# METRANS Transportation Consortium
### USC | CSULB

## *METRANS on the Move*:
## our weekly newsletter by students

**Interested in commenting on Open Restaurants or Open Streets?
Please fill out this USC ITE questionnaire here.**

## *In the News*

The articles in this newsletter are prepared or accomplished by others in their personal capacity. The opinions expressed are the author's own and do not necessarily reflect the views of METRANS or its partners.

### UC Davis' Jesus Barajas Looks at Transportation Safety through the Lens of Equity

"Safe for Whom: Transportation Safety in the Context of Planning and Infrastructure Equities" showcased how identity shapes the way cyclists experience the streetscape, how safety has multiple meanings particularly for people of color, and how inequity in the distribution of infrastructure compounds police injustice in Black Communities.

**Read more here.**
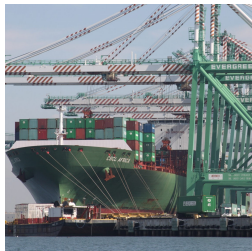
### 'March madness' at LA port amid 'once in a lifetime' surge

The flood of imports into the Port of Los Angeles is relentless. More records were set in March. And volumes are expected to remain at peak levels — with container ships to remain stuck at anchor — until June.

**Read the American Shipper feature here.**

### "Ask the Expert" Instagram Live with METRANS Associate Director Marlon Boarnet!

Click here to learn more about how urban economics, urban growth patterns, and transportation is effecting the health of our planet!
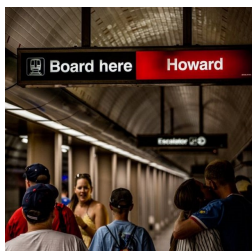
### How Chicago Could Build Equity Into Transportation

"This finding highlights the need to focus on making sure we have a connected transit system," said Hollander, "and the need to help households with lower income lower their costs."

**Read the Next City feature here.**

## *Webinars & Online Events*

### NICR Webinar: WSDOT's Telework Transformation: Worker-Centered Change
**Thursday, April 22nd at 9:00 am PDT**

In 2020, COVID-19 forced a rapid increase in telework for Washington State Department of Transportation employees. This tragic pandemic tested employees' adaptability, strained people . . .

**More Info**

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### ABC-UTC & Florida International University Present: Precast Culverts Flood Mitigation & Pedestrian Safety Solution – Allen Creek Railroad Berm Project
**Thursday, April 22nd at 10:00 am PDT**

"The biggest flood mitigation project in city history" is the description given to this project by the City of Ann Arbor, Michigan. Enclosed in 1926, Allen Creek near Argo Dam in Ann Arbor was seeing . . .

**More Info**

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### C2 Smart Webinar: AI-based Navigation for Accessible Cities: Challenges and Opportunities
**Thursday, April 22nd at 10:00 am PDT**

Visual place recognition (VPR) is an AI-based technology that is critical in not only localization and mapping for autonomous driving vehicles, but also assistive navigation for the visually impaired . . .

**More Info**

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### TRB Webinar: The Day of the Drones - Airports and Unmanned Aircraft Systems, Part 2
**Thursday, April 22nd at 11:00 am PDT**

Unmanned aircraft systems (UAS) activity is expanding. These rapid and large-scale changes may affect the safety of people and property.

**More Info**

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### TOMNET UTC Presents: The Impact of COVID-19 Travel Restrictions on Phoenix Air Quality
**Friday, April 23rd at 12:00 pm PDT**

During the travel restrictions in response to COVID-19, the popular press was full of news stories about lower air pollution concentrations from less driving.

**More Info**

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### Climate and Health Series Webinar- Happiness, Health and the Bicycle
**Friday, April 23rd at 1:00 pm PDT**

Presented by the Southern California Environmental Health Sciences Center, the USC Institute on Inequalities in Global Health, and the USC Spatial Sciences Institute

**More Info**

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### CARTEEH Webinar: 14 Pathways Between Urban Transportation and Health
**Tuesday, April 27th at 10:00 am PDT**

The Center for Advancing Research in Transportation Emissions, Energy and Health (CARTEEH) will be hosting a webinar featuring Drs. Joe Zietsman and Haneen Khreis.

**More Info**

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### NCST Webinar: Cost of Ownership and Discontinuance in the California Electric Vehicle Market
**Tuesday, April 27th at 10:00 am PDT**

This webinar will highlight two new studies on California's electric vehicle market with implications for the state's push to reach 100% zero-emission vehicle sales by 2035. The first presents an innovative. . .

**More Info**

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**Looking for more events occurring this week and next?**
**Check out our "Additional Events" section below!**

**Take me to more Events**

# *Fast Facts*
## *Created for Students, by Students*

**Pacific Southwest Region UTC**
University Transportation Center

Fast Facts
*Cutting edge transportation research summaries*
*Created for students, by students*

## Deep-Learning Traffic Flow Prediction for Forecasting Performance Measurement of Public Transportation Systems

**Authors:** *Cyrus Shahabi, Yao Yi Chiang, Min Mun, Luan Tran*
**Year:** 2020
**Keywords:** *public transit, congestion, urban mobility, performance reliability*

### What's going on?

Traffic congestion in urban areas across the U.S. has resulted in considerable social and economic detriment, which has raised serious concerns for drivers and transportation agencies. Los Angeles is ranked as one of the most congested cities in the U.S., with significantly longer commutes during morning and evening peaks. These traffic concerns have prompted transportation agencies and policymakers to prioritize measures to increase public transit ridership to help reduce traffic congestion. To address these challenges, this study used a data-driven Deep Learning approach to assess traffic congestion and develop regional public transportation vehicle forecasts.

### What were the findings?

This study used transportation sensor datasets from several transportation authorities in Southern California, including historical and real-time data. Researchers used this data to develop a reliability analysis system using Deep Learning techniques to model and forecast traffic flows at various spatial resolutions. The research team also developed a framework to model bus Estimated Time of Arrival (ETA) by incorporating traffic flow obtained by their initial model and forecast. This project showed that the researchers' ETA model is more accurate than the existing method in estimating bus travel times. However, modeling future Deep Learning performance techniques for public transportation systems for the entire Los Angeles Metro Area in the long-term remains a challenge.

### What's next?

The data obtained for this project serves as a unique big traffic dataset that can be used to understand factors causing traffic congestion and help forecast public transportation vehicles' performance reliability. Both models developed for this project were launched as a web application where users can access traffic prediction data and check bus arrival times to a destination location from a start point.

Read the full report on our website: http://bit.ly/deeplearningtrafficflow

The Pacific Southwest Region UTC conducts an integrated, multidisciplinary program of research, education and technology transfer aimed at improving the mobility of people and goods throughout the region.

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**Check this week's featured Fast Facts** here**.**
**Looking for more Fast Facts? Check out the Fast Facts Page on Metrans.org!**

**Take me to Fast Facts**

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# *Pathways to Opportunity*

### 2021 RASC Annual Scholarships
**RASC**
Apply by 05/14/2021
See more info

### I-NUF 2021 Call for Abstracts
**METRANS 2021 I-NUF**
Apply by 05/14/2021
See more info

**More Internships and Scholarships Here**

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### Senior Transportation Planner
**Broward MPO**
Fort Lauderdale, FL
Apply by 04/30/21
See more info

### Traffic Design Engineer
**Arizona Department of Transportation**
Phoenix, AZ
Apply by 04/27/2021
See more info

**More Job Opportunities Here**

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