulation/Optimization in Data Analytics
- Interpretable data mining
- Longitudinal data analysis
- Causal Mining (Inference)
- Analytics in social Media & finance
- Anomaly Detection
- Other Industrial Applications of Data Science

TIMELINE

June 30, 2017: Paper submissions
July 30, 2017: First round of review decisions sent out
August 30, 2017: Revised papers due
Oct 21, 2017: Presentation at the workshop

REGISTRATION FEES

All participants should pay the full amount of the regular Informs Conference Registration fee and additionally below listed fee to participate at this workshop. These below listed fees include meal courses (**coffee breaks, breakfast, and lunch**) for the day of October 21. Only the registered participants (both to the Informs Conference and to the DMDA Workshop itself) would be eligible to present, participate, and audit the event.

Students: $75.00 per student
Non-Students: $150.00 per non-student

HIGHLIGHTS OF THE DMDA WORKSHOP

A. Technical Sessions

B. Special Sponsored Sessions
(speakers are invited from selected research groups)

C. Best Paper Presentation Contest

Authors of all papers that are accepted after a review process and after an in-person presentation at the workshop would be eligible for the contests. The contest is focused on coherence between the content of the paper as well as the presentation. It will be judged by a panel of DMDA Workshop co-chairs, management committee, and session chairs. The following awards are considered for this year:

Best Student Paper & Best Non-Student Paper

In addition to a name-engraved plaque, $200 would be presented to the winners of each category. The top 2-3 papers of each category will present their work at a special (Best Paper) session.

D. Keynote Speakers of the DMDA Workshop

Panos M. Pardalos serves as Distinguished Professor of Industrial and Systems Engineering at the University of Florida. Additionally, he is the Paul and Heidi Brown Preeminent Professor in Industrial & Systems Engineering. He is also an affiliated faculty member of the Computer and Information Science Department, the Hellenic Studies Center, and the Biomedical Engineering Department. He is also the Director of the Center for Applied Optimization. Dr. Pardalos is a world leading expert in global and combinatorial optimization. His recent research interests include network design problems, optimization in telecommunications, e-commerce, data mining, biomedical applications, and massive computing. Dr. Pardalos won numerous awards including the 2013 Constantin Carathedory Prize, and the 2013 EURO Gold Medal. He is a foreign member of several academies of sciences, and he is a Fellow of AAAS, INFORMS, EURO, and AIMBE.

Victoria Chen is a Professor of Industrial, Manufacturing, & Systems Engineering (IMSE) at The University of Texas at Arlington. In 2015, she was awarded the George & Elizabeth Pickett Professorship in IMSE. She has served as Director of Research since 2014, and she served as Interim Department Chair in 2012-2014. She is also co-founder and former Director of the Center on Stochastic Modeling, Optimization, & Statistics. She holds a B.S. in Mathematical Sciences from The Johns Hopkins University, and M.S. and Ph.D. degrees in Operations Research from Cornell University. Dr. Chen is actively involved with INFORMS, having served as Fora Representative on the Subdivisions Council and as officers for the INFORMS Section on Data Mining and for the Forum for Women in OR/MS. She co-founded the Section on Data Mining in 2004 and served as Chair in 2006. As Chair, she founded the INFORMS Artificial Intelligence & Data Mining Workshop in 2006 and served as Program Chair. She is currently serving on the INFORMS Pro Bono Analytics Committee. She has been guest editor for the Annals of Operations Research since 2006. Dr. Chen's research utilizes statistical perspectives in stochastic optimization to create new methodologies for decision-making in a wide range of applications, from airline operations to environmental sustainability to health care. Her research has been funded by government agencies, foundations, and industry.

Endre Boros is a Distinguished Professor of the Department of Management Science and Information Systems and Director of the Operations Research Center (RUTCOR). He received his doctorate in

mathematics at the Eötvös Loránd University of Budapest in 1985. His research interests include graph theory, combinatorial optimization, theory of Boolean functions, game theory, machine learning, data mining, and their applications. He published over 190 articles in refereed journals and conference proceedings, edited 18 volumes, and authored a book chapter on Horn functions and their applications. He is a Foreign Member of the Hungarian Academy of Sciences. He serves as the Editor-in-Chief of the Annals of Operations Research and Discrete Applied Mathematics; and as an Associate Editor for the Annals of Mathematics and Artificial Intelligence, for Discrete Optimization, and member of the editorial boards of numerous other international journals. He was an invited visiting professor at various universities, including Kyoto University and Tokyo University in Japan, University of Rome "La Sapienza" in Italy, UPMC Sorbonne, Paris and University of Grenoble in France.

