

# Chanwoo Lee

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## CONTACT INFORMATION

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## 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, 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. Supervised Tensor Decomposition with Interactive Side Information. *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

Estimating smooth tensors with unknown permutation

- at Institute for Foundation of Data Science (IFDS) Summer School 2021 poster session, July 2021

Supervised Tensor Decomposition with interactive side information

- at Advances in 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

- 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: Byeong U. Park, 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

- **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.

### Languages

- R, Python, Matlab