
Event Agenda

2026 ICSA Applied Statistics Symposium

Sunday, June 14, 2026

8:00 AM - 5:00 PM	Registration
8:30 AM - 12:30 PM	Short Course: Graphical Multiple Comparison Procedures: Combining Flexibility with Optimality Location: FUSE 1327 Speakers: Yao Chen, Dong Xi, Frank Bretz
8:30 AM - 12:30 PM	Short Course: A Selective Introduction to the Statistical Foundations of Transfer Learning Location: FUSE 1328 Speaker: Yang Feng
12:30 PM - 1:30 PM	Lunch Break
1:30 PM - 5:30 PM	Short Course: Unlocking the Power of Semiparametric Models: A Practical Tutorial for Analyzing Complex Data with Minimum Assumptions Location: FUSE 1327 Speakers: Xin Tu, Jinyuan Liu
1:30 PM - 5:30 PM	Short Course: Selective Inference: Methods and Applications Location: FUSE 1328 Speaker: Zhimei Ren
6:00 PM - 9:00 PM	ICSA Board Meeting Location: FUSE 1324 (Global Studio)

Monday, June 15, 2026

7:30 AM - 5:00 PM	Registration
8:00 AM - 9:45 AM	Breakfast Location: Van Metre Hall 125/126 Multipurpose Room
8:00 AM - 5:00 PM	Expo Location: FUSE 1006
8:15 AM - 9:45 AM	Recent advances in modeling survival data Location: Van Metre 476 Chairs: Yingwei Peng A win probability based subgroup identification procedure in randomized clinical trials with survival endpoints 8:15 AM - 9:45 AM Location: Van Metre 476 Speaker: Na Bo Distance correlation and hypothesis testing in mixture cure models for censored data 8:15 AM - 9:45 AM Location: Van Metre 476 Speaker: Ricardo Cao A Unified Competing Risks Cure Regression Model 8:15 AM - 9:45 AM Location: Van Metre 476 Speaker: Suvra Pal Gradient boosting methods for survival data with a cured fraction 8:15 AM - 9:45 AM Location: Van Metre 476 Speaker: Yingwei Peng

8:15 AM - 9:45 AM

Statistical Innovations for Microbiome Data: Modeling Sparsity, Compositionality, and Multi-Omics

Location: FUSE 2416
Chairs: Jin Jin ; Organizers: Ni Zhao

Predicting Mortality in Older Men Through Multi-Omics Integration

8:15 AM - 9:45 AM
Location: FUSE 2416
Speaker: Huang Lin

MEM-SEQ: A scalable adjustment framework for correcting spatial autocorrelation in spatial multiscale analysis of microbiome data

8:15 AM - 9:45 AM
Location: FUSE 2416
Speaker: Daxuan Deng

DTH: A nonparametric test of homogeneity for multivariate dispersions

8:15 AM - 9:45 AM
Location: FUSE 2416
Speaker: Asmita Roy

Three-dimensional protein structure provides fine-grained classification of viral lineages

8:15 AM - 9:45 AM
Location: FUSE 2416
Speaker: Wodan Ling

8:15 AM - 9:45 AM

Innovations in Explainable AI and Statistical Learning

Location: FUSE 1328
Chairs: Suqi Liu ; Organizers: Yehua Li

Cultivating Patient Preferences in ALS Clinical Trials

8:15 AM - 9:45 AM
Location: FUSE 1328
Speaker: Ying Lu

Toward a Unified Statistical Theory of Unsupervised Pretraining and Supervised Neural Knowledge Graph Learning

8:15 AM - 9:45 AM
Location: FUSE 1328
Speaker: Suqi Liu

Bridging Statistical and Artificial Intelligence with Spatial and Network Images: An Explainable AI (XAI) Approach

8:15 AM - 9:45 AM
Location: FUSE 1328
Speaker: Rajarshi Guhaniyogi

A Principled Path to Fitted Distributional Evaluation

8:15 AM - 9:45 AM
Location: FUSE 1328
Speaker: Raymond K. W. Wong

8:15 AM - 9:45 AM

Statistical Methodology for High-Dimensional Biomedical Data Analysis

Location: Van Metre 478
Chairs: Zi Ye ; Organizers: Pei Wang

An adaptive nonparametric rank-based two-sample test for high-dimensional data

8:15 AM - 9:45 AM
Location: Van Metre 478
Speaker: Zi Ye

Explained Kernel Embedding Variation for Sufficient Dimension Reduction with Extensions to Censored Outcomes

8:15 AM - 9:45 AM
Location: Van Metre 478
Speaker: Chenlu Ke

Multi-ancestry Proteome-Wide Association Study for Alzheimer’s Disease

8:15 AM - 9:45 AM
Location: Van Metre 478
Speaker: Lei Fang

Bayesian Tensor Regression for Neuroimaging Data

8:15 AM - 9:45 AM
Location: Van Metre 478
Speaker: Hossein Moradi Rekabdarkolaee

8:15 AM - 9:45 AM

AI-Enabled Statistical Advances for Clinical Trial Design, Conduct and Oversight

Location: Van Metre 111

Chairs: Annie Wang ; Organizers: Zhaoyang Teng

Dose Optimization Design using Patient-Reported Outcomes via Bayesian Additive Regression Trees

8:15 AM - 9:45 AM

Location: Van Metre 111

Speaker: Yu-Che Chung

Improving Interim Decision Making: Predictive Modeling of Censored Survival Outcomes with Machine Learning

8:15 AM - 9:45 AM

Location: Van Metre 111

Speaker: Albert Man

Enhancing Clinical Trial Oversight with AI-Powered Risk-Based Data Visualization

8:15 AM - 9:45 AM

Location: Van Metre 111

Speaker: Xian Sun

Dynamic Prediction Tool of Patient Enrollment Using Hierarchical Semi-parametric Bayesian Modeling

8:15 AM - 9:45 AM

Location: Van Metre 111

Speaker: Qian Meng

8:15 AM - 9:45 AM

Bridging Statistics and AI: Decision Making, Preference Learning, Generative Modeling, and Causal Reasoning

Location: FUSE 2418

Chairs: Xiufan Yu

Offline Data-Driven Decision Making with Applications to Assortment Optimization

8:15 AM - 9:45 AM

Location: FUSE 2418

Speaker: Ethan Fang

Preference Inference for Language Model Evaluation

8:15 AM - 9:45 AM

Location: FUSE 2418

Speaker: Junwei Lu

Generalization Properties of Score-matching Diffusion Models for Intrinsically Low-dimensional Data

8:15 AM - 9:45 AM

Location: FUSE 2418

Speaker: Saptarshi Chakraborty

Deep Causal Learning for Heterogeneous Panel Data Models

8:15 AM - 9:45 AM

Location: FUSE 2418

Speaker: Xiufan Yu

8:15 AM - 9:45 AM

Statistical learning in biomedical sciences

Location: Van Metre 466

Chairs: Guannan Wang ; Organizers: Zhezhen Jin

Goodness-of-Fit Tests for Combined Unilateral and Bilateral Data

8:15 AM - 9:45 AM

Location: Van Metre 466

Speaker: Changxing Ma

Post-pandemic mortality forecasting

8:15 AM - 9:45 AM

Location: Van Metre 466

Speaker: Liquan Diao

Statistical Learning Boosted Calibration Methods to Improve Population Inferences

8:15 AM - 9:45 AM

Location: Van Metre 466

Speaker: Lingxiao Wang

Multicellular network-informed survival model for identification of drug targets of gliomas

8:15 AM - 9:45 AM

Location: Van Metre 466

Speaker: Yongzhao Shao

8:15 AM - 9:45 AM

Modern Nonparametric Learning Methods for High-Dimensional and Large-Scale Data

Location: Van Metre 120

Chairs: Yubai Yuan ; Organizers: Linxi Liu

Bayesian Poisson process tree model for high-dimensional spatial point patterns.

8:15 AM - 9:45 AM

Location: Van Metre 120

Speaker: Pulong Ma

Empirical Likelihood with Generative AI

8:15 AM - 9:45 AM

Location: Van Metre 120

Speaker: Jiguang Li

Efficient Likelihood-Free Adaptive Bayesian Inference

8:15 AM - 9:45 AM

Location: Van Metre 120

Speaker: Sophia Lu

Locally Adaptive Conformal Prediction in the Input Space of Large Language Models

8:15 AM - 9:45 AM

Location: Van Metre 120

Speaker: Jungeum Kim

8:15 AM - 9:45 AM

Advanced Methods for Personalized Decisions and Latent Structure Modeling

Location: FUSE 1327

Chairs: Yang Feng

Deep Representation Learning for Optimizing Individualized Treatment Decisions with Electroencephalogram (EEG) Biomarkers

8:15 AM - 9:45 AM

Location: FUSE 1327

Speaker: Yuanjia Wang

Divergence based methods for dLLM

8:15 AM - 9:45 AM

Location: FUSE 1327

Speaker: Anand Vidyashankar

Convergence and Optimality of the EM Algorithm Under Multi-Component Gaussian Mixture Models

8:15 AM - 9:45 AM

Location: FUSE 1327

Speaker: Xin Bing

Unsupervised Federated Multi-Task Learning for Heterogeneous Tasks

8:15 AM - 9:45 AM

Speaker: Yang Feng

8:15 AM - 9:45 AM

Recent advancements in analyzing chemical mixtures in environmental health

Location: Van Metre 477

Chairs: Jian Kang ; Organizers: Wei Hao

Approaches for generating consensus across epidemiologic studies of environmental mixtures

8:15 AM - 9:45 AM

Location: Van Metre 477

Speaker: Jenna Krall

A Stochastic Potential Outcomes Framework for Health Effect Estimation Under Multiple Covariate Measurement Errors

8:15 AM - 9:45 AM

Location: Van Metre 477

Speaker: Honghyok Kim

Heterogeneous Distributed Lag Mixture Model for Precision Environmental Health with Longitudinally Assessed Mixture Exposures

8:15 AM - 9:45 AM

Location: Van Metre 477

Speaker: Ander Wilson

Statistical methods for chemical mixtures: a roadmap for practitioners

8:15 AM - 9:45 AM

Location: Van Metre 477

Speaker: Wei Hao

8:15 AM - 9:45 AM

Advances in Statistical Methods for Complex Clustered and High-Dimensional Data
Location: Van Metre 113
Chairs: Bingkai Wang ; Organizers: Rui Wang

Clustered Autoregressive Modeling for Spatiotemporal Areal Health Data

8:15 AM - 9:45 AM
Location: Van Metre 113
Speaker: Ting Fung Ma

Synthetic Heterogeneous Effects LASSO: A Fixed-effects Estimation Approach for High-dimensional Mixed-effects Models

8:15 AM - 9:45 AM
Location: Van Metre 113
Speaker: Shangyuan Ye

How to achieve model-robust inference in stepped wedge trials with model-based methods?

