

# JEAN-SÉBASTIEN MATTE

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Desautels Faculty of Management

1001 Sherbrooke St W, Montreal, Quebec H3A 1G5

## EDUCATION

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**McGill University, Montréal, Qc, Canada**

*Sept. 2019 - present*

PhD Student

*Research Interests:* Sustainable Operations, Behavioural Economics, Choice Models, Assortment Optimization & Left-Over Inventory, Data-Driven Optimization, Big Data

*Methods:* Empirical Research, Econometrics, Hierarchical Bayes, Mathematical Optimization, Choice-Based Conjoint (CBC)

Supervised by: Dr. Mehmet Gumus

**Université Laval, Québec, Qc, Canada**

*Sept. 2012 - May 2014*

M.Sc. in Civil Engineering

Thesis: Behaviour of Buildings with Asymmetric Setbacks under Seismic Loading

Supervised by: Dr. Charles-Darwin Annan

**Université Laval, Québec, Qc, Canada**

*Sept. 2008 - May 2012*

B.Eng. in Civil Engineering

## ACADEMIC VISITS

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**Rotterdam School of Management–Erasmus University**

*Sept. 2022 – Apr. 2023*

*Visiting PhD Student*

*Rotterdam, Netherlands*

Host & Collaborator: Prof. Robert Rooderkerk

## RESEARCH & ACADEMIC EXPERIENCE

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**Summer School on Retail Operations**

*Sept. 17-20, 2023*

*Attendee*

*Stockholm Business School, Stockholm, Sweden*

A three-day, full-time, intensive PhD course on Retail Operations and Analytics. Topics covered:

- From Operations to Machine Learning: The Case of Choice Modelling.
- Causal Inference in Operations Analytics.
- Case study on analytics in retail operations: The challenges of last-mile delivery.

**Centre de Recherche sur les Infrastructures en Béton (CRIB)**

*Sept. 2014 – Nov. 2014*

*Research Professional*

*Québec, Qc, Canada*

- NSERC FONCER-INFRA research program: managed research projects, provided guidance to graduate students.
- Developed practice problems for the Prestressed Concrete graduate course.

**NSERC ENGAGE Research Project**

*Jan. 2014 – Sept. 2014*

*Research Assistant*

*Québec, Qc, Canada*

*Towards an Improved Design Procedure for Incorporating Soil-Structure Interaction in Seismic Performance Evaluation.* PI: Dr. Charles-Darwin Annan

- Reviewed the literature on material and component mathematical models.
- Developed the mathematical analytical model.
- Co-author of project report submitted to NSERC and a partnering consulting firm.

## TEACHING

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### McGill University

*Lecturer*

Summer 2023

*Montréal, Qc, Canada*

- Business Statistics (MGCR 271).

### McGill University

*Teaching Assistant*

Sept. 2020 - Dec. 2021

*Montréal, Qc, Canada*

- Operations Management (MGCR 617–MBA and MMA programs)

### Université Laval

*Lecturer – Steel Design*

Jan. 2014 – May 2014

*Québec, Qc, Canada*

- Design and lead lectures for a class of 170 students.
- Responsible for writing the final exam.

### Université Laval

*Teaching Assistant*

Sept. 2012 – Aug. 2014

*Québec, Qc, Canada*

- Structural Analysis (2012), Steel Design (2012, 2013), Structural Damage Diagnosis and Repairs (2013).

## SUPERVISION

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### MITACS GLOBALINK Internship

*Neha Madhulika and Vamshi Kadumuri, Université Laval*

May 2015 – Aug. 2015

*Québec, Qc, Canada*

- Provided supervision and guidance to Neha and Vamshi, whose internship was aimed at extending the findings of my Master's thesis.

## EXAMINATION COMMITTEE MEMBERSHIP

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### Masters Examination Committee

- Constance Efio-Akolly (2021) - Département de génie civil et des eaux, Université Laval.

## AWARDS & SCHOLARSHIPS

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### Sawtooth Academic Grant

*Sawtooth Software*

2023

### Graduate Mobility Award

*Graduate and Postdoctoral Studies - McGill University*

2022

*\$11,500*

- The Graduate Mobility Award encourages graduate students to study and conduct research abroad. A limited number of awards, funded by the Government of Quebec, are available each year on a competitive basis.

### MSRC Performance Award—Honorable Mention

*Management Science Research Center (MSRC) - Desautels Faculty of Management*

2021

*\$2,000*

- Awarded by the MSRC to the best PhD student project proposal.

### Walter John Stenason Fellowship

*Desautels Faculty of Management*

2019-2020

*\$10,000*

- Awarded by Graduate and Postdoctoral Studies upon the recommendation of the Desautels Faculty of Management to outstanding Canadian Ph.D. students.

<b>PhD Program in Management Guaranteed Funding Award (MGFA)</b>	2019-2023
<i>Desautels Faculty of Management</i>	<i>\$30,000/year</i>

<b>Honour List - Master's Thesis</b>	2015
<i>Faculty of Graduate and Postdoctoral Studies, Université Laval</i>	

- The Honour List includes graduates of a thesis master's program whose theses received a unanimous grade of "excellent".

