

**PEDRO JUAN RODRIGUEZ ESQUERDO**

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Professor  
Department of Mathematics  
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**ACADEMIC PREPARATION**

- J.D. 2003, Magna Cum Laude, Syracuse University, Technology Law, Intellectual Property, Certificates on Law and Technology Management and in Law and Market Economy. 3.504 GPA. Rank 28/247.
- Ph.D. Mathematics (Statistics) 1983, University of California, Santa Barbara. Group Testing, Linear Models, Experimental Design, Mathematical Statistics.
- M.A. Economics 1981, UCSB. Microeconomics, Operations Research, Econometrics.
- M.A. Statistics 1980, UCSB. Mathematical Statistics.
- Certificate Cartography, 1977, Defense Mapping School, Fort Belvoir, VA. Over 200 hours on Photogrammetry, Geodesy, Surveying, Map Production, Aerial Photo Interpretation.
- Graduate Program Mathematics 1976-77, University of Puerto Rico, Rio Piedras, completed M.A.coursework and exams. Algebra, Lattice Theory.
- B.S. Mathematics, 1976, Magna Cum Laude. UPR, Rio Piedras. Elective courses on Political Science, Sociology, Education, Economics, Physics, Art, Music.

**HONORS**

- 2000-2003 University Fellow, Airport Fellow. Dean's List> second semesters 2000-2001; 2001-2002, both semesters 2002-2003. First in class in courses of: Legislation and Policy (Environmental Law), Law and Market Economy, Patent Prosecution. Elected to Justinian Honor Society. Syracuse University.
- Appear in 1983 edition of Who's Who in California.
- 1983 – 1984 American Statistical Association - Census Bureau – National Science Foundation Research Associate.
- 1982 – 1983 Graduate Fellow, UCSB.
- 1979 – 1982 Scholarship of the President of the UPR.
- 1978 – 1982 Campus Fellow, UCSB.
- 1973 – 1977 UPR Honor's Scholarship.

**WORK EXPERIENCE**

**Teaching**

- 8/84 - Present Assistant/Associate/ Full Professor, Department of Mathematics, UPR, Rio Piedras.
- 1/02 – 5/02 Adjunct Instructor, Onondaga Community College, Teach course on Discrete Mathematics.
- 9/78 - 7/83 Adjunct Lecturer, Associate, Teaching Assistant, Department of Mathematics, UCSB.
- 9/82 - 6/83 Adjunct Instructor, Departments of Mathematics and of Computer Science, Santa Barbara City College. Hold Life Instructor Credential on Economics and Mathematics, The California Community Colleges, 1982
- 8/76 - 5/77 Department of Mathematics, UPR, Teaching Assistant.

Summer 87,89 Resource Center for Science and Engineering (RCSE). Summer workshop and Saturday follow up sessions for High School Teachers of Mathematics.  
1986-87 RCSE Summer Camp and Saturday Academy for High School Students.  
Summer 85,86,88 Faculty research sponsor to two high school students.

#### **Graduate courses taught**

Mathematical Statistics, Probability, Linear Models, Independent Studies, Projects in Applied Mathematics, Group Testing, Ranking and Selection, Sampling Techniques, Statistical Quality Control, Statistical Inference. Operations Research (Graduate School of Business Administration at UPR), Advanced Data Analysis and Experimental Design.

#### **Undergraduate courses taught**

Probability and Mathematical Statistics, Statistics for students majoring in communications, health sciences, Computer programming in Fortran, BASIC and Pascal, Calculus, Pre-calculus, Mathematics for Teachers, Remedial Mathematics, The Computer in the Economic Analysis (College of Social Sciences), Probability and Statistics (College of Business Administration), Discrete Mathematics.

#### **Research Positions**

2002-2003 Research Assistant, Technology Transfer Research Center, Syracuse University.  
8/83 - 8/84 U. S. Census Bureau, Washington D. C., Mathematical Statistician (Research Associate) in joint Census Bureau-ASA research program funded by NSF. Dynamic Discrete-Continuous Macroeconomic Modeling  
Summer 81 Minicars, 55 Depot Road, Goleta, California. Research Assistant. Linear modeling of automobile accidents.

#### **Consulting**

9/80 - 6/82 Statistical Consulting Laboratory, UCSB, Research Assistant, Research Associate, Consultant to PhD Dissertations in Education, Biology and English.  
3/92 - 6/92 Workshops on Statistical Quality Control, GTE Sylvania, Humacao, Puerto Rico.

