

IDSIS 2022

The First International Israel Data Science Initiative Conference

Ein Gedi

03/01/2022 - 06/01/2022

Schedule



Monday, 3.1.2022

08:30-11:00

Registration | Welcome (Avni Hall)

11:00-11:20

Opening Remarks

M1: Applied Data Science | Chair: Ofir Lindenbaum

11:20-11:40

Complete Closed Time Intervals-Related Patterns Mining, *Omer David Harel (BGU)*

11:40-12:00

Online Segmentation of Dynamic Data Stream Using Dynamic Classification Unit Classifier & ExpanDrogram Visualization, *Anna Khalemsky (BIU)*

12:00-12:20

Differentiable Unsupervised Feature Selection based on a Gated Laplacian, *Ofir Lindenbaum (BIU)*

12:20-12:40

Identifying Avoidance In Animal Social Networks Using Automated Proximity Loggers, *Amiyaal Ilany (BIU)*

12:40-12:55

Data4Good & Responsible Automated Data Collection: How Do You Ensure Data4good? *TBD (BrightData)*

12:55-14:20

Lunch

M2: Computer Vision + Data Science in Biology | Chair: Judith Somekh

14:20-14:40

Sparse Modeling for Improving Image Generators, *Roy Ganz (Technion)*

14:40-15:00

Deep Weighted Consensus (DWC) - Dense correspondence confidence maps for 3D shape registration, *Dvir Ginzburg (TAU)*

15:00-15:20

A Methodology for Predicting Tissue- specific Metabolic Roles of Receptors Applied to Subcutaneous Adipose, *Judith Somekh (Haifa U.)*

15:20-15:40

Adapting Breast Cancer Polygenic Risk Scores to Diverse Ethnic Groups in Israel, *Hagai Levi (TAU)*

15:40-16:00

Extracting the Invisible from Live Cell Microscopy, *Assaf Zaritsky (BGU)*

16:00-16:30

Coffee Break | Hotel Check In
(key distribution at Avni Hall)

M3: Mathematical Foundations of Data Science
| Chair: Tirza Routtenberg

16:30-16:50

Minimax Regret Rates for Prediction under Log Loss via Information Geometry, *Nir Weinberger (Technion)*

16:50-17:10

Non-Bayesian Parametric Missing-Mass Estimation, *Tirza Routtenberg (BGU)*

17:10-17:30

Predicting Classification Accuracy When Adding New Unobserved Classes, *Yuli Slavutsky (HUJI)*

17:30-17:50

Optimal selection of sample-size dependent common subsets of covariates for multi-task regression prediction, *David Azriel (Technion)*

18:30-19:30

Dinner

19:45-20:45

M4: Keynote Speaker | Prof. Yoav Freund | University of California San Diego | Recorded lecture + Live zoom Q&A session

20:45-22:00

Poster session #1

Tuesday, 4.1.2022

08:30-09:00

Coffee

Tu1: Natural Language Processing | Chair: Michael Freedman

09:00-09:20

Model Compression for Domain Adaptation through Causal Effect Estimation, *Guy Rotman (Technion)*

09:20-09:40

Automatic Identification of Ruptures in Transcribed Psychotherapy Sessions, *Dana Atzil-Slonim (BIU)*

09:40-10:00

How does social memory work on social media? A conceptual and methodological framework for the large-scale identification of discourse on the Holocaust on Facebook, *Anat Ben-David (Open U.)*

10:00-10:20

Semantic-Image Networks: Mapping & Validating the Multi-Modal Discursive Space of Populist Social Media, *Michael Freedman (Haifa U.)*

10:20-11:00

Coffee Break

Tu2A (Amichai Hall) :
Mathematical Foundations of DS | Chair: Boaz Nadler

Tu2B (Avni Hall) :
Health Informatics | Chair: Mark Last

11:00-11:20

GNMR: A Provable One-Line Algorithm for Low Rank Matrix Recovery Problems, *Pini Zilber (Weizmann)*

Towards the global equilibrium of COVID-19: statistical analysis of country-level data, *Mark Last (BGU)*

11:20-11:40

Learning Sub-Nyquist Sampling for FRI Signals, *Haiynag Zhang (Weizmann)*

Classifying Autism Spectrum Disorder (ASD) causal genes based on Intrinsic Disordered Regions, *Shula Shazman (Open U.)*

11:40-12:00

Near-Optimal Entrywise Sampling of Numerically Sparse Matrices, *Shay Sapir (Weizmann)*

Causal Inference For Heterogeneous Disease Etiology, *Amit Sasson (TAU)*

12:00-12:20

Personalized Federated Learning with Gaussian Processes, *Idan Achituv (BIU)*

TRACEvar: Prioritizing and interpreting pathogenic variants that underlie hereditary diseases by using machine learning and tissue contexts, *Chanan Argov (BGU)*

13:00-14:00

Lunch

14:00-17:00

Break

17:00-18:00

Tu3: Keynote Speaker | Prof. Yoav Freund | University of California San Diego | Live zoom session

18:30-19:30

Dinner

19:45-20:45

Tu4: Keynote Speaker | Prof. Bin Yu | UC Berkeley | Recorded lecture + Live zoom Q&A session

20:45-22:00

Poster session #2

Wednesday, 5.1.2022

08:30-09:00

Coffee

W1: Data Science in Biology | Chair: Noam Kaplan

09:00-09:20

Interpretable Deep Learning Uncovers Cellular Properties in Label-Free Live Cell Images that are Predictive of Highly Metastatic Melanoma, *Assaf Zaritsky (BGU)*

