

Héctor D. Torres Aponte

CONTACT INFORMATION	Institute of Statistics #7 Business Administration Faculty University of Puerto Rico Río Piedras Campus San Juan, Puerto Rico 00936	(787)764-0000 x.4091 (787)459-1295 hector.torres3@upr.edu http://epsilon.uprrp.edu/htorres
RESEARCH INTERESTS	Networks & propagations, Quantitative methods in finance, Clustering analysis in stock markets, Discrete mathematics, Minimum rank problem, Mathematical Finance.	
EDUCATION	University of Puerto Rico , Río Piedras, Puerto Rico <i>Graduate Business School</i> Ph.D. (Candidate) in Finance, May 2016 (Expected) Dissertation topic: “Networks and their Applications in Finance” Advisor: Javier Rodríguez, Ph.D. <i>Department of Mathematics</i> M.S. in Applied Mathematics, June 2011 Thesis title: “A Minimum Rank of n -dimensional Hypercube Cut-Complexes”. Advisor: M.Reza Emamy Khansary, Ph.D. B.S. in Mathematics, Feb 2008 Dean’s Honor List	
PROFESSIONAL EXPERIENCE	Popular, Inc. , San Juan, Puerto Rico Model Risk Monitoring & Corporate Loan Review <i>Manager - Model Risk Monitoring</i>	August 2015 - Present
ACADEMIC EXPERIENCE	University of Puerto Rico , Río Piedras, Puerto Rico Graduate Business School <i>Instructor</i> Quantitative Methods for Managers and Entrepreneurs (MECU 5050) Institute of Statistics and Computerized Information Systems <i>Instructor</i> Pre-Calculus for Business Administration (MECU 3031) Laboratory and recitation course - Pre-Calculus for Business Administration (MECU 3031) <i>Instructor & Course Coordinator</i> Pre-Calculus for Business Administration (MECU 3031) Laboratory and recitation course - Pre-Calculus for Business Administration (MECU 3031) <i>Instructor</i> Calculus for Business Administration (MECU 3032) <i>Instructor</i> Basic Mathematics for Business Administration (MECU 3001) Pre-Calculus for Business Administration (MECU 3031) Basic Statistics for Business Administration (ESTA 3041)	Summer 2015 Fall 2013 - Spring 2015 Fall 2012 - Summer 2013 Summer 2012 Spring 2012

Department of Mathematics
Instructor **Summer 2015**
 Introduction to Statistics with Computers (MATH 3026)
Teacher Assistant **Summer 2011**
 Teaching Assistant for Prof. F Castro, Pre-calculus course (MATH 3018).

Instructor **Fall 2009 - Spring 2011**
 Introductory Mathematics I (MATH 3001)

Teacher Assistant **Summer 2009**
 Teaching Assistant for Prof. P.J. Rodríguez Esquerdo, Pre-calculus course (MATH 3018).

Instructor **Fall 2008 - Spring 2009**
 Introductory Mathematics I (MATH 3001)

Teacher Assistant **Summer 2008**
 Teaching Assistant for Prof. F Castro, Pre-calculus course (MATH 3018).

Instructor **Spring 2008**
 Introductory Mathematics I (MATH 3001)

TEACHING
TRAINING

Dean of Graduate Studies and Research, University of Puerto Rico, Río Piedras, PR
Capacitación para Estudiantes Graduados en la modalidad de Cátedra **Summer 2009**

Alliance for Graduate Education and the Professoriate, University of Puerto Rico, Río Piedras, PR
Summer Teaching Assistant Training and Bridging Seminars **Summer 2007**

RESEARCH
EXPERIENCE

Department of Mathematics, Iowa State University, Ames, Iowa USA
Summer visiting researcher **Summer 2010**
 Principal Investigator: Leslie Hogben, Ph.D.
 Sponsored by National Science Foundation (DMS-0502354) and Iowa State University.

Summer visiting researcher **Summer 2008**
 Principal Investigator: Leslie Hogben, Ph.D. and Jason Smith, Ph.D.
 Sponsored by National Science Foundation (DMS-0753009), University of Minnesota.

WORKING PAPERS

Torres-Aponte, H., M.R. Emany-K., and L. Hogben. *A Minimum Rank of n -dimensional Hypercube Cut-Complexes.*

Torres-Aponte, H. *Stock Markets and Financial Crises: A Dynamic Networks Approach*

Torres-Aponte, H. *Financial networks as a clustering method for industrial classification*

HONORS AND
AWARDS

Dean of Graduate Studies and Research, University of Puerto Rico, Merit Scholarship, 2015.
 Dean of Graduate Studies and Research, University of Puerto Rico, Travel Scholarship, 2010.
 Society for Advancement of Chicanos and Native Americans in Sciences, Scholarship 2007, 2010.
 National Science and Mathematics Access to Retain Talent Grant (National SMART Grant).
 Puerto Rico Louis Stoke Alliance for Minority Participation (PRLS-AMP) Undergraduate Research

Fellowship, 2005 – 2007.

Dean's Honor List, University of Puerto Rico, 2005 – 2007.

National Science Foundations, CSEMS-grant award (DUE-9986985), University of Puerto Rico, 2004 – 2006.

CONFERENCE
TALKS

Stock Markets and Financial Crises: A Dynamic Networks Approach. XXIX Inter University Seminar on Mathematical Sciences Research, Ponce, Puerto Rico (February 2014)

Paper discussant: Optimal Portfolio for Investors with Heterogeneous Labor Income Risk across Industries 2013 Southern Finance Association Annual Meetings, Fajardo, Puerto Rico (November 2013).

