

# ALEJANDRA QUINTOS

## EDUCATION

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<b>Columbia University</b> Ph.D. in Statistics – Advisor: Philip Protter M.Phil. in Statistics M.A. in Statistics	New York, NY Sep. 2016 – May 2022 (expected) Sep. 2016 – Feb. 2020 Sep. 2016 – May 2018
<b>Universidad de las Américas Puebla</b> B.S. in Actuarial Science – Valedictorian, Summa Cum Laude, GPA: 9.9/10.0	Puebla, Mexico Aug. 2010 – Jun. 2015

## FELLOWSHIPS

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<b>Columbia University</b> Dean’s Fellowship	New York, NY Sep. 2016
<b>Fulbright – COMEXUS</b> Fulbright García-Robles Fellowship for <i>Columbia University</i> Proyecto 100 Mil Grant for Research Stay at <i>Cornell University</i>	Mexico City, Mexico Jun. 2015 Jun. 2014
<b>Universidad de las Américas Puebla</b> Outstanding Student Scholarship	Puebla, Mexico Jun. 2010

## RESEARCH INTERESTS

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Probability Theory, Applied Probability Theory, Stochastic Processes, Mathematical Finance, Credit Risk Theory, Microfinance, Statistics, Machine Learning.

## PUBLICATIONS

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1. R. Jarrow, P. Protter, **A. Quintos**, “Computing the Probability of a Financial Market Failure: A New Measure of Systemic Risk”, 2021. *Submitted to Annals of Operations Research*. Available online: <https://arxiv.org/abs/2110.10936>.
2. P. Protter, **A. Quintos**, “Dependent Stopping Times”, 2021. Available online: <https://arxiv.org/abs/2111.09458>
3. P. Protter, **A. Quintos**, “Optimal group size in microlending”, *Annals of Finance*, 2021. <https://doi.org/10.1007/s10436-020-00382-0>
4. **A. Quintos**, G. Romero-Meléndez, “Fractal modeling of poverty indicators in the state of Puebla”, Universidad de las Américas Puebla, 2014. Available upon request.
5. **A. Quintos**, “New Regulation in the Mexican Insurance Market”, SC Johnson Graduate School of Management at Cornell University, 2014. Available upon request.

## REFEREE

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SIAM Journal on Financial Mathematics (SIFIN)

## INVITED & CONTRIBUTED TALKS

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- Rutgers University, *6th Eastern Conference on Mathematical Finance*, New Brunswick, NJ, Oct. 2022.
- New York University, *Brooklyn Quant Experience Lecture Series*, Brooklyn, NY, Feb. 2022.
- Federal Reserve Bank of Philadelphia, *Young Scholars Conference on Machine Learning in Economics and Finance*, Philadelphia, PA, Dec. 2021.
- Columbia University, *Statistics Department Student Seminar*, New York, NY, Dec. 2021.
- CUNY, *20th Northeast Probability Seminar*, New York, NY, Nov. 2021.
- Columbia University, *Stochastic Processes and Applications*, Invited lecturer, New York, NY, Sep. 2021.
- Columbia University, *Research and Diversity – Graduate Student Panel*, New York, NY, Sep. 2021.
- Columbia University, *Undergraduate Research Experiences in Mathematical Modeling*, New York, NY, Jun. 2021.
- Universidad de las Américas Puebla, *32nd National Congress on Actuarial Sciences*, Puebla, México, Apr. 2021.
- Columbia University, *Minghui Yu Memorial Conference*, New York, NY, Mar. 2021.
- Columbia University, *Minghui Yu Memorial Conference*, New York, NY, Apr. 2019.
- Universidad de las Américas Puebla, *30th National Congress on Actuarial Sciences*, Puebla, México, Mar. 2019.

