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

Preprints

2. S.F. and **C.Liao**, Optimal Recovery from Inaccurate Data in Hilbert Spaces: Regularize, but what of the Parameter?, submitted.

1. S.F., **C. Liao**, S. Shahrampour, and Y. Wang, *Learning from Non-Random Data in Hilbert Spaces: An Optimal Recovery Perspective*, submitted.

PROJECTS

TAMIDS Course Development for MATH 664 *June 2021 - Aug 2021*
I help Dr.Simon Foucart to write computational illustrations accompanying his book Mathematical Pictures at a Data Science Exhibition, which is also the textbook for MATH 664: Topics in Mathematical Data Science. The topics of this computational illustrations are Machine Learning, Optimal Recovery, Compressive Sensing, Optimization and Neural Networks.

ORAL PRESENTATIONS

- *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, TX, 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, Texas A&M University, College Station, 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, Texas A&M University, College Station, October 16-18, 2020
- (Virtually) SIAM Conference on Mathematics of Data Science (MDS20), Cincinnati, Ohio, May 4 - June 30 2020
- Conference on Advances In Data Science Theory, Methods and Computation, Texas A&M University, September 2019
- Concentration Week on Randomness and Determinism in Compressive Data Acquisition, Texas A&M University, July 2019
- 3rd Texas A&M Big Data Workshop-Data Driven Discovery, Texas A&M University, April 2018

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

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

TEACHING EXPERIENCE

Texas A&M University (2018 -):

- 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 package), GUROBI, MOSEK