

Luca Weihs

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Education

2013 - 2018 **University of Washington, Seattle**
PhD, Statistics
Advisor: Mathias Drton

2009 - 2013 **University of California, Berkeley**
BA, Mathematics, Valedictorian
Minor in Computer Science

Employment

3/18 - current **Allen Institute for Artificial Intelligence, Seattle**
Research Scientist

6/16 - 6/18,
9/15 - 3/16,
9/14 - 6/15,
6/13 - 9/13 **University of Washington, Seattle**
Teaching and Research Assistant

3/16 - 6/16,
6/15 - 8/15 **Allen Institute for Artificial Intelligence, Seattle**
Research Scientist Intern

6/14 - 8/14 **ClearSlide inc., San Francisco**
Data Science Intern

Publications

2019 **Artificial Agents Learn Flexible Visual Representations by Playing a Hiding Game**
Weihs, Kembhavi, Han, et al.
Under review, arXiv 1912.08195

Two Body Problem: Collaborative Visual Task Completion
Jain*, Weihs*, Kolve, et al.
CVPR, 6689-6699

2018 **Symmetric Rank Covariances: a Generalised Framework for Nonparametric Measures of Dependence**
Weihs, Drton, and Meinshausen
Biometrika, 105(3):546-562

Nested Covariance Determinants and Restricted Trek Separation in Gaussian Graphical Models
Drton, Robeva, and Weihs
Accepted for publication in *Bernoulli*

2017 **Determinantal Generalizations of Instrumental Variables**

Weih, Robinson, et. al
Journal of Causal Inference, 6(1)

Learning to predict citation-based impact measures
Weih and Etzioni
2017 ACM/IEEE Joint Conference on Digital Libraries (JCDL), 1-10.

Marginal likelihood and model selection for Gaussian latent tree and forest models
Drton, Lin, Weih, and Zwiernik
Bernoulli, 23(2):1202-1232, 05

2016 Large-Sample Theory for the Bergsma-Dassios Sign Covariance
Nandy, Weih, and Drton
Electronic Journal of Statistics, 10(2):2287-2311

Generic Identifiability of Linear Structural Equation Models by Ancestor Decomposition
Drton and Weih
Scandinavian Journal of Statistics, 43:1035-1045

Efficient Computation of the Bergsma-Dassios Sign Covariance
Weih, Drton, and Leung
Computational Statistics, 31(1):315-328

Open Source Software

Language(s)	Software
R, C++	SymRC: Estimating Symmetric Rank Covariances On GitHub
R	SEMID: Parameter Identifiability in Linear Structural Equation Models On CRAN and GitHub
R, C++	TauStar: Efficient Computation and Testing of the Bergsma-Dassios Sign Covariance On CRAN and GitHub
R, C++	SBIC: Computing the Singular BIC for Multiple Models On CRAN and GitHub
R, C++	RIM: Inference with Recursive Inversion Models On GitHub
Python	Impact-Prediction: Predicting Author H-index and Paper Citation Counts On GitHub

Talks

- 2017 **SEMID: An R Package for Parameter Identifiability in Linear Structural Equation Models**
Minisymposium on Software and Computation in Algebraic Statistics
SIAM Conference on Applied Algebraic Geometry in Atlanta, GA, USA
- Generic Parameter Identifiability in Linear Structural Equation Models With Latent Factors**
Algebraic Statistics Workshop
Mathematisches Forschungsinstitut Oberwolfach in Oberwolfach, Germany
- Learning to Predict Citation-Based Impact Measures**
Full Paper Session on Citation Analysis
Joint Conference on Digital Libraries in Toronto, Canada
- Combinatorial Conditions for Generic Identification in Structural Equation Models**
AMS Special Session on Gaussian Graphical Models and Combinatorial Algebraic Geometry
Joint Mathematics Meetings in Atlanta, GA, USA

Awards

- 2018 **NSF Post-Doctoral Fellowship (declined)**
National Science Foundation
- 2017 **Z.W. Birnbaum Award for Outstanding General Exam**
University of Washington
Department of Statistics
- 2013 **Departmental Citation (Valedictorian Award)**
University of California, Berkeley
Department of Mathematics
- Percy Lionel Davis Award**
University of California, Berkeley
Department of Mathematics