## AWARDS

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- Columbia University, *Presidential Award for Outstanding Teaching by a Graduate Student Instructor*, Finalist, Feb. 2021.
- Universidad Popular Autónoma de Puebla, *Probability and Statistics Olympiad*, 1st place, Nov. 2014.
- Universidad de las Américas Puebla, *UDLAP Scholar (Highest GPA in Sciences School)*, Oct. 2014.
- Consejo de Ciencia y Tecnología del Estado de Puebla, *Tercer Encuentro Estatal de Jóvenes Investigadores (State Research Competition)*, 2nd place, Oct. 2014.
- Universidad Popular Autónoma de Puebla, *Probability and Statistics Olympiad*, 1st place, Nov. 2013.
- Universidad Popular Autónoma de Puebla, *Probability and Statistics Olympiad*, 1st place, Nov. 2012.

## TEACHING & MENTORING

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### Columbia University

Teaching Assistant – Statistics Department

New York, NY  
Sep. 2016 – Present

- Stochastic Processes and Applications (Graduate level)
- Elementary Stochastic Processes (Undergraduate level)
- Probability (Graduate level)

- Statistical Inference (Graduate level)
- Calculus-based Introduction to Statistics (Undergraduate level)
- Applied Linear Regression Analysis (Undergraduate level)

*Directed Reading Program Mentor – Mathematics Department*

Sep. 2021 – Present

- Read and discuss probability research articles with an undergraduate student

*Research Mentor – Undergraduate Research Experiences in Mathematical Modeling*

Jun. 2021 – Aug. 2021

- Supervised 2 teams of 3 undergraduate students on interdisciplinary research projects:
  - Alzheimer's brain in a network diffusion model
  - Discrete-event market simulation of the Figgie card game
- Helped mentees to understand methods of research and scholarship
- Trained students in mathematical and statistical skills

## LEADERSHIP & OUTREACH

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- Member, *Committee on Diversity, Equity and Inclusion*, Statistics Department, Columbia University, New York, NY, Sep. 2021 – Present.
- Co-organizer, *Networking Meetings for Women*, Statistics Department, Columbia University, New York, NY, Jan. 2020 – Present.
- Statistics Department Representative, *The 2021 SACNAS National Diversity in STEM*, Digital Conference, Oct. 2021.
- Speaker, *Ph.D. Information Session for M.A. Students*, Statistics Department, Columbia University, New York, NY, Oct. 2021.
- Host & Co-organizer, *Women in STEM Panel*, Undergraduate Research Experiences in Mathematical Modeling, Columbia University, New York, NY, Aug. 2021.
- Member, *Healthy Living Civic Engagement Project*, The Washington Center for Internships and Academic Seminars, Washington, DC, Feb. 2014 – May 2014.
- Mentor, *High School Finance Course*, Auxiliémos La Familia (non-profit organization), Puebla, Mexico, Aug. 2013 – Jan. 2014.

## PROFESSIONAL EXPERIENCE

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**Citigroup – Banamex**

Puebla, Mexico

*Compliance Analyst – Anti Money Laundering*

Jun. 2015 – Sep. 2015

- Developed novel risk models to detect and report activities linked to money laundering

**Cornell University – SC Johnson Graduate School of Management**

Ithaca, NY

*Research Intern – Advisors: Prof. Lourdes Casanova and Richard Coyle*

Jun. 2014 – Aug. 2014

- Conducted research on new regulation in the Mexican insurance market

**American Association for Marriage and Family Therapy**

Alexandria, VA

*Policy Intern*

Feb. 2014 – May 2014

- Estimated the organization's pure premiums and assisted them in Congress Meetings on Capitol Hill

## CERTIFICATIONS & PROGRAMS

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- Society of Actuaries, *Exam P Probability*, Jan. 2014.
- Society of Actuaries, *Exam FM Probability*, Aug. 2013.
- The Washington Center for Internships and Academic Seminars, *Business and Global Trade Program*, Washington, DC, Jan. 2014 – May 2014.
- The Anglo Mexican Foundation, *Teacher Training Course – English language teaching methodology*, Puebla, Mexico, Aug. 2009 – May 2010.

## SKILLS

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- Programming: R, LaTeX, VBA, C#, Python, Mathematica
- Applications: Minitab, EViews, Microsoft Office (Access, Excel, Word, PowerPoint, Publisher)

## OTHER

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- Languages: Spanish (native), English (near-native fluency)
- Hobbies: Marathon running, swimming, hiking