

# Juan Carlos Martínez Mori

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## EDUCATION

<b>Cornell University</b> <b>PhD Student in Systems</b> Advisor: Prof. Samitha Samaranayake Area(s): Urban Transportation Systems	Fall 2017 - Spring 2022
<b>University of Illinois at Urbana-Champaign</b> <b>Bachelor of Science in Civil Engineering</b> <b>Minor in Computer Science</b> <i>Highest Honors at Graduation</i> <i>Edmund J. James Scholar</i> Advisor: Prof. Daniel B. Work Area(s): Sustainable and Resilient Infrastructure Systems (SRIS), Transportation Engineering	Fall 2013 - Spring 2017 GPA: 3.91

## HONORS

Dwight David Eisenhower Transportation Fellowship (FHWA)	Fall 2017 - Summer 2018
Graduate Fellowship (Systems at Cornell)	Fall 2017
Universidades de Excelencia Full-Ride Scholarship (Govt. of Ecuador)	Fall 2013 - Spring 2017
Melih T. Dural Undergraduate Research Prize (CEE at Illinois)	Spring 2017
Illinois Association of County Engineers Scholarship Award (CEE at Illinois)	Spring 2016
Summer Student Research Program Grant (ICT/IDOT)	Summer 2015
Grant W. Shaw Memorial Scholarship (CEE at Illinois)	Spring 2015

## PUBLICATIONS

### Journal Articles

- William Barbour, **Juan Carlos Martínez Mori**, Shankara Kuppa, and Daniel Work, “Prediction of arrival times of freight traffic on US railroads using support vector regression.” *Transportation Research Part C: Emerging Technologies*, 93, pp. 211-227, 2018.  
DOI: 10.1016/j.trc.2018.05.019
- Yanning Li, **Juan Carlos Martínez Mori**, and Daniel Work, “Estimating traffic conditions from smart work zone systems.” *Journal of Intelligent Transportation Systems*, 2018.  
DOI: 10.1080/15472450.2018.1438274

### Conference Papers and Technical Reports

- Juan Carlos Martínez Mori**, William Barbour, Shankara Kuppa, and Daniel Work, “Predicting Delay Occurrence at Freight Rail Sidings.” In *Proceedings of the 97th Transportation Research Board Annual Meeting*, 2018.
- Yanning Li, **Juan Carlos Martínez Mori**, and Daniel Work, “Improving the effectiveness of smart work zone technologies.” Tech. Report FHWA-ICT-16-021, *Illinois Center for Transportation*, 2016.

### Academic Talks and Posters

- Juan Carlos Martínez Mori**, “Predicting Delay Occurrence at Freight Rail Sidings.” Talk at the *97th Transportation Research Board Annual Meeting*, Washington, D.C., January 7-11, 2018.
- Juan Carlos Martínez Mori**, “Improving traffic estimation in smart work zone systems.” Poster at the *65th Illinois Traffic Engineering and Safety Conference*, Champaign, IL, October 19-20, 2016.

## INDUSTRY EXPERIENCE

### Bosch North America

Research Intern, *Bosch Energy Research Network* (BERN)

Summer 2017

Supervisor: Shyam Jade, PhD

Evaluated the suitability of traffic micro simulator MATSim to characterize powertrain requirements of future traffic with electric, autonomous vehicles. Trained a *Bayesian Network* (BN) for travel demand generation. Additionally, trained a BN with combustion engine data to help identify relationships between engine state variables.

## RELEVANT COURSEWORK

### Cornell University

CS 6820: Analysis of Algorithms

CS 6815: Pseudorand. and Combinat. Constr. \*

CRP 6860: Sustainable Transportation

ORIE 6300: Mathematical Programming I

ORIE 6520: Applied Probability

SYSEN 6000: Complex Systems \*

Note: The symbol '\*' denotes in progress Fall 2018.

### University of Illinois at Urbana-Champaign

CEE 498: Sustainable Infrastructure Systems

CEE 491: Decision and Risk Analysis

CEE 418: Public Transportation Systems

CEE 416: Traffic Capacity Analysis

CEE 310: Transportation Engineering

ECE 486: Control Systems

CS 498: Social and Information Networks

CS 482: Simulation

CS 412: Data Mining

CS 225: Data Structures

## TEACHING

### University of Illinois at Urbana-Champaign

Engineering Learning Assistant, ENG 100: *Engineering Orientation*

Fall 2015, Fall 2016

This course introduces freshmen engineering students to the engineering profession, including the wide variety of studies and potential careers.

Laboratory Assistant, GE 101: *Engineering Graphics & Design*

Fall 2014, Spring 2015

This course introduces students to computer-aided design using Autodesk Revit.

## ACTIVITIES AND SKILLS

### Programming

Python, Matlab (including Simulink), R, SQL

### Specialized Tools

TSS Aimsun, MATSim, AutoDesk Revit,  $\text{\LaTeX}$ , Microsoft Office, Git, Gurobi

### Service

Cornell CURIE Academy, Center for Transportation, Environment, and Community Health (CTECH)  
Student Council

### Other

English, Spanish (native), Taekwondo (1st Dan Black Belt, Kukkiwon, No. 05431493)