CHUNYANG LIAO

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ACADEMIC TRAINING

Texas A&M University *Sept 2018 - Present*
Ph.D. Mathematics (Advisor: Simon Foucart) College Station, Texas

Texas A&M University *Sept 2016 - May 2018*
M.S. Computational Mathematics College Station, Texas

Dalian Maritime University *Sept 2012 - June 2016*
B.S. Applied Mathematics Dalian, China

RESEARCH INTERESTS

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

PUBLICATIONS

Journal Publications

2. *Optimal Recovery from Inaccurate Data in Hilbert Spaces: Regularize, but what of the Parameter?* Constructive Approximation. Accepted. With S. Foucart

1. *Learning from Non-Random Data in Hilbert Spaces: An Optimal Recovery Perspective* Sampling Theory, Signal Processing, and Data Analysis, 20, 5, 2022. With S. Foucart, S. Shahrampour, Y. Wang

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

Conferences

- *Optimal Recovery from Inaccurate Data in Hilbert Spaces: Regularize, but what of the Parameter?*

  1. 2022 Summer Informal Regional Functional Analysis Seminar (SUMIRFAS), Texas A&M University, College Station, July 29-31, 2022.

  2. 2022 SIAM Annual Meeting, Pittsburgh, Pennsylvania, July 11-15, 2022.

Seminars

- *Optimal Recovery in the age of Data Science.* Gathering in Graduate Expository Mathematics (GIG'EM), Texas A&M university, College Station, 23 April 2022
- *Optimal Recovery in Hilbert Spaces from Exact or Inaccurate data.* Center of Approximation and Mathematical Data Analytics (CAMDA), Texas A&M university, College Station, 23 Feb 2022
- *Computational Optimal Recovery in Hilbert Spaces.* Graduate Students Seminar, Texas A&M university, College Station, 17 Feb 2022
- *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:

- (remote) SIAM Annual Meeting, Spokane, Washington, July 19-23 2021
- (remote) Workshop on the Theory of Overparameterized Machine Learning (TOPML), April 20-21 2021
- (remote) 3rd annual meeting of the SIAM TX-LA Section, College Station, Texas, October 16-18, 2020
- (remote) 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
- (remote) 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 (Matlab), CVXOPT/CVXPY (Python), GUROBI, MOSEK