Galit Shmueli is the Tsing Hua Distinguished Professor at the Institute of Service Science, National Tsing Hua University, Taiwan. She is also Director of the Center for Service Innovation & Analytics at NTHU's College of Technology Management. Between 2011-2014 she was the SRITNE Chaired Professor of Data Analytics and Associate Professor (tenured) of Statistics & Information Systems at the Indian School of Business, and earlier she was Associate Professor (tenured) at University of Maryland's Smith School of Business. Dr. Shmueli received her PhD from the Israel Institute of Technology in 2000. Dr. Shmueli's research focuses on statistical and data mining methodology with applications in information systems and healthcare. Her focus is on developing and evaluating analytics for novel data structures. She authors multiple books, including the popular textbook Data Mining for Business Analytics and over 80 publications in peer-reviewed journals and books, including the top journals Management Science, Journal of the American Statistical Association, Journal of the Royal Statistical Society, Information Systems Research, MIS Quarterly, Journal of the Association of Information Systems, Journal of Business and Economic Statistics, Marketing Science, Statistical Science, Technometrics, and Proceedings of the National Academies of Science. Dr. Shmueli teaches courses on data mining, forecasting analytics, interactive visualization, statistics, and other business analytics topics. She has experience in teaching engineers and business students, undergraduate and graduate students, teaching online and on-ground.
Dr. Shmueli has won multiple research and teaching awards, and has supervised many Masters and PhD students. She is senior editor at Decision Sciences Journal (Analytics section), editorial board member at Big Data, and associate editor at Annals of Applied Statistics, JASA Reviews & The American Statistician Review.

CURRENT SPONSORS OF THE DMDA WORKSHOP:

- Frontline Solvers

- Salesforce

- University of Miami, Department of Industrial Engineering

Proposal and Paper Format:

Papers should follow the below listed guidelines:

- The paper should contain the following information the NAMES and AFFILIATIONS of all authors.
- Papers should be limited to a maximum length of 15 pages (including figures, tables, and references).
- Double-spaced and 12-point font.
- Templates will be provided on the INFORMS Workshop websites at:
  http://meetings2.informs.org/wordpress/houston2017/12th-informs-workshop-on-data-mining-decision-analytics-workshop/
- Papers should be sent to 12dmdaworkshop@gmail.com with subject 2017 Workshop.

Note 1: Please mention in your submission email one of the categories on page 1 that best describes your paper.

Note 2: All accepted papers will be included in the workshop CD, but will not be made available online.

Making Your Presentation

1. Go to the registration area of the Informs conference between 7:00am -5:00pm and pick up your name badge and other registration materials.
2. Arrive at your session at least 15 minutes early for A/V set-up and to check in with the session chair.
3. Limit your presentation to key issues with a brief summary.
4. Time your presentation to fit within your designated time span, leaving time for audience questions. Time per speaker is determined by the number of papers in the session, with equal time given to each paper.
5. Bring copies of your paper or other handouts to distribute to the audience.

Courtesy to Fellow Speakers

Attendees are asked to be respectful of their colleagues by turning off cell phones and mobile devices before the presentations begin. In addition, please note that use of cameras and all recording devices is prohibited during sessions unless you have received prior permission from the speaker.

Session Chair Guidelines

The role of the Chair is to coordinate the smooth running of the session. The Chair

1. Begins and ends the session on time. Each session lasts 90 minutes, with the time per presentation determined by the number of papers in the session. Equal time should be given to each paper.
2. Introduces each presentation (just the title of the paper and the name of the presenting author).
3. Ensures that presentations are made in the order shown in the program. This allows for "session jumping." If a speaker cancels or does not attend, the original time schedule should be adhered to rather than sliding every talk forward.
4. Completes the session attendance forms (forms will be in the room).

5. Reminds the audience to (a) turn off all mobile devices and (b) that photography is not allowed without the prior permission of the speaker.

Late Cancellations & No-Shows

Please don't be a "no-show." While we understand that last-minute emergencies may prevent speakers from attending, we urge you to inform us so we can alert attendees. Speakers who fail to notify us that they are not attending are being unfair to their colleagues and the Organizing Committee. In an effort to improve the quality of the meeting, we maintain records of individuals who are late cancellations and "no-shows." These people may be required to register in advance for future meetings in order for their papers to be scheduled. Send cancellation in writing to one of the co-chairs with the reason for canceling. If a speaker is a "no-show," the original time schedule should be adhered to rather than sliding every talk forward. This allows for effective session jumping.

Program co-Chairs (alphabetical order):

For inquiries, please contact one of the program co-chairs:

Cem Iyigun (Middle East Technical University, Department of Industrial Engineering)
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Management Committee:

Tom Au (AT&T Labs)

Victoria Chen (University of Texas at Arlington)

Kwok-Leung Tsui (City University of Hong Kong)

Cynthia Rudin (Duke University)

George Runger (Arizona State University)