



FINANCING YOUR GRADUATE EDUCATION

Most WSU Mathematics and Statistics graduate students are supported by teaching or research assistantships, which include tuition waivers and health insurance. Students making good progress can expect to be supported throughout their degree program. See the Graduate Student Handbook for timelines.



MATHEMATICS GRADUATE DEGREE OPTIONS

Master's Degree Options

- Applied Mathematics
- Computational Finance
- Mathematics
- Mathematics Teaching
- Statistics and Graduate Minor in Statistics

Doctoral Degree Options

- Applied Mathematics
- Mathematics
- Mathematics with Education Emphasis
- Statistics

PULLMAN, WASHINGTON

Pullman, Washington is a pleasant, safe community of 31,000 residents in the southeastern part of the State of Washington. With small-town comforts and cosmopolitan amenities, the town is home to excellent restaurants, and provides a range of entertainment and cultural activities. Moscow, Idaho, home of the University of Idaho, is only 8 miles away and likewise offers fine dining and an array of entertainment and cultural activities.

Pullman is surrounded by the beautiful rolling hills of the region known as the Palouse. A *National Geographic* cover story called the region, "A Paradise Called the Palouse" and the October 2001 *National Geographic Traveler* magazine featured the Palouse region in their cover story, "50 Places of a Lifetime." Within a 100-mile radius can be found outdoor recreational activities such as cross-country skiing, downhill skiing, whitewater rafting, hiking, fishing, climbing, camping, and the splendor of Hells Canyon, the deepest river gorge in North America.



WASHINGTON STATE UNIVERSITY

Founded in 1890, Washington State University is the state's original land grant institution. Today, WSU enrolls more than 30,000 students in 11 colleges engaged in over 95 fields of study, including 79 Master's programs, 63 Doctoral programs, and 3 professional degree programs. Approximately 1900 international students, representing over 90 countries, study at WSU each year.

WSU is ranked 63rd among public research universities, according to US News and World Report, and receives the "very high research activity" categorization from Carnegie Foundation for the Advancement of Teaching. The faculty-student ratio affords true collaboration between the student and expert faculty members who are nationally and internationally renowned for their contributions to science, business, government, culture, and society.

Students can stay fit at the award-winning University Recreation Center and sports enthusiasts can cheer on the WSU Cougars, members of the Pac-12 athletic conference.

The Department of Mathematics and Statistics Graduate Programs



math.wsu.edu

A graduate degree from Washington State University will prepare you for a broad range of careers and opportunities in theoretical mathematics, applied mathematics, mathematics education, or statistics.

Our diverse faculty are committed to excellence in both teaching and research, and provide personalized mentoring and research support for both master's and doctoral students.

Employers place a high value on advanced mathematics and statistics degrees from WSU. Our graduates are excellent problem solvers, critical thinkers, good writers, and function well in a team. WSU alumni hold faculty positions at academic institutions around the world, and are employed in federal research laboratories and a range of major industries.

Join the nearly 100 graduate students currently exploring a variety of topics in the WSU mathematics and statistics graduate program.

WASHINGTON STATE
UNIVERSITY

CONTACT US

Department of Mathematics and Statistics

Washington State University

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RESEARCH ENVIRONMENT

Students study with mathematics faculty who are on the forefront of research in areas of current global interest:

Analysis and geometric measure theory with a parallel focus on applications of these areas to challenging data analysis problems.

Discrete Mathematics including cryptography, combinatorics, and number theory.

Environmental mathematics such as flow of moisture and contaminants in soils, deformation of soils, population ecology, predator-prey problems, and forest modeling.

Mathematics education concerning mathematical discourse, math teacher professional development, critical transitions, and calculus teaching and learning.

Mathematical modeling in infectious diseases, population genetics, neuroscience, muscle physiology, biomolecular systems, bio-tissue, and gels.

The department has frequent colloquiums given by world-renowned visitors and our research groups hold weekly seminars. Funding is available for advanced graduate students to travel to research conferences. The department is an institutional member of the Mathematical Sciences Research Institute in Berkeley, California, and each summer we send several students to attend workshops on current research topics.

There is a substantial amount of flexibility in graduate study in the Mathematics and Statistics Department. If a student is interested in more applied areas, emphasis may be placed on the development of educational options leading to possible careers in business, industry, and government.

Some students may choose to pursue research with the faculty on our Vancouver, WA, campus where they may benefit from the resources in the greater Portland area.

Matrix Algebra including both computational and theoretical analysis.

Numerical Analysis including computational linear algebra, scientific computing, numerical integration and numerical methods for partial differential equations.

Optimization problems on high performance environments, with non-smooth functions and integer programming.

Partial differential equations in materials research, microwave heating, and inverse problems.

Statistics including experimental design, reliability theory, Bayesian statistics, change-point problems, bioinformatics, environmetrics, simultaneous inference, and analysis of image and network data.



THE FACULTY AND THEIR RESEARCH INTERESTS

Asaki, Tom, PhD, Washington State University, 1995. Applied optimization, image and data analysis.

