Omar MOUCHTAKI

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EDUCATION	**Columbia University, Graduate School of Business**, New York, NY 2019-present Ph.D. candidate in Decision, Risk and Operations division. Advisors: Prof. Omar Besbes and Prof. Will Ma Coursework includes *Optimization, Stochastic Modeling, Reinforcement Learning, Reliable Statistical Learning, Machine Learning for Algorithm Design, Revenue Management.* GPA: 10.24/10.00 **École Polytechnique**, Palaiseau, France 2016-2019 Bachelor of Science (2018) and Master of Science (2019) in Applied Mathematics, with minor in Computer Science. Coursework includes *Operations Research, Advanced Algorithms Analysis, Game Theory, Numerical Approximation and Optimization.* GPA: 3.90/4.00 **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	<u>Methodologies:</u> data-driven decision-making, sample complexity, optimization under uncertainty, machine learning in data-scarce environments, sequential decision-making <u>Applications:</u> the general automation of operational decision-making pipelines, such as those for inventory, pricing and assortment optimization
JOURNAL PUBLICATIONS	"How Big Should Your Data Really Be? Data-Driven Newsvendor: Learning One Sample at a Time" with Omar Besbes. *Management Science* (Articles in Advance) ★ First Place, RMP Jeff McGill Student Paper Award, 2021 ★ Finalist, INFORMS George Nicholson Student Paper Competition, 2021 ★ Finalist, APS Best Student Paper Award, 2021
SUBMITTED TO REFEREED JOURNALS	"Beyond IID: Data-Driven Decision-Making in Heterogeneous Environments" with Omar Besbes and Will Ma. Major Revision in *Management Science* Preliminary version appeared in Advances of *Neural Information Processing Systems (NeurIPS)*, 2022 "Joint Assortment and Inventory Planning under the Markov Chain Choice Model" with Omar El Housni, Guillermo Gallego, Vineet Goyal, Humair Salal, Ali Sadighian, Kim Sangjo, Jingchen Wu. Major Revision in *Management Science* "From Contextual Data to Newsvendor Decisions: On the Actual Performance of Data-Driven Algorithms" with Omar Besbes and Will Ma. Under Review in *Management Science*
WORK IN PROGRESS	"Pricing with Binary Feedback: the Value of Information Bit by Bit" with Omar Besbes and Will Ma. Working paper (2023) "Fast Revenue Maximization with Few Experiments" with Achraf Bahamou and Omar Besbes. Working paper (2023)
TECHNICAL REPORTS	"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, 2022-2023 Doctoral fellow
	Paul and Sandra Montrone Doctoral Fellowship, 2022
	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 Regional Contest, 2017
	Bronze Medalist, the 24th International Math Competition, 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. 2nd prize, Best Pitch at the European Extreme Blue seminar

TEACHING EXPERIENCE	**Columbia University**, **Teaching Assistant**	
	Operations Management (EMBA core)	Spring 2022
	Business Analytics I (MBA core)	Fall 2021/Fall 2022
	Business Analytics II (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.	

LEADERSHIP ACTIVITIES	**Student Representative**, Columbia University 2021-2023
	Student representative for the Decision Risk and Operations division.
	Organized the student reading group and the open house for prospective students.
	Board of Directors, École Polytechnique 2017-2019
	Elected student representative for the 2016 Class on the Board of Directors of Ecole Polytechnique. Led initiatives to improve the diversity of the student cohort and living conditions of minority groups (low-income, international and female students).
	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.

PROFESSIONAL SERVICE	Co-organizer of the NYC Operations Day PhD Colloquium, 2023
	Brown Bag (DRO Internal Seminar) series co-organizer, 2021-2023
	Columbia DRO PhD review Committee member, 2021
	Reviewer for *Management Science*, *MSOM SIG* and *WINE*

SKILLS	**English/French/Arabic:** Fluent **Spanish:** Intermediate
	Programming: Python, Java, C/C++, JavaScript, PHP, HTML, CSS

SELECTED PRESENTATIONS	*From Contextual Data to Newsvendor Decisions: On the Actual Performance of Data-Driven Algorithms*	
	INFORMS Annual Meeting, Phoenix	Oct 2023
	Cornell Young Researchers Workshop, Ithaca	Oct 2023
	RMP Annual Conference, London	July 2023
	MSOM Annual Conference, Montreal	June 2023
	POMS Annual Conference, Orlando	May 2023
	Deming Center Doctoral Fellow Seminar, New York	April 2023

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

APS Conference, Nancy	June 2023
Columbia Economics Interdisciplinary Market Design Seminar, New York	March 2023
Rotman OM&S Data Science Seminar, Online	December 2022
NeurIPS (Poster), New Orleans	December 2022
INFORMS Annual Meeting, Indianapolis	October 2022
CFOL Workshop at ICML (Poster), Baltimore	July 2022
RMP Annual Conference, Online	June 2022
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	June 2022
INFORMS Annual Meeting, Anaheim	October 2021
MSOM Annual Conference, Online	June 2021
RMP Annual Conference, Online	June 2021
Amazon SCOT seminar, Online	May 2021

Joint Assortment and Inventory Planning under the Markov Chain Choice Model

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

REFERENCES

Professor Omar Besbes
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