

# Jared W. Tanner

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## Positions

Assistant Professor (Warnock Endowed Chair), University of Utah,  
Department of Mathematics, 06/05 - present

NSF Mathematical Sciences Postdoctoral Fellow, Stanford University,  
Department of Statistics, 06/04 - 06/06

Visiting Assistant Research Professor(VIGRE), University of California, at  
Davis, Department of Mathematics, 07/02 - 06/04.

## Education

University of California, Los Angeles, June 2002  
Ph.D. in Applied Mathematics(Thesis Adviser: Eitan Tadmor)

University of Utah, July 1997  
B.S. in Physics, minors in Chemistry and Mathematics

## Journal Publications

- *Counting faces of randomly-projected polytopes when the projection radically lowers dimension*, submitted J. of the AMS, with David L. Donoho.
- *Sparse Nonnegative Solutions of Underdetermined Linear Equations by Linear Programming*, Proceedings of the National Academy of Sciences (USA), 2005 Vol. 102(27): 9446-9451, with David L. Donoho.
- *Neighborliness of Randomly-Projected Simplices in High Dimensions* Proceedings of the National Academy of Sciences (USA), 2005 Vol. 102(27): 9452-9457, with David L. Donoho.
- *Robust reprojection methods for the resolution of Gibbs phenomenon*, Applied and Computational Harmonic Analysis, 2006 Vol. 20(1): 3-25, with Anne Gelb.
- *Fast reconstruction methods for bandlimited functions from periodic nonuniform sampling*, SIAM J. on Numerical Analysis, 2006 Vol. 44(3): 1073-1094, with Thomas Strohmer.
- *Optimal Filter and Mollifier for Piecewise Smooth Spectral Data*, Mathematics of Computation, 2006 Vol. 75(254): 767-790.
- *Adaptive Filters for Piecewise Smooth Spectral Data*, IMA J. of Numerical Analysis, 2005 Vol. 25(4): 635-647, with Eitan Tadmor.
- *Implementations of Shannon's sampling theorem, a time-frequency approach*, Sampling Theory in Signal and Image Processing, 2005 Vol. 4(1): 1-17, with Thomas Strohmer.
- *Adaptive Mollifiers - High Resolution Recovery of Piecewise Smooth Data from its Spectral Information*, Journal on Foundations of Computational Mathematics, 2002 Vol. 2: 155-189, with Eitan Tadmor.

## Proceedings

- *Fast reconstruction algorithms for periodic nonuniform sampling with applications to time-interleaved ADCs*, Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing April, 2007, with Thomas Strohmer.
- *Thresholds for the Recovery of Sparse Solutions via  $\ell_1$  Minimization*, Proceedings of the IEEE Conference on Information Sciences and Systems; March, 2006, with David L. Donoho.
- *An Adaptive Order Godunov Type Central Scheme*, "Hyperbolic Problems: Theory, Numerics, Applications" Proceedings of the 9th International Conference in Pasadena, March. 2002 (T. Hou and E. Tadmor, eds.), Springer, 2003: 871-880, with Eitan Tadmor.

## Prizes, Honors, and Awards—Selected

Sloan Research Fellow in Science and Technology, 2007-2009  
Monroe H. Martin Prize (Applied Math.), IPST - U. of Maryland College Park, 2005  
NSF Postdoctoral Fellowship in the Mathematical Sciences, 06/04-06/06  
Fox Prize (Numerical Analysis), University of Cambridge, First Place, 2003  
Research Assistant/Fellow, UCLA, Dept. of Math., 3/98 - 6/98, 7/99 - 6/00  
Physics Department Teaching Award, University of Utah, June, 1997  
Outstanding Undergraduate in Physics, University of Utah, June, 1997

## Colloquium and Seminar Talks

**2007:** International U. Bremen, U. of Edinburgh  
**2006:** Arizona State U., Brown U., U. of Maryland College Park, U. of Cambridge, U. of Oxford.  
**2005:** Paris VI, U. of Cambridge, Warwick University, U. of Oxford, Stanford U.  
**2004:** U. of Maryland College Park, U. of Calgary, U. of British Columbia, Simon Frasier U., U. of Utah, U. of Wisconsin Madison, U. of California Davis, Rice U., California Institute of Technology  
**2003:** U. of South Carolina, Brown U., U. of Novi Sad(Serbia), U. of Vienna, U. of Cambridge,  
**2002:** U. of California Davis, Stanford U.  
**2001:** Lawrence Livermore National Labs, U. of California Los Angeles

## Invited Conference/Workshop Talks

Workshop: Nonlinear and Adaptive Approximation in High Dimensions, Bad Honnef Germany, Dec. 10-15, 2007.  
Twentieth Annual Pacific Northwest Numerical Analysis Seminar, British Columbia, Sept. 30, 2006.  
Sampling Theory and Application(SampTA05), Samsun Turkey, July 10-15 , 2005.  
5th Bay Area Scientific Computing Day, LL-Berkeley Labs, March 13, 2004.

## **Professional Experiences**

- Organizing committee for the 2007 AMS Von Neumann Symposium - Sparse Representations and High Dimensional Geometry.
- Organizing committee for IPAM short course May 30 - June 1, 2007 Sparse Representations and High Dimensional Geometry.
- DARPA Analog-to-Information program - with David L. Donoho and HRL
- Referee for: Mathematics of Computation, SIAM J. Numerical Analysis, J. of Fourier Analysis and Appl., Applied and Computational Harmonic Analysis, SIAM J. Scientific Computing, J. of Computational Physics, IMA J. of Numerical Analysis, Foundations of Computational Math., Computing in Science & Engineering, IEEE Transactions on Circuits and Systems I, Applied & Numerical Mathematics, EURASIP J. on Applied Signal Processing, and Electronic J. on Numerical Analysis.
- NSF panel participation for DMS and CCF