Chen, Xiongzi, PhD, Purdue University, 2012. Simultaneous inference, analysis of non-Euclidean data, spectra of random matrices.

Cooper, Sandra, PhD, Colorado State University, 1988. Mathematics education: entry level college mathematics, transition from high school to college math.

Cooper, Kevin, PhD, Colorado State University, 1988. Numerical analysis, differential equations, scientific computing.

Dasgupta, Nairanjana, PhD, University of South Carolina, 1996. Bioinformatics, Simultaneous Testing, Modeling, Categorical data.

Dillon, Robert, PhD, University of Utah, 1993. Mathematical biology, computational biofluids with applications in cell motility, development, and cancer.

Dimitrov, Alex, PhD, University of Chicago, 1998. Mathematical modeling, mathematical neuroscience, information theory. (Vancouver campus)

Dong, Hongbo, PhD, University of Iowa, 2011. Mathematical optimization.

Evans, Marc, PhD, University of Wyoming, 1989. Estimation for generalized linear mixed models, population size estimation.

Genz, Alan, PhD, Kent (England), 1976. Numerical integration, multiple integrals, statistical analysis.

Hall, William, PhD, North Carolina State University, 2017. Mathematics education, calculus teaching and learning, interdisciplinary approaches to calculus.

Hudelson, Matthew, PhD, University of Washington, 1995. Combinatorics and discrete geometry, random algorithms.

Jacroux, Michael, PhD, Oregon State University, 1976. Experimental design, linear models, and quality control.

Jandhyala, Venkata Krishna, PhD, University of Western Ontario, Canada, 1986. Change-point problems for statistical models and their applications.

Johnson, Harry, PhD, Washington State University, 2002. Educational statistics, teaching of statistics, statistical consulting, item response theory.

Kaul, Abhishek, PhD, Michigan State University, 2015. High dimensional models (model selection, inference) and applications, machine learning, time series analysis, biostatistics.

Khalplov, Alex, PhD, Russian (USSR) Academy of Sciences, 1982. Applied analysis, control theory for PDEs, swimming phenomenon.

Knott, Libby, PhD, Oregon State University, 1994. Mathematics education, mathematical reasoning and proof, teacher professional development.

Krishnamoorthy, Bala, PhD, University of North Carolina, Chapel Hill, 2004. Computational topology and geometry, optimization, computational biology, biomedical informatics. (Vancouver campus)

Lapin, Sergey, PhD, University of Houston, 2005. Mathematical modeling with applications in biology, hydrology and finance.

Li, Haijun, PhD, University of Arizona, 1994. Probability, stochastic processes, risk analysis. (Everett campus)

Liu, Sheng-Chi, PhD, Ohio State University, 2009. Number theory, automorphic forms and representation theory.

Manoranjan, V.S., PhD, Dundee (Scotland), 1982. Environmental problems, industrial applications, modeling.

McDonald, Judith, PhD, University of Wisconsin, Madison, 1993. Matrix analysis, linear algebra.

Moore, Charles, PhD, University of California, Los Angeles, 1986. Analysis, harmonic analysis, PDEs, probability theory.

New, Leslie, PhD, University of St Andrews, 2010. Bayesian statistics, hierarchical modeling, statistical ecology, state-space models. (Vancouver campus)

Panchenko, Alexander, PhD, University of Delaware, 1999. PDEs in materials science, porous media, inverse problems.

Pascual, Francis, PhD, Iowa State University, 1997. Engineering reliability, failure-time models and data analysis.

Schreyer, Lynn, PhD, Purdue University, 1994. Applied math, mathematical modeling at the continuous scale, porous media, partial differential equations.

Schumaker, Mark, PhD, University of Texas at Austin, 1987. Mathematical modeling in biology: differential equations and stochastic processes with application to infectious diseases.

Schwartz, Elissa, PhD, Mount Sinai-NYU, 2001. Mathematical biology, differential equations, stochastic models, infectious disease dynamics.

Slavit, David, PhD, University of Delaware, 1994. Mathematics education, teacher collaboration and research. (Vancouver campus.)

Strigul, Nikolay, PhD, Stevens Institute of Technology, 2007. Theoretical and experimental ecology, mathematical biology, biostatistics, forest dynamics. (Vancouver campus.)

Tsatsomeros, Michael, PhD, University of Connecticut, 1990. Matrix theory, linear algebra and its applications.

Vincent, Kimberly, PhD, University of Idaho, 1999. Collegiate and pre-service mathematics education.

Vixie, Kevin, PhD, Portland State University, 2001. Geometric analysis, data analysis.

Voulgarakis, Nikos, PhD, University of Crete, Greece, 2003. Mathematical biology and computational fluid dynamics.

Wang, Xueying, PhD, Ohio State University, 2009. Mathematical biology.

Wang, Yuan, PhD, Colorado State University, 2013. Object-oriented data modeling and estimation, Bayesian inference, and high-dimensional signal processing.

Yin, Hong-Ming, PhD, Washington State University, 1988. Financial engineering and portfolio management, applied math, PDEs.