8:15 AM - 9:45 AM
Location: Van Metre 113
Speaker: Bingkai Wang

The Causal Effects of School-Based Prevention Programs on Adolescent Polysubstance Use: Emulating a Cluster-Randomized Trial

8:15 AM - 9:45 AM
Location: Van Metre 113
Speaker: Aya Mitani

8:15 AM - 9:45 AM

Splines in Modern Statistics: Flexibility, Scalability, and Inference for Complex Data
Location: Van Metre 468
Chairs: Pang Du

Interpretable Scalar-on-Image Linear Regression Models via the Generalized Dantzig Selector

8:15 AM - 9:45 AM
Location: Van Metre 468
Speaker: Xiaoxiao Sun

A state space approach to parametric and nonparametric regressions of densely sampled multivariate time series data

8:15 AM - 9:45 AM
Location: Van Metre 468
Speaker: Ziyue Liu

Effect-Wise Inference for Smoothing Spline ANOVA on Tensor-Product Sobolev Space

8:15 AM - 9:45 AM
Location: Van Metre 468
Speaker: Youngjin Cho

A flexible seamless phase 2/3 design with biomarker-driven subgroup enrichment and sample size re-estimation

8:15 AM - 9:45 AM
Location: Van Metre 468
Speaker: Rachael Liu

10:00 AM - 10:20 AM

Welcome Opening Remarks
Location: FUSE 1311 Conference Center / 1312
Speakers: Amarda Shehu, Rong Chen, Lily Wang ; Chairs: Wanli Qiao

10:20 AM - 10:30 AM

Break

10:30 AM - 12:00 PM

Frontiers in Functional Data Analysis for Biomedical Imaging
Location: Van Metre 120
Chairs: Shuoyang Wang

Simultaneous Regression, Registration, and Clustering for Misaligned Shape Predictors

10:30 AM - 12:00 PM
Location: Van Metre 120
Speaker: Chao Huang

Linear regression using principal components from general Hilbert-space-valued covariates

10:30 AM - 12:00 PM
Location: Van Metre 120
Speaker: Xinyi Li (Clemson)

High-Dimensional Multivariate Mediation Analysis for Brain Imaging via Structured Dimension Reduction

10:30 AM - 12:00 PM
Location: Van Metre 120
Speaker: Yuexuan Wu

Semi-Partitioned GMM for Longitudinal Data With Time-Dependent and Feedback Covariates

10:30 AM - 12:00 PM
Location: Van Metre 120
Speaker: Niloofar Ramezani

10:30 AM - 12:00 PM

Advances in Data Fusion and Missing Data Analysis

Location: Van Metre 113

Chairs: Raymond K. W. Wong

Multi-task Learning for Semiparametric Models with Nuisance Parameters Fusion

10:30 AM - 12:00 PM

Location: Van Metre 113

Speaker: Muxuan Liang

Efficient and Multiply Robust Risk Estimation under General Forms of Dataset Shift

10:30 AM - 12:00 PM

Location: Van Metre 113

Speaker: Hongxiang Qiu

Representation Learning with Blockwise Missingness and Signal Heterogeneity

10:30 AM - 12:00 PM

Location: Van Metre 113

Speaker: Weijing Tang

Integrative Nearest Neighbor Classifiers for Block-missing Multi-modality Data

10:30 AM - 12:00 PM

Location: Van Metre 113

Speaker: Guan Yu

10:30 AM - 12:00 PM

The Session in Honor of Gabor Szekeley: The Energy of Data and Its Role in Modern Statistical Sciences and Machine Learning

Location: FUSE 1327

Chairs: Suqi Liu ; Organizers: Yulia Gel

Asymptotic FDR Control with Model-X Knockoffs: Is Moments Matching Sufficient?

10:30 AM - 12:00 PM

Location: FUSE 1327

Speaker: Yingying Fan

Accessible goodness-of-fit tests in R with energyGOF

10:30 AM - 12:00 PM

Location: FUSE 1327

Speaker: John Haman

Robust Estimation and Inference for Multivariate Location and Scatter with the Minimum Density Power Divergence Estimator

10:30 AM - 12:00 PM

Location: FUSE 1327

Speaker: Michael Pokojovy

Measuring Independence in the Big Data Era: A Journey Inspired by Gábor Székely

10:30 AM - 12:00 PM

Location: FUSE 1327

Speaker: Xiaoming Huo

10:30 AM - 12:00 PM

Recent Advances in Statistical Learning and AI for Complex Data

Location: Van Metre 476

Chairs: Minjie Wang

New Empirical Process Tools and Their Applications to Robust Deep ReLU Networks and Phase Transitions for Nonparametric Regression

10:30 AM - 12:00 PM

Location: Van Metre 476

Speaker: Yizhe Ding

Contaminated Multi-Task Learning: Negatives and Positives

10:30 AM - 12:00 PM

Location: Van Metre 476

Speaker: Ye Tian

Statistical Inference for Misspecified Contextual Bandits

10:30 AM - 12:00 PM

Location: Van Metre 476

Speaker: Yongyi Guo

Digital Twin for Personalizing Just-In-Time Adaptive Intervention Development: A Case Study on HeartSteps

10:30 AM - 12:00 PM

Location: Van Metre 476

Speaker: Ziping Xu

10:30 AM - 12:00 PM

Recent advances in statistical design and analysis in oncology studies

Location: FUSE 2418
Chairs: Junxian Geng

Oncology Dose Optimization: How Many Doses and How Many Patients?

10:30 AM - 12:00 PM
Location: FUSE 2418
Speaker: Linda Sun

Adaptive Biomarker Enrichment Design with Group Sequential Testing

10:30 AM - 12:00 PM
Location: FUSE 2418
Speaker: Ningxin Song

DOD-SSR: An Adaptive Seamless Phase II/III Design With Dose Optimization Decision and Sample Size Re-estimation.

10:30 AM - 12:00 PM
Location: FUSE 2418
Speaker: Jianchang Lin

Treatment Switching in Late-Phase Oncology Trials: Design and Analysis Considerations for Overall Survival

10:30 AM - 12:00 PM
Location: FUSE 2418
Speaker: Ya Wang

10:30 AM - 12:00 PM

From Incidence to Inference: A Statistical Playbook for Vaccine Development

Location: Van Metre 111
Chairs: Naitee Ting ; Organizers: Xiaolin Chang

Adopting the Estimand Framework in Prophylactic Vaccine Trials

10:30 AM - 12:00 PM
Location: Van Metre 111
Speaker: Ye Yang

Real-time Case Prediction using Bayesian Method in Vaccine Development

10:30 AM - 12:00 PM
Location: Van Metre 111
Speaker: Zhe Guan

Bayesian Dynamic Borrowing for Vaccine Efficacy Studies in Pediatric Population

10:30 AM - 12:00 PM
Location: Van Metre 111
Speaker: Ruoyuan Qian

Leveraging ellmer and GPT to Integrate AI Agents into Shiny Applications for Accelerating Clinical Translational Data Insights Across mRNA Programs

10:30 AM - 12:00 PM
Location: Van Metre 111
Speaker: Xiaolin Chang

10:30 AM - 12:00 PM

Statistical Guardrails for Trustworthy AI: Privacy, Robustness, and Bias Mitigation

Location: FUSE 2416
Chairs: Chunlin Li

Model Privacy: A Unified Framework for Understanding Model Stealing Attacks and Defenses

10:30 AM - 12:00 PM
Location: FUSE 2416
Speaker: Ganghua Wang

History-Aware Epistemic Accounting in LLMs: Certainty-Driven Robust Inference

10:30 AM - 12:00 PM
Location: FUSE 2416
Speaker: Fengnan Deng

Additive-Effect Assisted Learning

10:30 AM - 12:00 PM
Location: FUSE 2416
Speaker: Jiawei Zhang

In-Context Learning and Unlearning of Length Biases (Tentative Speech Title)

10:30 AM - 12:00 PM
Location: FUSE 2416
Speaker: Yangfeng Ji

10:30 AM - 12:00 PM

Modern Statistical Process Monitoring with AI/Big Data (I)

Location: Van Metre 468

Chairs: Dong Han ; Organizers: Yajun Mei

Intelligence-driven quality Anyalytics: Integrating Generative AI with statistical process control

10:30 AM - 12:00 PM

Location: Van Metre 468

Speaker: Fugee Tsung

Quickest Causal Change-Point Detection by Adaptive Intervention

10:30 AM - 12:00 PM

Location: Van Metre 468

Speaker: Chen Zhang

Multiple Change Point Detection in Time Series with Non-stationary Dynamics

10:30 AM - 12:00 PM

Location: Van Metre 468

Speaker: Abolfazl Safikhani

Federated Monitoring of High-Dimensional Online Streaming Data

10:30 AM - 12:00 PM

Location: Van Metre 468

Speaker: Yajun Mei

10:30 AM - 12:00 PM

Fair, Causal, and Network Learning with Electronic Health Records

Location: Van Metre 477

Chairs: Yushu Shi

Nonparametric Propensity Score Estimation with Optimized Covariate Balance with Application to EHR Data Analysis

10:30 AM - 12:00 PM

Location: Van Metre 477

Speaker: Liang Li

A joint fairness model with applications to risk predictions for underrepresented populations

10:30 AM - 12:00 PM

Location: Van Metre 477

Speaker: Hua Judy Zhong

Assisted disease network analysis with a temporal conditional graphical model based on electronic health records.

10:30 AM - 12:00 PM

Location: Van Metre 477

Speaker: Mingcong Wu

Target trial emulation with EHR: turning observational data into causal evidence

10:30 AM - 12:00 PM

Location: Van Metre 477

Speaker: Shuo Mila Sun

10:30 AM - 12:00 PM

Recent Advances in Statistical Genetics

Location: FUSE 1328

Chairs: Shiyang Ma

Uncovering Heterogeneous Effects via Localized Feature Selection

10:30 AM - 12:00 PM

Location: FUSE 1328

Speaker: Jiaqi Gu

An Ancestry-Informed Association Analysis Framework for Large-Scale Multi-Ancestry Whole Genome Sequencing Studies

10:30 AM - 12:00 PM

Location: FUSE 1328

Speaker: Xihao Li

Identification of differentially expressed genes via knockoff statistics in single-cell RNA-sequencing studies

10:30 AM - 12:00 PM

Location: FUSE 1328

Speaker: Linxi Liu

Fine-mapping in admixed populations using CARMA-X, with applications to Latin American studies

10:30 AM - 12:00 PM

Location: FUSE 1328

Speaker: Zikun Yang

10:30 AM - 12:00 PM

Recent Advances in Clinical Trials I

Location: Van Metre 466
Chairs: Lili Zhu

Quantitative considerations in early oncology clinical development

10:30 AM - 12:00 PM
Location: Van Metre 466
Speaker: Tao Duan

Seamless Phase 2/3 Trials: Principles, Benefits, and Challenges

10:30 AM - 12:00 PM
Location: Van Metre 466
Speaker: Liyi Jia

Matching Adjusted indirect Comparison in Oncology Studies: From Profile Matching to External Control Arms

10:30 AM - 12:00 PM
Location: Van Metre 466
Speaker: Tian Chen

A Cross-Fitted Graph-Fused Borrowing Analysis of Basket Trials

10:30 AM - 12:00 PM
Location: Van Metre 466
Speaker: Xinyi Li (UNC)

10:30 AM - 12:00 PM

Recent Advances in Statistical Learning for Complex Data

Location: Van Metre 479
Chairs: Lan Xue

Exploring Longitudinal Effects in Epilepsy: A Statistical Perspective

10:30 AM - 12:00 PM
Location: Van Metre 479
Speaker: Jing Wang

Leverage large-scale educational data and appropriate tools for teaching

10:30 AM - 12:00 PM
Location: Van Metre 479
Speaker: Hongwen Guo

Functional dynamic models with functional and scalar predictors prone to measurement errors

10:30 AM - 12:00 PM
Location: Van Metre 479
Speaker: Carmen Tekwe

Addressing zero-inflated and mis-measured functional predictors in scalar-on-function regression model

10:30 AM - 12:00 PM
Location: Van Metre 479
Speaker: Roger Zoh

10:30 AM - 12:00 PM

Student Paper Awards Session 1

Location: Van Metre 478
Chairs: Jingru Mu

Covariate-Adjusted Deep Causal Learning for Heterogeneous Panel Data Models

10:30 AM - 12:00 PM
Location: Van Metre 478
Speaker: Guanhao Zhou

Randomization-Based Inference for Average Treatment Effects in Inexactly Matched Observational Studies

10:30 AM - 12:00 PM
Location: Van Metre 478
Speaker: Jianan Zhu

Maximum-Variance-Reduction Stratification for Improved Subsampling

10:30 AM - 12:00 PM
Location: Van Metre 478
Speaker: Dingyi Wang

12:00 PM - 1:00 PM

Roundtable Lunch

Location: Van Metre Hall 125/126 Multipurpose Room
Speakers: Naitee Ting, Rong Liu, Margaret Gamalo, Ziqian Geng, Grace Li, Bidan Huang, Jeen Liu

