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 Teaching. Its campus is located at 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 the 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 15,000 students—3,600 of which are graduate students. Students come from a variety of backgrounds and places, including Puerto Rico, the Caribbean, the 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.

FINANCIAL AID

Students accepted in the graduate program can receive financial aid in the form of teaching assistantships, research assistantships, and fellowships. 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 about graduate programs at the University of Puerto Rico-Río Piedras Campus, visit the Office of the Dean of Graduate Studies and Research (DEGI)
http://graduados.uprrp.edu

For admission application, visit:
https://app.applyyourself.com/?id=upr-grad

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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, banker, actuary, cryptanalyst, quantitative analyst, public utilities analyst, among others.

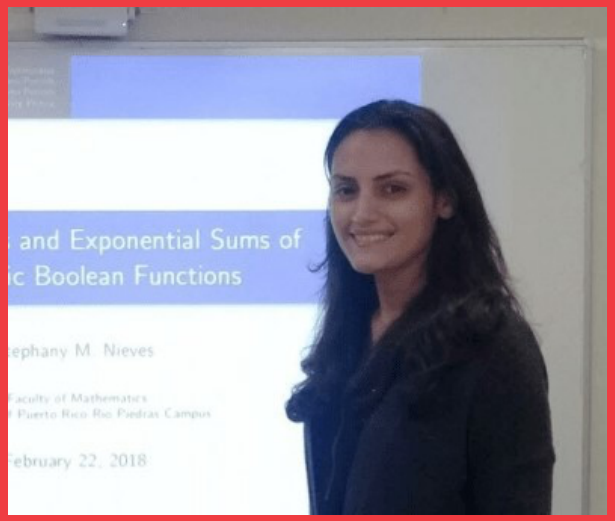
RESEARCH AREAS IN THE MATHEMATICS GRADUATE PROGRAM AT UPR-RP

Mathematical Analysis, Discrete Mathematics, Computational Mathematics and Statistics are the main research areas of interest 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, 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, mathematical modeling, mathematical biology and information theory.

The core courses in the Applied Mathematics option of the Master 's Program now include a hybrid version (prepared in collaboration with the Department of Computer Science) combining classroom activities with online work. This is a result of the Title V project coordinated by the Deanship of Graduate Studies and Research (DEGI). For more information, contact the Department of Mathematics or the DEGI.



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 Optim ization.

Raúl Figueroa. Combinatorics; Finite Geometries; Alg ebraic Geometry.

Guihua Gong. Functional Analysis; Index Theory; Global Ana lysis; Noncommutative Differential Geometry.

Puhua Guan. Combinatorics; Symbolic computation; Hypercube Structure.

Heeralal Janwa. Coding Theory; Cryptography; Algebraic Geometry; Information Theory.

Liangqing Li. Functional Analysis; Operator Algebras.

Valentin Keyantuo. Semigroups of Linear Operators; Partial Differential Equations

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

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.

Ana Helvia Quintero. Mathematical Education

Lin Shan. Functional Analysis; Operator Algebras; Index Theory; Coarse Geometry; Geometric 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. Combinatorics Geometry. Discrete Geometry. Algebraic Geometry. Coding Graphs

Alejandro Vélez (UPR-Mayagüez). Elliptic and parabolic boundary value problems on non-smooth domains, Generation of operator semigroups, Potential theory, Analysis