ABOUT THE UNIVERSITY

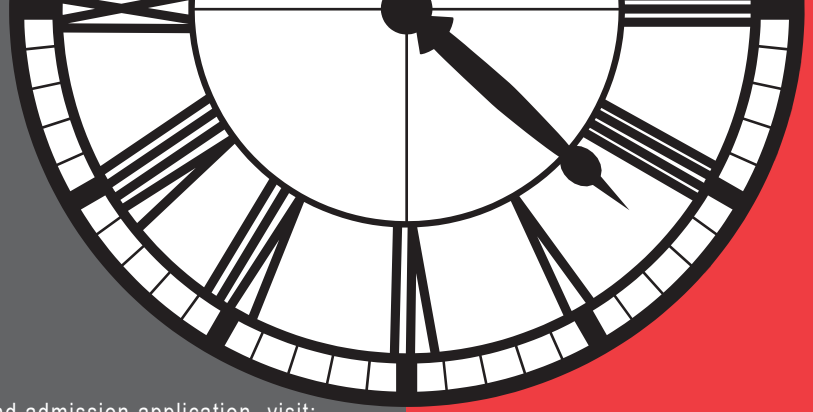
The University of Puerto Rico, Río Piedras Campus is the only higher education institution in Puerto Rico to be classified as doctoral research intensive by the Carnegie Foundation for Advancement of Teaching. Its campus is located in the metropolitan area of San Juan, occupying 289 acres in the community of Río Piedras. Founded in 1903 and characterized by its lush tropical vegetation and Spanish-style architecture, the Río Piedras Campus is the oldest and largest of eleven campuses that form the University of Puerto Rico system. A land-grant university, UPR-RP offers a variety of academic programs to its approximately 11,556 students—2,621 of which are graduate students. Students come from a variety of backgrounds and places, including Puerto Rico, the Caribbean, Mainland US, China, Latin America, and other countries of the world.

RESEARCH FACILITIES

The Center for Information Technology houses the library, which has an excellent supply of books and research journals in all areas of Mathematics. It also offers up-to-date computing facilities. The center is structured in a way that optimizes the use of information technology to provide relevant services to students, faculty, and researchers. The High Performance Computing facility has parallel and distributed computing access.

FINANCIAL AID

Students accepted in the graduate program can receive financial aid in the form of teaching assistantships, research assistantships, or fellowships. Several members have grants that support graduate research assistants. Those receiving teaching assistantships receive a tuition waiver. In addition, the university provides funds to support students' participation in meetings, workshops, and short courses. Students interested in applying to the graduate program are encouraged to contact faculty members with whom they share research interests to explore additional funding opportunities.



For more information and admission application, visit:

http://graduados.uprrp.edu
Dean of Graduate Studies and Research (DEGI)
787-764-0000 ext.86716

http://solicitud.upr.edu
Maria L. Castro Romero| maria.castro19@upr.edu
Coordinator of Graduate Admission

Contacts:
Dr. Lin Shan | lin.shan@upr.edu
Graduate Program Coordinator

Dr. Heeralal Janwa | heeralal.janwa@upr.edu
Department Chair

Graduate Program
Department of Mathematics
University of Puerto Rico
17 Ave Universidad 1701
San Juan PR 00925-2537

Tel: (787) 764-0000 Extension: 87942, 88269 Fax: (787) 281-0651; (787) 772-1437
http://math.uprrp.edu

GRADUATE PROGRAM IN MATHEMATICS

COLLEGE OF NATURAL SCIENCES

GRADUATE DEGREES IN MATHEMATICS AT UPR-RP

The Department of Mathematics at UPR-RP offers graduate programs leading to the Master of Science and Doctor of Philosophy degrees in Mathematics. The M.S. Program has options in Pure Mathematics and Applied Mathematics. The Ph.D. Program has specializations in Pure Mathematics, Discrete Mathematics, and Computational Mathematics & Statistics. Faculty members associated with the graduate program possess advanced degrees from prestigious universities around the world and many publish regularly in internationally recognized research journals and participate in exchange programs with institutions all over the world.

The relatively small size of the graduate classes offers individualized attention and is very favorable to establish common research interests with faculty members.

