

FHDDA-XV FINAL PROGRAM

DAY-1 (Wednesday, August 12, 2026)

- 8:00-8:40 Registration
8:40-8:45 Welcome Speech by the President of Istanbul Medipol Un., **Prof. Bahadır Kürşat Güntürk**
8:45-8:50 Welcome Speech by the conference chair, **Prof. Mehmet Koçak**
8:50-8:55 Welcome Speech by the honorable conference chair, **Prof. Ejaz Ahmed**
8:55-9:00 Announcements of HDDA-XVI by **Prof. Antonio Calcagni**

9:00-10:50 HDDA Plenary Session (Main Conference Hall): Post variable selection: Cutting-edge statistical methods and applications in the AI era

Chair: Yi Li

- 9:00-09:50 **Plenary Speech: Ejaz Ahmed** — *From Sparsity to Weak Signals: Advances in Post-Shrinkage Modeling*
9:50-10:20 **Yi Li** — *Inference on deep learning*
10:20-10:50 **Subha Guha** — *Enhancing Inference for Small Cohorts via Transfer Learning and Weighted Integration of Multiple Datasets*

10:50-11:20 Coffee Break and Social Networking

11:20-13:35 Invited Session 1 (Main Conference Hall): Variable Selection and Penalized Regression

Chair: Antonio Calcagni

- 11:20-11:45 **Michael Evans** — *Basing statistical methodology on a precise definition of statistical evidence: a cost-benefit analysis*
11:45-12:10 **Bahadır Yüzbaşı** — *A Hybrid Regularization Framework for Correlated Feature Selection in High-Dimensional Data*
12:10-12:35 **Abbas Khalili** — *Sparse mixture-of-experts generalized linear models in ultrahigh dimensions*

12:35-14:00 Lunch Break (Medipol Dining Hall)

14:00-14:40 Keynote Speech: Ming Yuan — *The Estimation–Efficiency Frontier in Portfolio Complexity*

14:40-15:55 Invited Session 2 (Main Conference Hall): Financial Statistics and Statistical Learning

Chair: Ming Yuan

- 14:40-15:05 **Erfanul Hoque** — *Optimizing Canada’s Inflation: A Novel Data-Driven Forecast Combination Approach*
15:05-15:30 **Joan Hu** — *Statistical Learning Strategies for Administrative Recurrent Event Data*
15:30-15:55 **Pakize Yigit** — *Regularization and Machine Learning in High-Dimensional Linear Mixed Models: A Comparative Study*

15:55-16:20 Coffee Break and Social Networking

16:20-17:20 Contributed Session 1 (Main Conference Hall): Regularization and High-Dimensional Statistical Learning

Chair: Ersin Yılmaz

- 16:20-16:35 **Akram Mahmoudi** — *Penalized Estimation in High-Dimensional DEA with Application to Swedish Electricity Distribution Data*
16:35-16:50 **İsmail Yenilmez** — *A two-stage Bayesian shrinkage strategy for high-dimensional regression*
16:50-17:05 **Judy Abdallah** — *Generalised estimating equations for high-dimensional matrix-valued responses*
17:05-17:20 **Yaqing Xu** — *Robust Transfer Learning for High-Dimensional GLM Using γ -Divergence with Applications to Cancer Genomics*

END OF DAY-1: FREE EVENING (Dinner at your leisure)

DAY-2 (Thursday, August 13, 2026)

09:00-09:40 Keynote Speech (Main Conference Hall): Stanley Pounds — PROMISE-ME a Cure

09:40-10:55 Invited Session 3 (Track-A, Main Conference Hall): Bioinformatics and Multi-Omics

Chair: Stanley Pounds

- 09:40-10:05** **Leila Kianmehr (on behalf of Gökmen Zararsız)** — *Multi-Omics Integration Reveals Lipid Metabolic Reprogramming as a Driver of Cystogenesis in Autosomal Dominant Polycystic Kidney Disease (ADPKD)*
- 10:05-10:30** **Peter Song** — *Meta-Clock to Calculate Epigenetic Age Using Neural Networks*
- 10:30-10:55** **Pan Wei** — *Mendelian Randomization Using Constrained Maximum Likelihood with a Large Number of Instrumental Variables*

09:40-10:55 Invited Session 3 (Track-B, Conference Hall 206): Clinical Statistics and Healthcare Applications

Chair: Esra Kurum

- 09:40-10:05** **Esra Kurum** — *Time-Dynamic Joint Modeling of Longitudinal and Survival Outcomes in End-Stage Kidney Disease*
- 10:05-10:30** **Hao Mei** — *A Functional Latent Space Model for Time-varying Networks with Applications to Clinical Outcomes Data*
- 10:30-10:55** **Mohamed Belalia** — *Semiparametric copula-based quantile regression for semicontinuous outcomes with application to healthcare data*