#### **Administrative**

8/2009- 8/2014 Chair, Institute of Statistics and Computer Information Systems, College of Business Administration, UPR, Rio Piedras.  
8/03 – 7/04 Academic Coordinator of Campus Technologies. Office of the Dean for Academic Affairs, UPR, Rio Piedras.  
5/93 – 7/96 Project Director, Puerto Rico Statewide Systemic Initiative, Resource Center for Science and Engineering, UPR Responsible for a Mathematics and Science Reform Initiative. Coordinated with the P.R. Department of Education and the P.R. General Council on Education. Budget of over \$24 million in 5 years.  
1/93 - 5/93 Acting Dean for Academic Affairs, UPR Rio Piedras  
8/91 - 1/93 Associate Dean for Academic Affairs, UPR, Rio Piedras  
Among other duties, supervise the Library System, Office of the Registrar, Computational Laboratory for Faculty, Faculty Improvement Fund and university Professional Schools; President, Campus and UPR System Academic Computing Committees.  
8/88 - 8/91 Assistant Dean for Academic Affairs, UPR, Rio Piedras. Supervise faculty appointments, responsible for university accreditation reports.

8/85 - 8/88 Coordinator of the UPR Graduate Program in Mathematics.

#### **Other**

1996-98 Statistician- Evaluator, Partner - EMAEDUC Inc. Evaluation of Educational Projects. SJ, PR.  
8/77 - 9/78 Cartographer, Mathematician Defense Mapping Agency, 6500 Brookes La., Wash. D.C.

#### **Committees**

Campus Discipline Board, elected by the Academic Senate 2007-2010  
Academic Senator, elected by the College of Natural Sciences 2006-2009  
Curriculum Committee, Dept of Mathematics, UPR, 2003-2008.  
Personnel Committee, Dept of Mathematics, UPR, 2003-2008.  
College Board, Office of Puerto Rico and Latin American Activities, Advisory Board, 1993-96.  
Graduate Program Mathematics (President) 8/85 - 8/88.  
Graduate Affairs Mathematics 8/87 - 8/88.  
Graduate Mathematics Curriculum 8/85 - 12/86.  
Undergraduate Mathematics Curriculum 8/85 - 8/89.  
Graduate Mathematics Examination 8/84 - 8/89.  
Liaison Committee with the College of Education 8/87 - 8/89.  
Auctions Committee, UPR Río Piedras 1990-1994

#### **PROJECTS AND GRANTS**

- Group Testing to Identify the Sample Minimum. FIPI, UPR 1985-86.
- Multinomial Group Testing. FIPI, UPR 1987-88.
- Optimal Multinomial Group Testing. NSF planning grant, 10/86 - 7/88.
- Optimal Multinomial Group Testing. NSF EPSCoR group proposal, accepted 8/86
- Mathematics Equipment. 8/87 (O. Moreno, director) Group Testing computational proposal to NSF for a minicomputer, Alliant F/X-8.
- Group Testing Plans for Acceptance Sampling. FIPI, U.P.R., 1989-90.
- Entendiendo los que hacemos: Estadísticas para todos. Council on Higher Education, Summer 1994.

#### **M.A. THESIS SUPERVISED**

Segundo Díaz Meléndez, Quality Control Techniques for the Mean of Two Correlated Variables.  
Carlos Martín Torres, The Optimal Solution to the Generalized Group Testing Problem.  
Ileana Arroyo, Group Testing for Isolating a Single Defective.  
Nidza Vicente, On the Distribution of the CUSUM Run Length.  
Tawfig Abuosba, Multinomial Group Testing.  
Gloria Vega Rodríguez, The Economic Design of Control Charts.  
Maria I. Ripol, Exploratory Methods for Quality Control.  
Evelyn Dávila, Group Testing Plans for Acceptance Sampling.

In the M.A. Thesis Committees of

Walter Cedeño, Wilfredo Martínez, Rosa López, Nilda Santiago, María de Jesús, Anneliese Sánchez, Agda Cordero, Victorio Jauregui, Ivelisse Rubio, Jairo Fúquene, Raúl O. Sánchez, Mónica Nadal and others.

In the Ph.D. Thesis Committees of Ismael Torres, College of Business Administration.

## LANGUAGES AND COMPUTER SKILLS

Spanish, English. Knowledge of several computer languages and specialized packages as well as with Internet and Web technology.

## RELEVANT PUBLICATIONS AND ACTIVITIES

Jacek Welc and PJ Rodríguez Esquerdo, *Applied Regression Analysis for Business. Tools, Traps and Applications* (Tentative title). Textbook, work in progress 2014.

Rodríguez Esquerdo, Pedro J. (2011). Convergence of Random Variables. *International Encyclopedia of Statistical Science*, Miodrag Lovric, ed., 2011, Part 3, 297-300. Springer.

Comité de Expertos de la Prueba Aptitud Académica, College Board, 2010-present. President.

