Kiryung Lee

CONTACT INFORMATION

Ohio State University
Department of Electrical and Computer Engineering
2015 Neil Avenue
Columbus, OH 43210, USA

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RESEARCH INTERESTS

Inverse problems in signal processing, imaging, statistics, bioinformatics, and computational neurosicence; optimization algorithms and theory; computational harmonic analysis; applied probability and statistics.

CURRENT APPOINTMENT

Assistant Professor, Ohio State University 2018–Present
Department of Electrical and Computer Engineering

PROFESSIONAL EXPERIENCE

Research Engineer II, Georgia Institute of Technology 2016–2018
School of Electrical and Computer Engineering, Mentor: Justin Romberg

Visiting Researcher, Korea Advanced Institute of Science & Technology 2015–2016
Department of Bio & Brain Engineering

Visiting Assistant Professor, University of Illinois at Urbana-Champaign 2014–2015
Department of Statistics

Visiting Lecturer, University of Illinois at Urbana-Champaign 2014
Department of Electrical and Computer Engineering

Postdoctoral Research Associate, University of Illinois at Urbana-Champaign 2012–2014
Coordinated Science Laboratory, Mentor: Yoram Bresler

Senior Research Engineer, LG Electronics 2004–2006
Mobile Multimedia Laboratory

Member of Engineering Staff, Electronics Telecommunications Research Institute 2002–2004
Computer Software Laboratory

EDUCATION

Ph.D. Electrical and Computer Engineering, 2012
University of Illinois at Urbana-Champaign, Urbana, IL
- Thesis Topic: *Efficient and guaranteed algorithms for sparse inverse problems*
- Advisor: Yoram Bresler, Co-Adviser: Marius Junge

M.S. Electrical Engineering and Computer Science, 2002
Seoul National University, Seoul, Republic of Korea
- Thesis Topic: *A new postprocessing algorithm based on regression functions*
- Advisor: Taejeong Kim, Co-Adviser: Dong Sik Kim

B.S. Electrical Engineering, 2000
Seoul National University, Seoul, Republic of Korea

PAPERS IN PREPARATION

M. Kalra, M. Ferreira Da Costa, and K. Lee, "Perturbation analysis of spike deconvolution," will be submitted to Journal of Fourier Analysis and Applications in March, 2025.

S. Kim, H. Kanj, and K. Lee, "Robust max-affine regression," (short version presented at SAIM Conference on Mathematics of Data Science, Atlanta GA, 2024).

PREPRINTS

H. Kanj and K. Lee, anonymously submitted to International Conference on Machine Learning, under review.

H. Kanj, S. Kim, and K. Lee, "Variable Selection in Convex Piecewise Linear Regression", submitted to SIAM Journals on Mathematics of Data Science, under review, https://arxiv.org/abs/2411.02225.

J. Gabet, M. Kalra, M. Ferreira Da Costa, and K. Lee, "Global Convergence of ESPRIT with Preconditioned First-Order Methods for Spike Deconvolution," submitted to International Conference on Sampling Theory and Applications (SampTA) 2025, under review, http://arxiv.org/abs/2502.08035.

REFEREED JOURNAL PUBLICATIONS

S. Kim and K. Lee, "Implicit Regularization: Robust Phase Retrieval via an unconstrained Gauss-Newton Method," *IEEE Transactions on Signal Processing*, vol. 73, pp. 40-54, 2024.

M. Kalra and K. Lee, "Stable estimation of pulses of unknown shape from multiple snapshots via ESPRIT," *IEEE Transactions on Signal Processing*, vol. 72, pp. 2637-2648, May 2024.

S. Kim and K. Lee, "Max-affine regression via first-order methods," *SIAM Journal on Mathematics of Data Science*, vol. 6, Issue 2, 2024.

S. Kim, S. Bahmani, and K. Lee, "Max-Linear Regression by Convex Programming," *IEEE Transactions on Information Theory*, vol. 70, no. 3, pp 1897–1912, 2024.