12:00 PM - 1:00 PM

Lunch Break

Location: Van Metre Hall 125/126 Multipurpose Room

1:00 PM - 2:30 PM

Modern Statistical and AI Frameworks for Modeling Heterogeneity and Progression of Neuropsychiatric Diseases

Location: FUSE 2418
Chairs: Boyi Hu ; Organizers: Yuanjia Wang

Shared Hidden-factor Information Framework for Multiple Behavioral Tasks 1:00 PM - 2:30 PM Location: FUSE 2418 Speaker: Yuan Bian
Dynamic System for Modeling Disease Progression with Temporal Registration 1:00 PM - 2:30 PM Location: FUSE 2418 Speaker: Shanghong Xie
Quantifying Brain Atrophy Patterns with High-Dimensional MRI Distance Metrics and Cross-Attention Models for Early Alzheimer's Disease Detection 1:00 PM - 2:30 PM Location: FUSE 2418 Speaker: Zheyu Wang
Uncovering Disease Heterogeneity through Integrative Outcome-Guided Subtyping Using Multi-Omics Data 1:00 PM - 2:30 PM Location: FUSE 2418 Speaker: Annie Lee

1:00 PM - 2:30 PM

Scalable Statistical Methods for Complex, Spatial, and Functional Data

Location: FUSE 2416
Chairs: Guannan Wang

Dynamic Bivariate Penalized Spline Estimation for Varying Coefficient Models with Spatial Data Streams over Complicated Domains 1:00 PM - 2:30 PM Location: FUSE 2416 Speaker: Jingru Mu
Large Margin Nearest Neighbor Classification for 2D and 3D Functional Data 1:00 PM - 2:30 PM Location: FUSE 2416 Speaker: Todd Ogden
LLM-Enhanced Analysis Framework for Spatial Transcriptomics 1:00 PM - 2:30 PM Location: FUSE 2416 Speaker: Peifeng Ruan

1:00 PM - 2:30 PM

Innovations in Modeling Heterogeneity and Complexity in Survival Data

Location: Van Metre 120
Chairs: Siyuan Guo ; Organizers: Jiajia Zhang

Estimating Interpretable Heterogeneous Treatment Effect with Causal Subgroup Discovery in Survival Outcomes 1:00 PM - 2:30 PM Location: Van Metre 120 Speaker: Ying Ding
Flexible Semiparametric Latent Class Regression of Heterogeneous Recurrent Event 1:00 PM - 2:30 PM Location: Van Metre 120 Speaker: Limin Peng
Fitting mixture cure models in the presence of a high-dimensional covariate space 1:00 PM - 2:30 PM Location: Van Metre 120 Speaker: Kellie Archer
Correlation for left-truncated and right censored survival outcomes 1:00 PM - 2:30 PM Location: Van Metre 120 Speaker: Benjamin Langworthy

1:00 PM - 2:30 PM

Innovative Statistical Methods in Clinical Trials and Real-World Evidence: Causal Inference, Estimands, and Predictive Modeling

Location: Van Metre 113
Chairs: Hao Li ; Discussants: Angela Zhu

Target Trial Emulation for External Control Arms: Practical Considerations for Small Oncology Trials

1:00 PM - 2:30 PM
Location: Van Metre 113
Speaker: Irina Degtiar

Covariate Adjustment for the Win Ratio and Beyond

1:00 PM - 2:30 PM
Location: Van Metre 113
Speaker: Han Zhang

Tripartite Estimand for Estimating Treatment Effect Using Adherence-Based Causal Estimators under the Causal Inference Framework

1:00 PM - 2:30 PM
Location: Van Metre 113
Speaker: Zheng Zhu

Discussion

1:00 PM - 2:30 PM
Location: Van Metre 113
Speaker: Angela Zhu

1:00 PM - 2:30 PM

Recent Advances in Causal Inference for Evidence-Based Decision-Making

Location: Van Metre 476
Chairs: Bingkai Wang ; Organizers: Ruoqi Yu

Design-Based Weighting for Multilevel Full Matching

1:00 PM - 2:30 PM
Location: Van Metre 476
Speaker: Katherine Brumberg

Propensity Score Propagation: A General Framework for Design-Based Inference with Unknown Propensity Scores

1:00 PM - 2:30 PM
Location: Van Metre 476
Speaker: Siyu Heng

Towards the most powerful randomization tests

1:00 PM - 2:30 PM
Location: Van Metre 476
Speaker: Zijun Gao

Using a Two-Parameter Sensitivity Analysis Framework to Efficiently Combine Randomized and Non-randomized Studies

1:00 PM - 2:30 PM
Location: Van Metre 476
Speaker: Ruoqi Yu

1:00 PM - 2:30 PM

Advances in Statistics, Machine Learning, and AI for Real-World and EHR Data

Location: FUSE 1328
Chairs: Hongkai Ji

AI and multimodal evidence on clinical success

1:00 PM - 2:30 PM
Location: FUSE 1328
Speaker: Bingxin Zhao

Distributional Evaluation of Generative Models via Relative Density Ratio

1:00 PM - 2:30 PM
Location: FUSE 1328
Speaker: Yuliang Xu

Empowering Real-world Evidence for Autoimmune Diseases with Synergistic Human-Agent Reasoning System (SHARE)

1:00 PM - 2:30 PM
Location: FUSE 1328
Speaker: Jue Hou

Unlocking Multi-Institutional Insights into Disease Progression Using Federated Learning on Longitudinal Electronic Health Records

1:00 PM - 2:30 PM
Location: FUSE 1328
Speaker: Yicheng Shen

1:00 PM - 2:30 PM

Data integration under different data types: new methodology developments

Location: Van Metre 468
Chairs: Peisong Han

Bayesian methods for astrophysics discovery based on big data

1:00 PM - 2:30 PM
Location: Van Metre 468
Speaker: Yang Chen

A Model-Robust G-Computation Method for Analyzing Hybrid Control Studies Without Assuming Exchangeability

1:00 PM - 2:30 PM
Location: Van Metre 468
Speaker: Zhiwei Zhang

Promising Tools for Integrating Information from Secondary Outcomes to Improve Primary Data Analysis: A New Usage of Secondary Outcomes in the Era of Big Data

1:00 PM - 2:30 PM
Location: Van Metre 468
Speaker: Chixiang Chen

Data Integration for Statistical Operation Strategy: Building the Foundation for Insights

1:00 PM - 2:30 PM
Location: Van Metre 468
Speaker: Guohui Wu

1:00 PM - 2:30 PM

Integrating AI/ML in Statistical Research

Location: Van Metre 477
Chairs: Jianhui Zhou

CytoOne: A unified probabilistic framework for CyTOF data

1:00 PM - 2:30 PM
Location: Van Metre 477
Speaker: Xinlei (Sherry) Wang

Information-based Composite Likelihood Method for Hybrid Meta-Analysis Integrating Individual Participant Data and Aggregated Data

1:00 PM - 2:30 PM
Location: Van Metre 477
Speaker: Guoqing Diao

Identifying Causal Features by Model-Agnostic Invariance Prediction Inference

1:00 PM - 2:30 PM
Location: Van Metre 477
Speaker: Chunlin Li

Statistical AI Modeling of Directed Brain Networks in Neuroimaging Studies

1:00 PM - 2:30 PM
Location: Van Metre 477
Speaker: Yaotian Wang

1:00 PM - 2:30 PM

Advances in Statistical Inference and Experimental Design

Location: Van Metre 466
Chairs: Lan Gao ; Organizers: Yichen Zhang

Debiased Difference-in-Differences Estimation and Inference of Causal Effects Under Adaptive Controls

1:00 PM - 2:30 PM
Location: Van Metre 466
Speaker: Yining Wang

Efficient Switchback Experiments with Temporal Startification

1:00 PM - 2:30 PM
Location: Van Metre 466
Speaker: Weibin Mo

Knockoffs Inference under Privacy Constraints

1:00 PM - 2:30 PM
Location: Van Metre 466
Speaker: Lan Gao

1:00 PM - 2:30 PM

Advances in Sampling: Classical and Modern Approaches

Location: Van Metre 111
Chairs: Peng Zhao ; Organizers: Yun Yang

- An Optimal Transport-Based Generative Model for Bayesian Posterior Sampling**
1:00 PM - 2:30 PM
Location: Van Metre 111
Speaker: Yun Yang

On the fundamental limits to learning heavy-tailed distributions in deep generative models
1:00 PM - 2:30 PM
Location: Van Metre 111
Speaker: Ray Bai

Polynomial Mixing Times of Simulated Tempering for Mixture Targets by Conductance Decomposition
1:00 PM - 2:30 PM
Location: Van Metre 111
Speaker: Quan Zhou

Provable guarantees for sampling multimodal distributions
1:00 PM - 2:30 PM
Location: Van Metre 111
Speaker: Holden Lee

1:00 PM - 2:30 PM

Advances in Representation Learning and Statistical Methods for Complex Data

Location: FUSE 1327
Chairs: Grace Y. Yi

- Solving the Mysteries of Place Cells and Grid Cells by Representation Learning**
1:00 PM - 2:30 PM
Location: FUSE 1327
Speaker: Ying Nian Wu

Functional Imaging data classification with crowdsourced noisy labels
1:00 PM - 2:30 PM
Location: FUSE 1327
Speaker: Guanqun Cao

Reconstruction of Fragmented Functional Data Using Transformer
1:00 PM - 2:30 PM
Location: FUSE 1327
Speaker: Wenqing He

Optimal Detection for Language Watermarks with Pseudorandom Collision
1:00 PM - 2:30 PM
Location: FUSE 1327
Speaker: Weijie Su

1:00 PM - 2:30 PM

Student Paper Awards Session 2

Location: Van Metre 478
Chairs: Zhiling Gu

- Conformal Selective Prediction with General Risk Control**
1:00 PM - 2:30 PM
Location: Van Metre 478
Speaker: Tian Bai

Distributed Synthetic Surrogate Functional Regression (D-SSFR): A Scalable and Robust Framework for Estimating Spatially Varying Covariate Effects in AI-Augmented Neuroimaging
1:00 PM - 2:30 PM
Location: Van Metre 478
Speaker: Yang Long

Preserving Rare Features in Big Data Regression: Balanced Subsampling
1:00 PM - 2:30 PM
Location: Van Metre 478
Speaker: Qingkai Dong

2:30 PM - 3:00 PM

Break

3:00 PM - 4:30 PM

Statistical Innovation at the Intersection of Machine Learning and AI

Location: FUSE 2416
Chairs: Xinyi Li (Clemson)

Modern Strategies for Missing Data Imputation: From Adaptive kNN with Feature Selection to Deep Learning Models

3:00 PM - 4:30 PM
Location: FUSE 2416
Speaker: Panpan Zhang

Scalable divergence time estimation via Hamiltonian Monte Carlo sampling

3:00 PM - 4:30 PM
Location: FUSE 2416
Speaker: Xiang Ji

Uncertainty Assessment in Federated Learning

3:00 PM - 4:30 PM
Location: FUSE 2416
Speaker: Xiaoran Jiang

Robust Diffusion Training via Generalized Divergence Minimization

3:00 PM - 4:30 PM
Location: FUSE 2416
Speaker: Lei Li

3:00 PM - 4:30 PM

Statistical Models for Cognitive Aging, Disease Progression, and Omics Analysis

Location: Van Metre 477
Chairs: Pei Wang ; Organizers: Lu Yang

Finite Markov chains with absorbing states and mis-specified random effects: application to cognitive data

3:00 PM - 4:30 PM
Location: Van Metre 477
Speaker: Pei Wang

Absolute Risk in Alzheimer’s Disease: A Hidden Markov Framework for Biological Severity, Death, and Dropout Bias