10:55-11:20 Coffee Break and Social Networking

11:20-13:00 Invited Session 4 (Track A, Main Conference Hall): High-Dimensional Data Analysis and Applications

Chair: Bahadır Yüzbaşı

- 11:20-11:45** **David Post** — *The potential for use of high dimensional data analysis (HDDA) in Environmental Sciences*
- 11:45-12:10** **Ersin Yılmaz** — *Invited A ridge-stabilized semiparametric logistic framework for multicollinear predictors*
- 12:10-12:35** **Mina Aminghafari** — *Robust Model-Based Clustering for Functional Data*
- 12:35-13:00** **Taoufik Bouezmarni** — *Enhancing Censored Sliced Inverse Regression through Weighted Leverage Scores*

11:20-12:35 Invited Session 4 (Track B, Conference Hall 206): High-Dimensional Regression

Chair: Pakize Yiğit

- 11:20-11:45** **Grace Yi** — *Function-on-Scalar Linear Model with Ultra-high Dimensional Data with Measurement Error*
- 11:45-12:10** **Wenqing He** — *Feature Screening with Large Scale and High Dimensional Survival Data*
- 12:10-12:35** **Ersin Yılmaz (on behalf of Dursun Aydın)** — *Estimation of high-dimensional linear mixed-effects models via singular value decomposition and weighted adaptive penalization*

13:00-14:20 Lunch Break (Medipol Dining Hall)

14:20-16:25 Invited Session 5 (Track A, Main Conference Hall): Artificial Intelligence and Machine Learning

Chair: Ahu Cephe

- 14:20-14:45** Bei Jiang — *A Data-Augmented Predictive Framework for Generating Fair Synthetic Data with Controlled Fairness–Faithfulness Trade-offs*
- 14:45-15:10** Linglong Kong — *Intrinsic Benefits of Categorical Distributional Loss: Uncertainty-aware Regularized Exploration in Reinforcement Learning*
- 15:10-15:35** Xinzhou Guo — *Stein-Encoder: A White-Box Supervised Encoder via Stein Identities*
- 15:35-16:00** Shuangge Ma — *Cancer Human Disease Networks (cHDNs) via Deep Learning SEER-Medicare*

14:20-15:35 Invited Session 5 (Track B, Conference Hall 206): Bayesian Methods, Spatial Statistics, and Text Mining

Chair: Gökhan Yıldırım

- 14:20-14:45** Rauf Ahmad — *Consistency of regularized estimators using Bayesian methods*
- 14:45-15:10** Boxin Tang — *Oracle arrays and their use for constructing space-filling designs*
- 15:10-15:35** Rahim Mahmoudvand — *Spatial Signal Extraction Using Singular Spectrum Analysis*
- 15:35-16:00** Kıvanc Kok — *Automated Text Mining and Bibliometric Profiling of Huntington's Disease Literature in PubMed*

16:00-16:40 Coffee and Social Networking

16:40-17:40 Contributed Session 2 (Track A, Main Conference Hall) Genomics and Biomedical Applications

Chair: Abdulahad Bayraktar

- 16:40-16:55** Abdullah Bilal Aktaşın — *Pseudotime-resolved high-dimensional single-cell transcriptomic analysis reveals dynamic gene programs in Trypanosoma brucei differentiation*
- 16:55-17:10** Ayşegül Murat — *Integrated multi-omics re-analysis of RNA-seq and proteomics data from human substantia nigra dopaminergic neurons in Parkinson's disease*
- 17:10-17:25** Berat Doğan — *Clustering strategies improve structure-preserving visualization of single-cell RNA-seq data with CBMAP*
- 17:25-17:40** Esra Şirazi — *Biology-informed deep learning identifies metabolic, epigenetic, and exocrine programs in pancreatic ductal adenocarcinoma*

16:40-17:40 Contributed Session 2 (Track B, Conference Hall 206): AI Applications and Applied Statistics

Chair: Fatma Sevinç Kurnaz

- 16:40-16:55** Marie-Pier Domingue — *A privacy-aware logistic regression method for vertically partitioned data within a novel privacy risk assessment framework*
- 16:55-17:10** Matabel Odin Odiaga — *Surrogate Approximation of the Information-Based Bermudan Option Pricing PDE with Variable Transaction Costs*
- 17:10-17:25** Leila Kianmehr — *Plasma Amino-Acid Signatures Associated with Disease Progression and Hypertension in Autosomal Dominant Polycystic Kidney*
- 17:25-17:40** Ahmet Akın Atasoy — *Temporal dynamics and geographic heterogeneity in the impact of renewable energy on growth: The potential-efficiency paradox in the context of selected European countries and Türkiye*

END OF DAY-2: GALA DINNER in LIMAK EURASIA HOTEL at 18:30

DAY-3 (Friday, August 14, 2026)

