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| ACADEMIC APPOINTMENTS            | <b>Cornell University</b> and <b>Cornell Tech</b> , New York, NY<br>School of Operations Research and Information Engineering   |
|                                  | - Assistant Professor Jan 2022-Present<br>- Visiting Assistant Professor 2020-2021  |
| EDUCATION                        | <b>Columbia University</b> , New York, NY   |
|                                  | - Ph.D. in Operations Research. 2016-2020<br>Thesis: <i>Tractable Policies in Dynamic Robust Optimization</i><br>Advisor: Professor Vineet Goyal  |
|                                  | - Master of Science in Operations Research, GPA: 4.05/4.0 2015-2016   |
|                                  | <b>Ecole Polytechnique</b> , Paris, France 2012-2015<br>Bachelor of Science and Master of Science in Applied Mathematics, GPA: 4.16/4.0   |
| JOURNAL PUBLICATIONS             | <i>On the Optimality of Affine Policies for Budgeted Uncertainty Sets</i> (joint with V. Goyal)<br>Math of Operations Research, 46 (2), 674-711, 2021<br><b>2nd place in the INFORMS George Nicholson student paper competition, 2020</b>   |
|                                  | <i>A Tractable Approach for Designing Piecewise Affine Policies in Dynamic Robust Optimization</i> (joint with A. Ben-Tal and V.Goyal). Math Programming, 182 (1), 57-102, 2020   |
|                                  | <i>Piecewise Static Policies for Two-stage Adjustable Robust Linear Optimization</i> (joint with V. Goyal)<br>Math Programming 169 (2), 649-665, 2018<br><b>Finalist in INFORMS Undergraduate OR student paper competition, 2015</b>  |
| REFEREED CONFERENCE PUBLICATIONS | <i>LP-based Approximations for Disjoint Bilinear and Two-Stage Adjustable Robust Optimization</i> (joint with A. Foussoul and V. Goyal) <i>Forthcoming in IPCO 2022</i>   |
|                                  | <i>Matchings Riders to Drivers: A Two-stage Robust Optimization Approach</i> (joint with V. Goyal, O. Hanguir and C. Stein). In Proceedings of the International Conference on Approximation Algorithms for Combinatorial Optimization Problems (APPROX), 2021. <i>Journal version under review</i> |
|                                  | <i>On the Power of Static Assignment Policies for Robust Facility Location Problems</i> (joint with V. Goyal and D. Shmoys). In Proceedings of the International Conference on Integer Programming and Combinatorial Optimization (IPCO), 252-267, 2021   |
|                                  | <i>Beyond Worst-case: A Probabilistic Analysis of Affine Policies in Dynamic Optimization</i> (joint with V. Goyal). In Advances of Neural Information Processing Systems (NeurIPS), 2017 ( <b>spotlight talk</b> )   |
| PAPERS UNDER REVIEW              | <i>Joint Assortment Optimization and Customization under Mixture of Multinomial Logit Model: On the Value of Personalized Assortments</i> (joint with H. Topaloglu). Under second round review in Operations Research   |
|                                  | <i>Joint Assortment and Inventory Planning for Heavy Tailed Demand</i> (joint with O. Mouchtaki, G.Gallego, V. Goyal, S. Humair, S. Kim, A. Sadighian, J. Wu). Submitted to Management Science  |
|                                  | <i>Beyond Worst-case: A Probabilistic Analysis of Affine Policies in Dynamic Optimization</i> (joint with V. Goyal). Under Major Revision in INFORMS Journal on Optimization  |
| WORK IN PROGRESS                 | <i>Near-optimal Threshold Policies via Lifted Linear Decision Rules</i> (with A. Bennouna and V. Goyal)   |
|                                  | <i>Dynamic Resource Provisioning under Demand Uncertainty</i> (with C. Bandi and V. Goyal)  |