3:00 PM - 4:30 PM
Location: Van Metre 477
Speaker: Mingzhao Hu

Sparse Compositional Integrative Factor Model for Multi-View Data with Compositions

3:00 PM - 4:30 PM
Location: Van Metre 477
Speaker: Sangyoon Yi

mPower: a Real Data-based Power Analysis Tool for Microbiome Study Design

3:00 PM - 4:30 PM
Location: Van Metre 477
Speaker: Lu Yang

3:00 PM - 4:30 PM

Advances in High-Dimensional Statistical Learning and AI for Complex and Imaging Data

Location: Van Metre 120
Chairs: Guanqun Cao

Comprehensive neural network methods for heteroscedastic partial linear quantile regression in ultra-high dimensions: deep and shallow architectures

3:00 PM - 4:30 PM
Location: Van Metre 120
Speaker: Shuoyang Wang

Functional Linear Regression: Linear Hypothesis Testing with Functional Response

3:00 PM - 4:30 PM
Location: Van Metre 120
Speaker: Dengdeng Yu

Statistical Learning for Joint Longitudinal Modeling of Tau and Brain Connectivity

3:00 PM - 4:30 PM
Location: Van Metre 120
Speaker: Zhiling Gu

3:00 PM - 4:30 PM

New advances in predictive learning, causal inference, and sequential decision making

Location: Van Metre 113

Chairs: Shanshan Ding

Prediction Machines Based on Concordance Correlation

3:00 PM - 4:30 PM

Location: Van Metre 113

Speaker: Edsel Pena

Statistical Inference for Semiparametric Bandits with Delayed Feedback

3:00 PM - 4:30 PM

Location: Van Metre 113

Speaker: Wenbin Lu

A Liberating Framework from Truncation and Censoring, with Application to Learning Treatment Effects

3:00 PM - 4:30 PM

Location: Van Metre 113

Speaker: Yuyao Wang

On Fairness-Assisted Sequential Variable Selection

3:00 PM - 4:30 PM

Location: Van Metre 113

Speaker: Wei Qian

3:00 PM - 4:30 PM

Recent Advancements in Oncology Dose Escalation and Optimization

Location: Van Metre 476

Chairs: Yun He

Dose optimization in multi-indication oncology basket trials: Leveraging Bayesian borrowing to identify OBD

3:00 PM - 4:30 PM

Location: Van Metre 476

Speaker: Yanning Wu

TITE-STEIN: Time-to-event Simple Toxicity and Efficacy Interval Design to Accelerate Phase I/II Trials

3:00 PM - 4:30 PM

Location: Van Metre 476

Speaker: Jieqi Tu

An enhanced exact permutation rank-based inferential seamless phase 2/3 design

3:00 PM - 4:30 PM

Location: Van Metre 476

Speaker: Tianchen Xu

DOD-SSR: An Adaptive Seamless Phase II/III Design With Dose Optimization Decision and Sample Size Re-estimation

3:00 PM - 4:30 PM

Location: Van Metre 476

Speaker: Yefei Zhang

3:00 PM - 4:30 PM

AI-Enabled Statistical Innovation for Trustworthy Clinical Evidence: From Trial Design to Safety Evaluation and Regulatory Readiness

Location: FUSE 1328

Chairs: Shu Yang

Optimizing Eligibility Criteria in Asthma & COPD: A Data-Driven Approach Using Target Trial Emulation and Machine Learning

3:00 PM - 4:30 PM

Location: FUSE 1328

Speaker: Margaret Gamalo

AI-Enabled Analysis of Tolerability Data on BTK Inhibitors in the Context of Project Optimus

3:00 PM - 4:30 PM

Location: FUSE 1328

Speaker: Wei Wang

Closing the Loop in Clinical Evidence Synthesis: From Automated Extraction to Eligibility-Aware Meta-Analysis

3:00 PM - 4:30 PM

Location: FUSE 1328

Speaker: Yanxun Xu

The Regulatory Landscape of AI: Guidance, Trends, and Considerations

3:00 PM - 4:30 PM

Location: FUSE 1328

Speaker: Hana Lee

3:00 PM - 4:30 PM

Statistical Advances in Data Augmentation and Transfer Learning

Location: Van Metre 468

Chairs: Xiwei Tang ; Organizers: Fei Xue

Mismatch-Aware Transfer Learning for Optimal Linear Prediction

3:00 PM - 4:30 PM

Location: Van Metre 468

Speaker: Lu Tang

Data Augmentation in Self-Supervised Learning: Principles and Theory

3:00 PM - 4:30 PM

Location: Van Metre 468

Speaker: Shulei Wang

High-Dimensional Variable Selection with Diffusion-Generated Synthetic Data

3:00 PM - 4:30 PM

Location: Van Metre 468

Speaker: Minjie Wang

dG-ComBat: A Privacy-Preserving Framework for Harmonizing Multi-Site Neuroimaging Data

3:00 PM - 4:30 PM

Location: Van Metre 468

Speaker: Qiong Wu

3:00 PM - 4:30 PM

Advances in Robust Causal Inference and Personalized Decisions Learning

Location: Van Metre 466

Chairs: Rui Miao ; Discussants: Gabriel Loewinger

Learning Optimal Dynamic Treatment Regimes Under Unmeasured Confounding

3:00 PM - 4:30 PM

Location: Van Metre 466

Speaker: Wei Jin

Personalized Pricing with Invalid Instrumental Variables

3:00 PM - 4:30 PM

Location: Van Metre 466

Speaker: Rui Miao

Distributionally Enhanced Marginal Sensitivity Model and Bounds

3:00 PM - 4:30 PM

Location: Van Metre 466

Speaker: Yi Zhang

Discussion

3:00 PM - 4:30 PM

Location: Van Metre 466

Speaker: Gabriel Loewinger

3:00 PM - 4:30 PM

Emerging development of Nonparametric Methods in Statistical learning and AI

Location: FUSE 2418

Chairs: Lan Xue

Partial Gini Covariance-based Robust Inference for High-dimensional Linear Models with Heavy-tailed Errors

3:00 PM - 4:30 PM

Location: FUSE 2418

Speaker: Lan Wang

Smooth Flow Matching for Synthesizing Functional Data

3:00 PM - 4:30 PM

Location: FUSE 2418

Speaker: Jianbin Tan

Cluster Analysis of Longitudinal Associations Between Microbial Abundance and Environmental Factors

3:00 PM - 4:30 PM

Location: FUSE 2418

Speaker: Lan Xue

Neural Network-Based Approaches for Modeling Subject-Specific Activity Distributions from Wearable Devices

3:00 PM - 4:30 PM

Location: FUSE 2418

Speaker: Caihong Qin

3:00 PM - 4:30 PM

Beyond the Fundamentals: Tackling New Complexities in Intercurrent Events and Missing Data

Location: Van Metre 111

Chairs: Rong Liu ; Discussants: Jianghao Li

Retrieved dropout imputation when there are small number of available retrieved dropout

3:00 PM - 4:30 PM

Location: Van Metre 111

Speaker: Shuting Liao

Estimating treatment effects with competing intercurrent events in randomized controlled trials

3:00 PM - 4:30 PM

Location: Van Metre 111

Speaker: Sizhu Lu

Handling intercurrent events and missing data in clinical trials

3:00 PM - 4:30 PM

Location: Van Metre 111

Speaker: Sapna Thakur

Imputation Method Selection for Retrieved Dropouts Imputation

3:00 PM - 4:30 PM

Location: Van Metre 111

Speaker: Jianghao Li

3:00 PM - 4:30 PM

Statistical Foundations for Evaluating and Understanding Large Language Models

Location: FUSE 1327

Chairs: Linjun Zhang

How to Use Synthetic Data for Improved Statistical Inference?

3:00 PM - 4:30 PM

Location: FUSE 1327

Speaker: Edgar Dobriban

AdaDetectGPT: Adaptive Detection of LLM-Generated Text with Statistical Guarantees

3:00 PM - 4:30 PM

Location: FUSE 1327

Speaker: Chengchun Shi

Understanding LLM reasoning: A synthetic study of transformers' learning dynamics for compositions

3:00 PM - 4:30 PM

Location: FUSE 1327

Speaker: Yiqiao Zhong

Frontier LLMs Still Struggle with Simple Reasoning Tasks

3:00 PM - 4:30 PM

Location: FUSE 1327

Speaker: Jiawei Ge

3:00 PM - 4:30 PM

Statistical Foundations and Bayesian Innovations for Trustworthy AI

Location: Van Metre 478

Chairs: Wei Jiang ; Organizers: Xinlei (Sherry) Wang

Bayesian Donor Set Selection in Synthetic Controls

3:00 PM - 4:30 PM

Location: Van Metre 478

Speaker: Johan Lim

A Bayesian latent class approach to assessing inter-rater agreement

3:00 PM - 4:30 PM

Location: Van Metre 478

Speaker: Song Zhang

A Multiple-Testing Framework for Assessing Replication Success in Genome-Wide Association Studies

3:00 PM - 4:30 PM

Location: Van Metre 478

Speaker: Yaofang Hu

When Is Interpolation Safe? Empirical-Bayes Risk Control for Over-Parameterized Learning

3:00 PM - 4:30 PM

Location: Van Metre 478

Speaker: Wei Jiang

3:00 PM - 4:30 PM

Bayesian, Time Series and Applications: A Session in Memory of Professor George C. Tiao
Location: FUSE 1311 Conference Center
Chairs: Rong Chen

George Tiao: A Leader and Builder of Statistics

3:00 PM - 4:30 PM
Location: FUSE 1311 Conference Center
Speaker: Xiao-Li Meng

Time Series of Everything

3:00 PM - 4:30 PM
Location: FUSE 1311 Conference Center
Speaker: Rong Chen

Open-Mic Portion in Memory of George Tiao

3:00 PM - 4:30 PM
Location: FUSE 1311 Conference Center
Speaker: Naitee Ting

4:30 PM - 4:40 PM

Break

4:40 PM - 5:10 PM

ICSA Member Meeting and Award Ceremony
Location: FUSE 1311 Conference Center

5:15 PM - 5:45 PM

Leadership Summit Reception
Location: FUSE 1311 Conference Center

5:45 PM - 7:00 PM

Leadership Summit
Location: FUSE 1311 Conference Center
Speakers: Xiao-Li Meng, Tian Zheng, Margaret Gamalo, Jeen Liu

7:00 PM - 9:00 PM

Poster & Mixer
Location: FUSE 1311 Conference Center / 1312

#1: Measuring Geographic Heterogeneities in Group Effect Using Semi-parametric Spatial Effect Models under Complex Survey Sampling Designs

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Yumiao Hui

#2: A Distributionally Robust Framework for Safe and Generalizable Utilization of Surrogates

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Tian Jiang

#3: Regularized Ensemble Forecasting for Learning Weights from Historical and Current Forecasts

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Han Su

#4: Markov Missing Graph: A Graphical Approach for Missing Data Imputation

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Yanjiao Yang

#5: From Single-Arm Evidence to Hybrid RCTs: A Seamless Two-Stage Adaptive Design with External Controls and Global Error Control (TSAH-EC)

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Yixin Kang

#6: Machine Learning-Assisted Causal Inference for Desirability of Outcome Ranking Endpoints

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Yuan Feng

#7: STGNN for Extreme Hail Prediction with Learned Generalized Pareto Parameters

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Tianlu Xue

#8: An R Package to Analyze Multiple Exposure Realizations in Association Studies

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Sander Roberti

#9: Feature Selection in Penalized Generalized Estimating Equations with False Discovery Rate Control

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Zeyu Yang

#10: Statistical Inference for Time-to-Event Outcomes using Survival Data Stacking

7:00 PM - 9:00 PM

Location: FUSE 1311 Conference Center / 1312
Speaker: Hui Wen

#11: An Emulator-Level Bayesian Model Averaging Framework for Structurally Distinct Simulation Models