Minimum Rank of Subgraphs of Hypercube. XXVI Inter University Seminar on Mathematical Sciences Research, Humacao, Puerto Rico. (February, 2011).

Minimum Rank of Subgraphs of Hypercube. 2010 NSF Alliance/VIGRE/REU-site/NIH-ISIB Iowa Summer Research Symposium, Ames, Iowa. (July, 2010).

Kummer Method Over Infinite Series. 27th Puerto Rico Interdisciplinary Scientific Meeting, Bayamón, Puerto Rico. (March, 2007).

OTHER TALKS

Minimum rank of n -dimensional hypercube cut-complex: c -Complex approach, Seminar in Convex Polytopes, Department of Mathematics, University of Puerto Rico. (February 2015).

Minimum Rank of Subgraph of Hypercube. Seminar in Discrete Mathematics, Department of Mathematics, Iowa State University. (June 2010).

Radon Transformations and Digital Topology in Tomography. Seminar in Applied Mathematics, Department of Mathematics, University of Puerto Rico. (March 2009).

WORKSHOPS AND
CONFERENCES

2015 Financial Management Association Annual Meeting, Orlando, Florida. (October 2015)-Scheduled.

Institute of Pure and Applied Mathematics - Long Program: Broad Perspectives and New Directions in Financial Mathematics - *Systemic Risk and Financial Networks*, University of California, Los Angeles, California. (March 2015).

XXVI Inter University Seminar on Mathematical Sciences Research, Humacao, Puerto Rico. (February, 2011).

2010 NSF Alliance/VIGRE/REU-Site/NIH-ISIB, Iowa Summer Research Symposium - Iowa State University, Ames, Iowa. (July 2010).

2010 NSF-CBMS Regional Conference, *The Mutually Beneficial Relationship of Matrices and Graphs*, Iowa State University, Ames, Iowa. (July 2010)

Institute of Mathematics and its Application - Special Workshop: Career Options for Under-represented Groups in Mathematical Sciences, University of Minnesota - University of Minnesota. (March, 2010)

2010 Joint Mathematical Meeting, Moscone West Cernet, San Francisco, California. (January 2010).

The Eleventh International Symposium on Artificial Intelligence and Mathematics. Special Session:

Boolean and Pseudo-Boolean Function. Fort Lauderdale, FL. (January 2010)

Fourth Transdisciplinary Research Workshop - *Computational Modeling*, University of Puerto Rico at Mayagüez.

Institute for Mathematics and its Applications, *Linear Algebra and its applications*, Iowa State University, Ames, IA. (Summer 2008).

2007 National Conference of the Society for Advancement of Chicanos and Native Americans in Science (SACNAS), Kansas City, MO, (October 2007)

Mathematics Sciences Research Institute, *Modern Mathematics: An Introduction to MSRI's 2008-2009 Programs*, Kansas City, MO. (October 2007).

27th. Puerto Rico Interdisciplinary Scientific Meeting, Interamerican University, Bayamón, Puerto Rico. (March 2007).

- COMPUTER SKILLS
- Math/Stat Packages: Mathematica, MATLAB, SAGE; some experience with R and Minitab.
 - Languages: C++; PHP, HTML, XHTML, MySQL and some experience with Fortran.
 - Applications: \LaTeX , common Windows database, spreadsheet, and presentation software.
 - Operating Systems: Linux, Windows.

PROFESSIONAL MEMBERSHIPS

Southern Finance Association (SFA).
American Finance Association (AFA).
Society for Industrial and Applied Mathematics (SIAM).

REFERENCES

Javier Rodríguez, Ph.D. Graduate Business School University of Puerto Rico 787-764-0000 x.87118 javier.rodriguez19@upr.edu	Pedro J. Rodriguez Esquerdo, Ph.D. Department of Mathematics University of Puerto Rico 787-764-0000 x.4686 pj.rodriguez.esquerdo@gmail.com
Leslie Hogben, Ph.D. Department of Mathematics Iowa State University 515-294-8168 lhogben@iastate.edu	M. Reza Emany-Khansary, Ph.D. Department of Mathematics University of Puerto Rico 787-764-0000 x.4787 sanjuancube@yahoo.com

GRADUATE COURSEWORK IN MATHEMATICS

<input type="checkbox"/> Probability & Statistics	<input type="checkbox"/> Linear Algebra
<input type="checkbox"/> Linear Programming	<input type="checkbox"/> Applied Linear Algebra
<input type="checkbox"/> Non-linear Programming	<input type="checkbox"/> Finite Radon Transforms
<input type="checkbox"/> Algorithms	<input type="checkbox"/> Graph Domination Symmetries
<input type="checkbox"/> Topology	<input type="checkbox"/> Minimum Rank and Polynomiography
<input type="checkbox"/> Algebraic Topology	

GRADUATE COURSEWORK IN BUSINESS

- Microeconomics: Price Theory
- Macroeconomics: Theory of Income and Money
- Research Methods in Managerial Sciences
- Integrated Probabilistic and Statistical Analysis
- Econometrics and Statistics I& II
- Investments
- Contemporary Topics in Finance
- Graduate Seminar in Corporate Finance
- Graduate Seminar in Investments
- Marketing Management
- Operation management
- Wavelets in finance
- Financial Theory I & II