

Rachel A. Ward

rward@math.utexas.edu

PMA (RLM) 10.144, Dept. of Mathematics and Oden Institute for Computational Engineering Sciences,
University of Texas at Austin, Austin, TX 78712-1199

Professional Experience

W. A. "TEX" MONCRIEF DISTINGUISHED PROFESSOR IN COMPUTATIONAL ENGINEERING AND SCIENCES – DATA SCIENCE University of Texas at Austin, Oden Institute for Computational Engineering Sciences	March 2019 -
VISITING RESEARCH SCIENTIST, Facebook AI Research, New York, New York	2017 - 2018
ASSOCIATE PROFESSOR University of Texas at Austin, Department of Mathematics	2016 - 2020
ASSISTANT PROFESSOR University of Texas at Austin, Department of Mathematics	2011 - 2016
NSF POSTDOCTORAL FELLOW Courant Institute New York University	2009-2011

Education

PHD IN APPLIED AND COMPUTATIONAL MATHEMATICS, Princeton University	Sept. 2009
BS IN MATHEMATICS, University of Texas at Austin	May 2005

Research Interests

I am an applied mathematical analyst. I am broadly interested in the analysis of algorithms for acquiring and extracting structure from large data sets. My current work is focused on applications to statistical machine learning, optimization, numerical linear algebra, and dynamical systems.

Awards and Honors

Simons Fellow in Mathematics	2020
von Neumann Fellowship, Institute for Advanced Study	2019
2016 Recipient of IMA Prize in Mathematics and its Applications	2016
ICES Grand Challenge Faculty Award	Fall 2015
NSF CAREER Award	2013 - 2018
AFOSR Young Investigator Award (YIP)	2013-2016
Alfred P. Sloan Fellowship	2012
Harrington Faculty Fellowship, UT Austin	2011-2012
NSF Mathematical Sciences Postdoctoral Research Fellowship	2009-2011

Current Funding

NSF Award 1952735 for FRG Collaborative Research Randomized Algorithms for Solving Linear Systems PI: Gunnar Martinsson	08/2020 – 08//2023 Total award: \$677,000
AFOSR MURI Award Title: “Verifiable, Control-Oriented Learning on the Fly ” PI: Ufuk Topcu	8/01/18 – 8/01/23 Total award: \$7,5000,000
2019 NSF TRIPODS Award Title: “UT Institute for the Foundations of Data Science” PI: Sujay Sanghavi	10/1/2019 – 10/1/22 Total award: \$1,500,000

Selected Invited Plenary Lectures

Israeli-American Kavli Frontiers of Science Symposium, Jerusalem, Israel, September 2019.
SIAM Conference on Computational Science and Engineering, Spokane, Washington, February 2019.
21st Conference of the International Linear Algebra Society (ILAS), Iowa State University, July 2017.
12th International Conference on Sampling Theory and Applications, Tallinn, Estonia, July 2017
Fifth International Conference on Continuous Optimization, Tokyo, Japan, August 2016
Time-Frequency Analysis and Related Topics, Strobl, Austria, June 2016
Compressed Sensing and its Applications, Berlin, Germany, December, 2015.
Fifteenth Riviere-Fabes Symposium, Minneapolis, MN, April 2012.

Selected Service

Editorial Board: Information and Inference, SIAM Journal on Mathematics of Data Science, Mathematical and Scientific Machine Learning (MSML)

Scientific Advisory Board: ICERM (2020-2023), PIMS (2020-2023).

Other

Patents: US Patent No. 8, 967, 481 “Symbol-based decoding of optical codes,”
(with Mark Iwen and Fadil Santosa), Issued March 3, 2015.

Consulting:

- Facebook AI Research, 2018- 2019
- Applied Research Laboratories, the University of Texas at Austin, 2012-2013