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Siqi Li

#12: On Cluster Randomized Trials with the Desirability of Outcome Ranking (DOOR) Endpoints

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Wanying Shao

#13: Variance Estimation in Nonparametric Regression

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Haiyang Zhu

#14: Conformal Prediction Under Covariate Shift with Summary Statistics

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Shanshan Liu

#15: Synthetic Phenotype Assisted Linear Mixed Models Improve Proteome-Wide Genetic Discovery in Incomplete Biobank Data

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Haoyu Yang

#17: Targeted Maximum Likelihood Estimation for Causal Survival Analysis in the Presence of Immortal Time Bias

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Yan Zou

#18: Dependence-Aware Heterogeneous Low-Rank Learning for Matrix-Valued Systems

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Jialu Zhou

#19: To Adaptively Randomize or to Rerandomize: A Comparison of Covariate-Adaptive Randomization and Rerandomization

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Ziji Qin

#N1: Genotype Classification Using High-Resolution Melt Curves and Machine Learning Approaches

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Parastoo Bybordi

#N2: Maximum-Variance-Reduction Stratification for Improved Subsampling

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Dingyi Wang

#N3: A Web-Based Application for Machine Learning Predictions of Kidney Transplant Outcomes

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Abby Sun

#N4: ArtistR: an integrative epigenomic-transcriptomic framework for systematic detection of alternative transcript initiation

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Hyo Young Choi

#N5: Robust and Data-Adaptive Integration of Nonconcurrent Data in Platform Trials via Gaussian Processes

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Yuhan Qian

#N6: Online Expectation-Maximization for Multi-Fidelity Simulation Optimization under Fixed Budgets

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Wei Dai

#N7: Statistical approaches to classify investigational product using hERG safety assay

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Yu-Ting Weng

#N8: Agent-Atom-Gradient: A Next-Gen AI Architecture for Evidence-Driven Outcomes Research

7:00 PM - 9:00 PM
Location: FUSE 1311 Conference Center / 1312
Speaker: Margaret Gamalo

Tuesday, June 16, 2026

7:30 AM - 5:00 PM

Registration

8:00 AM - 9:45 AM

Breakfast

Location: Van Metre Hall 126 Multipurpose Room

8:00 AM - 5:00 PM

Expo

Location: FUSE 1006

8:30 AM - 10:00 AM

Optimization Methods and Adaptive Learning

Location: Van Metre 120

Chairs: Yaqi Duan ; Organizers: Yichen Zhang

Preference Optimization on Pareto Sets: On a Theory of Multi-Objective Optimization

8:30 AM - 10:00 AM

Location: Van Metre 120

Speaker: Abhishek Roy

Don't waste mistakes: Leveraging negative RL-groups via confidence reweighting

8:30 AM - 10:00 AM

Location: Van Metre 120

Speaker: Yaqi Duan

Online Covariance Matrix Estimation in Sketched Newton Methods

8:30 AM - 10:00 AM

Location: Van Metre 120

Speaker: Sen Na

SGD with Dependent Data: Optimal Estimation, Regret, and Inference

8:30 AM - 10:00 AM

Location: Van Metre 120

Speaker: Yinan Shen

8:30 AM - 10:00 AM

Recent Advances in Lifetime Data Analysis

Location: Van Metre 121

Chairs: Guannan Wang ; Organizers: Mei-LingTing Lee

Deep neural networks for partially linear mean models with panel count data

8:30 AM - 10:00 AM

Location: Van Metre 121

Speaker: Xin He

Variable Screening for Personalized Treatment with High-Dimensional Survival Outcomes

8:30 AM - 10:00 AM

Location: Van Metre 121

Speaker: Yu-Jen Cheng

Statistical methods for dealing with measurement error in cumulative exposures

8:30 AM - 10:00 AM

Location: Van Metre 121

Speaker: Molin Wang

Trastuzumab Reshapes the Survival Landscape of HER2-Positive Breast Cancer: Real-World Evidence from Taipei Veterans General Hospital

8:30 AM - 10:00 AM

Location: Van Metre 121

Speaker: Manhua Chen

8:30 AM - 10:00 AM

Interpretable Frequency- and Wavelet-Domain Methods for Explainable Biomedical Time Series Analysis

Location: Van Metre 466
Chairs: Zeda Li ; Organizers: Scott Bruce

Conditional Graphical Models for Replicated Multivariate Time Series

8:30 AM - 10:00 AM
Location: Van Metre 466
Speaker: Zeda Li

Quantum Wavelet Shrinkage: A Statistical View of Denoising Through Quantum Channels

8:30 AM - 10:00 AM
Location: Van Metre 466
Speaker: Brani Vidakovic

Interpretable Frequency Band Summary Measures and Analysis For Multiple Nonstationary Biomedical Time Series

8:30 AM - 10:00 AM
Location: Van Metre 466
Speaker: Scott Bruce

The Dual Frequency Spectral Density Function of Locally Periodic Stationary Processes With an Application to Testing for Correlation Between Different Frequency Bands of a Time Series

8:30 AM - 10:00 AM
Location: Van Metre 466
Speaker: Pramita Bagchi

8:30 AM - 10:00 AM

Statistical and AI Innovations for Heterogeneous Data

Location: Van Metre 476
Chairs: Xinping Cui

Multiple Matrix Data Integration via Embedding Alignment

8:30 AM - 10:00 AM
Location: Van Metre 476
Speaker: Runbing Zheng

Model Selection for Externally Augmented Statistical Learning

8:30 AM - 10:00 AM
Location: Van Metre 476
Speaker: Tianyu Zhang

Transfer Learning for Robust Structured Regression with Bi-level Source Detection

8:30 AM - 10:00 AM
Location: Van Metre 476
Speaker: Xiaoqian Liu

Estimating optimal interpretable individualized treatment regimes from a classification perspective using adaptive LASSO

8:30 AM - 10:00 AM
Location: Van Metre 476
Speaker: Yunshu Zhang

8:30 AM - 10:00 AM

Advanced Machine Learning and Statistical Inference

Location: Van Metre 118
Chairs: Wen Su

Digital Controls: An Efficient, Robust, and Privacy-Preserving Bayesian Tool for Adaptive Information Borrowing from External Data

8:30 AM - 10:00 AM
Location: Van Metre 118
Speaker: Ruitao Lin

The HM-TARGET personalised real-time haemodynamic targets in critical care

8:30 AM - 10:00 AM
Location: Van Metre 118
Speaker: Dayu Sun

Statistical Inference in an Interactive Learning Paradigm

8:30 AM - 10:00 AM
Location: Van Metre 118
Speaker: Kangjie Zhou

8:30 AM - 10:00 AM

AI in Drug Development: Industry Statistical Perspectives and Applications

Location: FUSE 1328
Chairs: Rong Liu

Leading Science and Clinical Research – Biostatistics in the Age of AI

8:30 AM - 10:00 AM
Location: FUSE 1328
Speaker: Haoda Fu

An LLM-Powered Virtual Agent for Genomics Analysis to Accelerate Drug Discovery

8:30 AM - 10:00 AM
Location: FUSE 1328
Speaker: Keela Dai

EnrolXpert Genie: A Multi-Agent System for Clinical Trial Enrollment Scenario Planning

8:30 AM - 10:00 AM
Location: FUSE 1328
Speaker: Yi Hong

RWE from RWD: A Case Study using “COPD” RWD in Informing Trial Design and Conduct

8:30 AM - 10:00 AM
Location: FUSE 1328
Speaker: Yaqi Wu

8:30 AM - 10:00 AM

Advancing Cancer Care Through Statistical Innovation: From Early Detection to Personalized Treatment

Location: FUSE 2416
Chairs: Qing Yin ; Discussants: Gene Pennello

Minimal Residual Disease (MRD) testing: Statistical challenges in Clinical Validation

8:30 AM - 10:00 AM
Location: FUSE 2416
Speaker: Rajesh Nair

Beyond Agreement: Statistical Methods for Integrating Assay Concordance, Uncertainty, and Decision Making in Drug–CDx Codevelopment

8:30 AM - 10:00 AM
Location: FUSE 2416
Speaker: Kai Qu

Statistical challenges in the development of CDx

8:30 AM - 10:00 AM
Location: FUSE 2416
Speaker: Shuguang Huang

Statistical Challenges with Evaluating Companion Diagnostics and Other Medical Tests for Efficacy and Effectiveness

8:30 AM - 10:00 AM
Location: FUSE 2416
Speaker: Gene Pennello

8:30 AM - 10:00 AM

Statistical Methods for Complex and High-Dimensional Data

Location: Van Metre 468
Chairs: Zhengyuan Zhu

Bregman projection for calibration estimation

8:30 AM - 10:00 AM
Location: Van Metre 468
Speaker: Jae-Kwang Kim

Contrast Space Projections for Interpretable Inference in Complex Network Meta-Analysis

8:30 AM - 10:00 AM
Location: Van Metre 468
Speaker: Chong Wang

Contrastive Eigenanalysis for Exploring Hidden Effects

8:30 AM - 10:00 AM
Location: Van Metre 468
Speaker: Peng Liu

Amortized Bayesian Inference for High Quantiles: QuantilePFN

8:30 AM - 10:00 AM
Location: Van Metre 468
Speaker: Chengguo Weng

8:30 AM - 10:00 AM

Recent Advances in Generative AI and Large Language Models

Location: FUSE 2418
Chairs: Minjie Wang

Understanding and Optimizing Initial Noise in Diffusion Models
8:30 AM - 10:00 AM
Location: FUSE 2418
Speaker: Guanyang Wang

Towards Efficient Inference under Nonmonotone Missingness with General Imputation
8:30 AM - 10:00 AM
Location: FUSE 2418
Speaker: Qi Xu

Taming Polysemanticity in LLMs: Provable Feature Recovery via Sparse Autoencoders
8:30 AM - 10:00 AM
Location: FUSE 2418
Speaker: Tianhao Wang

Sample Lottery: Unsupervised Discovery of Critical Instances for LLM Reasoning
8:30 AM - 10:00 AM
Location: FUSE 2418
Speaker: Xiao Luo

8:30 AM - 10:00 AM

From Design to Decision: Novel Statistical Strategies in Oncology and Survival Analysis

Location: Van Metre 477
Chairs: Naitee Ting ; Organizers: Xiaolin Chang

Statistical Considerations for Seamless Two-Stage Designs in Oncology Clinical Trials with a Dose Selection Stage and Time-to-Event Endpoints
8:30 AM - 10:00 AM
Location: Van Metre 477
Speaker: Qingyu Chen

Design and Analysis of Clinical Trials with Survival Outcome by Incorporating Pre-Randomization Longitudinal Biomarkers
8:30 AM - 10:00 AM
Location: Van Metre 477
Speaker: Haolin Li

Considerations for Safety Monitoring in Oncology trials Using Overall Survival Data
8:30 AM - 10:00 AM
Location: Van Metre 477
Speaker: Zhantao Lin

Adjusting for Treatment Crossover in Survival Models with Cure Fraction
8:30 AM - 10:00 AM
Location: Van Metre 477
Speaker: Hongfei Li

8:30 AM - 10:00 AM

Advances in Trustworthy and Generative AI for Complex Data Domains

Location: Van Metre 481
Chairs: Xiwei Tang ; Organizers: Xuan Bi

Preference Learning with Sequence-Induced Dependence in Pairwise Comparison
8:30 AM - 10:00 AM
Location: Van Metre 481
Speaker: Xiwei Tang

Graph Release with Assured Node Differential Privacy
8:30 AM - 10:00 AM
Location: Van Metre 481
Speaker: Tianxi Li

Generative latent representation learning for integrative analysis of multi-scale data
8:30 AM - 10:00 AM
Location: Van Metre 481
Speaker: Cai Li

8:30 AM - 10:00 AM

Robust and Generalizable Statistical Learning under Distributional or Dependence Structures

