

# Mathematics

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## Faculty

### Chair

#### John Shareshian

Professor  
PhD, Rutgers University  
Algebraic and topological combinatorics

### Director of Graduate Studies

#### Gregory Knese

Professor  
PhD, Washington University  
Complex function theory; operators; harmonic analysis

### Director of Undergraduate Studies

#### Ari Stern

Professor  
PhD, California Institute of Technology  
Geometric numerical analysis; computational mathematics

### Associate Director of Undergraduate Studies

#### Blake Thornton

Teaching Professor  
PhD, University of Utah  
Geometric topology

### Department Faculty

#### Roya Beheshti Zavareh

Professor  
PhD, Massachusetts Institute of Technology  
Algebraic geometry

#### Alan Chang

Assistant Professor  
PhD, University of Chicago  
Geometric measure theory; harmonic analysis

#### Quo-Shin Chi

Professor  
PhD, Stanford University  
Differential geometry

#### Lawrence Conlon

Emeriti Professor  
PhD, Harvard University  
Differential topology

#### Aliakbar Daemi

Assistant Professor  
PhD, Harvard University  
Gauge theory; low-dimensional topology; symplectic geometry

#### Laura Escobar Vega

Associate Professor  
PhD, Cornell University  
Combinatorics; algebraic geometry

#### Renato Feres

Professor  
PhD, California Institute of Technology  
Differential geometry; dynamical systems

#### Steven Frankel

Associate Professor  
PhD, University of Cambridge  
Geometric topology; dynamics

#### Ron Freiwald

Emeriti Professor  
PhD, University of Rochester  
General topology

#### Andrew Walton Green

William Chauvenet Postdoctoral Lecturer  
PhD, Clemson University  
Harmonic analysis; partial differential equations

#### Gary R. Jensen

Emeriti Professor  
PhD, University of California, Berkeley  
Differential geometry

#### Silas Johnson

Senior Lecturer  
PhD, University of Wisconsin–Madison  
Algebraic number theory; arithmetic statistics

#### Matt Kerr

Professor  
PhD, Princeton University  
Algebraic geometry; Hodge theory

#### Steven G. Krantz

Professor  
PhD, Princeton University  
Several complex variables; geometric analysis

#### N. Mohan Kumar

Emeriti Professor  
PhD, Bombay University  
Algebraic geometry; commutative algebra

#### Wanlin Li

Assistant Professor  
PhD, University of Wisconsin–Madison  
Number theory; arithmetic geometry

**Henri Martikainen**

Associate Professor  
PhD, University of Helsinki, Finland  
Harmonic analysis; geometric measure theory

**John E. McCarthy**

Spencer T. Olin Professor of Mathematics  
PhD, University of California, Berkeley  
Analysis; operator theory; one and several complex variables

**Minh Nguyen**

Postdoctoral Lecturer  
PhD, University of Arkansas  
Gauge theory; low dimensional topology

**Charles Ouyang**

Assistant Professor  
PhD, Rice University  
(Higher) Teichmüller theory; Riemann surfaces; harmonic maps and minimal surfaces

**Martha Precup**

Associate Professor  
PhD, University of Notre Dame  
Applications of Lie theory to algebraic geometry and the related combinatorics

**Donsub Rim**

Assistant Professor  
PhD, University of Washington  
Applied mathematics

**Rachel Roberts**

Elinor Anheuser Professor of Mathematics  
PhD, Cornell University  
Low-dimensional topology

**Richard Rochberg**

Emeriti Professor  
PhD, Harvard University  
Complex analysis; interpolation theory

**Angel Roman**

Postdoctoral Lecturer  
PhD, Pennsylvania State University  
Representation theory; operator algebras

**Jesus Sanchez**

Postdoctoral Lecturer  
PhD, Pennsylvania State University  
Noncommutative index theory; cyclic cohomology; spin Riemannian geometry; high-dimensional gauge theory

**Karl Schaefer**

Lecturer  
PhD, University of Chicago  
Algebraic number theory

**Jack Shapiro**

Emeriti Professor  
PhD, City University of New York  
Algebraic K-theory

**Edward Spitznagel**

Emeriti Professor  
PhD, University of Chicago  
Statistics; statistical computation; application of statistics to medicine

**Yanli Song**

Associate Professor  
PhD, Pennsylvania State University  
Noncommutative geometry; symplectic geometry; representation theory

**Xiang Tang**

Professor  
PhD, University of California, Berkeley  
Symplectic geometry; noncommutative geometry; mathematical physics

**Joel Villatoro**

Postdoctoral Lecturer  
PhD, University of Illinois at Urbana-Champaign  
Differential geometry; Poisson geometry; singular spaces

**Brett Wick**

Professor  
PhD, Brown University  
Complex analysis; harmonic analysis; operator theory; several complex variables

**Mladen Victor Wickerhauser**

Professor  
PhD, Yale University  
Harmonic analysis; wavelets; numerical algorithms for data compression

**Edward N. Wilson**

Emeriti Professor  
PhD, Washington University  
Harmonic analysis; differential geometry

**David Wright**

Emeriti Professor  
PhD, Columbia University  
Affine algebraic geometry; polynomial automorphisms

**Jay Yang**

Postdoctoral Lecturer  
PhD, University of Wisconsin–Madison  
Commutative algebra; algebraic geometry