

International Conference on Design of Experiments (ICODOE-2019)

May 18—21

Department of Mathematical Sciences, University of Memphis

FedEx Institute of Technology, University of Memphis

TZ: The Zone conference room, first floor

MPT: Methodist Presentation Theater, first floor

Saturday, May 18

6—7 PM Registration (Holiday Inn)

7—9 PM Reception Dinner (Holiday Inn, Tennessee Ballroom)

Sunday, May 19

7—8 AM Breakfast (Holiday Inn, Tennessee Ballroom)

8 AM Registration (FedEx Institute Lobby)

8:15 AM Inauguration (TZ)

8:30—10 AM Session 1 (TZ): Opening

Organizer: David Woods, University of Southampton, UK

Chair: David Woods

8:30—9 AM Timothy Waite, University of Manchester, UK.

Minimax efficient random experimental design strategies

9—9:30 AM Erin Leatherman, Kenyon College.

Designing combined physical and computer experiments to maximize global prediction accuracy

9:30—10 AM Matthew Plumlee, Northwestern University.

Composite grid designs for large scale computer model emulation

10—10:30 AM Coffee Break (FedEx Institute Lobby)

10:30 AM—12:30 PM Session 2a (TZ): Inference and Information with Adaptive Designs

Organizer: Nancy Flournoy, University of Missouri

Chair: Nancy Flournoy

10:30—11 AM Nancy Flournoy, University of Missouri

Some interesting results on inference and information with adaptive designs

11—11:30 AM Zhantao Lin, George Mason University

Random Norming Aids Analysis of Non-linear Regression Models with Sequential Informative Dose Selection

11:30 AM—NOON Adam Lane, Cincinnati Children's Hospital Medical Center

Adaptive designs for optimal observed Fisher information

NOON—12:30 PM Sergey Tarima, Medical College of Wisconsin
Asymptotic properties of maximum likelihood estimators with sample size recalculation

10:30AM—12:30 PM Session 2b (MPT): Subset Selection for Big Data

Organizer: Min Yang, University of Illinois at Chicago

Chair: Min Yang

10:30—11 AM Chenlu Shi, Simon Fraser University, Canada
Model-robust subdata selection for big data

11—11:30 AM Hongquan Xu, UCLA
Orthogonal array based big data subsampling

11:30 AM—NOON Abigail Nachtsheim, Arizona State University
Strategic subdata selection for linear regression modeling with big data

NOON—12:30 PM HaiYing Wang, University of Connecticut
Optimal subsampling: sampling with replacement vs Poisson sampling

12:30—2 PM Lunch (Holiday Inn, Tennessee Ballroom)

2—3:30 PM Session 3a (TZ): Computational Aspects of Optimal Experimental Design

Organizer: Radoslav Harman, Comenius University in Bratislava, Slovakia

Chair: Radoslav Harman

2—2:30 PM Elisa Perrone, MIT
Recent advances and new challenges in optimal designs for copula models

2:30—3 PM Wei Zheng, University of Tennessee
Incomplete U-statistics

3—3:30 PM Radoslav Harman, Comenius University in Bratislava, Slovakia
Ascent with quadratic assistance for the construction of exact experimental designs

2—3:30 PM Session 3b (MPT): Robust Design

Organizer: Doug Wiens, University of Alberta, Canada

Chair: John Stufken

2—2:30 PM Julie Zhou, University of Victoria, Canada
Computing R-optimal designs for multi-response regression models via interior point method

2:30—3 PM Rui Hu, MacEwan University, Canada
Robust designs for model discrimination

3—3:30 PM Xiaojian Xu, Brock University, Canada
Optimal active learning for approximately specified linear regression

3:30—4 PM Coffee Break (FedEx Institute lobby)

4—6 PM Session 4a (TZ): New Developments in Factorial Design I

Organizer: Hongquan Xu, UCLA

Chair: Hongquan Xu

4—4:30 PM Frederick K.H. Phoa, Academia Sinica, Taiwan
A systematic construction of cost-efficient designs for order-of-addition experiments

4:30—5 PM Qian Xiao, University of Georgia

Applications of universal Kriging models for drugs' order-of-addition problems with blocking

5—5:30 PM. William Li, Shanghai Jiao Tong University, China

Recent progress on using individual column information for design selections

5:30—6 PM Jose Nunez Ares, KU Leuven University, Belgium

OMARS designs: a new family of response surface designs

4—6 PM Session 4b (MPT): Developments in Optimal Design of Experiments

Organizers: Bradley Jones, JMP; John Stufken, Arizona State University

Chair: Bradley Jones

4—4:30 PM Olga Egorova, University of Southampton, UK

Compound optimality criteria accounting for potential model uncertainty

4:30—5 PM Anna Errore, University of Minnesota

Minimal aliasing optimal designs for non-linear models

5—5:30 PM Ming-Hung (Jason) Kao, Arizona State University

Optimal designs for mixed responses with quantitative and qualitative factors

5:30—6 PM Abhyuday Mandal, University of Georgia

d-QPSO: A quantum-behaved particle swarm technique for finding D-optimal designs with discrete and continuous factors and a binary response

