

**International Conference on
Design of Experiments (ICODOE-2022) May 8-11, 2023
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
FB: Fishbowl (Room 203/205), second floor; **226:** Room 226, second floor

Monday, May 8

6—7 PM Registration (Holiday Inn)

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

Tuesday, May 9

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

8 AM Registration (FedEx Institute Lobby)

8:15 AM Inauguration (TZ)

8:30—10.00 AM Session 1 (TZ): Opening

Organizer: The Scientific Program Committee

Chair: John Stufken, George Mason University

8:30—9 AM Qing Liu, University of Wisconsin.

A Representative Sampling Method for Peer Encouragement Designs in Network Experiments

9—9:30 AM Jonathan Stallrich, NC State University.

Optimal Supersaturated Designs for Lasso Sign Recovery

9:30—10 AM Torsten Reuter, Otto von Guericke University, Magdeburg, Germany.

D-Optimal Subsampling Design for Big Data Regression

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

10:30 AM—12:30 PM Session 2a (TZ): Adaptive Designs.

Organizer: Nancy Flournoy, University of Missouri

Chair:

10:30—11 AM Zhantao Lin, Eli Lilly

Inference for a Two-Stage Enrichment Design

11—11:30 AM Adam Lane, University of Cincinnati

Optimal Relevant Subset Designs in Nonlinear Models

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

Optimality of Sequential Likelihood Ratio Tests Given an α -Spending Function and Interim Sample Sizes

NOON—12:30 PM Sergey Tarima, Medical College of Wisconsin

Cost of Sequential Adaptations

10:30AM—12:30 PM Session 2b (MPT): Screening Experiments.

Organizer: Angela Dean, The Ohio State University.

Chair: Angela Dean, The Ohio State University

10:30—11 AM Hongquan Xu, UCLA

Designs for Order-of-Addition Screening Experiments

11—11:30 AM Yasmeen Akhtar, Birla Institute of Technology and Science, Goa, India

Locating Arrays for Design Selection and Analysis of Screening Experiments

11:30 AM—NOON Eric Schoen, KU Leuven, Belgium

Systematic Enumeration of Two-Level Even-Odd Designs of Strength 3

NOON—12:30 PM Rakhi Singh, Binghamton University

Design Selection for Multi- and Mixed-Level Supersaturated Designs

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

2—3:30 PM Session 3a (TZ): DOE in the Pharmaceutical Industry.

Organizer: Sergei Leonov, CSL Behring

Chair:

2—2:30 PM Inna Perevozkaya, GSK

Applying Quantitative Decision-Making to Prediction of Clinical Trial Recruitment

2:30—3 PM Jinesh Shah, CSL Behring

Framework to design a Bayesian Group Sequential Clinical Study

3—3:30 PM Sergei Leonov, CSL Behring

On a Longitudinal Mixed Effects Model for a Dose-Finding Study

2—3:30 PM Session 3b (MPT): Variational Methods for Optimal Experimental Design

Organizer: Xun Huan, University Michigan

Chair: Xun Huan, University Michigan

2—2:30 PM Fengyi Li, Massachusetts Institute of Technology

Transport Map-Based Bayesian Optimal Experimental Design

2:30—3 PM Jiayuan Dong, University of Michigan

Variational Bayesian Optimal Experimental Design with Normalizing Flows

3—3:30 PM Ahmed Attia, Argonne National Laboratory, U.S.,

Robust Optimal Experimental Design for Bayesian Inverse Problems

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

4—5 PM Session 4a (TZ): Design of Experiments for Functional Data Analysis

Organizer: Ming-Hung (Jason) Kao, Arizona State University

Chair:

4—4:30 PM Cai Li, St. Jude Children's Research Hospital.