R.S. Srinivasa, S. Kim, K. Lee, "Sketching low-rank matrices with a shared column space by convex programming, " *IEEE Journal on Selected Areas on Information Theory*, vol. 4, pp. 54-60, 2023.

K. Lee and D. Stöger, "Randomly Initialized Alternating Least Squares: Fast Convergence for Matrix Sensing," *SIAM Journal of Data Science*, vol. 5, no. 3, pp 774-799, 2023.

K. Lee, R.S. Srinivasa, M. Junge, J. Romberg, "Approximately low-rank recovery from noisy and local measurements by convex program," *Information and Inference*, vol. 12, no. 3, 2023.

S. Bahmani and K. Lee, "Low-Rank Matrix Estimation From Rank-One Projections by Unlifted Convex Optimization," *SIAM Journal on Matrix Analysis and Applications*, vol. 42, no. 3, pp 1119–1147, 2021.

M. Junge and K. Lee, "Generalized notion of sparsity and restricted isometry property. Part II: Applications," *Journal of Fourier Analysis and Applications*, vol. 27, no. 12, 2021.

N. Tian, K. Lee, J. Romberg, N. Durofchalk, and K. Sabra, "Blind deconvolution of sources of opportunity in ocean waveguides using bilinear channel models," *The Journal of the Acoustical Society of America*, vol. 148, no. 4, pp. 2267–2279, 2020.

S. Mulleti, K. Lee, and Y. Eldar, "Identifiability Conditions for Compressive Multichannel Blind Deconvolution," *IEEE Transactions on Signal Processing*, vol. 68, no. 7, pp 4627–4642, 2020.

K. Lee, S. Bahmani, Y. Eldar, and J. Romberg, "Phase retrieval of low-rank matrices by anchored regression," *Information and Inference*, Feb. 2020.

M. Junge and K. Lee*, "Generalized notion of sparsity and restricted isometry property. Part I: A unified framework," *Information and Inference*, Feb. 2019 (∗**corresponding author**).

Y. Li, K. Lee, and Y. Bresler, "Blind gain and phase calibration via sparse spectral methods," *IEEE Transactions on Information Theory*, vol. 65, no. 5, pp. 3097–3123, 2018.

K. Lee, F. Krahmer, and J. Romberg, "Spectral methods for passive imaging: Non-asymptotic performance and robustness," *SIAM Journal on Imaging Science*, vol. 11, no. 3, pp. 2110–2164, 2018.

K. Lee, Y. Li, K.H. Jin, and J.C. Ye, "Unified theory for recovery of sparse signals in a general transform domain," *IEEE Transactions on Information Theory*, vol. 64, no. 8, pp. 5457–5477, Aug. 2018.

K. Lee, N. Tian, and J. Romberg, "Fast and guaranteed blind multichannel deconvolution under a bilinear system model," *IEEE Transactions on Information Theory*, vol. 64, no. 7, pp.4792–4818, Jul. 2018.

K. Lee, Y. Wu, and Y. Bresler, "Near optimal compressed sensing of a class of sparse low-rank matrices via sparse power factorization," *IEEE Transactions on Information Theory*, vol. 64, no. 3, pp. 1666-1698, Mar. 2018.

Y. Li, K. Lee, and Y. Bresler, "Identifiability and stability in blind deconvolution under minimal assumptions," *IEEE Transactions on Information Theory*, vol. 63, no. 7, pp. 4619-4633, Jul. 2017.

Y. Li, K. Lee, and Y. Bresler, "Identifiability in bilinear inverse problems with applications to subspace or sparsity-constrained blind gain and phase calibration," *IEEE Transactions on Information Theory*, vol. 63, no. 2, pp. 822-842, Feb. 2017.

K. Lee, Y. Li, M. Junge, and Y. Bresler, "Blind recovery of sparse signals from subsampled convolution," *IEEE Transactions on Information Theory*, vol. 63, no. 2, pp. 802-821, Feb. 2017.

