



# METRANS on the Move: our weekly newsletter by students



Click [here](#) if interested in submitting an abstract for the International Urban Freight Conference



## 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.



### Understanding Mobility Changes in Response to COVID-19: A Los Angeles Case Study

The COVID-19 pandemic has affected people from throughout the world. In the U.S., the pandemic response has been largely a function of local governments' reactions to a combination of policies. This research examines compliance with COVID-19 related policies in Los Angeles, Greater metropolitan and non-metropolitan groups to understand driver choice to compare mobility patterns before and during the various policy phases of the pandemic. The results show how car and non-metropolitan groups are resistant to mobility patterns.



Yongqiang Lu  
Ph.D. candidate in Urban Planning and Development at Price School of Public Policy, USC

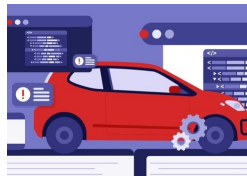


Dr. Genevieve Giuliano  
Professor in the Price School of Public Policy, USC, and Director of METRANS

### METRANS Giuliano and Lu Research COVID Impacts on Mobility in Los Angeles

Giuliano and Lu's research is motivated by three research questions: How does COVID-19 affect people's travel behavior? Do different population groups respond differently to COVID-19? Do different population groups respond differently to policy restrictions on mobility?

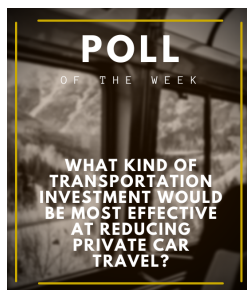
Read more [here](#).



### Automakers and universities team up to fix AV industry's talent gap

Schools are evolving their courses to keep pace with autonomous vehicle technology changes and build the industry's pipeline of workers.

Read the Smart Cities Dive feature [here](#).



### POST POLLS: 'Amtrak Joe': Will Biden's infrastructure plan revive railroads?

Biden's proposed \$2.25 trillion infrastructure package focuses on incremental Amtrak service improvements and fixes to broken parts of the existing rail network. Critics say that the plan is underwhelming and misguided, due to its lack of a focus on high-speed rail.

Read the Al Jazeera feature [here](#) and take our poll [here](#).

## Webinars & Online Events

**CARTEEH Presents: Transportation, Air Quality, and Health (TAQH2021) Symposium**  
**Attention Students: A limited number of scholarships to attend the Symposium are available now for full-time students. For more information, please contact Jill Barber at [jbarber@cert.ucr.edu](mailto:jbarber@cert.ucr.edu)**  
**Registration ends Monday, May 10th at 9:00 pm PDT**

Register today for a one-of-a-kind virtual symposium discussing research, policy, and emerging issues related to transportation emissions, energy, air quality, exposures, and human health.

[More Info](#)

**City of Tomorrow Presents: Mobility, Equity, and Access Summit**  
**Thursday, May 6th at 11:00 am PDT**

Join us to hear from a series of leaders working to achieve equity in mobility like Naomi Doerner, Gabe Klein, Angie Schmitt, Keith Benjamin, Ashton Simpson, Professor Sara Bronin, and more!

[More Info](#)

**TOMNET UTC Presents: Valley Metro – Waymo AV Mobility-on-Demand (MOD) Project: Experience from a Real-World Pilot Demonstration**  
**Friday, May 7th at 11:00 am PDT**

Join Angie Devore and Joseph Gregory, Valley Metro, Ram M. Pendyala, ASU, and Thaddeus Miller, University of Massachusetts-Amherst as they discuss Waymo AV Mobility-on-Demand (MOD) Project.

[More Info](#)

**ITS Davis: Traffic flow smoothing at scale**  
**Friday, May 7th at 1:40 pm PDT**

The majority of the best-selling cars in the US are now available with SAE level-one automated driving features such as adaptive cruise control. As the penetration rate of these vehicles grows on . . .

[More Info](#)

**ITS America Presents: Freight Movement: Shipping, Trucking, and the Last Mile**  
**Wednesday, May 12th at 9:00 am PDT**

Join us to explore how the ports are transforming their operations and the steps they are taking to reduce the emissions from congested operations; how the highways and freight corridors are maximizing . . .

[More Info](#)

**STRIDE Webinar: Work Zone Driver Behavior Extraction and Modelling using AI-system and Vissim**  
**Wednesday, May 12th at 9:00 am PDT**

Quantitatively Evaluate Work Zone Driver Behavior Using 2D Imaging, 3D LiDAR, and Artificial Intelligence in Support of Congestion Mitigation Model Calibration and Validation.