TBA

4:30—5 PM Ming-Hung (Jason) Kao, Arizona State University

Optimal Designs for Functional Principal and Empirical Component Scores

5—6 PM Session 4b (TZ): Design in Business Decision Making Processes

Organizers: Weitao Duan, LinkedIn, Xinwei Deng, Virginia Tech, and Shan Ba,

Chair:

5—5:30 Yin Jin, Stanford University

Selection by Prediction: Machine-assisted Candidate Screening with Conformal p-Values

5:30—6 PM Yixin Tang, DoorDash

Business Policy Experiments using Factorial Designs

4—6 PM Session 4c (MPT): Contributed Session

Chair:

4—4:30 PM Jay Beder, University of Wisconsin – Milwaukee

The story of a Wikipedia article

4:30—5 PM Olga Egorova, King's College London, UK.

Sequential multi-objective design of multistratum experiments

5—5:20 Kade Young, North Carolina State University

Comparing Supersaturated Screening Designs using Exact Screening Probabilities

5:20—5.40 PM William Fisher, Clemson University

Non-Myopic Methods in Bayesian Sequential Preference Learning with Application to Tradespace Exploration for Vehicle Concept Design

5:40—6PM Alexandre Bohyn, KULeuven, Belgium.

Design and analysis of a microplate assay in the presence of multiple restrictions on the randomization

7.00-8.30 Conference Banquet (Holiday Inn, Shelby Ballroom)

Wednesday, May 10

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

8:30—10 AM Session 5a (TZ): Recent Advances in Order-of-Addition Experiments

Organizer: Dennis K.J. Lin, Purdue University.

Chair: Ching-Chi Yang, University of Memphis

8:30—9 AM Frederick Phoa, Academia Sinica, Taiwan

A Systematic Design Construction and Analysis for Cost-Efficient Order-of-addition Experiment

9—9:30 AM Xueru Zhang, Purdue University

Analysis of Order-of-addition experiments

9:30—10 AM Dennis K.J. Lin, Purdue University,

Order-of-addition Experiments: Design and Analysis

8:30—10 AM Session 5b (MPT): Computational Methods for Bayesian Optimal Experimental Design

Organizer: Youssef Marzouk, MIT

Chair:

8:30—9 AM Alen Alexanderian, North Carolina State University

Optimal Design of Large-Scale Bayesian Inverse Problems under Model Uncertainty

9—9:30 AM Desi R. Ivanova, University of Oxford, UK

Deep Adaptive Design

9:30—10 AM Jayanth Jagalur-Mohan, Lawrence Livermore National Laboratory

Randomized Algorithms for Design of Experiments in High-Dimensions

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

10.30 AM—12:30 PM Session 6a (TZ): Computer Experiments.

Organizer: Max Morris, Iowa State University

Chair: Max Morris, Iowa State University

10:30—11 AM Roshan Joseph, Georgia Institute of Technology

Maximum One-Factor-At-A-Time Designs for Screening in Computer Experiments

11—11:30 AM Russell Barton, The Pennsylvania State University

Experiment Designs for Inverse Approximations

11:30 AM—NOON Isaac Michaud, Los Alamos National Laboratory

Designing Integral Experiments to Eliminate Compensating Nuclear Data Errors

NOON—12:30 PM Alan Vazquez, University of Arkansas

An integer programming algorithm for constructing maximin distance designs from good lattice point sets

10.30 AM—12:30 PM Session 6b (MPT): Reinforcement Learning.

Organizer: Wei Zheng, University of Tennessee.

Chair:

10:30—11 AM Haoda Fu, Eli Lilly.

TBA

11—11:30 AM. Linglong Kong, University of Alberta, Canada

Damped Anderson Mixing for Deep Reinforcement Learning: Acceleration, Convergence, and Stabilization

11:30 AM—NOON Wei Zheng, University of Tennessee.

Discretization of the prior for Thompson Sampling and the improvement on posterior update.

NOON—12:30 PM Xun Huan, University of Michigan.

