

Saturday 17th August

6:30 – 8:15 Breakfast and registration

8:20 – 8:30 Introductions

8:30 – 10:00 Session 1; Chair: Todd Kuffner, WUSTL

8:30 – 8:55 Miles Lopes, UC Davis

Bootstrap methods in high dimensions: spectral statistics and max statistics

8:50 – Panda

8:55 – 9:00 Discussion

9:00 – 9:25 Kristin Linn, University of Pennsylvania

Interactive Q-learning

9:20 – Panda

9:25 – 9:30 Discussion

9:30 – 9:55 Peter Song, University of Michigan

Method of Contraction-Expansion (MOCE) for simultaneous inference in linear models

9:50 – Panda

9:55 – 10:00 Discussion

10:00 – 10:30 Coffee break

10:30 – 12:00 Session 2; Chair: John Kolassa, Rutgers University

10:30 – 10:55 Pallavi Basu, Indian School of Business

TBA

10:50 – Panda

10:55 – 11:00 Discussion

11:00 – 11:25 Mladen Kolar, University of Chicago

TBA

11:20 – Panda

11:25 – 11:30 Discussion

11:30 – 11:55 Robert Tibshirani, Stanford University

Prediction and outlier detection: a distribution-free prediction set with a balanced objective

11:50 – Panda

11:55 – 12:00 Discussion

12:00 – 1:30 Lunch

1:30 – 3:00 Session 3; Chair: Heather Battey, Imperial College London

1:30 – 1:55 Ioannis Kosmidis, University of Warwick
Improved estimation of partially specified models

1:50 – Panda

1:55 – 2:00 Discussion

2:00 – 2:25 Daniela De Angelis, University of Cambridge
Value of information for evidence synthesis

2:20 – Panda

2:25 – 2:30 Discussion

2:30 – 2:55 Alastair Young, Imperial College London
Challenges for (Bayesian) selective inference

2:50 – Panda

2:55 – 3:00 Discussion

3:00 – 3:30 Coffee break

3:30 – 4:30 **Session 4**; Chair: Annie Qu, UIUC

3:30 – 3:55 Ryan Tibshirani, Carnegie Mellon University
What deep learning taught me about linear models

3:50 – Panda

3:55 – 4:00 Discussion

4:00 – 4:25 Daniel Yekutieli, Tel Aviv University
TBA

4:20 – Panda

4:25 – 4:30 Discussion

4:30 – 5:00 Coffee break

5:00 – 6:00 **Session 5**; Chair: Xiao-Li Meng, Harvard University

5:00 – 5:25 Xihong Lin, Harvard University
Hypothesis testing for a large number of composite nulls in genome-wide causal mediation analysis

5:20 – Panda

5:25 – 5:30 Discussion

5:30 – 5:55 Iain Johnstone, Stanford University
HOA-PSI for top eigenvalues in spiked PCA models

5:50 – Panda

5:55 – 6:00 Discussion

6:10 – 7:10 *Drinks & hors d'oeuvres*

6:10 – 7:10 Poster Session

1. Stephen Bates (Stanford) – TBA
2. Zhiqi Bu (Penn) – SLOPE is better than LASSO: estimation and inference of SLOPE via approximate message passing
3. Hongyuan Cao (Florida State) – TBA
4. Paromita Dubey (UC Davis) – Frechet analysis of variance and change point detection for random objects
5. Yinqiu He (Michigan) – Likelihood ratio test in multivariate regression: from low to high dimension
6. David Hong (Penn) – Asymptotic eigenstructure of weighted sample covariance matrices for large dimensional low-rank models with heteroscedastic noise
7. Byol Kim (Chicago) – TBA
8. John Kolassa (Rutgers) – TBA

7:10 – 9:00 *Banquet dinner & open bar*

Sunday 18th August

6:30 – 7:55 Breakfast and registration

7:55 – 8:00 Herding

8:00 – 9:30 **Session 6**; Chair: Lucas Janson, Harvard University

8:00 – 8:25 Irina Gaynanova, Texas A&M University
Direct inference for sparse differential network analysis

8:20 – Panda

8:25 – 8:30 Discussion

8:30 – 8:55 Richard Samworth, University of Cambridge
High-dimensional principal component analysis with heterogeneous missingness

8:50 – Panda

8:55 – 9:00 Discussion

9:00 – 9:25 Vladimir Koltchinskii, Georgia Tech
Bias reduction and efficiency in estimation of smooth functionals of high-dimensional parameters

9:20 – Panda

9:25 – 9:30 Discussion

9:30 – 10:00 Coffee break

10:00 – 11:30 **Session 7**; Chair: Kristin Linn, University of Pennsylvania

10:00 – 10:25 Stephen M.S. Lee, University of Hong Kong
High-dimensional local polynomial regression with variable selection and dimension reduction

10:20 – Panda

10:25 – 10:30 Discussion

10:30 – 10:55 Florentina Bunea, Cornell University
Essential regression

10:50 – Panda

10:55 – 11:00 Discussion

11:00 – 11:25 Jonathan Taylor, Stanford University
Inference after selection through a black box

