Pacific Southwest Region UTC
University Transportation Center

Semi-Annual Progress Report #4

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Center Director Name, Title, Contact Information	Marlon Boarnet, Director Sol Price School of Public Policy University of Southern California Lewis Hall, RGL 301-C Los Angeles, California 90089-0626 213-740-3696 boarnet@usc.edu
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Signature of Submitting Official	

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1. Accomplishments

Major goals of the program
The Pacific Southwest Region (PSR) University Transportation Center (UTC) serves Region 9 with a comprehensive, integrated program of research, education and technology transfer built upon the priority needs of the region: 1) closing access gaps, 2) increasing the efficiency and resilience of the goods movement system, and 3) expanding workforce opportunities. Our research program is tailored to address US DOT strategic goals.

Our consortium of universities and community colleges, together with partnerships with state Departments of Transportation (DOTs), Metropolitan Planning Organizations (MPOs), and industry leaders, forms a comprehensive, region-wide network. The University of Southern California (USC) leads the consortium. Partners include California State University Long Beach (CSULB); University of California, Berkeley (UCB); University of California, Davis (UCD); University of California, Irvine (UCI); University of California, Los Angeles (UCLA); University of Hawai'i at Manoa (UH); Northern Arizona University (NAU); Pima Community College (PCC); and University of Nevada, Las Vegas (UNLV). USC and CSULB are both partners in the METRANS Transportation Center, the entity that houses the PSR UTC.

Accomplishments under these goals
Our accomplishments are categorized under administrative, research, education, and outreach.

Administrative accomplishments

Lysa Goldstein joined USC METRANS on February 13, 2025 as the new program coordinator. Prior to joining METRANS, Lysa was at LMV Recycling Solutions where she provided comprehensive support to CEO and leadership team. With over 10 years of experience supporting executive and operational staff.

In February 2025, Ken Knight was hired as Contracts and Grants Specialist for the College of Professional and Continuing Education (CPaCE) and the Center for International Trade and Transportation (CITT) at CSULB. In this role, Knight will support the financial management and administration of grants and contracts, ensuring compliance with funding guidelines and efficient utilization of resources for CPaCE and CITT programs and initiatives.

Tyler Reeb (CSULB) was officially named Executive Director of CITT at CSULB as of February 2025.

1) Research Accomplishments

The goal of our Center is to address regional issues, engage in transportation research that will transform both knowledge and practice while supporting US DOT strategic goals, and provide public policy advisement, technical assistance to state and local agencies, and innovative workforce development strategies. Our research, education, and outreach program is multi-modal and multi-disciplinary, engaging all our partners and stakeholders throughout Region 9.

Our research program has four parts: 1) research initiated and conducted by PSR faculty; 2) research conducted by researchers inside or outside PSR but within Region 9; and 3) a graduate research fellowship program, and (4) community-partnered research projects which pair PSR faculty and stakeholders and end-users from the earliest stages of the research. The community-partnered projects,

which are new in the BIL UTC, are intended to accelerate technology transfer by working with communities and practice from the earliest stages of research conceptualization. The more traditional faculty-initiated projects are research that is still formative and hence not ready for partnering at the earliest stages. As with the earlier FAST-Act PSR, we have reserved a small pool fund for a Region 9-wide solicitation with the purpose to promote broader participation across the states and territories. We found that helps PSR maintain vibrant links to scholars throughout Region 9.

Our Year 3 Pacific Southwest Region RFP for faculty research proposals closed on March 10. We received 31 proposals across our 10-university consortium. Of the 31 proposals, there are two cross-university proposals. The proposals were from 9 of our 10 PSR partner universities. The universities with the largest number of proposals are USC (10), UC Irvine (5), and UC Los Angeles (4). Overall, this was a very healthy response.

Table 1: Projects completed during the reporting period.
Note on Funding Source: CT-PSR= Caltrans funds (for California partners), match funding source

Partner	Project No.	PI	Title	Start date	Funding Source
USC	PSR-23-04 TO 074	Gencturk, Bora	Development and testing of a novel anchor-profiled FRP jacket system for effective confinement of rectangular concrete columns	1/1/2024	CT-PSR
USC	PSR-23-07 TO 077	Savla, Ketan	Practical Performance Indices to Enable Ranking of Signalized Corridors	3/20/2024	CT-PSR
CSULB	PSR-23-08 TO 078	Reeb, Tyler	Best Practices in Freight Technology Transfer	1/1/2024	CT-PSR
CSULB	PSR-22-02 TO 063	Reeb, Tyler	Implementing a Community-Based Mobility Lab: Improving Traffic, Protecting Data Privacy	1/1/2024	CT-PSR