Variational Bayesian Sequential Optimal Experimental Design via Policy Gradient

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

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

Organizer: Robert Mee, University of Tennessee

Chair: Hongquan Xu, UCLA

2—2:30 PM Lin Wang, Purdue University

Group-Orthogonal Subsampling for Non-independent Data Based on Linear Mixed Models

2:30—3 PM David Edwards, Virginia Commonwealth University

Structure of Nonregular Two-Level Designs

3—3:30 PM Robert Mee, University of Tennessee

Split Plot Parallel Flats Designs

2—3:30 PM Session 7b (MPT): Advances in the Design and Analysis of Modern Experiments and Observational Studies.

Organizer: Arman Sabbaghi, Unlearn.AI.

Chair:

2—2:30 PM Iavor Bojinov, Harvard University

Design of Panel Experiments with Spatial and Temporal Interference

2:30—3 PM Nicole Pashley, Rutgers University

Estimating Heterogeneous Treatment Effects in Conjoint Analysis

3—3:30 PM Yuki Ohnishi, Purdue University

A Bayesian Analysis of Two-Stage Randomized Experiments in the Presence of Interference, Treatment Nonadherence, and Missing Outcomes

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

4—6:00 PM Session 8a (TZ) Design of Experiments in Industry: Still Solving Important Business Problems .

Organizer: William Myers, Miami University

Chair:

4—4:30 PM Yanran Wei and Xinwei Deng, Virginia Tech.

An Efficient Filtering Approach for Model Estimation in Sparse Regression'.

4:30—5 PM Nathaniel Stevens, University of Waterloo, Canada.

An Overview of Statistical Challenges in Online Controlled Experiments

5—5:30 PM Arvind Krishna, Northwestern University.

TBA

5:30—6 PM TBA

4—6:00 PM Session 8b (MPT): Design and Causal Inference.

Organizer: Xinran Li, University of Illinois Urbana-Champaign

Chair: Xinran Li

4—4:30 PM Fredrik Sävje, Yale University.

Balancing Covariates in Randomized Experiments with the Gram-Schmidt Walk Design

4:30—5 PM Yuhao Wang, Tsinghua University

Rerandomization with Diminishing Covariate Imbalance and Diverging Number of Covariates

5—5:30 PM Adam Kapelner, Queens College, City University of New York

The Role of Pairwise Matching in Experimental Design for an Incidence Outcome

5:30—6 PM Anqi Zhao, National University of Singapore.

TBA

Thursday 11 May 2023

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

8:30—10 AM Session 9a (TZ): Discrete Choice Experiments

Organizer: Deborah Street, University of Technology Sydney, Australia

Chair: Deborah Street

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

New Sample Size Selection Methods for Discrete Choice Experiments

9:30—10 AM Juan Marcos Gonzalez, Duke University

Patient preferences in regulatory decision-making

9—9:30 AM Peiwen Jiang, University of Technology Sydney, Australia

How Much Overlap is Just Right? Comparing Stated Preference with Model Consistency

8:30—10 AM Session 9b (MPT): Kernel and Sampling Methods for Design

Organizer: Luc Pronzato, CNRS, France

Chair

8:30—9 AM Simon Mak, Duke University

Design and Analysis of Conglomerate Multi-Fidelity Computer Experiments, With Application to Emulation of Heavy-Ion Collisions

9—9:30 AM Luc Pronzato, CNRS, France

Incremental Space-filling Design

9:30—10 AM Belhadji Ayoub, ENS de Lyon, France

Function Reconstruction using Determinantal Sampling

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

10:30 AM—12:30 PM Session 10a (TZ): Recent Developments on Subsampling Methods

Organizer: HaiYing Wang, University of Connecticut

Chair:

10:30—11 AM JooChul Lee, University of Pennsylvania

Model Calibration and Evaluation via Optimal Sampling Using Electronic Health Record Data

11—11:30 AM Jing Wang, University of Connecticut

Scale-Invariant Optimal Sampling and Variable Selection with Rare-Events Data

11:30 AM—NOON HaiYing Wang, University of Connecticut

A Note on Centering in Subsample Selection for Linear Regression

NOON—12:30 PM Amalan Mahendran, Queensland University of Technology, Australia

A Model Robust Subsampling Approach for Generalised Linear Models in Big Data Settings