Location: Van Metre 479
Chairs: Yihong Gu ; Organizers: Wenxin Zhou

Is double machine learning optimal for black-box models?
8:30 AM - 10:00 AM
Location: Van Metre 479
Speaker: Yihong Gu

Finite-Sample Distribution Theory and Efficient Large-Scale Inference for Online Quantile Regression
8:30 AM - 10:00 AM
Location: Van Metre 479
Speaker: Jiaqi Li

Expected Shortfall Regression with Deep Neural Networks under Dependence
8:30 AM - 10:00 AM
Location: Van Metre 479
Speaker: Peiyao Cai

8:30 AM - 10:00 AM

Student Paper Awards Session 3

Location: Van Metre 478
Chairs: Shan Yu

Policy-Aware Design of Large-Scale Factorial Experiments

8:30 AM - 10:00 AM
Location: Van Metre 478
Speaker: Xin Wen

Integrating Prioritized and Non-Prioritized Structures in Win Statistics

8:30 AM - 10:00 AM
Location: Van Metre 478
Speaker: Yunhan Mou

MV-PEAL: A Federated Learning Framework for Multivariate Longitudinal EHR Data

8:30 AM - 10:00 AM
Location: Van Metre 478
Speaker: Yicheng Shen

10:00 AM - 10:30 AM

Break

10:30 AM - 11:30 AM

Keynote 1: AI Agents to Accelerate Scientific Discoveries

Location: FUSE 1311 Conference Center / 1312
Speaker: James Zou ; Chairs: Wanli Qiao

11:30 AM - 1:00 PM

Lunch Break

1:00 PM - 2:30 PM

Recent Development in Functional and Longitudinal Data Analysis

Location: Van Metre 120
Chairs: Salil Koner ; Organizers: Yehua Li

MoFI-FLR: Model Form Identification in High-Dimensional Functional Linear Regressions

1:00 PM - 2:30 PM
Location: Van Metre 120
Speaker: Xingche Guo

A Flexible Semiparametric Regression for Multivariate Longitudinal Data Under Temporal Asynchrony

1:00 PM - 2:30 PM
Location: Van Metre 120
Speaker: Salil Koner

Variational Nonparametric Inference in Stochastic Block Models with Functional Covariates

1:00 PM - 2:30 PM
Location: Van Metre 120
Speaker: Peijun Sang

Ultra-High-Dimensional Quantile Regression for Longitudinal Data

1:00 PM - 2:30 PM
Location: Van Metre 120
Speaker: Yan Yu

1:00 PM - 2:30 PM

Modern Machine Learning Methods for Complex and High-Dimensional Models

Location: Van Metre 118
Chairs: Yun Yang

Automated Hypothesis Validation with Agentic Sequential Falsifications

1:00 PM - 2:30 PM
Location: Van Metre 118
Speaker: Ying Jin

Matrix Non-Normal Graphical Model

1:00 PM - 2:30 PM
Location: Van Metre 118
Speaker: Munwon Yang

Structured Nonparametric Variational Inference for Dependent Latent Modeling

1:00 PM - 2:30 PM
Location: Van Metre 118
Speaker: Shan Yu

Risk-Certified Algorithmic Anti-Shrinkage: Finite-Time Signed Gradient Flow as Spectral Shaping

1:00 PM - 2:30 PM
Location: Van Metre 118
Speaker: Peng Zhao

1:00 PM - 2:30 PM

Statistical Methods and Applications in Precision Oncology

Location: FUSE 2418
Chairs: Ying Lu ; Discussants: Dehua Bi

Covariate-informed multiple testing via the conditional local false discovery rate, with an application to a melanoma study
1:00 PM - 2:30 PM
Location: FUSE 2418
Speaker: Yushu Shi

Assessing Survival Benefits of Immunotherapy Using Restricted Mean Survival Time and Average Hazard
1:00 PM - 2:30 PM
Location: FUSE 2418
Speaker: Miki Horiguchi

Learning from Literature: Integrating LLMs and Bayesian Hierarchical Modeling for Oncology Trial Design
1:00 PM - 2:30 PM
Location: FUSE 2418
Speaker: Wei Wei

TWICEBEE: A Two-stage Intra-patient Curve-free Bayesian Decision-Theoretic Dose Escalation Design
1:00 PM - 2:30 PM
Location: FUSE 2418
Speaker: Dehua Bi

1:00 PM - 2:30 PM

Advances of method development in life data science: survival, multivariate outcomes, and data integration

Location: Van Metre 481
Chairs: Yilin Zhang ; Organizers: Chixiang Chen

Data-augmented multistate modeling for chronic disease processes using cross-sectional studies: Application to HPV and cervical precancer
1:00 PM - 2:30 PM
Location: Van Metre 481
Speaker: Li Cheung

Longitudinal varying coefficient single-index model with censored covariates
1:00 PM - 2:30 PM
Location: Van Metre 481
Speaker: Shikun Wang

Deep Survival Learning for Kidney Transplantation: Knowledge Distillation and Data Integration
1:00 PM - 2:30 PM
Location: Van Metre 481
Speaker: Kevin He

A framework for error-prone survival outcome in the presence of complex truncation and censoring
1:00 PM - 2:30 PM
Location: Van Metre 481
Speaker: Yidan Shi

1:00 PM - 2:30 PM

Statistical Learning and Dimension Reduction for High-Dimensional Data

Location: Van Metre 479
Chairs: Daoji Li

High-Dimensional Multi-Study Multi-Modality Covariate-Augmented Generalized Factor Model
1:00 PM - 2:30 PM
Location: Van Metre 479
Speaker: Qingzhi Zhong

Simultaneous Inference with Fused Lasso
1:00 PM - 2:30 PM
Location: Van Metre 479
Speaker: Mengyu Xu

Nonparametric Screening for Additive Quantile Regression in Ultra-High Dimension
1:00 PM - 2:30 PM
Location: Van Metre 479
Speaker: Daoji Li

Fréchet Sufficient Dimension Reduction for Metric Space-Valued Data via Distance Covariance
1:00 PM - 2:30 PM
Location: Van Metre 479
Speaker: Feng Yu

1:00 PM - 2:30 PM

Recent Advances in Precision Medicine with Statistical and Machine Learning Insights

Location: FUSE 1328
Chairs: Zuoheng Wang ; Organizers: Xin Zhou

- Model-assisted reinforcement learning**
1:00 PM - 2:30 PM
Location: FUSE 1328
Speaker: Eric Laber

Leveraging external drug knowledge improves comparative analysis of antidepressants in UK Biobank
1:00 PM - 2:30 PM
Location: FUSE 1328
Speaker: Zuoheng Wang

Utility-Based Outcome-Adaptive Sequential Multiple Assignment Randomized Trial Design for Bivariate Outcomes
1:00 PM - 2:30 PM
Location: FUSE 1328
Speaker: Xinyue Mao

1:00 PM - 2:30 PM

Modern Methods in Time-to-Event Analysis for Complex Clinical Trials

Location: Van Metre 466
Chairs: Shanghong Xie ; Organizers: Jiajia Zhang

- Sample size determination for win statistics in cluster-randomized trials**
1:00 PM - 2:30 PM
Location: Van Metre 466
Speaker: Xi Fang

Transfer Learning in Survival Analysis: When and How We Gain Efficiency
1:00 PM - 2:30 PM
Location: Van Metre 466
Speaker: Manting Jin

Modelling Longitudinal data and Survival outcomes using Functional Principal Component Analysis
1:00 PM - 2:30 PM
Location: Van Metre 466
Speaker: Siyuan Guo

1:00 PM - 2:30 PM

Modern Statistical Process Monitoring with AI/Big Data (II)

Location: Van Metre 468
Chairs: Yajun Mei

- Flow Mismatching - Unsupervised Anomaly Detection via Velocity Discrepancies in Flow Matching Models**
1:00 PM - 2:30 PM
Location: Van Metre 468
Speaker: Hao Yan

Adaptive process monitoring with the communication-efficient distributed design
1:00 PM - 2:30 PM
Location: Van Metre 468
Speaker: Miaomiao Yu

Interval Localization with Error Rate Control in Multiple Change-Point Analysis
1:00 PM - 2:30 PM
Location: Van Metre 468
Speaker: Haojie Ren

A METHOD FOR CONSTRUCTING OPTIMAL CONTROL CHARTS
1:00 PM - 2:30 PM
Location: Van Metre 468
Speaker: Dong Han

1:00 PM - 2:30 PM

Trustworthy AI for Health: Safe Deployment in Clinical and Biomedical Systems

Location: Van Metre 476
Chairs: Yutao Liu ; Organizers: Jin Liu

Learning to Fuse Aspect-Level LLM Annotations for Low-Quality Ordinal Sentiment Supervision

1:00 PM - 2:30 PM
Location: Van Metre 476
Speaker: Jin Liu

Trade-offs between machine learning and deep learning for mental illness detection on social media

1:00 PM - 2:30 PM
Location: Van Metre 476
Speaker: Zhanyi Ding

LLM Annotations as Supervision for Digital Health NLP: Burden Profiling and Soft-Label Emotion Classification in Cancer Peer-Support Text

1:00 PM - 2:30 PM
Location: Van Metre 476
Speaker: Yeyubei Zhang

Digital Phenotyping of Psychological Distress in Cancer Support Forums: A Statistically Rigorous Benchmark for Ordinal Sentiment Models

1:00 PM - 2:30 PM
Location: Van Metre 476
Speaker: Yuchen Cao

1:00 PM - 2:30 PM

Recent Advances in High Dimensional Data for Complex Biomedical Studies

Location: Van Metre 477
Chairs: Ting Fung Ma ; Organizers: Jiajia Zhang

DISAA: Differential Identification of Sequence Abundance With Absence for Omics Analysis

1:00 PM - 2:30 PM
Location: Van Metre 477
Speaker: Liangliang Zhang

Supervised Testing of Homogeneity for Random Objects: Mean–Variance, Errors, and Angle-Based Geometric Methods

1:00 PM - 2:30 PM
Location: Van Metre 477
Speaker: Satarupa Bhattacharjee

DrFARM: A framework for high-dimensional inference of master predictors, with applications to genome-wide association studies

1:00 PM - 2:30 PM
Location: Van Metre 477
Speaker: Lap Sum Chan

Latent-Factor Modeling of Robust Pathway Networks for Systems Biology

1:00 PM - 2:30 PM
Location: Van Metre 477
Speaker: Yue Wang

1:00 PM - 2:30 PM

Advanced Statistical and Machine Learning Methods for Complex Data: Encoding, Interpretation, and Trustworthy Decision-Making

Location: Van Metre 478
Chairs: Yaofang Hu ; Organizers: Xinlei (Sherry) Wang

Temporal Encoding for Longitudinal Data in Transformer Models

1:00 PM - 2:30 PM
Location: Van Metre 478
Speaker: Rui Feng

Interpretable Word-level Context-based Sentiment Analysis

1:00 PM - 2:30 PM
Location: Van Metre 478
Speaker: Jing Cao

Constructing Gene Regulatory Networks Using Integrated Single Cell Multi Omics Data

1:00 PM - 2:30 PM
Location: Van Metre 478
Speaker: Min Chen

Shapley-based Fault Variable Identification in MSPC

1:00 PM - 2:30 PM
Location: Van Metre 478
Speaker: Sungim Lee

1:00 PM - 2:30 PM

From High-Dimensional Confounding to Digital Twins: Advances in Machine-Learning-Driven Causal Inference

Location: FUSE 2416
Chairs: Lin Ge ; Organizers: Jinyuan Liu

Double machine learning to estimate the effects of multiple treatments and their interactions

1:00 PM - 2:30 PM
Location: FUSE 2416
Speaker: Qingyan Xiang

A Capture-Recapture Approach to Facilitate Causal Inference for a Trial-eligible Observational Cohort

1:00 PM - 2:30 PM
Location: FUSE 2416
Speaker: Lin Ge

Causal Inference Meets Non-Sparse High-dimensional Confounders: A Remedy Using Feature Aggregation and Data Integration