J.C. Ye, J.M. Kim, K.H. Jin, and K. Lee, "Compressive sampling using annihilating filter-based low-rank interpolation," *IEEE Transactions on Information Theory*, vol. 63, no. 2, pp. 777-801, Feb. 2017.

Y. Li, K. Lee, and Y. Bresler, "Optimal sample complexity for blind gain and phase calibration," *IEEE Transactions on Signal Processing*, vol. 64. no. 21, pp. 5549-5556, Nov. 2016.

Y. Li, K. Lee, and Y. Bresler, "Identifiability in blind deconvolution with subspace or sparsity constraints," *IEEE Transactions on Information Theory*, vol. 62, no. 7, pp. 1-10, Jul. 2016.

K. Lee, Y. Bresler, and M. Junge, "Oblique pursuits for compressed sensing," *IEEE Transactions on Information Theory*, vol. 59, no. 9, pp. 6111-6141, Sep. 2013.

K. Lee, Y. Bresler, and M. Junge, "Subspace methods for joint sparse recovery," *IEEE Transactions on Information Theory*, vol. 58, no. 6, pp. 3613-3641, Jun. 2012.

K. Lee and Y. Bresler, "ADMiRA: Atomic decomposition for minimum rank approximation," *IEEE Transactions on Information Theory*, vol. 56, no. 9, pp. 4402-4416, Sep. 2010.
(Correction: *IEEE Transactions on Information Theory*, vol. 59, no.7, pp. 4730-4732, Jul. 2013.)

D.S. Kim and K. Lee, "Block-coordinate Gauss-Newton optimization and constrained monotone regression for image registration in the presence of outlier objects," *IEEE Transactions on Image Processing*, vol. 17, no. 5, pp. 798-810, May 2008.

K. Lee, D.S. Kim, and T. Kim, "Regression-based prediction for blocking artifact reduction in JPEG-compressed images," *IEEE Transactions on Image Processing*, vol. 14, no. 1, pp. 36-48, Jan 2005.

T.Y. Kim, H. Choi, K. Lee, and T. Kim, "An asymmetric watermarking system with many embedding watermarks corresponding to one detection watermark," *IEEE Signal Processing Letters*, vol. 11, no. 3, pp. 375-377, Mar. 2004.

H. Choi, K. Lee, and T. Kim, "Transformed-key asymmetric watermarking system," *IEEE Signal Processing Letters*, Vol. 11, Issue 2, pp. 251–254, Feb. 2004.

J.L. Kim, K. Lee, and T. Kim, "Adaptive reconstruction for embedded quantisation," *IEE Electronics Letters*, Vol. 38, Issue 18, pp. 1065–1067, Aug. 2002.

CONFERENCE PUBLICATIONS

H. Kanj, S. Kim, and K. Lee, "Variable Selection for Max-Affine Regression via Sparse Gradient Descent," IEEE Sensor Array and Multichannel (SAM) 2024 Workshop.

M. Kalra, M. Ferreira Da Costa, K. Lee, "Small-Noise Sensitivity Analysis of Locating Pulses in the Presence of Adversarial Perturbation," IEEE Sensor Array and Multichannel (SAM) 2024 Workshop.

S. Kim and K. Lee, "Sequence of Linear Program for Robust Phase Retrieval," IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Seoul, Korea, May 2024.

S. Kim and K. Lee, "Fast max-affine regression via stochastic gradient descent," 59th Annual Allerton Conference on Communication, Control, and Computing, September 2023, Monticello, IL, USA.

M. Kalra and K. Lee, "Stability Analysis of Resolving Pulses of Unknown Shape from Compressive Fourier Measurements," 14th International Conference on Sampling Theory and Applications (SampTA), July 2023, Yale University, USA.

M. Kalra, K. Lee, and Y. Bresler, "Identification of Pulse Streams of Unknown Shape from Time Encoding Machine Samples," IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Singapore, May 2022.

S. Mulleti, K. Lee, and Y.C. Eldar, "Sub-Nyquist Multichannel Blind Deconvolution," IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), May 2021, Toronto, Canada.