10:30 AM—12:30 PM Session 10b (MPT): Optimal Design of Experiments

Organizer: Jesús Lopez Fidalgo, University of Navarra, Spain

Chair: Jesús Lopez Fidalgo

10:30—11 AM Carlos De-La-Calle-Arroyo, University of Navarra, Spain

Augmenting Designs with Controlled Efficiency

11—11:30 AM Sergio Pozuelo-Campos, University of Castilla-La Mancha, Spain

Optimal Designs for Detecting and Characterizing Hormesis in Toxicological Tests

11:30 AM—NOON Alvaro Cia-Mina, University of Navarra, Spain

Optimal Subdata Selection for Random-X Linear Regression

NOON—12:30 PM Irene Mariñas-Collado, University of Oviedo, Spain

Optimal Designs for Non-Standard Alcohol Clearance Models

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

1:30PM —3:30 PM Session 11a (TZ): Contributed Session.

Chair:

1:30—1.50 PM Adetola Adediran, University of Southampton, UK.

Designing follow up samples – A comprehensive approach to detect MNAR missingness efficiently

1.50—2:10 PM Caroline Kerfonta, Clemson University

Sequential Selection for Minimizing the Variance with Application to Crystal Formation Experiments

2:10—2:30 PM Thomas Coons, University of Michigan

A Multi-Fidelity Approach to Bayesian Optimal Experimental Design

2:30—2.50 PM Samuel Onyambu, University of California, Los Angeles.

Kriging Based Sequential Region Perturbation and Shrinkage with EGO For Hyper-parameter Optimization

2.50—3.10PM Jose Toledo, University of California, Los Angeles.

Enhancing Efficient Global Optimization through a Kriging Based Space Reduction

3.10—3:30 PM Yezhuo Li, Clemson University.

Uncertainty Quantification for Computer Experiments with transformed additive Gaussian process

1:30PM —3:30 PM Session 11b (MPT): Contributed Session.

Chair:

1:30—1.50 PM Marco Arndt, University of Stuttgart, Germany

Power and Accuracy Characterization of Regression Models in The Presence of Orthogonality Deviations in CCDs:

1.50—2:10 PM Bushra Hussain, Aligarh Muslim University-Aligarh, India

Three component optimal orthogonally blocked designs for additive quadratic and reduced cubic canonical mixture models

2:10—2:30 PM Miguel Fudolig, University of Nevada Las Vegas

Incomplete and Confounded Block Designs in Visual Inference Experiments

2:30—2.50 PM Yao Shi, Qingdao University, China

Optimal Design for Generalized Linear Mixed Models Based on the Penalized Quasi-Likelihood Method

2.50—3.10PM Mohammed Saif Ismail Hameed, KU Leuven, Belgium
D- and A- optimal screening designs. What if n is not a multiple of 4?

3.10—3:30 PM Aisaku Nakamura, Cincinnati Children's Hospital
Simultaneous Tolerance Intervals for Response Surface and Mixture Designs Using the
Adjusted Product Set Method

1:30PM —3:30 PM Session 11c (FB): Contributed Session.

Chair: Rakhi Singh

1:30—1.50 PM Arpan Singh, Indian Institute of Technology, Hyderabad, India.
Optimal designs for testing pairwise differences: a graph based game theoretic approach

1.50—2:10 PM Sasanka Adikari, Old Dominion University
The geometry of dynamic time dependent best-worst choice pairs.

2:10—2:30 PM Yi Zhang, George Washington University
Independence-Encouraging Subsampling for Nonparametric Additive Models

2:30—2.50 PM Desi Ivanova, University of Oxford, UK
Are tighter mutual information bounds necessarily better?

2.50—3.10PM Joseph Ayodele Kupolusi, Federal University of Technology Akure, Nigeria
Design optimality in the presence of non-normal overdispersion responses model

3.10—3:30 PM Hanan Alzahrani, King's College London, UK
Optimal Design of Clinical Trials in Multi-state Models

End of Conference