1:00 PM - 2:30 PM
Location: FUSE 2416
Speaker: Jinyuan Liu

Use AI-generated Digital Twin(DT) to Boost Trial Efficiency for Alzheimer’s Disease

1:00 PM - 2:30 PM
Location: FUSE 2416
Speaker: Deli Wang

1:00 PM - 2:30 PM

Innovative Endpoint Strategies in Modern Clinical Trials: Multi-Component, Composite, and Hierarchical Designs

Location: Van Metre 121
Chairs: Bang Wang

Correlation Matters! Streamlining the Sample Size Procedure with Composite Time-to-event Endpoints

1:00 PM - 2:30 PM
Location: Van Metre 121
Speaker: Yuan Huang

Bayesian Data Borrowing for Hierarchical Composite Outcomes under Win Ratio Framework

1:00 PM - 2:30 PM
Location: Van Metre 121
Speaker: Peng Shi

ALSFRS-R Item-Level Data Simulation for Novel Endpoints Development in ALS Trials

1:00 PM - 2:30 PM
Location: Van Metre 121
Speaker: Yihan Tang

win ratio under mixed censored data based death and progration time

1:00 PM - 2:30 PM
Location: Van Metre 121
Speaker: Yuan Wu

2:30 PM - 3:00 PM

Break

3:00 PM - 4:00 PM

Keynote 2: To Diffuse or Not? One-step Generative Modeling via Wasserstein Flows

Location: FUSE 1311 Conference Center / 1312
Speaker: Emmanuel Candès ; Chairs: Lily Wang

4:00 PM - 4:30 PM

Break

4:30 PM - 6:00 PM

The Jiann-Ping Hsu Invited Session on Biostatistical and Regulatory Sciences

Location: Van Metre 476

Chairs: Varadan Sevilimedu ; Organizers: LiLi Yu

Comparison of an improved Misclassification Simulation-Extrapolation (MC-SIMEX) algorithm to Regression Calibration.

4:30 PM - 6:00 PM

Location: Van Metre 476

Speaker: Varadan Sevilimedu

Some Regulatory Experiences in Adaptive Designs for CNS trials

4:30 PM - 6:00 PM

Location: Van Metre 476

Speaker: Xiang Ling

Statistical and Regulatory Considerations on Non-Inferiority Trials: From Design to Interpretation

4:30 PM - 6:00 PM

Location: Van Metre 476

Speaker: Chunfeng Ren

Robust and Data-Adaptive Integration of Nonconcurrent Data in Platform Trials via Gaussian Processes

4:30 PM - 6:00 PM

Location: FUSE 2310

Speaker: Yuhua Qian

4:30 PM - 6:00 PM

Copulas, Boosting, and Neural Networks: Modern Tools for Biomedical and Spatial Applications

Location: Van Metre 477

Chairs: Antai Wang ; Organizers: Li-Shan Huang

The identifiability of copula models for dependent competing risks data with exponentially distributed margins

4:30 PM - 6:00 PM

Location: Van Metre 477

Speaker: Antai Wang

An Interpretable Machine Learning Model for Biological Age Estimation Using Categorical and Continuous Features

4:30 PM - 6:00 PM

Location: Van Metre 477

Speaker: Zhanglin Cui

DeepKriging on the Sphere: Basis Adaptation for Spherical Data

4:30 PM - 6:00 PM

Location: Van Metre 477

Speaker: Hao-Yun Huang

Integrated Statistical Modeling and Neural Networks for Robust Single-Cell Analysis in Biomedical Research

4:30 PM - 6:00 PM

Location: Van Metre 477

Speaker: Zheng Qu

4:30 PM - 6:00 PM

Recent Advances in Causal Inference for Complex Settings

Location: Van Metre 118

Chairs: Ruofei Yu ; Organizers: Xinran Li

Causal mediation analysis for zero-inflated longitudinal data in the presence of sequential treatment non-compliance and multiple mediators

4:30 PM - 6:00 PM

Location: Van Metre 118

Speaker: Bikram Karmakar

Randomization Inference with Sample Attrition

4:30 PM - 6:00 PM

Location: Van Metre 118

Speaker: Zeyang Yu

Distributional Discontinuity Design

4:30 PM - 6:00 PM

Location: Van Metre 118

Speaker: Kyle Schindl

A sensitivity analysis for the average derivative effect

4:30 PM - 6:00 PM

Location: Van Metre 118

Speaker: Jeffrey Zhang (UChicago)

4:30 PM - 6:00 PM

Recent Advances in Clinical Trials II

Location: FUSE 2416
Chairs: Xiaoming Xu

Strategies for Successful Dose Optimization in Oncology Drug Development

4:30 PM - 6:00 PM
Location: FUSE 2416
Speaker: Lili Zhu

Recent advances in Desirability of Outcome Ranking (DOOR) Analyses

4:30 PM - 6:00 PM
Location: FUSE 2416
Speaker: Shiyu Shu

Patient-Level Longitudinal Disease Modeling from Baseline Information: A Digital Twin Approach in a Case Study

4:30 PM - 6:00 PM
Location: FUSE 2416
Speakers: Sheng Zhong, Subhrajit Samanta

Feature Interaction Detection Based on Random Forest and Its Applications in Biomarker Selection

4:30 PM - 6:00 PM
Location: FUSE 2416
Speaker: Zhilin Jin

4:30 PM - 6:00 PM

Veridical Data Science: A Pathway to Statistical Thinking in the Age of AI

Location: FUSE 1328
Chairs: Ruobin Gong ; Organizers: Hongzhe Li

Veridical Data Science in Statistics Education: A Report from Rutgers

4:30 PM - 6:00 PM
Location: FUSE 1328
Speaker: Matteo Bonvini

Veridical Data Science in the Age of AI

4:30 PM - 6:00 PM
Location: FUSE 1328
Speaker: Joshua Grossman

A stability-driven framework for consensus dimension reduction

4:30 PM - 6:00 PM
Location: FUSE 1328
Speaker: Tiffany Tang

Discussion

4:30 PM - 6:00 PM
Location: FUSE 1328
Speaker: Ruobin Gong

4:30 PM - 6:00 PM

Scalable and Adaptive Statistical Learning in the Era of AI

Location: Van Metre 479
Chairs: Guannan Wang

Surrogate Likelihood Estimation for Smoothing Spline Models

4:30 PM - 6:00 PM
Location: Van Metre 479
Speaker: Pang Du

Deep Survival Analysis for Competing Risk Modeling with Functional Covariates and Missing Data Imputation

4:30 PM - 6:00 PM
Location: Van Metre 479
Speaker: Xiaofeng Wang (Cleveland Clinic)

Self-organized criticality (SOC) in dynamical systems

4:30 PM - 6:00 PM
Location: Van Metre 479
Speaker: Dipak Dey

4:30 PM - 6:00 PM

Recent Advances in Federated Causal Inference in the Presence of Heterogeneity in Multi-Site Clinical Data

Location: Van Metre 120

Chairs: Chengxi Zang ; Organizers: Peiran Liu

Heterogeneity-Aware Federated Causal Inference Leveraging Effect-Measure Transportability

4:30 PM - 6:00 PM

Location: Van Metre 120

Speaker: Siqu Cao

Targeted Data Fusion for Region-Specific Survival Effects in the AMP HIV Prevention Trials

4:30 PM - 6:00 PM

Location: Van Metre 120

Speaker: Larry Han

A New Targeted-Federated Learning Framework for Estimating Heterogeneity of Treatment Effects: A Robust Framework with Applications in Aging Cohorts

4:30 PM - 6:00 PM

Location: Van Metre 120

Speaker: Rong (Jeffery) Zhao

Collaborative Indirect Treatment Comparisons with Multiple Distributed Single-arm Trials

4:30 PM - 6:00 PM

Location: Van Metre 120

Speaker: Yuru Zhu

4:30 PM - 6:00 PM

Recent Development in Biostatistics and Health Sciences

Location: Van Metre 468

Chairs: Hongbin Fang

Cell Type Specific Differential Expression of Spatial Transcriptomics by Mixed Effect Multiplicative-Additive Poisson-gamma Models

4:30 PM - 6:00 PM

Location: Van Metre 468

Speaker: Garret Guthrie

A permutation-based approximate Rao-Blackwellized estimator in Multi-Arm Multi-Stage designs for distributions in the one-parameter exponential family

4:30 PM - 6:00 PM

Location: Van Metre 468

Speaker: Chongyang Duan

Doubly robust semiparametric U-statistic and its applications

4:30 PM - 6:00 PM

Location: Van Metre 468

Speaker: Ao Yuan

Longitudinal data analysis using semiparametric model with sequential dependence structure

4:30 PM - 6:00 PM

Location: Van Metre 468

Speaker: Ran Tu

4:30 PM - 6:00 PM

Advances in Statistical Machine Learning for Biomedical and Health Applications

Location: Van Metre 466

Chairs: Linxi Liu ; Organizers: Cindy Zhang

Double machine learning for heterogeneous spillover effect

4:30 PM - 6:00 PM

Location: Van Metre 466

Speaker: Yubai Yuan

A Robust Framework for Two-Sample Mendelian Randomization under Population Heterogeneity

4:30 PM - 6:00 PM

Location: Van Metre 466

Speaker: Dingke Tang

Random-Walk Debiased Inference for Contextual Ranking Model with Application in Large Language Model Evaluation

4:30 PM - 6:00 PM

Location: Van Metre 466

Speaker: Yichi Zhang

4:30 PM - 6:00 PM

Statistical Advances in Integrative Genomics and Spatial Transcriptomics

Location: FUSE 2418
Chairs: Didong Li ; Organizers: Hao Feng

Multi-sample integration enables robust spatially variable gene detection in spatial transcriptomics
4:30 PM - 6:00 PM
Location: FUSE 2418
Speaker: Yuesong Wu

AI/ML-driven decoding of single-cell 3D genome architecture and its impact on Alzheimer's disease risk
4:30 PM - 6:00 PM
Location: FUSE 2418
Speaker: Ming Hu

SPIinfer: from foundation-model cell segmentation to population-scale spatial-proteomic inference
4:30 PM - 6:00 PM
Location: FUSE 2418
Speaker: Jiebiao Wang

Prototype-driven fusion of pathology and spatial transcriptomics for interpretable survival prediction
4:30 PM - 6:00 PM
Location: FUSE 2418
Speaker: Lulu Shang

4:30 PM - 6:00 PM

Methodological Frontiers in Causal Estimation, Network Modeling, and Predictive Analytics

Location: Van Metre 478
Chairs: Yinqiu He ; Organizers: Jiwei Zhao

Bridging Theory and Practice: Statistical Inference of Latent Space Models for Networks
4:30 PM - 6:00 PM
Location: Van Metre 478
Speaker: Yinqiu He

Practical Guidance for Cross-Validation of Prediction Models Under Small-Sample Constraints: Bias, Variance, and Calibration Implications
4:30 PM - 6:00 PM
Location: Van Metre 478
Speaker: Nathaniel O'Connell

Efficient Estimation of the Complier General Causal Effect in Randomized Controlled Trials with One-Sided Noncompliance
4:30 PM - 6:00 PM
Location: Van Metre 478
Speaker: Yin Tang

Benchmarking statistical and machine learning methods for predicting time to mobility limitation in older adults.
4:30 PM - 6:00 PM
Location: Van Metre 478
Speaker: Jaime Speiser

4:30 PM - 6:00 PM

Statistics in Biosciences Best Paper Award

Location: Van Metre 121
Chairs: Margaret Gamalo

Variable Selection in Multivariate Functional Linear Regression
4:30 PM - 6:00 PM
Location: Van Metre 121
Speaker: Peijun Sang

Sieve estimation of the additive hazards model with bivariate current status data
4:30 PM - 6:00 PM
Location: Van Metre 121
Speaker: Xuewen Lu