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| REPORTS<br>(ON COVID-19) | <p><i>Can Testing Ease Social Distancing Measures? Future Evolution of COVID-19 in NYC</i> (joint with Mika Sumida, Paat Rusmevichientong, Huseyin Topaloglu and Serhan Ziya)</p> <p><i>Future Evolution of COVID-19 Pandemic in North Carolina: Can We Flatten the Curve?</i> (joint with Mika Sumida, Paat Rusmevichientong, Huseyin Topaloglu and Serhan Ziya)</p>   |
| AWARDS                   | <p>Cornell Tech Urban Tech grant, 2022</p> <p>Second prize in the INFORMS George Nicholson student paper competition, 2020</p> <p>Amazon Inventor Award, 2017</p> <p>The Graduate Fellowship for Masters in Operations Research, Columbia University, 2016</p> <p>Finalist in INFORMS Undergraduate OR student paper competition, 2015</p> <p>Ecole Polytechnique Research Prize in Applied Mathematics, 2015</p> <p>French Government's Major-Excellence Scholarship, 2012</p> <p>Honorable Mention in the 51st International Mathematical Olympiad, Astana, Kazakhstan, 2010</p>  |
| PATENTS                  | <p><i>Real-time Iterative Assortment Allocation Estimation</i> (joint with D.Bhatia, S.Humair, V.Jain, G.Li, J.Marasanapalle, A.Sadighian, and J.Wu) Amazon Research. Patent pending.</p>   |
| INDUSTRY<br>EXPERIENCE   | <p><b>Uber</b>, Data Scientist Intern, San Francisco, CA Summer 2018<br/>Developed a machine learning and an optimization framework for Uber Eats targeted promotions.</p> <p><b>Amazon</b>, Research Scientist Intern, Seattle, WA Summer 2016, Summer 2017<br/>Developed a standardized decision-making process for Amazon fashion assortment planning (patent pending).</p> <p><b>EDF R&amp;D</b>, Research Intern, Paris, France Fall 2014<br/>Developed a large scale optimization framework for scheduling employees rounds at the French flagship electric utility company EDF.</p> <p><b>Empresas Lipigas</b>, Supply Chain Analyst, Santiago, Chili Summer 2014<br/>Implemented optimization algorithms for scheduling the production of gas cylinders under demand uncertainty.</p>   |
| TEACHING<br>EXPERIENCE   | <p><b>Cornell Tech</b>, Instructor</p> <p><i>ORIE 6360: Optimization under uncertainty: robust and online models</i>, PhD Spring 2022</p> <p><i>ORIE 5530: Modeling under uncertainty</i>, graduate (60 students) Fall 2021</p> <p><i>ORIE 5250: Business Applications of Optimization</i>, graduate (20 students) Summer 2021</p> <p><i>ORIE 5132: Service Systems and Online Markets</i>, graduate (30 students) Spring 2021</p> <p><b>Columbia University</b>, Teaching Assistant</p> <p><i>IEOR 6613: Optimization</i>, PhD (30 students). Fall 2016, 2018</p> <p><i>IEOR 4601: Dynamic Pricing &amp; Revenue Management</i>, graduate(50 students) Spring 2017,2020</p> <p><i>IEOR 3404: Simulation</i>, undergraduate (90 students), Spring 2018</p> <p><i>IEOR 3609: Advanced Optimization</i>, undergraduate (90 students), Spring 2019</p> <p><b>Columbia University Science Honors Program</b>, Co-instructor Spring 2019<br/><i>Introduction to Algorithms</i>, (40 students).</p> <p><b>Mathematical Olympiad</b>, Instructor 2018-2019<br/><i>Head coach and Instructor of the Moroccan International Mathematical Olympiad team, IMO 2019, Bath UK.</i></p> |
| PROFESSIONAL<br>SERVICE  | <p>Reviewer for <i>Operations Research</i>, <i>INFORMS journal on Computing</i>, <i>Mathematical Programming</i>, <i>Mathematics of Operations Research</i> and <i>Management Science</i> journals.</p> <p>Co-organizer of IEOR-DRO seminars at Columbia university.</p>  |

