

Chanwoo Lee

CONTACT INFORMATION

Department of Statistics
1205A Medical Science Center
1300 University Avenue
Madison, WI 53706

Phone: (608) 556-9906
E-mail: chanwoo.lee@wisc.edu
Webpage: <https://chanwoost.github.io>

EDUCATION

University of Wisconsin-Madison 2018 - Present
Ph.D Candidate in Statistics with minor in Computer Science
-Advisor: Miaoyan Wang

Seoul National University 2012 - 2018
B.S. in Mathematical Science
B.S. in Statistics
-Summa Cum Laude

RESEARCH INTERESTS

Statistical machine learning, matrix/tensor data analysis, network analysis

PUBLICATIONS

C. Lee, and M. Wang. Smooth tensor estimation with unknown permutations. Submitted, 2021.

(Part of the work is selected as **oral presentation** into *NeurIPS* 2021 Workshop on Quantum Tensor Networks in Machine Learning).

C. Lee, L. Li, H. Zhang, and M. Wang. Nonparametric trace regression in high dimensions via sign series representation. Under review by *Annals of Statistics*, 2021.

C. Lee, and M. Wang. Beyond the Signs: Nonparametric tensor completion via sign series. *Advances in Neural Information Processing Systems 35 (NeurIPS)*, 2021.

J. Hu, C. Lee and M. Wang. Generalized Tensor Decomposition with Features on Multiple Modes. *Journal of Computational and Graphical Statistics (JCGS)*, 2021.

(This work wins **Best Student Paper Award** from the Statistical Computing and Graphics Section of American Statistical Association (ASA), 2021).

C. Lee and M. Wang. Tensor denoising and completion based on ordinal observation. *Proceedings of International Conference on Machine Learning (ICML)*, 2020.

TALKS& CONFERENCE PRESENTATIONS

Smooth tensor estimation with unknown permutation

- at Neural Information Processing Systems 35 (NeurIPS) Workshop on Quantum Tensor Networks in Machine Learning, December 2021
- at Institute for Foundation of Data Science (IFDS) Summer School 2021 poster session, July 2021

Beyond the Signs: Nonparametric tensor completion via sign series.

- at Neural Information Processing Systems 35 (NeurIPS), December 2021

Generalized Tensor Decomposition with features on multiple modes

- at Neural Information Processing Systems 33 (NeurIPS) Workshop on Machine Learning and the Physical Sciences, December 2020

Nonparametric learning with matrix-valued predictors in high dimensions

- at Institute for Foundation of Data Science (IFDS) Kickoff 2020 poster session, September 2020

	Tensor denoising and completion based on ordinal observations	
	<ul style="list-style-type: none"> • at Institute for Foundation of Data Science (IFDS) brown-bag at UW-Madison, March 2020 • at International Conference on Machine Learning (ICML), July 2020 • at Bernoulli-IMS One World Symposium, August 2020 	
WORK EXPERIENCE	Graduate Research Assistant, University of Wisconsin-Madison	2019 - Present
	Researching statistical machine learning with a particular focus on matrix/tensor data analysis.	
	Advisor: Prof. Miaoyan Wang.	
	Summer Research Assistant, Institute for Foundation of Data Science (IFDS)	2021
	Researched hypergraph and hypergraphon estimation.	
	Faculty supervisors: Miaoyan Wang (UW-Madison, Stat), Stephen Wright (UW-Madison, CS), Kangwook Lee (UW-Madison, ECE), Rebecca Willet (UChicago, Stat), Anru Zhang (Duke, Biostat).	
	Undergraduate Research Assistant, Seoul National University	2016 - 2018
	Implemented topic modeling algorithm based on Latent Dirichlet Allocation.	
	Worked on boundary detection and image classification.	
	Advisor: Prof. Byeong U. Park, Prof. Myungjoo Kang.	
	Republic of Korea Air Force	2013 - 2015
	Operated aero surveillance technician	
AWARDS& SCHOLARSHIPS	Dean's List	2015 - 2017
	1st prize, NIMS-SKKU Big Data Summer School Project	2016
	National Institute for Mathematical Sciences - Sungkyunkwan University	
	Seoul National University Alumni Scholarship	2016 - 2017
	Seoul National University Alumni Association	
	National Scholarship For Science & Engineering	2012 - 2017
	Korea Student Aid Foundation	
COMPUTING	Software	
	<ul style="list-style-type: none"> • TensorComplete: An R package for tensor noise reduction and completion. Available on CRAN. • TraceAssist: An R package for fitting nonparametric matrix trace regression model. Available on CRAN. • SmoothTensor: An R package for estimating a smooth tensor an unknown permutation. Available on CRAN. 	
	Languages	
	<ul style="list-style-type: none"> • R, Python, Matlab 	
PROFESSIONAL SERVICE	Reviewer for* IEEE Transactions on Information Theory (1), International Conference of Machine Learning (5), Neural Information Processing Systems (1), Electronic Journal of Statistics (1), Journal of Machine Learning Research (1), Journal of the American Statistical Association (2), Biometrics (1), Journal of the Royal Statistical Society: Series B (1).	

*Numbers in parenthesis indicate the number of papers reviewed