09:00-09:40 Keynote Speech: Mehmet Gönen — *Efficient alternatives to foundation models for single-cell and spatial transcriptomics*

09:40-11:20 Invited Session 6 (TRACK-A, Main Conference Hall): Linear Mixed Model and Statistical Learning

Chair: Abdulbari Bener

- 09:40-10:05 Xinyuan Song** — *Longitudinal Mixed Membership Image-on-Scalar Model*
10:05-10:30 Yuedong Wang — *Covariance estimation in multidimensional response linear mixed effects models*
10:30-10:55 Shakhawat Hossain — *A framework for optimal estimation in generalized partially linear single-index models*
10:55-11:20 Xiao Hui Tai — *Uncovering Public Health Priorities at the World Health Organization*

09:40-11:20 Invited Session 6 (TRACK-B, Conference Hall 206): Bioinformatics and Omics

Chair: Ahmet Kaplan

- 09:40-10:05 Antonio Calcagni** — *Statistical Modeling of Multigene Fuzzy RNA-seq Counts*
10:05-10:30 Muhammed Erkan Karabekmez — *Translating Transcriptomic Heterogeneity into Multicellular Metabolic Systems*
10:30-10:55 Semih Alpsoy — *A deep learning framework with transfer learning and multi-omics integration for cancer drug resistance prediction*
10:55-11:20 Elif Acar — *Robust Automated Statistical Tests for High-throughput Phenotyping Data*

11:20-11:40 Coffee Break and Social Networking

11:40-12:40 Contributed Session 3 (TRACK-A, Main Conference Hall): AI and Biomedical Applications

Chair: Tarık Ziyadoğlu

- 11:40-11:55 Abdulahad Bayraktar** — *Sex-Aware Associations of the Gut Microbiome and Inflammatory Responses in Alzheimer's Disease by Meta-analysis of Gut NGS*
11:55-12:10 Ahmet Kaplan — *AI agents for bioinformatics and health data analysis: a systematic review of state-of-the-art, applications, and future directions*
12:10-12:25 Hayriye Ecem Yelkenci — *Quantitative Proteomic Profiling of Traumatic Brain Injury in Mouse Brain Tissue: A Multi-Group Comparative Study Using Mass Spectrometry and Bioinformatics*
12:25-12:40 Vipul Patni — *Application of Non-Linear Multi-Variate Machine Learning Models in Clinical Trials Design Optimization*

11:40-12:25 Contributed Session 3 (TRACK-B, Conference Hall 206): Modern Statistical Methods and Applications

Chair: Elif Acar

- 11:40-11:55 Saba Riaz** — *Advancing Forest Health Monitoring through Comparative Perspectives on Machine Learning Models' Performance*
11:55-12:10 Ali İhsan Çetin — *From Distance to Default: A Comparative Study of Feature-Aware kNN Models for Credit Risk Classification*
12:10-12:25 Farrukh Javed — *Post-Selection Estimation in High-Dimensional Spatial Autoregressive Models*

12:25-14:00 Lunch Break (Medipol Dining Hall)

14:00-17:00 HDDA-XV Online Session 7 (Main Conference Hall): Statistical Modeling & Computational Biology

Chair: Kıvanç Kök

- 14:00-14:25** **ONLINE Presentation:** Jianhua Hu (Frank) — *Response Knockoffs Inference for Response Variable Selection Under the False Discovery Rate*
- 14:25-14:50** **ONLINE Presentation:** Kaiqiong Zhao — *Automatic Relevance Determination Variational Autoencoder for Single-Cell DNA Methylation Analysis and Batch Correction*
- 14:50-15:15** **ONLINE Presentation:** Javed H. Tomal — *Fertility Differences by Household Headship and Marital Structure in Bangladesh: A Bayesian Hierarchical Generalised Poisson Regression Analysis*
- 15:15-15:40** **ONLINE Presentation:** Kristofer Månsson — *Penalized Mixed-Frequency Estimation: Oracle Properties and Asymptotic Efficiency*
- 15:40-16:05** **ONLINE Presentation:** Xingqiu Zhao — *Nonparametric Inference for Censored Data Using Deep Neural Networks*
- 16:05-16:30** **ONLINE Presentation:** Sara Bendjeddou — *Sparse Integer-Valued Time Series Modeling Across Low- and High-Dimensional Regimes*
- 16:30-16:45** **ONLINE Presentation:** Emanuel H. Ben-David — *Modeling Census Self-Response Rates with Sparse Nonparametric Additive Models*
- 16:45-17:00** **ONLINE Presentation:** Abdulkadir Hussein — *A New Approach for Variable Selection and Estimation in High Dimensional Beta Regression models with Collinearity: Application in Econometrics and Health Care Data*

17:00-17:05 Closing Remarks by Honorable Chair, Prof. Ejaz Ahmed

END OF DAY-3: SEE YOU NEXT YEAR IN ITALY