S. Zhao, L. Potter, K. Lee, and R. Ahmad, "Convolutional Framework for Accelerated Magnetic Resonance Imaging, " IEEE International Symposium on Biomedical Imaging (ISBI), April 2020.

R.S. Srinivasa, K. Lee, M. Junge, and J. Romberg, "Decentralized sketching of low rank matrices," Advances in Neural Information Processing Systems (NeurIPS), December 2019, Vancouver, Canada.

K. Lee, R.S. Srinivasa, M. Junge, and J. Romberg, "Entropy Estimates on Tensor Products of Banach Spaces and Applications to Low-Rank Recovery," 13th International Conference on Sampling Theory and Applications (SampTA), July 2019, Bordeaux, France.

S. Bahmani and K. Lee, ""Matrix "Desketching": Unlifted but Convex,' Signal Processing with Adaptive Sparse Structured Representations (SPARS) workshop, July 2019, Toulouse, France.

K. Lee, F. Krahmer, and J. Romberg, "An eigen approach to stable multichannel blind deconvolution under an FIR subspace model," 12th International Conference on Sampling Theory and Applications (SampTA).

Y. Li, K. Lee, and Y. Bresler, "Blind gain and phase calibration for low-dimensional or sparse signal sensing via power iteration," 12th International Conference on Sampling Theory and Applications (SampTA).

Y. Li, K. Lee, and Y. Bresler, "Blind deconvolution with sparsity: optimal identifiabiliy conditions and efficient recovery," Asilomar Conf. Signals, Systems, and Computers, 2016.

Y. Li, K. Lee, and Y. Bresler, "Optimal sample complexity for stable matrix recovery," IEEE International Symposium on Information Theory (ISIT), Barcelona, Spain, Jul., 2016.

V. B. Krishna, K. Lee, G. A. Weaver, R. K. Iyer, W. H. Sanders, "F-DETA: A framework for detecting electricity theft attacks in smart grids," 46th Annual IEEE/IFIP International Conference on Dependable Systems and Networks, 2016.

Y. Li, K. Lee, and Y. Bresler, "Identifiability of blind deconvolution with subspace or sparsity constraints," Signal Processing with Adaptive Sparse Structured Representations (SPARS) 2015 (**best student paper award**).

K. Lee, Y. Li, M. Junge, and Y. Bresler, "Stability in blind deconvolution of sparse signals and reconstruction by alternating minimization," 11th International Conference on Sampling Theory and Applications (SampTA), 2015.

Y. Li, K. Lee, and Y. Bresler, "Uniqueness in bilinear inverse problems with applications to subspace and joint sparsity models", 11th International Conference on Sampling Theory and Applications (SampTA), 2015.

K. Lee, Y. Bresler, and M. Junge, "Oblique pursuits for compressed sensing with random anisotropic measurements," IEEE International Symposium on Information Theory (ISIT), Istanbul, Turkey, Jul. 2013.

K. Lee and Y. Bresler, "Subspace-augmented MUSIC for joint sparse recovery with any rank," Sensor Array and Multichannel Signal Processing Workshop (SAM), Israel, Oct. 2010.

K. Lee and Y. Bresler, "Efficient and guaranteed rank minimization by atomic decomposition," IEEE International Symposium on Information Theory (ISIT), Seoul, Korea, Jun. 2009.

K. Lee and Y. Bresler, "Computing performance guarantees for compressed sensing," IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Las Vegas, NV, Apr. 2008.

D.S. Kim and K. Lee, "Constrained monotone regression and outlier detection for searching occlusion objects," Asilomar Conference on Signals, Systems and Computers, Pacific Grove, CA, Nov. 2007.

D.S. Kim and K. Lee, "Block-coordinate Gauss-Newton regression method for image registration with efficient outlier detection," International Conference on Image Processing (ICIP), San Antonio, TX, Sep. 2007.