7—8:30 PM Dinner (Holiday Inn, Tennessee Ballroom)

Monday, May 20

7:15—8:15 AM Breakfast (Holiday Inn, Tennessee Ballroom)

8:30—10 AM Session 5a (TZ): Experimental Design Thinking for Large-Scale Statistical Analyses

Organizer: Xinwei Deng, Virginia Tech

Chair: JP Morgan

8:30—9 AM Youngdeok Hwang, Sungkyunkwan University, South Korea

Estimation of healthcare accessibility using an online experiment

9—9:30 AM Shifeng Xiong, Chinese Academy of Science, China

Linear screening for high-dimensional computer experiments

9:30—10 AM Yiou Li, DePaul University

I_c -optimal design with a large candidate pool of generalized linear models

8:30—10 AM Session 5b (MPT): Discrete Choice Experiments

Organizer: Deborah Street, University of Technology Sydney, Australia

Chair: Deborah Street

8:30—9 AM Martina Vandebroek, KU Leuven University, Belgium

The choice set size: to be fixed or not to be fixed

9—9:30 AM Brendan Mulhern, University of Technology Sydney, Australia
Comparing DCEs in the field: Does design construction method matter?

9:30—10 AM Ben White, SurveyEngine, Germany
Discrete choice experiments in practice

10—10:30 AM Coffee Break (FedEx Institute Lobby)

10:30 AM—12:30 PM Session 6a (TZ): Bayesian Optimal Design with Physical Models

Organizer: Youssef Marzouk, MIT

Chair: Youssef Marzouk

10:30—11 AM Omar Ghattas, University of Texas at Austin
Large-scale optimal experimental design for Bayesian inverse problems

11—11:30 AM Wanggang Shen, University of Michigan
Optimal Bayesian design of sequential experiments via reinforcement learning

11:30 AM—NOON Markus Hainy, Johannes Kepler University Linz, Austria
Optimal Bayesian design for models with intractable likelihoods via supervised learning methods

NOON—12:30 PM Antony Overstall, University of Southampton, UK
Bayesian design for physical models using computer experiments

10:30 AM—12:30 PM Session 6b (MPT): Optimal Design of Dose-Finding Studies

Organizer: Sergei Leonov, CSL Behring

Chair: Adam Lane

10:30—11 AM Vlad Dragalin, Janssen Pharmaceuticals
Optimal designs for drug combination informed by longitudinal model for the response

11—11:30 AM Valerii Fedorov, Innovation Center, ICON, North Wales, USA
Dose ranging studies for mixed populations

11:30 AM—NOON Mike Fries, CSL Behring
Incorporating historical data into dose ranging design utilizing Bayesian methods.

NOON—12:30 PM Suman Sen, Novartis
Adaptive dose escalation approaches for oncology combinations – theory and practice.

12:30—2 PM Lunch (Holiday Inn, Tennessee Ballroom)

2—3:30 PM Session 7a (TZ): Computer Experiments

Organizer: Peter Chien, University of Wisconsin-Madison and Qiong Zhang, Clemson University

Chair: Qiong Zhang,

2—2:30 PM Qiong Zhang, Clemson University
Bayesian sequential data collection for stochastic simulation calibration

2:30—3 PM Ryan Lekivetz, JMP
Design and analysis of covering arrays using prior information

3—3:30 PM Tzu-Hsiang Hung, University of Wisconsin-Madison
A random Fourier feature method for modeling computer experiments with gradient information

2—3:30 PM Session 7b (MPT): Multi-Stage Designs and Blocking

Organizer: Angela Dean, The Ohio State University

Chair: Angela Dean

2—2:30 PM Rosemary Bailey, University of St Andrews, UK

Blocking in multi-stage experiments

2:30—3 PM Ming-Chung Chang, National Central University, Taiwan

A Bayesian approach to the selection of two-level multi-stratum factorial designs

3—3:30 PM Rakhi Singh, University of Dortmund, Germany

Pseudo generalized Youden designs

3:30—4 PM Coffee Break (FedEx Institute Lobby)

4—5:30 PM Session 8a (TZ): Agent-Based Simulation Experiments: Insights and Examples

Organizer: Susan Sanchez, Naval Postgraduate School

Chair: Susan Sanchez

4—4:30 PM Susan Sanchez, Naval Postgraduate School

Simulation experiments: designs for decision making

4:30—5 PM Eric Applegate, Purdue University

Multi-objective ranking and selection: Optimal sampling laws and tractable approximations via SCORE

5—5:30 PM Jeffrey Parker, Naval Postgraduate School

Agent-based simulation experiments: An innovative approach for the development of future marine corps amphibious capability