Set-Based Tests for Genetic Association Studies with Interval-Censored Competing Risks Outcomes
4:30 PM - 6:00 PM
Location: Van Metre 121
Speaker: Ryan Sun

Covariate-Balancing-Aware Interpretable Deep Learning Models for Treatment Effect Estimation
4:30 PM - 6:00 PM
Location: Van Metre 121
Speaker: Kan Chen

6:15 PM - 6:45 PM

Shuttle to Banquet

7:00 PM - 9:30 PM

Banquet

Location: Hong Kong Pearl Seafood Restaurant
Speaker: Xiao-Li Meng ; Chairs: Wanli Qiao, Lily Wang, Jingjing Ye

Wednesday, June 17, 2026

7:30 AM - 11:00 AM

Registration

8:00 AM - 9:45 AM

Breakfast

Location: Van Metre Hall 126 Multipurpose Room

8:30 AM - 10:00 AM

Innovative Statistical Methods with Applications in Precision Medicine

Location: FUSE 2418

Chairs: Ling Shen

Time-Dependent Biomarkers and Graft Outcomes After Transplantation: A Multi-State Modeling Approach Applied to dd-cfDNA and Chimerism

8:30 AM - 10:00 AM

Location: FUSE 2418

Speaker: Jing Shi

Predictive Power for Long-term eGFR Effect from Interim UPCR Effect in IgAN Trials

8:30 AM - 10:00 AM

Location: FUSE 2418

Speaker: Lixi Yu

ROC regression – a step toward personalized rejection diagnosis

8:30 AM - 10:00 AM

Location: FUSE 2418

Speaker: Chun-Po Fan

Leading Science and Clinical Research – Biostatistics in the Age of AI

8:30 AM - 10:00 AM

Location: FUSE 2418

Speaker: Haoda Fu

8:30 AM - 10:00 AM

Advanced statistical and machine learning methods for analyzing real world data

Location: Van Metre 120

Chairs: Ruoyu Wang ; Organizers: Xuan Wang

Divide-and-shrink: An efficient and heterogeneity-agnostic approach for transfer estimation using summary statistics

8:30 AM - 10:00 AM

Location: Van Metre 120

Speaker: Ruoyu Wang

Transfer Topic Modeling for Identifying Depression Subtypes in Youth

8:30 AM - 10:00 AM

Location: Van Metre 120

Speaker: Yu-Jyun Huang

Inference and variable selection for two-phase studies with high-dimensional covariates

8:30 AM - 10:00 AM

Location: Van Metre 120

Speaker: Qingning Zhou

Modern Statistical Strategies for Transfer Learning, Federated Learning, and High-Dimensional Inference

8:30 AM - 10:00 AM

Location: Van Metre 120

Speaker: Xuan Wang

8:30 AM - 10:00 AM

Recent Advances in Indirect Treatment Comparison and Network Meta-Analysis

Location: Van Metre 111

Chairs: Zilin Wang ; Organizers: Jincheng (Jeni) Zhou

Enhanced Simulated Treatment Comparison for Binary Endpoints Through Direct Marginalization

8:30 AM - 10:00 AM

Location: Van Metre 111

Speaker: Zilin Wang

A novel visualization approach for network meta-analysis: The plate plot and the nmaplateplot R package

8:30 AM - 10:00 AM

Location: Van Metre 111

Speaker: Lifeng Lin

Enhancing Simulated Treatment Comparison under Mixed Model for Repeated Measures with Dropout

8:30 AM - 10:00 AM

Location: Van Metre 111

Speaker: Min Hee Seo

Simulation-Based Methods for Power Calculation in Bayesian Network Meta-Analysis

8:30 AM - 10:00 AM

Location: Van Metre 111

Speaker: Yicheng Shen

8:30 AM - 10:00 AM

Statistical and Computational Advances in Spatial and Multi-Omics Data Analysis

Location: FUSE 2417
Chairs: Daxuan Deng ; Organizers: Ni Zhao

Spatial Transcriptomics from a Large-Scale Perspective

8:30 AM - 10:00 AM
Location: FUSE 2417
Speaker: Didong Li

Topological Data Analysis of Multiplexed Spatial Proteomics Imaging Using TOASTER

8:30 AM - 10:00 AM
Location: FUSE 2417
Speaker: Sarah Samorodnitsky

Integrating morphology and gene expression of neural cells in unpaired single-cell data using GeoAdvAE

8:30 AM - 10:00 AM
Location: FUSE 2417
Speaker: Kevin Lin

PennPRS: a centralized cloud computing platform for efficient polygenic risk score training

8:30 AM - 10:00 AM
Location: FUSE 2417
Speaker: Jin Jin

8:30 AM - 10:00 AM

AI/ML-related inference, with applications in biomedical research

Location: Van Metre 113
Chairs: Tong Wen ; Organizers: Chixiang Chen

A promising pathway to improve patient selection procedure in clinical trials via principal stratification and conformal selection

8:30 AM - 10:00 AM
Location: Van Metre 113
Speaker: Yilin Zhang

Flow-Based Conformal Predictive Distributions

8:30 AM - 10:00 AM
Location: Van Metre 113
Speaker: Trevor Harris

Fisher Randomization Test with Conformal Selective Borrowing in Hybrid Controlled Trials

8:30 AM - 10:00 AM
Location: Van Metre 113
Speaker: Ke Zhu

8:30 AM - 10:00 AM

New Developments in Functional, Distributional, and Survival Data Analysis in the Modern Era

Location: FUSE 1327
Chairs: Shanshan Ding ; Organizers: Hongzhe Li

Spatially Varying Deep Functional Neural Network: Application in Large-Scale Crop Yield Prediction

8:30 AM - 10:00 AM
Location: FUSE 1327
Speaker: Yehua Li

Semiparametric Joint Modeling for Survival Analysis with Longitudinal Covariates

8:30 AM - 10:00 AM
Location: FUSE 1327
Speaker: Wensheng Guo

Dimension reduction and nonparametric learning in high dimensional survival analysis

8:30 AM - 10:00 AM
Location: FUSE 1327
Speaker: Shanshan Ding

Modeling Amplitude and Phase Variation of Multivariate Random Processes in Metric Spaces

8:30 AM - 10:00 AM
Location: FUSE 1327
Speaker: Yaqing Chen

8:30 AM - 10:00 AM

AI and Machine Learning for Single-Cell, Spatial, and Multi-Omics Data

Location: FUSE 1328

Chairs: Hongkai Ji

Image-based alignment of spatial omics data with AXIS

8:30 AM - 10:00 AM

Location: FUSE 1328

Speaker: Zhicheng Ji

A Multi-modal Diffusion Model with Dual-Cross-Attention for Multi-Omics Data Generation and Translation

8:30 AM - 10:00 AM

Location: FUSE 1328

Speaker: Qiao Liu

Interpretable and scalable spatial gene set activity analysis with GESSO uncovers functional tissue architecture

8:30 AM - 10:00 AM

Location: FUSE 1328

Speaker: Chichun Tan

Language-powered genomic data analysis with applications to in silico perturbations

8:30 AM - 10:00 AM

Location: FUSE 1328

Speaker: Yiqun Chen

8:30 AM - 10:00 AM

Responsible Statistics and AI Methods for Health Applications

Location: Van Metre 118

Chairs: Xinping Cui

Federated On-Policy Reinforcement Learning

8:30 AM - 10:00 AM

Location: Van Metre 118

Speaker: Zhong Zheng

Joint Modeling of Multivariate Biomarker Dynamics and Temporal Ordering: An Application to Alzheimer's Disease

8:30 AM - 10:00 AM

Location: Van Metre 118

Speaker: Cindy Zhang

Rethinking Conformal Prediction for Binary Classification

8:30 AM - 10:00 AM

Location: Van Metre 118

Speaker: Anqi Zhao

Retrieval-Augmented Large Language Models for Faithful Biomedical Citation Recommendation

8:30 AM - 10:00 AM

Location: Van Metre 118

Speaker: Jeffrey Zhang (UCR)

8:30 AM - 10:00 AM

New development in latent variable models in AI

Location: FUSE 2416

Chairs: Yun Wei ; Organizers: Rui Miao

Statistical foundations of representation learning in generative models

8:30 AM - 10:00 AM

Location: FUSE 2416

Speaker: Bryon Aragam

Optimal Inference with Black-box Predictions

8:30 AM - 10:00 AM

Location: FUSE 2416

Speaker: Lucas Kania

Learning topic hierarchies by tree-directed latent variable models

8:30 AM - 10:00 AM

Location: FUSE 2416

Speaker: Sunrit Chakraborty

Identifiability, inverse bounds and uniform convergence of finite mixture models with repeated measures

8:30 AM - 10:00 AM

Location: FUSE 2416

Speaker: Yun Wei

8:30 AM - 10:00 AM

Recent Advances in Statistical Innovation for Adaptive Design and Decision-Making

Location: Van Metre 468
Chairs: Guannan Wang ; Organizers: Jincheng (Jeni) Zhou

A Multi-Arm Multi-Stage Group Sequential Phase 2/3 Design with Dose Selection for Oncology Trials

8:30 AM - 10:00 AM
Location: Van Metre 468
Speaker: Eric (Pingye) Zhang

Responsible Innovation Through Statistics and Automation: Insights from Onboarding and Lead Prioritisation

8:30 AM - 10:00 AM
Location: Van Metre 468
Speaker: Annie Lyu

Distributed Learning Methods for Robust and Scalable Neuroimaging Analysis

8:30 AM - 10:00 AM
Location: Van Metre 468
Speaker: Guannan Wang

Downscaling Public-Use Microdata for Small Area Estimation via Calibration and Population Synthesis

8:30 AM - 10:00 AM
Location: Van Metre 468
Speaker: Zhengyuan Zhu

8:30 AM - 10:00 AM

Trustworthy AI for Finance & Social Science: Risk, Narratives, and Decision Systems

Location: Van Metre 121
Chairs: Yutao Liu ; Organizers: Jin Liu

Trustworthy Financial Narratives: How Markets Process Biased Qualitative Information from Conflicted Intermediaries

8:30 AM - 10:00 AM
Location: Van Metre 121
Speaker: Xiaofeng Wang (CCSU)

LLMs for Mental-Health Risk Signals in Social Media: Reliability, Privacy, and Human-in-the-Loop Safeguards

8:30 AM - 10:00 AM
Location: Van Metre 121
Speaker: Yexin Tian

Evaluating Supervised and Unsupervised Learning Approaches for Fraud Detection in Highly Imbalanced Transaction Data

8:30 AM - 10:00 AM
Location: Van Metre 121
Speaker: Shuo Xu

Trustworthy LLMs for Instant Messaging: Real-Time Abuse/Scam Detection with Monitoring and Incident Response

8:30 AM - 10:00 AM
Location: Van Metre 121
Speaker: Hailiang Wang

8:30 AM - 10:00 AM

Contemporary Statistical Learning for Complex Dependent Data

Location: Van Metre 466
Chairs: Tatiyana Apanasovich

Precision Physical Activity Prescription via Reinforcement Learning for Functional Actions

8:30 AM - 10:00 AM
Location: Van Metre 466
Speaker: Xiaoke Zhang

Personalized growth modeling using local polynomials

8:30 AM - 10:00 AM
Location: Van Metre 466
Speaker: Siddhartha Nandy

Deep classifier kriging for probabilistic spatial prediction of air quality index

8:30 AM - 10:00 AM
Location: Van Metre 466
Speaker: Junyu Chen

10:00 AM - 10:30 AM

Break

10:30 AM - 11:30 AM

Keynote 3: Statistical Innovation in Regulatory Science and the Limits of Inference

Location: FUSE 1311 Conference Center / 1312
Speaker: John Scott ; Chairs: Jingjing Ye

11:30 AM - 11:45 AM

Closing Remarks

Location: FUSE 1311 Conference Center / 1312