## SKILLS

**Arabic/French:** bilingual      **Spanish:** Fluent  
**Programming:** Python, R, Matlab, CVX, GUROBI

## SELECTED TALKS

- Joint Assortment Optimization and Customization: On the Value of Personalized Assortments
- INFORMS Annual Meeting, Anaheim, CA Oct 2021
  - Cornell ORIE, Ithaca, NY Sep 2021
  - MSOM, (virtual) June 2021
  - RMP, (virtual) June 2021
- On the Power of Static Assignment Policies for Robust Facility Location Problems
- IPCO, (virtual) May 2021
  - INFORMS Annual Meeting, Seattle, WA Oct 2019
- From Affine to Threshold Policies: a New Framework in Dynamic Robust Optimization
- Cornell ORIE, Ithaca, NY Dec 2019
  - Cornell Tech, New York, NY Dec 2019
  - Chicago Booth, IL Jan 2020
  - Imperial College Business School, London, UK Feb 2020
  - University of Waterloo, Combinatorics & Optimization, Canada Feb 2020
  - Lyft Labs, New York, NY Mar 2020
- On the Power of Affine Policies for Capacity Planning under Demand Uncertainty
- MSOM, Singapore Jul 2019
- On the Optimality of Affine Policies for Budget of Uncertainty Sets
- INFORMS Annual Meeting, (virtual) Nov 2020
  - ICCOPT, Berlin, Germany Aug 2019
  - ICSP, Trondheim, Norway Jul 2019
  - BIRS workshop, Banff, Canada Jan 2019
  - INFORMS Annual Meeting, Phoenix, AZ Nov 2018
  - INFORMS Optimization society Conference, Denver, CO Mar 2018
  - INFORMS Annual Meeting, Houston, TX Oct 2017
- On the Power of Affine Policies in Two-Stage Adjustable Robust Optimization
- INFORMS Annual Meeting, Seattle, WA Oct 2019
  - Imperial College, London, UK May 2017
- Beyond Worst-case: A Probabilistic Analysis of Affine Policies in Dynamic Optimization
- Uber Tech Talks, San Francisco, CA Aug 2018
  - ISMP, Bordeaux, France Jul 2018
  - TADC, London Business School, London, UK May 2018
  - INFORMS Optimization society Conference, Denver, CO Mar 2018
  - NIPS, Long Beach, CA Dec 2017
  - INFORMS Annual Meeting, Houston, TX Oct 2017
  - Student seminar Columbia University, NY Oct 2017
- Dynamic Resource Provisioning in Data Centers under Demand Uncertainty
- MSOM conference, Chapel Hill, NC Jun 2017

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| Piecewise Affine policies for Dynamic Robust Optimization              |          |
| • Young Researchers Workshop at Cornell ORIE, Ithaca, NY               | Oct 2017 |
| • Computational Management Science conference, Bergamo, Italy          | May 2017 |
| • IBM Thomas J.Watson Research center, NY                              | Dec 2016 |
| • INFORMS Annual Meeting, Nashville, TN                                | Nov 2016 |
| • EURO of Operations Research, Poznan, Poland                          | Jul 2016 |
| • Amazon seminars, Seattle, WA   | Jun 2016 |
| • Student seminar Columbia University, NY                              | Apr 2016 |
| Affine policies for Multi-stage Dynamic Robust Optimization            |          |
| • INFORMS Annual Meeting, Nashville, TN                                | Nov 2016 |
| • Student seminar Columbia University, NY                              | Nov 2016 |
| Piecewise Static policies for Two-stage Adjustable Robust Optimization |          |
| • Optimization days, Montreal, Canada                                  | May 2016 |
| • INFORMS Annual Meeting, Philadelphia, PA                             | Nov 2015 |
| Tractable Policies in Dynamic Robust Optimization                      |          |
| • Africa Business School- OCP Headquarters, Casablanca, Morocco        | Jun 2017 |