11:20 – Panda

11:25 – 11:30 Discussion

11:30 – 1:00 Lunch

11:30 – 1:00 Poster Session: Chair: Nicholas Syring, WUSTL

1. Lihua Lei (UC Berkeley) – The Bag-of-Null-Statistics procedure: an adaptive framework for selecting better test statistics
2. Cong Ma (Princeton) – Inference and uncertainty quantification for noisy matrix completion
3. Matteo Sesia (Stanford) – Multi-resolution localization of causal variants across the genome
4. Nicholas Syring (WUSTL) – TBA
5. Armeen Taeb (Caltech) – TBA
6. Hua Wang (Penn) – The simultaneous inference trade-off analysis on Lasso path
7. Yuling Yan (Princeton) – Noisy matrix completion: understanding statistical guarantees for convex relaxation via nonconvex optimization
8. Yubai Yuan (UIUC) – High-order embedding for hyperlink network prediction
9. Xiaorui Zhu (Cincinnati) – Simultaneous confidence intervals using entire solution paths

1:00 – 2:30 Session 8; Chair: Hongyuan Cao, Florida State University

1:00 – 1:25 Yuval Benjamini, Hebrew University of Jerusalem

Extrapolating the accuracy of multi-class classification

1:20 – Panda

1:25 – 1:30 Discussion

1:30 – 1:55 Aaditya Ramdas, Carnegie Mellon University

Online control of the false coverage rate and false sign rate

1:50 – Panda

1:55 – 2:00 Discussion

2:00 – 2:25 Snigdha Panigrahi, Stanford University

Post-selective estimation of linear mediation effects

2:20 – Panda

2:25 – 2:30 Discussion

2:30 – 3:00 Coffee break

3:00 – 4:00 Session 9; Chair: Rina Foygel Barber, University of Chicago

3:00 – 3:25 Veronika Rockova, University of Chicago

TBA

3:20 – Panda

3:25 – 3:30 Discussion

3:30 – 3:55 Ed George, University of Pennsylvania

Multidimensional monotonicity discovery with MBART

3:50 – Panda

3:55 – 4:00 Discussion

4:00 – 4:30 Coffee break

4:30 – 5:30 **Session 10**; Chair: Xiao-Li Meng, Harvard University

4:30 – 4:55 Ulrike Schneider, TU Wien

Uniformly valid confidence sets based on the Lasso in low dimensions

4:50 – Panda

4:55 – 5:00 Discussion

5:00 – 5:25 Art Owen, Stanford University

Six percent power and barely selective inference

5:20 – Panda

5:25 – 5:30 Discussion

Dinner on your own!

Monday 19th August

6:30 – 7:55 Breakfast

7:55 – 8:00 Herding

8:00 – 9:30 **Session 11**; Chair: Aaditya Ramdas, Carnegie Mellon University

8:00 – 8:25 Weijie Su, University of Pennsylvania

Gaussian differential privacy

8:20 – Panda

8:25 – 8:30 Discussion

8:30 – 8:55 Julia Fukuyama, Indiana University

Phylogenetically-informed distance methods: their uses, properties, and potential

8:50 – Panda

8:55 – 9:00 Discussion

9:00 – 9:25 Linda Zhao, University of Pennsylvania

Nonparametric empirical Bayes methods for sparse, noisy signals

9:20 – Panda

9:25 – 9:30 Discussion

9:30 – 10:00 Coffee break

10:00 – 11:30 **Session 12**; Chair: Ed George, University of Pennsylvania

10:00 – 10:25 Rina Foygel Barber, University of Chicago

Predictive inference with the jackknife+

10:20 – Panda

10:25 – 10:30 Discussion

10:30 – 10:55 Annie Qu, UIUC

Community detection with dependent connectivity

10:50 – Panda

10:55 – 11:00 Discussion

11:00 – 11:25 Xiao-Li Meng, Harvard University

The conditionality principle is (still) safe and sound, but our large-p-small-n models are ill (defined)

11:20 – Panda

11:25 – 11:30 Discussion

11:30 – 1:00 Lunch

1:00 – 2:30 **Session 13**; Chair: Yuval Benjamini, Hebrew University of Jerusalem

1:00 – 1:25 Brian Caffo, Johns Hopkins University
Statistical properties of measurement in resting state functional magnetic resonance imaging

1:20 – Panda

1:25 – 1:30 Discussion

1:30 – 1:55 Cynthia Rush, Columbia University
Algorithmic analysis of SLOPE via approximate message passing

1:50 – Panda

1:55 – 2:00 Discussion

2:00 – 2:25 Emmanuel Candès, Stanford University
TBA

2:20 – Panda

2:25 – 2:30 Discussion

2:30 – 3:00 Coffee break

3:00 – 4:00 **Session 14**; Chair: R.A. Fisher, Rothamsted / Adelaide

3:00 – 3:25 Jingshen Wang, UC Berkeley
TBA

3:20 – Panda

3:25 – 3:30 Discussion

3:30 – 3:55 Arun Kumar Kuchibhotla, University of Pennsylvania
Post-selection inference for all

3:50 – Panda

3:55 – 4:00 Discussion

End of Workshop