

## Awarded Funds

1. *LWIR Compressive Sensing Hyperspectral Imager*, sponsor Physical Sciences, Inc. (DOE Phase I), 5/15/2015-11/15/2014.
2. *Compressed Sensing for Wide Area Chemical and Biological Early Warning*, sponsor Physical Sciences, Inc. (DOD Army Phase I, STTR), 10/7/2013-3/15/2014.
3. *ATD: Detection and Classification of Threats Using Subspace Manifold Geometry*, National Science Foundation. 8/1/2013-7/31/2016.
4. Principal Investigator, *CDS&E-MSS: Algebraic and Geometric Tools and Algorithms for the Analysis of Data Clouds and Large Data Arrays*, National Science Foundation DMS-1228308, 09/01/2012-08/31/2015.
5. Principal Investigator, *Algorithms on Flag Manifolds for Knowledge Discovery in N-way data arrays*, DOD-USAF-Air Force, 09/01/2012-8/31/2015.
6. Principal Investigator, *Mathematics, Physics and Biology – A Multidisciplinary Approach to Modeling Infectious Disease*, Infectious Disease Supercluster, Colorado State University, matching from College of Natural Sciences and Department of Mathematics, 08/01/2012-10/31/2013.
7. Principal Investigator, *Prediction and Control of Sepsis*, Yale University, 10/29/11-9/29/12.
8. Principal Investigator, *ATD: Geometric and Statistical Data Analysis on Special Manifolds for Threat Detection*, National Science Foundation DMS-1120875 10/01/2011-09/30/2012.
9. CO-Principal Investigator, *Visual Intelligence through Latent Geometry and Selective Guidance*, Defense Advance Research Projects Agency 6/23/2010-6/22/2015.
10. Principal Investigator, *ATD: Mathematical Algorithms for Characterizing Spectral Signatures*, National Science Foundation, supplemental award, award date 09/22/10.
11. Principal Investigator, *ATD: Mathematical Algorithms for Characterizing Spectral Signatures*, National Science Foundation, 9/1/09-8/31/12.
12. Principal Investigator, *Optimizing Detection, Characterization, and Classification of Features and Anomalies in Signals*, DOD-NGA-Natl Geospatial-Intelligence, 9/10/08-9/9/11.
13. Principal Investigator, *Classification of Data Bundles via Parameter Spaces*, DOD/AFOSR FA9550-08-1-0166, 04/01/08-11/30/10.
14. Principal Investigator, *Synergistic Mathematics: CSU-PSD*, the Bohemian Foundation, 3/1/07–2/28/08.
15. CO-Principal Investigator, *CMG: Analysis of Transport, Mixing, and Coherent Structures in Hurricane Intensity*, NSF ATM-530884, Funding 10/1/05–9/30/09.

16. Principal Investigator, National Science Foundation *MSPA-MCS: New Tools for Algebraic-Geometric Data Analysis*, 8/15/2004–7/31/2007.
17. CO-Principal Investigator, *Geometric Pattern Analysis and Mental Task Design for a Brain-Computer Interface*, NSF IIS-0208958, Funding 9/15/02–8/15/06.
18. Principal Investigator, *Multiscale Analysis of Vegetation Disease*, United States Forest Service, 8/16/04-7/31/06.
19. Principal Investigator, DOD USAF Office of Scientific Research, Contract # FA9550-04-1-0094, *Geometric, Algebraic and Topological Invariants for Signal and Image Processing*, 2/15/04–2/14/07
20. Principal Investigator, *Face Manifolds for Recognition*, Directorate of Central Intelligence, NMA501-03-BAA-0001, 7/24/03–7/23-05.
21. 2002-2005 Principal Investigator, *A Mathematical Modeling Program for Undergraduates in Science, Mathematics, Engineering & Technology*, NSF DUE-0126650
22. Siemens Corporate Research, Princeton N.J. donation to research program in signal processing 2003.
23. 2000-2003 Principal Investigator, *The Whitney Reduction Network*, National Science Foundation DMS 997330, Funding 8/15/00–7/31/03
24. 2001-2002 Principal Investigator, *Wavelet Analysis for Detecting and Characterizing Landscape-Scale Patterns of Forest Disturbance*, United States Forest Service, 7/30/01-6/1/02
25. IBM proposal: *A Radial Basis Function Approach for Nonlinear Gamut Mapping*
26. 2000-2001 Principal Investigator, *Image Mining of Sensed Data*, Technical Management Concepts, Inc., Funding 10/15/00–9/30/01
27. Principal Investigator, DOD USAF Office of Scientific Research, Contract # F49620-99-1-0034, *A Reductionist Approach to Process Discovery*
28. 2000 Principal Investigator, *Development of a MATLAB Novelty Detection Algorithm*, Honeywell Corporation, 5/15/00–8/15/00
29. 1999-2000 Honeywell, INC: Asset Analysis II
30. 1998-1999 Honeywell Inc, Principal Investigator, *Asset Analysis*.
31. 1996-1999 CO-Principal Investigator National Science Foundation Award DMS-9406144, *A Taylor-Couette Simulator*, Funding: FY1995-1998
32. 1996-1998 Principal Investigator National Science Foundation Award INT-9513880, *U.S.-Germany Cooperative Research on Attractive Invariant Manifolds in High-Dimensional Symmetric Systems*

33. 1993-1996 Principal Investigator National Science Foundation Award ECS-9312092,  
*Low-Dimensional Invariant Coordinate Systems for Dynamic Modeling.*