

CHUNYANG LIAO

Department of Mathematics, Texas A&M University, College Station, TX, 77843

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ACADEMIC TRAINING

Texas A&M University

Ph.D. Mathematics (Advisor: Simon Foucart)

Sept 2018 - Present

College Station, Texas

Texas A&M University

M.S. Computational Mathematics

Sept 2016 - May 2018

College Station, Texas

Dalian Maritime University

B.S. Applied Mathematics

Sept 2012 - June 2016

Dalian, China

RESEARCH INTERESTS

Mathematical Data Science, Approximation Theory, Optimization, (Deep) Learning Theory

PUBLICATIONS

Journal Publications

1. *Learning from Non-Random Data in Hilbert Spaces: An Optimal Recovery Perspective*
Sampling Theory, Signal Processing, and Data Analysis. Accepted. With S. F., S. Shahrampour, Y. Wang,

Preprints

1. *Optimal Recovery from Inaccurate Data in Hilbert Spaces: Regularize, but what of the Parameter?*
Submitted to Constructive Approximation. With S.F.

PROJECTS

TAMIDS Course Development for MATH 664

June 2021 - Aug 2021

Design numerical illustrations for MATH 664: Topics in Mathematical Data Science. Topics are Machine Learning, Optimal Recovery, Compressive Sensing, Optimization and Neural Networks.

ORAL PRESENTATIONS

Seminars

- *Learning from Non-Random Data in Hilbert Spaces: An Optimal Recovery Perspective*
Graduate Students Seminar, Texas A&M university, College Station, 23 Sept 2020

MISCELLANEOUS CONFERENCES & WORKSHOPS

Poster section:

- *Optimal Recovery from Inaccurate Data in Hilbert Spaces: Regularize, but what of the Parameter?*
4th annual meeting of the SIAM TX-LA Section, South Padre Island, Texas, Nov 5-7, 2021
- *Learning from Non-Random Data in Hilbert Spaces: An Optimal Recovery Perspective*
3rd annual meeting of the SIAM TX-LA Section, College Station, Texas, October 16-18, 2020

Conference Attendance:

- 4th annual meeting of the SIAM TX-LA Section, South Padre Island, TX, Nov 5-7, 2021
- (Virtually) SIAM Annual Meeting, Spokane, Washington, July 19-23 2021
- (Virtually) Workshop on the Theory of Overparameterized Machine Learning (TOPML), April 20-21 2021
- (Virtually) 3rd annual meeting of the SIAM TX-LA Section, College Station, Texas, October 16-18, 2020
- (Virtually) SIAM Conference on Mathematics of Data Science (MDS20), Cincinnati, Ohio, May 4 - June 30 2020
- Concentration Week on Randomness and Determinism in Compressive Data Acquisition, College Station, Texas, July 2019

Summer Schools:

- (Hybrid) Institute for Foundations of Data Science (IFDS) Summer School, Madison, Wisconsin, July 26-30 2021
- (Virtually) Deep Learning Theory Summer School at Princeton, July 27 - Aug 4 2021
- (Hybrid) Gene Golub SIAM Summer school, Muizenberg, South Africa, July 19-30 2021

HONORS AND AWARDS

- 2014 National Scholarship (top 2%), Ministry of Education of China
- 2013 National Scholarship (top 2%), Ministry of Education of China

TEACHING EXPERIENCE

Texas A&M University (2018 -):

- Lab instructor, Topics in Mathematical Data Science (Spring 2022)
- Instructor of Record, Mathematics for Business and Social Sciences (Fall 2021)
- Teaching Assistant, Engineering Mathematics II (Spring 2021, Fall 2019)
- Teaching Assistant, Numerical Analysis (Fall 2020)

ACTIVITIES

- Volunteer & Grader, Texas A&M University High School Mathematics Contest 2016-2019

- Volunteer, Texas A&M University Datathon

2019

PROFESSIONAL MEMBERSHIP

- Texas A&M TRIPODS Research Institute for Foundations of Interdisciplinary Data Science (2020-)
- Society for Industrial and Applied Mathematics (2016-)

ADDITIONAL INFORMATION

- Computer skill: Matlab, Python, R, C, C++, HTML
- Convex optimization packages: CVX (for Matlab), CVXOPT/CVXPY (Python), GUROBI, MOSEK