

# Rachel A. Ward

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

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## Professional Experience

ASSOCIATE PROFESSOR University of Texas at Austin, Department of Mathematics	Sept. 2016 -
VISITING RESEARCH SCIENTIST, Facebook AI Research, New York, New York	Sept. 2017 - June 2018
ASSISTANT PROFESSOR University of Texas at Austin, Department of Mathematics	Sept. 2011 -
NSF POSTDOCTORAL FELLOW Courant Institute New York University	2009-2011
RESEARCH ASSISTANT Program for Applied and Computational Mathematics, Princeton University Advisor: Ingrid Daubechies	2005-2009

## 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 was trained in applied and computational harmonic analysis and approximation theory, and much of my research has been in compressive sensing theory. More recently, I am interested in statistical machine learning and optimization.

## Grants

### Current Funding

AFOSR MURI Award Title: “Verifiable, Control-Oriented Learning on the Fly ”	8/01/18 – Total award estimate: \$900,000
NSF CAREER Award Title: “Sparsity-aware sampling theorems and applications ”	7/01/13 - 6/30/19 Total award: \$443,905

### Previous Funding

Air Force Young Investigator Award (AFOSR YIP) # FA9550-13-1-0125 Title: “Reliable Function Approximation and Estimation”	3/15/13 - 3/14/16 Total award: \$359,796
ICES Grand Challenge Faculty Award	9/01/15 - 1/01/16 Total award: \$75,000
Alfred P. Sloan Fellowship	3/15/12 - 3/15/14 Total award: \$50,000
DOD-Navy grant N00014-12-1-0743 Title: “Computer-enabled Hypothesis Testing: Algorithm and Theory”	6/15/12-07/01/15 Total award: \$149,567

## Awards and Honors

2016 Recipient of IMA Prize in Mathematics and its Applications	2016
ICES Grand Challenge Faculty Award	Fall 2015
Invited Participant, Indonesian-American Kavli Frontiers of Science Symposium	2015
NSF CAREER Award (also listed under grants)	2013 - 2018
Alfred P. Sloan Fellowship	2012
Harrington Faculty Fellowship, UT Austin	2011-2012
NSF Mathematical Sciences Postdoctoral Research Fellowship	2009-2011
NSF Graduate Research Fellowship	2005-2008
Barry M. Goldwater Scholarship	2004-2005

## Selected Invited Plenary Lectures

Simons Collaboration on Algorithms and Geometry Annual Meeting, New York, May 2018.  
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.  
American Mathematical Society (AMS) Spring Central Sectional Meeting, Texas Tech University, April 2014.  
Fifteenth Riviere-Fabes Symposium, Minneapolis, MN, April 2012.

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

**Consulting:** Applied Research Laboratories, the University of Texas at Austin, 2012 – 2013