CAREERS IN MATHEMATICS

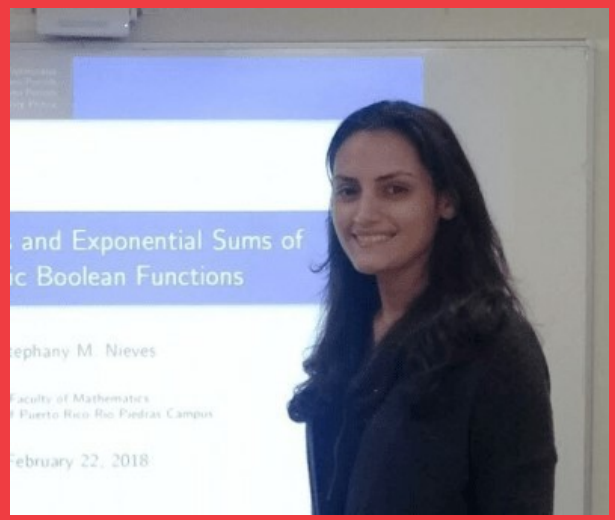
Graduates will qualify for a broad range of careers in academia, business, industry, and government, including professor, research mathematician and scientist, statistician, computer analyst, forensics analyst, climate analyst, data analyst, quantitative analyst, public utilities analyst, cryptanalyst, cybersecurity, information theorist, bioinformatics, AI expert, banker, actuary, optimization, machine learning, communication systems, finance, among others.

RESEARCH AREAS IN THE MATHEMATICS GRADUATE PROGRAM AT UPR-RP

Mathematical Analysis, Discrete Mathematics, Computational Mathematics and Statistics are the main research areas in the M.S. and Ph.D. Programs in Mathematics. Research seminars are held regularly in these areas. In Mathematical Analysis, research covers functional analysis, especially operator algebras, global analysis, non-commutative geometry, operator theory, semigroups of operators, as well as partial differential equations, control theory and potential theory.

Researchers in Discrete Mathematics study broad areas of that subject: graph theory, combinatorics, coding theory, cryptography, discrete, convex and finite geometry, discrete and combinatorial optimization, number theory, finite fields, and related applications.

The Computational Mathematics and Statistics area is concerned with problems in Bayesian statistics, biostatistics, bioinformatics, econometrics, machine learning, numerical methods, stochastic differential equations, applied data analysis, machine learning, AI, mathematical modeling, mathematical biology, applied optimization, algorithms and computing, data security and integrity, and information theory and communication systems.



RESEARCH FACULTY IN THE MATHEMATICS GRADUATE PROGRAM AND THEIR RESEARCH AREAS OF INTEREST

Mathematics professors have a wide variety of research interests. Additionally, faculty members from the Department of Computer Science and from other UPR campuses collaborate with the Graduate Program.

DEPARTMENT OF MATHEMATICS

M. Reza Emamy-K. Discrete and Convex Geometry, Ge ometric Hypercube, Distributive Lattices, Discrete Opti mization.

Maria D. Gonzalez-Lima. Numerical Optimization, Models and Applications, Support Vector Mahcines, Interior-points Methods for Mathematical Programming.

Eugenio Guerrero Ruiz. Stochastic Analysis, Stochastic Partial Differential Equations, Statistics Applied to Environmental Problems.

Heeralal Janwa. Coding Theory, Cryptography, Algebraic Geometry, Information Theory, AI, Bioinformatics, Computing.

Valentin Keyantuo. Functional Analysis, Semigroups of Linear Operators, Partial Differential Equations.

Liangqing Li. Functional Analysis, Operator Algebras.

Luis A. Medina. Combinatorics, Number Theory, Information Theory, Integer Sequences, p-adic Analysis.

Gabriel Montoya-Vega. Low-dimensional Topology, Knot Theory, Knot Invariants.

María-Eglée Pérez. Bayesian Statistics, Applications of Statistics to Life Sciences.

Luis Raúl Pericchi. Mathematical Statistics and Decision Analyses, Bayesian Statistics-Theory and Practice, Biostatistics, Econometrics, Extremes.

Lin Shan. Functional Analysis, Operator Algebras, Index Theory, Coarse Geometry, Geometric Analysis.

Alejandro Vélez. Elliptic and Parabolic Boundary Value Problems on Non-smooth Domains, Generation of Operator Semigroups, Potential Theory, Analysis.

DEPARTMENT OF COMPUTER SCIENCE

Carlos Corrada Bravo. Applied Machine Learning, Coding Theory.

Rémi Mégret. Computer Vision, Machine Learning.

Edusmildo Orozco Salcedo. Applications of Finite Fields, Finite Models of Discrete Dynamical Systems and the Design of Algorithmic Solutions.

José Ortiz-Ubarri. Cybersecurity, High Performance Computing, Coding Theory.

Humberto Ortiz Zuazaga. Bioinformatics, Computational and Networked Cyberinfrastructure.

Ivelisse Rubio. Computational Algebra, Finite fields.

AFFILIATED FACULTY

Pablo Negrón (UPR– Humacao). Numerical methods, Bifurcation Theory, Partial Differential Equations and their Applications to Problems in Continuum Mechanics.

Aniel Nieves (FAE, UPR-RP). Mathematical/ Computational Models of Complex Systems, Applied Dynamical Systems and Bifurcation Theory, Power Spectrum Analysis and Wavelets, Parallel Computing.

Fernando Piñero (UPR-Ponce). Discrete Mathematics, Graph Theory, Coding Theory, Combinatorics, Geometry, Discrete Geometry, Algebraic Geometry, Graphs Codes.