4—5:30 PM Session 8b (MPT): Randomization and Causal Inference

Organizer: Timothy Waite, University of Manchester, UK; Tirthankar Dasgupta, Rutgers University

Chair: Timothy Waite,

4—4:30 PM Xinran Li, University of Pennsylvania

Rerandomization in 2^K Factorial Experiments

4:30—5 PM Zach Branson, Harvard University

Sampling-based randomized designs for causal inference under the potential outcomes framework

5—5:30 PM David Puelz, University of Chicago

Randomization tests of causal effects under general interference

7—8:30 PM Conference Banquet (Holiday Inn, Tennessee Ballroom)

Tuesday 21 May 2019

7:15—8:15 AM Breakfast (Holiday Inn, Tennessee Ballroom)

8:30—10 AM Session 9 (TZ): Computer Experiments with Big n

Organizer: Will Welch, University of British Columbia, Canada

Chair: Will Welch

8:30—9 AM Robert Gramacy, Virginia Tech

Replication or exploration? Sequential design for stochastic simulation experiments

9—9:30 AM Sonja Surjanovic, University of British Columbia, Canada

Gaussian process regression with large datasets

9:30—10 AM Samuel Jackson, University of Southampton, UK

Design of physical experiments using history matching methodology

8:30—10 AM Session 9b (MPT): Design-Based Analysis of Experiments

Organizer: Maria Weese, University of Miami, Ohio

Chair: Maria Weese

8:30—9 AM Jon Stallrich, North Carolina State University

Sign-informative design and analysis of SSDs

9—9:30 AM David Edwards, Virginia Commonwealth University

Utilizing the block diagonal covariance structure of nonregular two-level designs

9:30—10 AM Bradley Jones, JMP

Construction, properties, and analysis of group-orthogonal supersaturated designs

10—10:30 AM Coffee Break (FedEx Institute Lobby)

10:30 AM—12:30 PM Session 10a (TZ): Designs for Online Experiments

Organizer: David Steinberg, Tel Aviv University, Israel

Chair: David Steinberg,

10:30—11 AM Jiannan Lu, Microsoft Corporation

Heavy user effect in A/B testing: Identification and estimation

11—11:30 AM Sol Sadeghi, Microsoft Corporation

Novelty and learning effects in online testing

11:30 AM—NOON Nathaniel Stevens, University of Waterloo

The analysis of A/B tests with comparative probability metrics

NOON—12:30 PM Paul Li, Microsoft Corporation

Experimentation in the operating system: The windows experimentation platform

10:30 AM—12:30 PM Session 10b (MPT): New Developments in Factorial Design II

Organizer: Hongquan Xu, UCLA

Chair: JP Morgan

10:30—11 AM Lin Wang, UCLA

A class of multilevel nonregular fractional factorial designs for studying quantitative factors

11—11:30 AM Alan Vazquez, KU Leuven University, Belgium
Construction of large two-level nonregular designs of strength three

11:30 AM—NOON Jay Beder, University of Wisconsin - Milwaukee
Aliasing in Hadamard arrays of size 12 and 16

NOON—12:30 PM R Vincent Paris, Iowa State University
Generalizing the foldover technique to 3^{f-s} regular fractional factorial designs

12:30—1:30 PM Lunch (Holiday Inn, Tennessee Ballroom)

1:30—3:20 PM Session 11a (TZ): Blocked Designs, Computer Experiments and Subsampling (Contributed session)

Chair: Manohar Aggarwal

1:30—2 PM Nha Vo-Thanh, University of Hohenheim, Stuttgart, Germany
Construction of two-phase designs for experiments with a single block factor in each phase

2—2:20 PM Bushra Husain, Aligarh Muslim University, India
D- and A- optimal orthogonally blocked mixture component-amount designs via projections

2:20—2:40 PM Xu He, Chinese Academy of Sciences
Interleaved lattice-based minimax distance designs and maximin distance designs

2:40—3 PM Yaqiong Yao, University of Connecticut
Optimal two-stage adaptive subsampling design for softmax regression

3—3:20 PM Hyungmin Rha, Arizona State University
A probabilistic subset search (PSS) algorithm for optimizing functional data sampling designs

1:30—3:20 PM Session 11b (MPT): Designs for Chemical, Medical and Industrial Experiments (Contributed session)

Chair: Jay Beder

1:30—2 PM Fabio D'Ottaviano, Dow Chemical
Challenges in experimental designs for the chemical industry

2—2:20 PM Cheng-Yu Sun, Simon Fraser University
Equivalence of 2-level designs between baseline and orthogonal parameterization

2:20—2:40 PM Timothy J. Keaton, Purdue University
Design and dismemberment for controlling the risk of regret for the multi-armed bandit

2:40—3 PM Reem Alghamdi, Arizona State University.
Experimental design issues in functional brain imaging with high temporal resolution

3—3:20 PM Anqing Zhang, University of Missouri
Adaptive Bayesian c-optimal design for estimating multiple EDps under the 4-parameter logistic model

End of Conference