

Research Interests: Game Theory, Optimization, Healthcare, Learning & Uncertainty in Decision Making.

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## EDUCATION

**Columbia University**, New York, NY

*Jun 2016 – Present*

Ph.D. Candidate in Operations Research. GPA 4.0/4.0

**Ecole Polytechnique**, Paris, France

*Sep 2013 – June 2016*

MS and BS in Optimization and Algorithms. GPA 3.83/4.0

## RESEARCH ARTICLES

*Interpretable and Robust Guidelines for Mechanical Ventilators Allocations*, with C. Chan and V. Goyal.  
Working paper, poster accepted at the American Thoracic Society 2021 International Conference.

*First-Order Methods For Wasserstein Distributionally Robust MDPs*, with C. Kroer.  
Accepted at ICML 2021.

*Scalable First-Order Methods for Robust MDPs*, with C. Kroer.  
Accepted at AAI 2021.

*Robust Policies for Proactive Transfer to Intensive Care Unit*, with C. Chan, V. Goyal and G. Escobar.  
Under major revision at Operations Research.

*A First-Order Approach to Accelerating Value Iteration*, with V. Goyal.  
Under major revision at Operations Research.

*Robust Markov Decision Processes: Beyond Rectangularity*, with V. Goyal.  
Under major revision at Mathematics of Operations Research.

*The Operator Approach to Entropy Games*, with S. Gaubert, M. Akian and J. Guillaud.  
Accepted at STACS 2017.  
Appeared in Theory of Computing Systems (1432-4350), May 2019.

## AWARDS

Columbia Business School Deming Fellowship Initiative, 2019/2020.

Winner of *Ecole Polytechnique Research Prize in Applied Mathematics*, 2016.

National Defense Medal (Bronze level), 2014.

## INDUSTRY EXPERIENCE

**Amazon**, Research Scientist intern, New York, NY

*Summer 2020*

Develop an optimization framework for improved order plannings in uncertain environments.

**Kaiser Permanente**, Research Scientist intern, Oakland, CA

*Summer 2019*

Improving timing of patients' discharges using Machine Learning and Markov processes.

## TEACHING EXPERIENCE

### **Columbia University, Teaching Assistant**

*2016 – Present*

Convex Optimization, IEOR 6616 PhD (20 students)

Advanced Optimization, IEOR 4004 Graduate (80 students)

Dynamic Pricing and Revenue Management, IEOR 4601 Graduate (20 students)

Game Theoretic Models of Operations, IEOR 4407 Graduate (50 students)

Operations Management, IEOR 4000 Graduate (30 students)

Foundations of Optimization, IEOR 3608 Undergraduate (80 students)

### **Lycée Saint-Louis, Mathematics Oral Examiner**

*Spring 2015*

Coach for preparation to the enrollment exams to the *Grandes Ecoles*, undergraduate level.

## SKILLS

**Coding:** Python, Matlab, R.

**Language:** French, English (fluent), Spanish, Russian (intermediate).

## INVITED TALKS

### *Job talk: Robust Policies for Proactive Transfer to Intensive Care Unit*

Vrije Universiteit Amsterdam, Department of Operations Analytics

*Feb 2021*

University of Southern California, Marshall School of Business

*Jan 2021*

Imperial College London, Business School

*Jan 2021*

University College London, Department of Mathematics,

*Jan 2021*

Kedge Business School, Center of Excellence in Supply chain

*Jan 2021*

MIT, Sloan School of Management

*Jan 2021*

HEC Paris, Informations Systems and Operations Management

*Dec 2020*

## CONFERENCE TALKS

### *Robust Policies for Proactive Transfer to Intensive Care Unit*

INFORMS Annual and Healthcare Meetings

*Jun & Oct 2019*

ICSP, Trondheim, Norway

*Jul 2019*

MSOM, Singapore

*Jun 2019*

Data Science Institute - poster sessions, Columbia University

*Mar, Jun & Nov 2018*

### *Robust Markov Decision Processes*

BIRS workshop, Banff, Canada

*Jan 2019*

Princeton Day of Optimization, Princeton, NJ

*Sep 2018*

ISMP, Bordeaux, France

*Jul 2018*

Data Science Day - poster session, Columbia University

*Mar 2018*

INFORMS Annual and Optimization Meetings

*Oct 2017, Mar 2018*

## REFERENCES

**Vineet Goyal** (advisor)

Associate Professor, IEOR Department

Columbia University

[vgoyal@ieor.columbia.edu](mailto:vgoyal@ieor.columbia.edu)

**Carri Chan** (advisor)

Associate Professor, Columbia Business School

Columbia University

[cwchan@columbia.edu](mailto:cwchan@columbia.edu)

**Garud Iyengar**

Professor, IEOR Department

Columbia University

[garud@ieor.columbia.edu](mailto:garud@ieor.columbia.edu)

**Christian Kroer**

Assistant Professor, IEOR Department

Columbia University

[christian.kroer@columbia.edu](mailto:christian.kroer@columbia.edu)