EDUCATION

Columbia University, Graduate School of Business, New York, NY

2019-present

Ph.D. candidate in Decision, Risk and Operations division.

Advisor: Prof. Omar Besbes and Prof. Will Ma

Major coursework includes Optimization, Stochastic Modeling, Reinforcement Learning, Reliable Statistical Learning, Machine Learning for Algorithm Design, Revenue Management

École Polytechnique, Palaiseau, France

2016-2019

Bachelor of Science (2018) and Master of Science (2019) in Applied Mathematics, with minor in Computer Science. GPA: 3.90/4.00.

Major coursework includes Operations Research, Advanced Algorithms Analysis, Game Theory, Numerical Approximation and Optimization

Lycée Louis-Le-Grand, Paris, France

2014-2016

Preparatory program - A two-year post-secondary curriculum in advanced mathematics, physics and computer science leading to nationwide competitive entrance exams to the Grandes Ecoles for scientific studies.

GPA 4.00/4.00

RESEARCH INTERESTS

Sequential decision-making under uncertainty, development of data-driven algorithms in heterogeneous and data-scarce environments, with applications in pricing and inventory planning

JOURNAL PUBLICATIONS

"How Big Should Your Data Really Be? Data-Driven Newsvendor: Learning One Sample at a Time" with Omar Besbes. *Management Science* (forthcoming)

- ★ First Place, RMP Jeff McGill Student Paper Award, 2021
- ★ Finalist, INFORMS George Nicholson Student Paper Competition, 2021
- ★ Finalist, APS Best Student Paper Award, 2021

REFEREED CONFERENCE PROCEEDINGS

"Beyond IID: Data-Driven Decision-Making in Heterogeneous Environments"

with Omar Besbes and Will Ma. In Advances of Neural Information Processing Systems (NeurIPS)

(2022)

Submitted to refereed

JOURNALS

"Joint Assortment and Inventory Planning for Heavy Tailed Demand"

joint with Omar El Housni, Guillermo Gallego, Vineet Goyal, Humair Salal, Ali Sadighian, Kim Sangjo, Jingchen Wu. Under Review (2021)

Working Papers

"Data-Driven Newsvendor: Operating in a Heterogeneous Environment" with Omar Besbes and Will Ma. Working paper

"Adversarial Feature Based Dynamic Pricing"

joint with Vineet Goyal. Technical Report, École Polytechnique (2019)

★ École Polytechnique Research Prize in Computer Science, 2019

AWARDS

Deming Center Doctoral Fellowship, 2023 Doctoral fellow

First Place, RMP Jeff McGill Student Paper Award, 2021

Finalist, INFORMS George Nicholson Student Paper Competition, 2021

Finalist, APS Best Student Paper Award, 2021

École Polytechnique Research Prize in Computer Science, 2019

Bronze Medalist, ACM International Collegiate Programming Contest, Southwestern Europe Re-

gional Contest, Paris 2017

Bronze Medalist, the 24^{th} International Math Competition, Bulgaria 2017

French Government's Major-Excellence Scholarship, 2014

Industry
EXPERIENCE

Amazon.com, Applied Scientist Intern, New York, NY, USA March 2021- May 2021 Part-time internship in the Supply Chain and Optimization Technology (SCOT) team.

IBM Extreme Blue Program, Paris, France

Summer 2018

Designed a multi-organization network for French public administration based on a blockchain technology. 2^{nd} prize, Best Pitch at the European Extreme Blue seminar

TEACHING EXPERIENCE

Columbia University, Teaching Assistant

Operations Management (EMBA core)
Business Analytics (MBA core)

Spring 2022 Fall 2021

Business Analytics (MBA elective)

Summer 2020/Summer 2021

Open Sciences (Science Ouverte), Drancy, France

Sept 2016 - Apr 2017

Tutored middle school, high school and undergraduate students from underprivileged neighborhoods.

OUTSIDE ACTIVITIES

Student representative, Columbia University

2021-present

Student representative for the Decision Risk and Operations division.

Board of Directors, École Polytechnique

2017-2019

Elected student representative for the 2016 Class on the Board of Directors of Ecole Polytechnique.

Math&Maroc, Casablanca, Morocco

2016-2019

Co-founder and vice-president of Math&Maroc: an association dedicated to the preparation of Moroccan high school students to international mathematics competitions.

Organized intensive math courses in partnership with the Ministry of Education.

SKILLS

English/French/Arabic: Fluent Spanish: Intermediate

Programming: Python, Java, C/C++, JavaScript, PHP, HTML, CSS

SELECTED TALKS

Data-Driven Newsvendor: Operating in a Heterogeneous Environment

MSOM Annual Conference, Munich

RMP Annual Conference, Online

June 2022

June 2022

Beyond IID: Data-Driven Decision-Making in Heterogeneous Environments

Marketplace Innovation Workshop, Online

May 2022

How Big Should Your Data Really Be? Data-Driven Newsvendor: Learning One Sample at a Time
MSOM Supply Chain Management SIG Meeting, Munich
INFORMS Annual Meeting, Anaheim
October 2021
MSOM Annual Conference, Online
IUIN 2021
RMP Annual Conference, Online
June 2021
Amazon.com, Online
May 2021

Joint Assortment and Inventory Planning for Heavy Tailed Demand

MSOM Annual Conference, Online June 2021 INFORMS Annual Meeting, Online Nov 2020