Espacios del Recinto de Río Piedras en la Web: Una evaluación preliminar 2004, Decanato de asuntos Académicos, Universidad de Puerto Rico, Recinto de Río Piedras.

Implicaciones del "Copyright y Fair Use" para la Educación a Distancia, Centeno Alayón, Purísima y Pedro Rodríguez Esquerdo, *Simbiosis, Avances en Educación a Distancia*, Vol. 1, Núm. 2, Año 2004, ISSN 1548-3436.

Workshop on Statistics for Research, Oct 21, 28 2005. Asociación Profesional Estudiantes Graduados UPR.

Creator/Programmer/Webmaster: Instituto de Estadística y Sistemas Computadorizados de Información, [esta.uprrp.edu](http://esta.uprrp.edu); Espacio de Estadística [estapr.com](http://estapr.com).

Resident Faculty on Technology, Center for Academic Excellence, UPR Río Piedras Campus, 1999-2000,

Principal author, textbook, *Estadística Descriptiva: una introducción conceptual al análisis de datos*. August 1997, with Ana H. Quintero and Gloria E. Vega. Editorial Autores Puertorriqueños. Río Piedras. (adopted as High School textbook by the Puerto Rico Department of Education).

Papers presented at local and national meetings on the National Assessment of Educational Progress tests on Mathematics and Science for Puerto Rico, Estimation of Continuous Vector Autoregressive Models, Group Testing to Identify the Sample Minimum, Quality Control of Related Variables, Teaching with Technology.

Puerto Rico Standards Committees for Science, Mathematics, Assessment and Professional Standards, member, 1993-1996.

Workshops for mathematics and science K-12 teachers. Designed and conducted workshops.

Design of the 1990 and 1995 UPR Río Piedras Accreditation Self-Study. Prepared and edited drafts of Follow-Up Report to the Middle States Association, 1989, Mid Point Review Report, 1995 and Self Study Design, 1995.

Advisory Committee, Hispanic Educational Telecommunications System, Learning Anytime Anywhere Partnerships (LAAP) Program, UPR 1999-2000,

Advisory Board, College Board, Office of Puerto Rico and Latin American Activities, 1994-97. Gold Certificate of Recognition for distinguished collaboration.

President of the Puerto Rico Action Committee, Regional Alliance for the Improvement of Education in Science, Mathematics and Technology, 1993-97.

Board of Directors, Regional Alliance for the Improvement of Education in Science, Mathematics and Technology, Cambridge, Massachusetts, 1993-97.

Academic Computing Symposiums. Presided over the organization of for the UPR Río Piedras Campus (1990) and UPR System (1992).

Group Testing conference at SUNY, Buffalo, July 1981.

Group Testing conference at UC Riverside, May 1983.

Group Testing to Identify the Sample Minimum of a Uniform Discrete Distribution (Ph.D. Thesis, 1983, Milton Sobel, advisor).

Inspection of Related Variables. Quality Assurance 1984, Vol. 10, No. 1, pp 9-11, (with L. Pesotchinsky).

Group Testing to Identify the Sample Minimum (with M. Sobel and F. K. Hwang) US Census Bureau SRD Report. 1984 ASA annual conference, Philadelphia.

Chaired Bayesian Methods Session, August 1984, ASA meeting, Phil., Penn.

Estimation of Continuous Vector Autoregressive Models. Software and documentation, US Census Bureau SRD Report, 8/84.

The Optimal Solution to the Generalized Group Testing Problem (with Carlos Martín) Presented at the X Conference on Scientific Research, 2/86. SJ, PR

Simulating Discrete Time Data from a Continuous Vector Autoregressive Model. UPR Dept of Mathematics Technical Report, 1987.

Optimal Multinomial Group Testing, Presented at the 1987 meeting of NSF-MRI researchers, Washington DC, 3/87.

On Simulating the Normal Distribution. 1987, UPR Dept of Math Tech Rep.

Introduction to Descriptive Statistics. 1987, UPR Dept of Math Tech Rep.

Introduction to Counting and Probability. 1987, Dept of Math Tech Rep.

The Optimal Solution to a Group Testing Problem, with Carlos Martín. Invited plenary paper at the Third Interuniversity Seminar of Mathematics Research. April 16, 1988, Cayey.

Multivariate CUSUM Procedures. (with Nidza Vicente), presented at the Third Interuniversity Seminar on Mathematics Research, 4/16/88, Cayey.

Experiences in the Development of a Mathematics Workshop for High School Teachers, with Nancy Costas. Presented at the First Interuniversity Seminar for the Teaching of Mathematics, 1/1988.

The Economic Design of Control Charts. (with Gloria Vega), Presented at the Fourth Interuniversity Seminar on Mathematics Research, February 1989.