D.S. Kim, K. Lee, K.E. Lee, S.S. Han, "Joint optimization of spatial registration and histogram compensation for microscopic images," IEEE Engineering in Medicine and Biology Society (EMBS), New York City, Aug. 2006.

M. Boutin, K. Lee, and M. Comer, "Lossless shape representation using invariant statistics: the case of point-sets," Asilomar Conference on Signals, Systems and Computers, Pacific Grove, CA, Oct. 2006.

D.S. Kim, S.Y. Lee, and K. Lee, "Joint optimization of image registration and comparametric exposure compensation based on the Lucas-Kanade algorithm," International Conference on Pattern Recognition, Hong Kong, Aug. 2006.

D.S. Kim, S.Y. Lee, and K. Lee, "Empirical conditional mean: nonparametric estimator for comparametric Exposure Compensation," IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Toulouse, France, May 2006.

K. Lee, D.S. Kim, T. Kim, and K.A. Moon, "EM estimation of scale factor for quantization-based audio watermarking," International Workshop on Digital-forensics and Watermarking, Seoul, Korea, Oct. 2003 (**best paper award**).

T.Y. Kim, T. Kim, and K. Lee, "Generation of embedding watermark signals from reference watermark of the detector," IEEE International Symposium on Circuits and Systems (ISCAS), Bangkok, Thailand, May 2003.

K. Lee, D.S. Kim, and K.A. Moon, "Amplitude-modification resilient watermarking based on A-law companding," International Conference on Image Processing (ICIP), Barcelona, Spain, Sep. 2003.

D.S. Kim and K. Lee, "Training sequence size in clustering algorithms and averaging single-particle images," International Conference on Image Processing (ICIP), Barcelona, Spain, Sep. 2003

K. Lee, D.S. Kim, and T. Kim, "A new postprocessing algorithm based on regression functions," IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Orlando, FL, May 2002.

WORKSHOP PRESENTATIONS AND POSTERS

Tensor-norm approaches to low-rank matrix recovery by convex program. 10th International Congress on Industrial and Applied Mathematics, Tokyo, Japan, 2023.

Convex relaxation of low-rank operators by tensor products of Banach spaces and its application to inverse problems, INFORMS Annual Meeting, Nov 2020.

Convex optimization for low-rank recovery by tensor product norms, IMA Workshop on Computational Imaging, Minneapolis, October 2019 (poster).

Theory and algorithms for processing data with sparse and multilinear structure, 2017 Joint PI Meeting: NSF BIGDATA and Big Data Hubs & Spokes, Washington DC, Mar 2017 (poster).

A nonconvex optimization method for multichannel blind deconvolution with sparsity channel models, International BASP Frontiers workshop, Villars-sur-Ollon, Switzerland, Feb 2017.

Fast and guaranteed multichannel blind deconvolution under a bilinear channel model, IEEE Information Theory Workshop (ITW), Cambridge, UK, Sep 2016.

Theory and algorithms for processing data with sparse and multilinear structure, 2016 NSF BIGDATA PI Meeting, Arlington, VA, Apr 2016 (poster).

Sparse power factorization: A computationally efficient solution to sparse bilinear inverse problems with a performance guarantee, Workshop on Information Theory and Applications (ITA), San Diego, CA, Feb 2014.

Performance of jointly sparse support recovery in compressed sensing, Workshop on Information Theory and Applications (ITA), San Diego, CA, Jan 2011.

Subspace methods for joint sparse recovery in compressed sensing, Workshop on Information Theory and Applications (ITA), San Diego, CA, Jan 2011.

Compressive sensing of low-rank matrices, CSL student conference, Urbana, IL, 2010.

Selecting good Fourier measurements for compressive sensing, SIAM Conference on Imaging Science, San Diego, CA, Jul 2008.

INVITED TALKS

Tensor-Norm Approaches to Low-Rank Matrix Recovery by Convex Program (ICIAM, Tokyo, Japan, August 2023; CWRU MAMS Colloquium, April, 2023; MSU CMSE Colloquium, March, 2023).

