

# Graduate Studies in the School of Mathematical Sciences

Overview, Highlights, and Opportunities

School of Mathematical Sciences,  
U. of Arizona, Tucson AZ

# School of Mathematical Sciences

- *Mathematics Department*
- *Graduate Interdisciplinary Program of Applied Mathematics*
- *Graduate Interdisciplinary Program in Statistics*

# The Application Process

Get started by visiting <http://www.math.arizona.edu>.

- "Which Program Should I Apply To?"

*Apply to programs that best matches your interests. The recruiting information is shared.*

- The Recruitment Workshop: held in Spring. Those short-listed for this workshop will have the opportunity to talk to the faculty and experience the Sonoran Desert.

- Admissions Criteria:

*Students come to our programs with diverse technical backgrounds. The technical background is a consideration in the admissions; equally important is demonstrated passion, intellectual curiosity and productivity.*

# Graduate School Funding

- Research Assistantships

*VIGRE , GK12, Graduate School Fellowships, NSF Fellowships, Ford Foundation Fellowships, NPSC Fellowship, Fullbright Fellowship, CONACyT, Government-agency grants. Faculty advisor grants.*

- Teaching Assistantships

*Teaching lower and mid-level college courses, Super-TA, Special Projects.*

Virtually every student has support during their 5-6 year PhD program (1-2 year MS). Full financial aid (Fellowship and/or TA), health insurance, tuition waivers, summer support for first summer. Long term financial support commitment. TA/RA Stipend scales: approx \$15K - \$17K (nine months).

# Academic Process

- 1st Year, core phase: master material, qualifying exams. *Each program has its own year-long core courses.* Students with unusual technical backgrounds may be given 2 years to complete these.
- 2nd Year, specialization phase: coursework, research experience, independent study, oral exams. *Programs offer tailored course requirements.*
- Dissertation phase: oral exam and faculty-directed student research. *applied math and stat students could choose a supervisor in mathematics as well as from a variety of other fields in science and engineering.*

# The University and Life in Tucson



- Land Grant University, established in 1885. 38000 undergraduates, 8000 graduate students, 2700 faculty. PAC12 Athletics.
- *Emphasis on Interdisciplinary Research.*
- A top 20 Research University in USA. *\$600 million in research.*
- Top-5 ranked (nationally) UA programs: Applied Mathematics, Mathematics, Planetary Science, Astronomy, Optics, Geosciences, Hydrology, Atmospheric Sciences.

# The University and Life in Tucson

- Tucson:

*Population 800,000, elevation 2400 ft. Outstanding outdoor recreation, rich and diverse cultural atmosphere. Mexico, Southern California, the Rockies, within a half-day drive.*



# Metrics of Success

- *Ranked Top-5 among peers in the 2010 National Research Council study (Assessment of Research Doctorate Programs).*
- *Over \$ 10 Million in research funding.*
- *Our faculty includes several Regents' Professors, University Distinguished Professors, and numerous recipients of national and international awards.*
- *Our Alumni....*

# Some of Our Alumni

- Stephen Shipman, Associate Professor, Louisiana State University
- Greg Forest, Professor, Mathematics Dept, University of North Carolina
- Larry Winter, Professor, University of Arizona Hydrology
- David Kopriva, Head of Applied Mathematics, Florida State University
- Mike Shelley, Professor, Courant Institute, New York University
- Peter Tonellato, Director, Biomedical Informatics, Harvard Medical School
- Alejandro Aceves, Professor, Southern Methodist University
- Shi Jin, Professor, Mathematics Dept, University of Wisconsin
- Peter Miller, Professor, Mathematics Dept, University of Michigan
- Natalia Komarova, Professor, Mathematics Dept, UC Irvine
- Barbara Shipman, Associate Professor, UT Arlington
- Regan Murray, Staff Scientist, Environmental Protection Agency (EPA)
- Aaron King, Associate Professor, Ecology & Evolutionary Biology Dept, University of Michigan
- Dan Coombs, Associate Professor, Mathematics Dept, University of British Columbia
- Patrick Shipman, Assistant Professor, Colorado State University
- Janet McShane, Professor, Northern Arizona University
- Sergei Pond, Project Scientist, Antiviral Research Center, UC San Diego
- Aric Hagberg, Staff Scientist, Los Alamos National Laboratory
- Abbie Warrick, Staff Scientist, Lawrence Livermore National Laboratory
- Bridget Kennedy, Department of Defense
- Joe McMann, Department of Defense
- Fang-Fang Shen, Research Scientist, CDM Optics, Boulder, Colorado
- John Kerl, 2 Sigma Investments
- Postdocs: Bob Jenkins and Rosalyn Rael, University of Michigan; Julia Arciero and Jared Barber, University of Pittsburgh; Thomas La Gatta, Courant Institute; Brad Weir, Oregon State University; Mei Yian, Bing Instructor U. Texas, David Hertzog Visiting Asst Prof, Duke University.

# Mathematics, Applied Mathematics, Statistics

## OVERVIEW:

- *The three units closely cooperate in academics and research, yet each unit is designed to best meet professional training demands.*
- *Our programs are well-known for being highly supportive, academically as well as socially.*
- Applied Math and Stat students can choose a supervisor in mathematics as well from a variety of other fields in science and engineering.
- Each program has an incoming class size: 8 - 12, and about 55 students.
- Stat program is new, started in 2008.

# Highlights

- Integration Workshop: A refresher for incoming students.
- Research Tutorial Group: An experience doing research in small groups.
- Excellent student participation in the research seminars.
- Graduate student seminar.
- Teaching assistants given responsibility for classes taught.
- Internships in government laboratories.
- Active and growing Statistics Consulting Laboratory.

# Centers and Institutes

- Internships in Government Laboratories
- Neuromathematics Working Group
- Uncertainty Quantification Group
- Biomath Seminar
- Center for Mathematics Education of Latinos/as
- Arizona Center for Mathematical Sciences
- Southwest Center for Arithmetic Geometry (Arizona Winter School)
- Math and Parent Partners

# FURTHER INFORMATION



[www.math.arizona.edu](http://www.math.arizona.edu)

## CONTACTS:

- Math: Prof. Tom Kennedy
- Applied Math: Prof. Michael Tabor
- Stat: Prof. Walter Piegorsch