<b>Funding for scientific communication</b>	2014
<i>Association des étudiant(e)s de Laval inscrits aux études supérieures (AELIES), Université Laval \$500</i>	

- Funding provided to present and attend the CSCE 2014 4th Int. Structural Speciality Conference.

<b>Merit Research Scholarship</b>	2013, 2014
<i>Faculty of Graduate and Postdoctoral Studies, Université Laval</i>	<i>\$200, \$300</i>

- Awarded to graduate students who complete the stages of their program on time.

## NON-ACADEMIC WORK EXPERIENCE

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<b>LERA Consulting Structural Engineers</b>	Nov. 2014 – July 2019
<i>Design Engineer &amp; Project Manager</i>	<i>New York City, NY, USA</i>

- **Managed in-house teams of several engineers and interns.**
- **Managed design development** with Owners, Architects, Service Engineers and Contractors.
- **Founder and Project Lead for LERA Tools:** Committee developing and standardizing design & optimization tools, and workflows, to be used office-wide.
- **Designed, analyzed, and optimized complex structural systems.** Researched on analysis methods, materials and systems modelling, international and local building codes, construction methods and available materials.
- **Authored and co-authored** design narratives, calculation packages, peer-review and forensics reports.

## VOLUNTEERING WORK

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<b>Architect Registration Exam (ARE) Program</b>	2019
<i>Lecturer</i>	<i>New York City, NY, USA</i>

- LERA-based initiative: Engineers **providing structural engineering lessons and tutoring to architectural professionals** in preparation for their board exam.

<b>Fashion Revolution USA</b>	2018
<i>Consultant</i>	<i>New York City, NY, USA</i>

- **Advise on the development of the High School Upcycle Competition.**
- Volunteer during the Fashion Revolution Week 2018

<b>ACE Mentor Program of America</b>	2017 - 2019
<i>Office Team Leader</i>	<i>New York City, NY, USA</i>

- **Mentoring High School students and promote careers in STEM**, specifically in Architecture/Construction/Engineering (ACE).

<b>Project JUST</b>	2016 - 2018
<i>Researcher</i>	<i>New York City, NY, USA</i>

- **Research on ethically and environmentally sustainable practices** of fashion brands, published on the website's wiki.

## SKILLS & TECHNICAL STRENGTHS

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<b>Programming</b>	Python, R, L <sup>A</sup> T <sub>E</sub> X, HTML, CSS, C++, bash, Matlab, SQL, JavaScript, High-Performance Computing (HPC) programming and deployment
<b>Softwares</b>	LimeSurvey, Sawtooth
<b>Packages &amp; Libraries</b>	Numpy, Pandas, Sklearn, RSOME, Gurobi, Multiprocessing, TensorFlow/PyTorch
<b>Languages</b>	French, English

## PUBLICATIONS, PRESENTATIONS & TALKS

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### Working Papers

1. Understanding the multidimensional effects of product variety on customer behaviour: A large-scale empirical study in online fast fashion retail (with Mehmet Gumus and Javad Nasiry). **Under Review: M&SOM**
2. Lowering the environmental impacts of fashion retail assortments: balancing profit maximization and impact minimization (with Robert Rooderkerk and Mehmet Gumus).

### Work in Progress

1. The elephant in the room: How to start addressing overproduction in fast fashion (with Mehmet Gumus)
2. “rume: Random Utility Model Estimation for Large Data Sets in R”

### Presentations

1. *6th Meeting of the EURO Working Group (EWG) on Retail Operations*: **Matte, J.-S.**, Gumus, M., Rooderkerk, R., Lowering the environmental impact of fashion retail assortments: Balancing profit maximization and impact minimization. Stockholm Business School–Stockholm University, Stockholm, Sweden, September 20-22, 2023.
2. *INFORMS MSOM 2023*: **Matte, J.-S.**, Gumus, M., Nasiry, J., Product Variety in Online Fashion Retailing. McGill University, Montréal, Canada, June 25-26, 2023.
3. *5th Meeting of the EURO Working Group (EWG) on Retail Operations*: **Matte, J.-S.**, Nasiry, J., Gumus, M., Product Variety and Consumer Behaviour in Online Fashion Retailing. Koç University, Istanbul, October 12-13, 2022.
4. *32nd Annual POMS Conference*: **Matte, J.-S.**, Nasiry, J., Gumus, M., Product Variety and Consumer Behaviour in Online Fashion Retailing. Online, April 21-25, 2022.
5. *CSCE 2014 4th Int. Structural Speciality Conference*: **Matte, J.-S.**, Annan, C.-D., Bastien, J., Seismic Behaviour of Multi-Storey Buildings with Asymmetric Setback – the Effect of the Level and the Degree of Setback. Halifax, Canada, May 2014.
6. *CSCE 2013 General Conference*: Hassan, M.H., Annan, C.-D., **Matte, J.-S.**, Finite Element Analysis of Cable-Stayed Bridges under the Effect of Accidental Loss of a Stay Cable. Montréal, Canada, May 2013.

### Talks

1. *Willingness-to-pay for sustainability in fashion*: Presentation to RSM Marketing Consumer Club. Rotterdam School of Management–Erasmus University, Rotterdam, March 16, 2023.
2. *The Engineering Challenges of World Trade Center Tower 4*: Presentation to MIT graduate students. LERA, New York City, NY, USA, Jan. 2019.