Regularization for Inverse Problems in Imaging: A Unifying Perspective (NT RIPS, September, 2019; fNIRS Seminar, November 2019).

Near optimal performance guarantees for phase retrieval of low-rank matrices, SIAM Annual Meeting, Portland, OR, Jul 2018.

Phase retrieval of low-rank matrices, The Seventh International Conference on Computational Harmonic Analysis, Nashville, TN, May 2018.

Model-based multichannel blind deconvolution: Mathematical analysis and nonconvex optimization algorithms, Applied and Computational Mathematics Seminar, Georgia Tech, Jan 2018.

Statistical blind deconvolution of underwater acoustics channels: Non-convex optimization algorithms and performance analysis, Statistics Seminar, University of Illinois at Urbana-Champaign, Oct 2017.

Generalized notions of sparsity and restricted isometry property: A unified framework and applications

- Operator Algebra Seminar, University of Illinois at Urbana-Champaign, Oct 2017.
- Computational Analysis Seminar, Vanderbilt University, Nashville, TN, Oct 2017.
- Applied Harmonic Analysis Seminar, RWTH Aachen University, Germany, Aug 2017.
- EEE Seminar, Imperial College London, UK, Aug 2017.
- Oberseminar, Technical University of Munich, Germany, Jul 2017.

Nonconvex optimization methods for blind deconvolution, Interventional and Diagnostic Radiology Seminar, University of Göttingen, Germany, Aug 2017.

Inference from incomplete data: Beyond linearity and sparsity, EEE Seminar, Imperial College London, UK, Apr 2017.

Nonconvex optimization methods for multichannel blind deconvolution with FIR sparse and subspace channel models, Oberseminar, Technical University of Munich, Germany, Feb 2017.

Bilinear compressed sensing: Theory, algorithms, and applications, EE Seminar, Pohang University of Science and Technology, Korea, Jan 2016.

Compressed sensing of sparse rank-one matrices, ESE Seminar, Washington University in St. Louis, MO, Feb 2014.

PATENTS & APPLICATIONS

J.C. Ye, J.M. Kim, O.K. Lee, Y. Bresler, and K. Lee, "Method and apparatus for compressed sensing with joint sparsity," US patent application, 20120259590.

K. Lee, D.S. Kim, K.A. Moon, Y.H. Suh, "Amplitude-scaling resilient audio watermarking method and apparatus based on quantization," US patent application 20050043830.

K. Lee, D.S. Kim, K.A. Moon, "Apparatus and method for digital watermarking using nonlinear quantization," US patent application 20050137876.

TECHNICAL REPORTS

K. Lee, E. Yarkony, and Y. Bresler, "Subsampled multichannel blind deconvolution using sparse power factorization," *CSL Technical Report UILU-ENG-13-2207*, University of Illinois, Sep. 2013.

GRANTS

- Principal Investigator, "Intergrative analysis of behavioral and neural data for decision-making via multi-modal learning," CBI Pilot Award, $50,000, 2025.
- Principal Investigator, "DAGSI Fellowship for Noah Levine, " Defense Associated Graduate Student Innovators Fellowship Award," $68,286, 2024 (renewable up to three years).
- Principal Investigator, "Principled optimization approaches to acquisition and analysis of single-cell RNA sequencing data," CBI Pilot Award, $25,000, 2024.
- Principal Investigator, "Efficient Inverse Phase II Search," AFRL/DEC, $68,000, 2022–2023.
- Principal Investigator, "Efficient Inverse Phase Search," AFRL/DEC, $50,000, 2022–2023.

- Principal Investigator, "CAREER: Nonlinear Models and Regularization for Infinite-Dimensional Inverse Problems," NSF CCF 19-43201, $530,877, 2020–2025.
- Co-Principal Investigator, "CIF:Small:Model-Based Blind Demixing for Signal Processing and Machine Learning," NSF CCF 17-18771, $499,703, 2017–2020 (Subaward to The Ohio State University).
- Co-Principal Investigator, "BIGDATA: F: DKA: CSD: DKM: Theory and Algorithms for Processing Data with Sparse and Multilinear Structure," NSF IIS 14-47879, $949,011, 2014–2017 (Subaward 2014-07138-01 to Georgia Institute of Technology).

