

## The 3rd MOPRED Symposium 2025

Integrative Genomics and Machine Learning for Precision Health

### I - Genomic Embeddings, Knowledge Graphs & Personalized Prediction

**10:10 – Moritz Sturm**

Genetic risk-aware embeddings of whole-genome data for multimodal applications

**10:30 – Julia Gehrmann**

Designing a reusable pipeline for integrating tabular data with neuroimaging

**10:50 – Arber Qoku**

Knowledge-guided matrix factorization for multi-omic perturbation analysis

**11:10 – Gerd Specht**

Machine learning approaches for activity-specific health profiling using wearable sensor data

**11:30 – Simeon Platte**

ML-based molecular burden scores: Predicting treatment outcome based on the genetic variation of underlying mechanisms

### Poster Highlights & Networking



11:50 – Poster Short Talks



12:00 – Group Photo



12:05 – Lunch Break

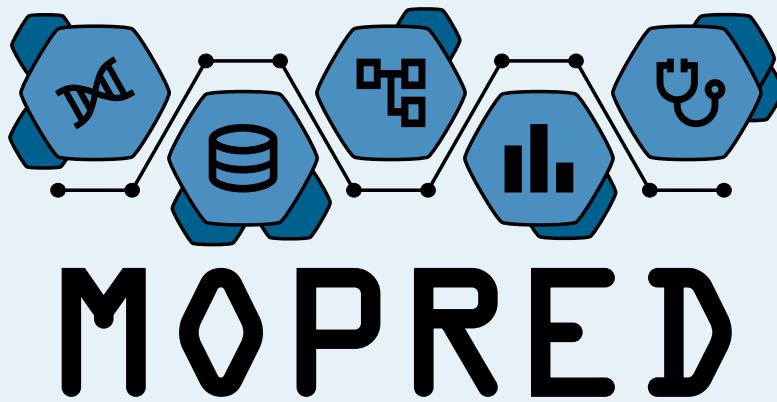


12:30 – Lunch & Poster Session

**OCTOBER 08 2025**

**GOETHE UNIVERSITY HOSPITAL FRANKFURT - BUILDING 22**

Agenda 1/2



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### Integrative Genomics and Machine Learning for Precision Health

#### II - Transcriptome Models

**13:45 – Jonas Schuck**


NanoAIRR: full-length adaptive immune receptor profiling from Nanopore long-read sequencing

**14:05 – Nikoletta Katsaouni**

Mechanism of action-aware drug ranking with contrastive learning and gene expression profiles

**14:25 – Laura Rumpf**

Predicting gene-specific regulation with transcriptomic and epigenetic single-cell data

 **14:45 – Ewa Szczurek Keynote Lecture**  
Hidden Dimensions of Biology: Latent Models for Multimodal Integration

 **15:25 – Poster Session II & Coffee Break**

#### III - Aging, Cancer Biology & Single-Cell Atlases

**16:30 – Fabian Kern**

Identifying key cellular and molecular aging features in mouse adipose tissue using spatiotemporal transcriptomics

**16:50 – Julia Eliseeva**

Single-cell RNA sequencing analysis of premalignant lesions to elucidate early cancer progression

**17:10 – Christina Kalk**

Prediction and validation of split open reading frames across cell types

**17:30 – Michael Tyler**

Mapping cellular heterogeneity in cancer with the Curated Cancer Cell Atlas

**17:55 – Award Ceremony & Closing Remarks**

**19:00 Dinner (self-funded)**