[More Info](#)

**Transportation Research Forum Minnesota Chapter Presents: Is the Workforce Ready for Connected Autonomous Vehicles?**  
**Wednesday, May 12th at 10:00 sm PDT**

Join our friends at the Transportation Research Forum Minnesota Chapter for an engaging discussion regarding the skills, knowledge, practices, and systems needed to develop a workforce ready for CAVs.

[More Info](#)

**WTS-LA Virtual Job Fair**  
**Thursday, May 13th at 4:00 pm PDT**

Join WTS-LA in this virtual job fair for an opportunity to network with a variety of different employers in the transportation industry. Participating employers include both private and public agencies, such as . . .

[More Info](#)

**Transportation Research Board (TRB) Standing Committee on Women and Gender in Transportation (AME20) Webinar Series: Young Scholars Transportation**

**Research Webinar**

Thursday, May 27th at 9:00 am PDT

Join the TRB Women and Gender in Transportation Committee for a webinar series that highlights the intersection of women and gender-related topics with other transportation topics.

[More Info](#)

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*



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

**Ultra-high-accuracy Digital Terrain Model Mapping for Assessing Roadway Vulnerability to Sea-level Rise and Flooding: An Integrated Analysis of Mobile and Airborne LiDAR Data**

Authors: Qi Chen

Year: 2020

Keywords: *Mapping, LiDAR, transportation, Digital Terrain Models*

**What's going on?**

The Hawaii coastline is most vulnerable to sea-level rise (SLR) and flooding, causing roadways to become damaged and costly to repair. This study uses Digital Terrain Models (DTM) to simulate hydrological processes in the islands' most vulnerable areas and roadways to understand the risk of roadway inundation and help develop cost-effective mitigation and adaptation plans. To produce precise DTM models, this project utilized mobile and airborne LiDAR (Light Detecting and Ranging) technology, which uses spatial laser beams and sensor data to produce visual analyses.



**What were the findings?**

This project used mobile LiDAR data from a moving vehicle combined with airborne LiDAR data to produce accurate DTM to identify the challenges posed by SLR and flooding in the region. The research for this project found that

1. Mobile LiDAR data provided errors relatively large in relation to centimeters,
2. mobile LiDAR geometric errors can be attributed to the use of different laser beams or different laser sensors,
3. a sizeable geometric mismatch exists between mobile LiDAR and airborne LiDAR,
4. there is a need for an efficient and accurate algorithm to register different LiDAR data to reduce geometric errors, and
5. the combination of mobile and airborne LiDAR data is a promising and effective strategy for mapping complex road infrastructure and conducting inundation analysis.

**What's next?**

To improve the methods developed in this study, more tests need to be conducted using spatial LiDAR technology over large study areas with varying road conditions.

Read the full report on our website:

[https://www.metrans.org/assets/research/psr-uh-18-41\\_chen\\_final-report.pdf](https://www.metrans.org/assets/research/psr-uh-18-41_chen_final-report.pdf)

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.

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](#)

**Pathways to Opportunity**

**Innovative Mobility Intern**  
Shared Use Mobility Center

Apply by ASAP

[See more info](#)

**RASC Scholarships**  
Railway Association of Southern California

Apply by 05/14/2021

[See more info](#)

[More Internships and Scholarships Here](#)

**Integrated Marketing Lead**

**OurBus**  
Remote  
Apply by ASAP  
[See more info](#)

**Assistant Regional Planner - Data Science**

**SCAG**  
Los Angeles, CA  
Apply by 05/12/2021  
[See more info](#)

[More Job Opportunities Here](#)

## Newsletter Staff

- Isidoro Serna • *Newsletter Lead* • [iserna@usc.edu](mailto:iserna@usc.edu)
- Marley Randazzo • *Managing Director* • [marleyra@usc.edu](mailto:marleyra@usc.edu)
- Adina Beck • *Publishing* • [akbeck@usc.edu](mailto:akbeck@usc.edu)
- Kevin Argueta Flores • *Publishing* • [arguetaf@usc.edu](mailto:arguetaf@usc.edu)
- Ashley Jimenez • *Staff Writer* • [ashleyyj@usc.edu](mailto:ashleyyj@usc.edu)
- Daniel Lamere • *Staff Writer* • [lamere@usc.edu](mailto:lamere@usc.edu)
- Hayley Rundle • *Staff Writer* • [hrundle@usc.edu](mailto:hrundle@usc.edu)
- Nikitha Kolapalli • *Staff Editor and Writer* • [kolapall@usc.edu](mailto:kolapall@usc.edu)
- Nandhana Nixon • *Social Media and Outreach* • [nandhana@usc.edu](mailto:nandhana@usc.edu)
- Namitha Nixon • *Social Media and Outreach* • [namithan@usc.edu](mailto:namithan@usc.edu)
- Dr. Victoria Deguzman • *Advisor* • [victoriv@price.usc.edu](mailto:victoriv@price.usc.edu)

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