

Research Grants held by faculty
Department of Mathematics
University of Illinois at Urbana-Champaign

Air Force Office of Sponsored Research:

Yuliy Baryshnikov

“CHASE: Control of Heterogenous Autonomous Sensors for Situational Awareness”

10/1/10-7/31/13

Richard Sowers and Sri Namachchivaya (Aerospace Engineering)

“Dimensional Reduction of Nonlinear Systems with Time-scale Separation”

4/15/08-11/31/12

Alfred P. Sloan Foundation

Bruce Berndt

“Ramanujan’s Lost Notebook”

9/1/11-8/1/12

Alfred P. Sloan Foundation Research Fellowship

Vera Mikyoung Hur

Award pending

National Science Foundation-Special Programs:

Jozsef Balogh

CAREER: “Methods and Outreach in Modern Combinatorics”

2/1/08-1/31/13

Steven Bradlow

RNMS: “Geometric Structures and Representation Varieties”

9/15/11-8/31/16

Steven Bradlow, John D'Angelo, and Randy McCarthy

MCTP: “Research Experience for Graduate Students”

6/1/09-5/31/14

Robert Lee Deville, Zoi Rapti, Ruth Kantorovitz, Michael Dietze (Plant Biology), and Carla Caceres (Animal Biology)

UMB Group: “Biomathematics Research and Training for Undergraduates at the University of Illinois Urbana-Champaign”

9/15/11-8/31/14

Jennifer McNeilly, James Lisy (Chemical Sciences) et al.

“Merit Based Immersion for Students and Teachers: The MIST Model for Increasing STEM Involvement and Graduation”

1/1/07-12/31/12

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Robert Muncaster, Jennifer McNeilly, Gretchen Adams (Chemistry), and Tracey Hickox (School of Integrative Biology)
"Merit Fellows Scholarship Program"
2/15/12-1/31/17

Paul Pollack
Mathematical Sciences Postdoctoral Research Fellowship
8/1/08-7/31/12

Zoi Rapti and Sri Namachchivaya (Aerospace Engineering)
"Decadal Climate Prediction Based on Coupled Ocean-atmosphere Models and Networks of Aerial and Oceanic Sensors"
9/1/10-8/31/12

Mathew Rogers
Mathematical Sciences Postdoctoral Research Fellowship
9/1/08-8/31/12

National Science Foundation-Collaborative:

Robert Lee Deville, Nicole Riemer (Atmospheric Sciences), and Matthew West (Mechanical Science and Engineering)
CMG: "Coarse-graining and Multiscale Analysis of Stochastic Particle-resolved Aerosol Models"
9/1/09-8/31/12

Ely Kerman, Olgica Milenkovic (Electrical and Computer Engineering), and Pierre Moulin (Electrical and Computer Engineering)
CIF: Small: "Nonlinear Matrix and Tensor Completion with Applications in Systems Biology"
7/1/11-6/30/14

Richard Sowers
Collaborative Research: "Explorations in Stochastic Moving Boundary Value Problems"
8/1/07-7/31/12

Richard Sowers and Vinayak Shanbhag (Industrial and Enterprise Systems Engineering)
"Rare systematic risk in markets: Modelling, Theory, and Computation"
9/15/10-8/31/12

National Science Foundation-Individual:

Pierre Albin
"Index Theory Singular Spaces"
9/1/11-8/31/14

Matthew Ando
"Twists of Elliptic Cohomology and K-Theory"
8/15/11-7/31/14

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Jayadev Athreya
"Dynamics of Group Actions on Parameter Spaces"
6/1/11-5/31/14

Jared Bronski
"Eigenvalue and Stability Problems in Applied Mathematics"
7/1/08-6/30/12

John D'Angelo
"Complex analysis and CR geometry"
5/15/08-4/30/12
"Hermitian Forms and CR Geometry"
6/1/11-5/31/14

Nathan Dunfield
"Facets of the Topology and Geometry of 3-Manifolds"
9/1/11-8/31/14

Mehmet Burak Erdogan
"Research in Harmonic Analysis and Partial Differential Equations"
6/1/09-5/31/12
"Research in Harmonic Analysis and Partial Differential Equations"
Award pending

Kevin Ford
"The Distribution of Prime Numbers and Products of Few Primes"
8/1/09-7/31/12

Zoltan Furedi
"Extremal Hypergraphs, Codes, Designs, and Combinatorial Geometry"
6/15/09-5/31/12

Aimo Hinkkanen
"Martingales and Painleve Equations"
6/15/08-5/31/12
"Martingales and Painleve Equations"
7/15/11-6/30/14

Dirk Hundertmark
"Non-linear Equations and Schroedinger Operators"
7/1/08-6/30/12

Mi Kyoung Vera Hur
"Mathematical Aspects of Surface Water Waves"
7/1/10-6/30/13

Sergei Ivanov
"Presentations of Groups by Generators and Defining Relations"
9/1/09-8/31/13

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Marius Junge

“Applications of Operator Algebra Theory to Certain Problems in Analysis”

7/1/09-6/30/12

“Applied Operator Algebra Theory”

Award pending

Ilya Kapovich

“Geodesic Currents on Free Groups and the Outer Space”