AWARDS

Research

- Lumley Research Award 2024
- Co-advisor of the best student paper award in SPARS 2015
- Best paper award in the 2nd international workshop on the digital watermarking, 2003
- Bronze prize in the 7th Samsung Humantech paper prize, 2001

Teaching

- FY 2018 research faculty teaching fellow, office of the executive vice president for research at Georgia Institute of Technology
- List of teachers ranked excellent by their students (Summer 2014), center for innovation for teaching & learning at the University of Illinois at Urbana-Champaign

Scholarship

- Graduate study scholarship by electric power industry technology evaluation and planning, 2007–2008

TEACHING EXPERIENCE

The Ohio State University

- ECE 3050: Signals and Systems, Autumn 2018, Autumn 2019, Autumn 2020
- ECE 5200: Introduction to Digital Signal Processing; Spring 2022, Autumn 2022, Autumn 2023, Autumn 2024
- ECE 6202: Stochastic Signal Processing, Spring 2019, Spring 2021, Spring 2025
- ECE 8201: High Dimensional Probability, Spring 2020, Spring 2024

Georgia Institute of Technology

- ECE 4813B: Mathematical Foundations of Data Science, Spring 2018.

University of Illinois at Urbana-Champaign

- ECE 310: Digital Signal Processing, Summer 2014.
- STAT 410: Statistics and Probability II, Fall 2014, Spring 2015.
- STAT 391: Honors Individual Study, Fall 2014, Spring 2015.
- STAT 542: Statistical Learning, Spring 2015.

ADVISING AND MENTORING

Alumni

- Seonho Kim: PhD ECE OSU, 2019–2024, now with KLA, Ann Arbor
- Alexander Thieken: MS ECE OSU, 2019–2021, now with Applied Physics Laboratory

Current Graduate Students

- Xuerong Wang: Statistics OSU, Autumn 2023–Present
  co-advisee with Professor Yoonkyung Lee
- Haitham Kanj: ECE OSU, Autumn 2023–Present
- Noah Levine: ECE OSU, Autumn 2023–Present
- Meghna Kalra: ECE OSU, Autumn 2021–Present
- Charles Berdanier: ECE OSU, 2021–Present

Former Undergraduate Research

- Meghna Kalra: ECE OSU, Spring 2020–Spring 2021, now PhD student in ECE at OSU
- Alex Thieken: ECE OSU, Spring 2019, now with Applied Physics Laboratory
- Tianyi He: ECE UIUC, Summer 2015, now with Morningstar
- Yi Xuan: Statistic UIUC, Summer 2015, now master student in statistics at Yale
- Michael Wei: Statistics UIUC, Spring 2015, now master student in statistics at Columbia
- Michael Young: Statistics UIUC, Fall 2014, now with Citadel

THESIS COMMITTEE SERVED

Final Defense

- Seonho Kim, , Ohio State University, 2024
- Isaac Zachmann, Ohio State University, 2024
- David Tucker, Ohio State University, 2024
- Ziwei Guan, ECE, Ohio State University, 2023
- Hamza Anwar, ECE, Ohio State University, 2023
- Tushar Agarwal, ECE, Ohio State University, 2022
- Shen Zhao, ECE, Ohio State University, 2022
- Zai Shi, ECE, Ohio State University, 2021
- Burak Civek, ECE, Ohio State University, 2021
- Deniz Sargun, ECE, Ohio State University, 2021
- Chanhuang Wan, Mechanical and Aerospace Engineering, Ohio State University, 2021
- Rakshith Sharma Srinivasa, ECE, Georgia Institute of Technology, 2020
- Dominik Stöger, Applied Mathematics, Technical University of Munich, 2019
- Johanes Maly, Applied Mathematics, Technical University of Munich, 2019
- Haoyu Fu, ECE, Ohio State University, 2019
- Evan Byrne, ECE, Ohio State University, 2019

