Daniel A.M.C. Vignon

CONTACT INFORMATION

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APPOINTMENT

Civil & Urban Engineering, New York University Sept 2022 – Present
Assistant Professor

RESEARCH INTERESTS

Economic modeling and analysis of connected and automated mobility systems; smart-infrastructure provision and investment; cyber-physical systems design and regulation

EDUCATION

University of Michigan, Ann Arbor, MI

PhD, Civil & Environmental Engineering (CEE) June 24, 2022

- Dissertation: On the Economics and Regulation of Smart Transportation Systems
- Advisor: Yafeng Yin, PhD

MA, Economics Spring 2022

Massachusetts Institute of Technology (MIT), Cambridge, MA

BSc, Mechanical Engineering June 2017

RESEARCH EXPERIENCE

Smart-infrastructure and automated driving Sept 2019 – June 2022
Laboratory for Innovative Mobility Systems (LIMOS), University of Michigan
Supervisor: Yafeng Yin, PhD

Regulating ride-hailing services Sept 2017 – present
LIMOS, University of Michigan
Supervisor: Yafeng Yin, PhD

Loadability limit of the electric grid Sept 2016 – February 2017
Department of Mechanical Engineering, MIT
Supervisor: Konstantin Turitsyn, PhD

Educational applications for mechanics Sept 2015 – May 2016
Department of Mechanical Engineering, MIT
Supervisor: Anthony Patera, PhD

FEA Analysis of nuclear pump components June 2015 – August 2015
Departement d'Analyses Mecaniques et Acoustiques, EDF R&D
Supervisor: Graham Hobbins

PUBLICATIONS

1. Liu, Tianming, Xu, Z., **Vignon, D.A.M.C.**, Yin, Y., Li, Q. and Qin, Z. (2022) "Effects of Threshold-Based Incentives on Drivers' Labor Supply Behavior". *Under review* [URL]
2. **Vignon, D.A.M.C.**, Ke, J. and Yin, Y. (2022) "Regulating the Ride-hailing Market in the Age of Uberization". *Under review* [URL]
3. **Vignon, D.A.M.C.**, Yin, Y., and Bahrami, S., Laberteaux, K. (2022) "Economic Analysis of Vehicle-Infrastructure Cooperation for Driving Automation". *Transportation Research Part C: Emerging Technologies*, 142:103757, Sept 2022. [URL]
4. **Vignon, D.A.**, Y. Yin, and J. Ke. Regulating ridesourcing services with product differentiation and congestion externality. *Transportation Research Part C: Emerging Technologies*, 127:103088, June 2021. ISSN 0968-090X. [URL]

5. Bahrami, S., **Vignon, D.A.M.C.**, Yin, Y. and Laberteaux, K. (2021) "Parking Management of Automated Vehicles in Downtown Areas". *Transportation Research Part C*, 121:103001, May 2021. [URL]

6. Xu, Z., **Vignon, D.A.M.C.**, Yin, Y., and Ye, J. (2020). "An empirical study of the labor supply of ride-sourcing drivers". *Transportation Letters*, 1-4, July 2020. [URL]

Talks and Conference Presentations

• - Oral ∗ - Poster

1. **An Economic Analysis of a Vehicle-Infrastructure Cooperative Approach to Automated Driving**
   - *Transportation Research Board 99th Annual Meeting.* January 27, 2021. Washington DC.
   - *INFORMS 2020 Annual Meeting.* November 8, 2020. Online.

2. **A Model of the Ridesourcing Market with Congestion Externality**
   - ∗ *Transportation Research Board 99th Annual Meeting.* January 15, 2020. Washington DC.
   - *Next Generation Transportation Systems Seminar.* November 2019. University of Michigan.
   - *INFORMS 2019 Annual Meeting.* October 21, 2019. Seattle, WA.

3. **Understanding the Matching Function in Ridesourcing Markets**
   - *INFORMS 2018 Annual Meeting.* November 6, 2018. Phoenix, AZ.

Teaching Experience

CEE 559: Transportation Network Modeling Winter 2021
Teaching Assistant
Department of Civil and Environmental Engineering, University of Michigan

CEE 553: Infrastructure Systems Optimization Fall 2019, 2021
Teaching Assistant
Department of Civil and Environmental Engineering, University of Michigan

Introductory fluid mechanics and thermodynamics Summer 2017
Co-instructor
African Leadership University (ALU), Mauritius

2.001: Mechanics and Materials I Spring 2017
Teaching Assistant
Department of Mechanical Engineering, MIT

Service and Membership

Member
INFORMS
Institute of Transportation Engineers (ITE)

Peer mentoring program
Mentor Fall 2021 – Spring 2022

MIT Educational Council
Educational Counselor Fall 2017 – Present

Michigan Transportation Student Organization (MiTSO),
Treasurer Summer 2018 – Summer 2019

Graduate Student Advisory Council
Department of Civil & Environmental Engineering Sept 2017 – August 2019

Awards

Teaching Awards

- *Wunsch Silent Hoist and Crane Award* for Outstanding TA
  Department of Mechanical Engineering, MIT May 2017