Saturday May 5

MS06 Part I

Discovery from Data

10:45 AM - 12:45 PM

AAB201

The number of large-scale high-dimensional datasets recording different aspects of interrelated phenomena is growing, accompanied by a need for mathematical frameworks for discovery from data arranged in structures more complex than that of a single matrix. In the three sessions of this minisymposium we will present recent studies demonstrating "Discovery from Data," in "I: Systems Biology," and "II: Personalized Medicine," by developing and using the mathematics of "III: Tensors."

Organizers:
Sri Priya Ponnapalli, Scientific Computing and Imaging Institute, University of Utah,
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UPDATED INFORMATION

10:45-11:15 Patterns of DNA Copy-Number Alterations Revealed by the GSVD and Tensor GSVD Encode for Cell Transformation and Predict Survival and Response to Platinum in Adenocarcinomas
Orly Alter, University of Utah

11:15-11:45 Systems Biology of Drug Resistance in Cancer
Antti Hakkinen, University of Helsinki

11:45-12:15 Single-Cell Entropy for Estimating Differentiation Potency in Waddington's Epigenetic Landscape
Andrew E. Teschendorff, Shanghai CAS-MPG Computational Biology Institute and University College London

12:15-12:45 Dimension Reduction for the Integrative Analysis of Multilevel Omics Data
Gerhard G. Thallinger, Graz University of Technology