Candidacy Exam

- Sajjad Akherati, ECE, Ohio State University, 2024
- Zhen Qin, CSE, Ohio State University, 2024
- Connor Jenkins, ECE, Ohio State University, 2024
- Jeffrey Wen, ECE, Ohio State University, 2024
- Syed Murtaza Arshad, ECE, Ohio State University, 2024
- Arti Vedula, ECE, Ohio State University, 2024
- Isaac Zachmann, ECE, Ohio State University, 2023
- Daouda Sow, ECE, Ohio State University, 2023
- Seonho Kim, ECE, Ohio State University, 2023
- Edward Reehorst, ECE, Ohio State University, 2022
- Tushar Agarwal, ECE, Ohio State University, 2022
- Mohamed Naguib Hussein Abdelrazek, ECE, Ohio State University, 2022
- Hamza Anwar, ECE, Ohio State University, 2022
- Ceyhun Deniz Ozkaptan, ECE, Ohio State University, 2021
- Stuart Synakowski, ECE, Ohio State University, 2021
- Burak Civek, ECE, Ohio State University, 2021
- Hassan Taherian, CSE, Ohio State University, 2021
- Shen Zhao, ECE, Ohio State University, 2020
- David Tucker, ECE, Ohio State University, 2020
- Zhe Wang, ECE, Ohio State University, 2020
- Deniz Sargun, ECE, Ohio State University, 2020
- Quianli Feng, ECE, Ohio State University, 2019
- Zhe Wang, ECE, Ohio State University, 2019
- Haoyu Fu, ECE, Ohio State University, 2019
- Cahrles Clum, Mathematics, Ohio State University, 2019
- Changhuang Wan, Aerospace Engineering, Ohio State University, 2019
- Evan Byrne, ECE, Ohio State University, 2019

PROFESSIONAL SERVICE

NSF Review Panel

Graduate School Service at OSU

- University Fellowship, ENGIE-Axium Fellowship, and Patrick S. Osmer fellowship review committees, Sp25.

Department Committee Service at OSU

- Recruiting & Financial Aid Committee, Au18–Sp19
- Seminar Committee, Au19–Sp21
- Graduate Study Committee, Au21–Present

Academic Community Service

- Chair, IEEE Signal Processing Society Columbus Chapter, 2019–Present
- Member, IEEE Computational Imaging Technical Committee, 2019–2024 (Chair of Media & Communication Subcommitee, 2022–2023)

Conference Organization

- Special Session Organizer, Asilomar 2020 & 2021
- Technical Program Committee, ISIT 2022

Referee Service

- *SIAM Journal on Imaging Science*
- *SIAM Journal on Scientific Computing*
- *IEEE Transactions on Information Theory*
- *IEEE Transactions on Signal Processing*
- *IEEE Transactions on Image Processing*
- *IEEE Transactions on Computational Imaging*
- *IEEE Transactions on Communications*
- *IEEE Journal of Selected Topics in Signal Processing*
- *IEEE Journal of Biomedical and Health Informatics*,
- *IEEE Signal Processing Letters*
- *IEEE Signal Processing Magazine*
- *Circuits, Systems & Signal Processing*
- *Advances in Computational Mathematics*
- *Applied and Computational Harmonic Analysis*
- *Linear Algebra and its Applications*
- *Journal of Fourier Analysis and Applications*
- *Annual Allerton Conference on Communication, Control, and Computing (Allerton)*
- *IEEE International Symposium on Information Theory (ISIT)*
- *IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP)*
- *Sampling Theory and Applications (SampTA)*
- *Signal Processing with Adaptive Sparse Structured Representations (SPARS)*
- *Advances in Neural Information Processing Systems (NeurIPS)*
- *International Conference on Machine Learning (ICML)*

CITIZENSHIP

Citizen of USA