9/15/10-8/13/12

Sheldon Katz

“Some Problems in Algebraic Geometry with Connections to String Theory”

5/15/06-4/30/12

Rinat Kedem

“Algebraic and Combinatorial Structures in Integrable Systems”

6/15/08-5/31/12

“Affine Algebra Representations and Discrete Integrability”

6/1/11-5/31/14

Kay Kirkpatrick

“Statistical Mechanics and Applications to PDEs, Condensed Matter, and Biology”

8/15/11-7/31/14

Alexandr Kostochka

“Packings and Contractions of Graphs and Hypergraphs”

6/1/10-5/31/13

Jiri Lebl

“Singularities and Complexity in CR Geometry”

5/1/09-6/30/12

Christopher Leininger

“Geometry, Topology and Group Theory of Surfaces”

9/1/09-8/31/12

Xiaochun Li

“Problems in Harmonic Analysis”

5/15/08-5/31/12

Sergiy Merenkov

“Quasisymmetric Deformations of Topologically Planar Fractal Spaces”

8/1/10-7/31/13

Igor Mineyev

“Flows and Structures on Metric Spaces”

9/15/07-8/31/11

Thomas Nevins

“Algebraic Geometry and Representation Theory in Genus One”

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8/1/08-7/31/12

Zoi Rapti

“Statistical Mechanics Approach to DNA Promoter Prediction”

9/1/07-8/31/12

Charles Rezk

“Homotopy Theory and Higher Categories”

6/1/10-5/31/13

Zhong-Jin Ruan

“Operator Spaces and Locally Compact Quantum Groups”

8/1/09-7/31/12

Henry Schenck

“Combinatorial Commutative Algebra”

8/15/11-7/31/14

Slawomir Solecki

“Ramsey Theory, Dynamics of Polish Groups, and Tukey Functions”

6/15/10-5/31/13

Susan Tolman

“Moment Maps and Morse Theory”

9/1/07-8/31/12

Jeremy Tyson

“Geometric Analysis of Carnot Groups”

8/1/09-7/31/12

Nikolaos Tzirakis

“Nonlinear Dispersive PDE”

8/1/09-7/31/12

Jang Mei Wu

“Quasisymmetric Maps”

7/1/10-6/30/13

Alexander Yong

“Combinatorial and Algebraic Methods in Schubert Geometry”

5/15/09-4/30/12

Alexandru Zaharescu

“Analytic Methods in Number Theory”

8/1/09-7/31/12

Vadim Zharnitsky

“Quasilinear Evolution and Periodic Orbits in Hamiltonian Systems”

6/15/08-5/31/12

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National Science Foundation-Conferences:

Pierre Albin
“Workshop on Spectral Invariants on Non-compact and Singular Spaces”
Award pending

Steve Bradlow
“Program on Geometry and Quantization of Moduli Spaces”
Award pending

Zhong-Jin Ruan
“Wabash Seminar and Miniconference”
2/15/09-1/31/13

Alexander Yong and Henry Schenck
“ALGECOM (Algebra-Geometry-Combinatorics)”
1/12-12/31/14

National Security Agency:

Robert Bauer
“Random Simple Curves on Riemann Surfaces”
7/16/10-7/15/12

Bruce Berndt
“Proving the Claims Made by Ramanujan in His Lost Notebook”
3/28/11-3/27/13

Thomas Nevins
Microlocal Geometry of Noncommutative Algebras
Award pending

Henry Schenck
“Toric Varieties, Hyperplane Arrangements, Splines”
1/1/11-12/31/12

Douglas West
“Extremal Problems in Graph Theory”
3/11/10-3/10/12

Noyce Foundation:

Joseph Miles, Rochelle Gutierrez (Curriculum and Instruction) et al.
“Preparing Excellence and Diversity in Secondary Mathematics Teachers for Illinois' High Needs Schools”
6/1/09-3/31/14

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Office of Naval Research:

Yuliy Baryshnikov
"Applied Configuration Spaces"
1/1/11-12/31/13

Simons Foundation Fellowship:

Jared Bronski
"Stability, Symmetry and Synchrony in the Kuramoto Model"
8/1/12-7/13/13

Nathan Dunfield
"Facets of the Topology and Geometry of 3-Manifolds"
8/1/13-7/31/14

Simons Foundation Collaboration Grant:

Scott Ahlgren
"Number Theory and Modular Form"
7/1/11-8/31/16

Stephanie Alexander
"Alexandrov Geometry and its Applications"
7/1/11-8/31/16

C. Ward Henson
"Model Theory for Metric Structures"
7/1/11-8/31/16

Ely Kerman
"Periodic Orbits of Hamiltonian Flows and Symplectic Rigidity"
7/1/11-8/31/16

Richard Laugesen
"Sharp Analysis of Membrane Eigenvalues, and Frames in Wavelet Theory"
7/1/11-8/31/16

Renming Song
"Markov Processes and Potential Theory"
7/1/11-8/31/16

US Department of Education:

Randy McCarthy and Karen Mortensen
"University of Illinois Mathematics GAANN Fellowship Project"
8/15/09-8/14/12