09:20-09:40

An Explicit Probabilistic Model For Genome Compartmentalization, *Hagai Kariti (Technion)*

09:40-10:00

KMD Clustering: Robust Generic Clustering of Biological Data, *Noam Kaplan (Technion)*

10:00-10:20

Reconfiguring primase DNA-recognition sequences by using a data driven approach, *Barak Akabayov (BGU)*

10:20-11:00

Coffee Break

W2A (Avni Hall) : AI and DS in Education | Chair: Arnon HersHKovitz

11:00-11:25

The Role of Thinking Level in Mathematics Problem Solving: A Large-Scale Log-Based Exploration, *Arnon HersHKovitz (TAU)*

W2B (Amichai Hall) : Machine Learning Based Navigation | Chair: Itzik Klein

Data-Driven Based Navigation, *Itzik Klein (Haifa U.)*

11:25-11:50

Machine Learning and Hebrew NLP for Automated Assessment of Open-Ended Questions in Biology, *Tanya Nazaretsky (Weizmann)*

Adaptive Attitude and Heading Estimation Using Deep Learning Approaches, *Eran Vertzberger (Haifa U.)*

11:50-12:15

Seeding Course Forums with the Teacher-in-the-Loop, *Kobi Gal (BGU)*

Learning Inertial-based Activity Recognition with Transformers, *Yoli Shavit (BIU)*

12:20-13:20

Lunch

13:20-14:00

Group Photo (near Avni Hall)

W3A (Amichai Hall) :
Health Informatics |
Chair: Mark Last

W3B (Avni Hall) :
Statistical Learning |
Chair: Nir Weinberger

14:00-14:20

Fully Automatic Anesthesiologists Trajectory Prediction Based on Graph Convolution Networks for Autonomous Clinical Decision Support System, *Sapir Gershov (Technion)*

Learning under Delayed Feedback: Implicitly Adapting to Gradient Delays, *Kfir Yehuda Levy (Technion)*

14:20-14:40

Causal Hazard Ratio Estimation In Randomized And Observational Studies, *Rachel Axelrod (TAU)*

Improved Estimators for Semi-supervised High-dimensional Regression Model, *Ilan Livne (Technion)*

14:40-15:00

A Matching-Based Approach For Identification And Estimation Of The Survivor Average Causal Effect In Truncation By Death Problems, *Tamir Zehavi (TAU)*

k-vectors: An Alternating Minimization Algorithm for Learning Regression Functions, *Nir Weinberger (Technion)*

15:00-15:30

Coffee Break

W4A (Amichai Hall) :
Responsible AI and Social Good | Chair:
Efrat Morin

W4B (Avni Hall) :
Computer Vision |
Chair: Ilan Shimshoni

15:30-15:50

Machine-Learning Based Routing of Callers in an Israeli Mental Health Hotline, *Akiva Kleinerman (BIU)*

Deep Permutation Equivariant Structure from Motion, *Ronen Basri (Weizmann)*

15:50-16:10

"I Don't Think So": Summarizing Policy Disagreements for Agent Comparison, *Yotam Amitai (Technion)*

GIScience integrated with computer vision for the spatial examination of historical visual sources, *Ilan Shimshoni (Haifa U.)*

16:10-16:30

Interpreting Machine-Learning Flood Prediction Models, *Efrat Morin (HUJI)*

16:30-16:45

Break

16:45-17:45

W5: Keynote Speaker | Prof. Ming Yuan | Columbia University | Recorded lecture + Live zoom Q&A session

18:00-19:00

W6: Keynote Speaker | Prof. Trey Ideker | University of California San Diego | Recorded lecture + Live zoom Q&A session

19:00-20:00

Break

20:00-22:00

Gala dinner

Thursday, 6.1.2022

08:30-09:40

Check out | Coffee

Th1: Mathematical Foundations of Data Science + Responsible AI and Social Good |
Chair: Ilan Shimshoni

09:40-10:00

Koopman Analysis of Gradient Descent Optimization, *Ido Cohen (Technion)*

10:00-10:20

Oracle Complexity in Nonsmooth Nonconvex Optimization, *Guy Kornowski (Weizmann)*

10:20-10:40

"Did I Say Something Wrong?": A Safe Collaborative Chatbot, *Merav Chkroun (Ariel U.)*

10:40-11:20

Coffee Break

Th2: Health Informatics | Chair: Mor Peleg

11:20-11:40

GoCom – a Guideline-based Goal-oriented Methodology for Treating Patients with Multimorbidity and Its Preliminary Evaluation, *Alexandra Kogan and Mor Peleg (Haifa U.)*

11:40-12:00

Selecting Intermittent Fasting Type to Improve Health in Type 2 Diabetes: A Machine Learning Approach, *Shula Shazman (Open U.)*

12:00-12:20

Closing Remarks

12:20

Lunch Box



General Information

Registration and welcome will be held in Avni Hall (in Kibbutz Ein Gedi) on Monday, January 3 between 8:30 – 11:00.

The conference will be held at Avni Hall (in Kibbutz Ein Gedi).

The parallel sessions will be held at Avni Hall and Amichai Hall (Near the hotel lobby).

Check In to the accommodation will be held in Avni Hall on Monday, January 3 between 16:00 – 16:30 during the coffee break.

A map of the hall's location



Visit the conference website for more information

