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
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.

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!

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. Pendiya, ASU, and Thaddeus Miller, University of Massachusetts-Amherst as they discuss Waymo AV Mobility-on-Demand (MOD) Project.

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 . . .

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 . . .

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.

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

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 . . .

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.

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

Fast Facts
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 noticeable 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:

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!

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
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More Internships and Scholarships Here
Integrated Marketing Lead
OurBus
Remote
Apply by ASAP
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Assistant Regional Planner - Data Science
SCAG
Los Angeles, CA
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More Job Opportunities Here

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