

Diego Fonseca

Curriculum Vitae

Personal information

First Names and Last Names: *Diego Fernando* Fonseca Valero.

Research Interest

Stochastic Optimization, Statistics, Stochastic Processes, Mathematical Finance.

Education

- 2019–present **Ph.D. Mathematics** , *Universidad de los Andes*, .
Research topic: Robust Distributional Optimization with Wasserstein metrics applied to Portfolio optimization and statistics.
Advisor: Mauricio Junca.
- 2016–2018 **M.Sc. Mathematics** , *Universidad de los Andes*, .
Thesis: Robust Distributional Optimization with Wasserstein metrics and some applications.
Advisor: Mauricio Junca.
- 2011–2015 **B.S. Mathematics** , *Universidad nacional de Colombia*, .
Thesis: Dynamic of Hénon map.
Advisor: Serafin Bautista.

Research, preprints and publications

- Preprint *Distributionally Robust Optimization based in Wasserstein metric applied to portfolio optimization*, Joint work with Mauricio Junca. 2020

Presentations, Proceedings, and Talks

- 2018 *Data-driven distributionally robust optimization applied to probability density estimation and portfolio optimization*. Poster session presented at IX PanAmerican Workshop in applied mathematics and computational science, Varadero, Cuba, July 2018.

Departamento de Matemáticas.

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- 2018 *Data-driven Robust Distributional Optimization applied to estimation of probability density functions and portfolio optimization*. Primer Congreso Colombiano de Matemáticas Aplicadas e Industriales (MAPI-1), Bogotá, Colombia, August 2018.
- 2019 *Data-driven distributionally robust optimization applied to portfolio optimization*. Third International Congress on Actuarial Science and Quantitative Finance, Manizales, Colombia, July 2019.

Conferences and Workshops attended

- 2017 Terceras Jornadas de probabilidad y Procesos Estocásticos, Bogotá, Colombia, August 2017.
- 2017 Matematicas por estudiantes, Bogotá, Colombia, November 2017.
- 2018 IX PanAmerican Workshop in applied mathematics and computational science, Varadero, Cuba, July 2018.
- 2018 Primer Congreso Colombiano de Matemáticas Aplicadas e Industriales (MAPI-1), Bogotá, Colombia, August 2018.
- 2019 Third International Congress on Actuarial Science and Quantitative Finance, Manizales, Colombia, July 2019.

Accomplishments

- 2016-present Graduate Assitance at Universidad de Los Andes.

Professional Experience

Teaching Experience at Universidad de los Andes, Bogotá, Colombia.

- 2016–Present **Courses.**
 - **MATE-1105** *Linear Algebra 1*, **TA**, 1st and 2nd Semesters 2016.
 - **MATE-1214** *Integral Calculus with Differential Equations*, **TA**, 1st Semester 2017, 1st Semesters 2018.
 - **MATE-1203** *Diferential calculus*, **TA**, 2nd Semester 2018.
 - **MATE-1253** *Calculus 3 with Linear algebra 1*, **TA**, 2nd Semester 2019.
 - **MATE-1252** *Integral Calculus with Probability*, **TA**, 1st and 2nd Semesters 2019, 1st and 2nd Semesters 2020, 1st Semester 2021.

Teaching Experience at Universidad Nacional de Colombia, Bogotá, Colombia.

- 2015 **Courses.**
 - **MATE-1000001** *Math basic (Precalculus)*, **TA**, 1st and 2nd Semesters 2015.

Departamento de Matematicas.

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Computer skills

Intermediate PYTHON, R,
Advanced MATLAB, L^AT_EX