Table 2: In-progress projects
Note on Funding Source: USDOT= DOT funded
CT-PSR= Caltrans funds (for California partners), match funding source

Partner	Project No.	PI	Title	Start Date	Funding Source
UCLA	PSR-22-22 TO 067	Blumenberg, Evelyn	Student Transit Programs and Other Modes-to-School in California	6/1/2023	CT-PSR
USC	PSR-23-01 TO 079	Giuliano, Genevieve	Impacts of e-commerce on warehousing and distribution in California	2/14/2024	CT-PSR
UCLA	PSR-23-02 TO 072	Ma, Jiaqi	Modernize Census Infrastructure Technology	4/25/2024	CT-PSR
UCI	PSR-23-03 TO 073	Ritchie, Stephen	Route-based Freight Activity Metrics along the California State Highway System through a Pilot Multi Sensor Fusion System	3/14/2024	CT-PSR

USC	PSR-23-05 TO 075	Comandon, Andre	The Environmental Impact and Policy Implications of Supercommuting in the Northern California Megaregion	5/8/2024	CT-PSR
USC	PSR-23-06 TO 076	Shahabi, Cyrus	Traffic Causality Analysis for Robust Road Freight	4/2/2024	CT-PSR
UCD	PSR-23-10	Rodier, Caroline	Grassroots Shared Mobility Community-Partnered Project	10/1/2023	USDOT
CSULB	PSR-23-12	Gregor, Theresa	Tribal Transportation Oral History of Mobility: Understanding the Past to Improve Future Collaborations and Innovations	10/1/2023	USDOT
USC	PSR-23-16	Razaviyayn, Meisam	Enhancing Traffic Flow through Private Data Sharing and Incentivizing New Mobility Services	3/1/2024	USDOT
USC	PSR-23-18	Boeing, Geoff	Resilient Livelihoods: The Vulnerability of Commutes to Street Network Disruption	3/1/2024	USDOT
USC	PSR-23-19	Giuliano, Genevieve	Closing the Gap: A Comparative Study of Transportation Accessibility for Adults with Disabilities in Urban and Rural California	3/1/2024	USDOT
UCSB	PSR-23-20	Goulias, Konstadinos	Household Demand for Clean Vehicles in California: Individual Attitudes, Current Car Ownership, and Future Car Ownership.	3/1/2024	USDOT
UCLA	PSR-23-23 TO 080	Blumenberg, Evelyn	The Equity and Policy Implications of Long-Distance Commuting in the Greater Los Angeles region	6/1/2024	CT-PSR
UCD	PSR-24-35	Hardman, Scott	Investigating unmet travel needs in disadvantaged and rural communities: Can sustainable transportation meet these needs?	8/15/2024	USDOT
UCSB	PSR-24-43	Goulias, Konstadinos	Strategies to Increase Zero Carbon Vehicles for Underserved and Disadvantaged Communities	8/15/2024	USDOT
UNLV	PSR-24-44	Morris, Brendan	Research Experience for Undergraduates (REU): Smart Cities – Advancing Mobility	8/15/2024	USDOT
UNLV	PSR-24-45	Erdem, Mehmet	Transportation Needs and Economic Opportunities for Service Employees of Socio-economically Disadvantaged Populations in Las Vegas Hospitality and Tourism Industry	8/15/2024	USDOT
UNLV	PSR-24-47	Bein, Wolfgang	Online Competitive Algorithms and Reinforcement Learning for Traffic Management	8/15/2024	USDOT
USC	PSR-24-54	Suen, Sze-Chuan	Optimizing Mobile Health Routing and Scheduling to Enhance Healthcare Access	8/15/2024	USDOT

USC	PSR-24-55	Ioannou, Petros	Intersection Control of Connected Vehicles for Mobility and Safety	8/15/2024	USDOT

Table 3: Projects selected in July 2024 that have not started and are waiting for the Caltrans master contract to be executed.
Note on Funding Source: CT-PSR= Caltrans funds (for California partners), match funding source

Partner	Project No.	PI	Title	Funding Source
UCD	PSR-24-24 TO 002	Bunch, David	Modeling the impacts of California electric vehicle policies with emphasis on the used vehicle market	CT-PSR
UCI	PSR-24-25 TO 003	Brownstone, David	Modeling the impacts of California electric vehicle policies with emphasis on the used vehicle market	CT-PSR
CSULB	PSR-24-26 TO 004	Tanvir, Shams	Machine Learning with Roadside Lidar for Efficient Signalized Intersection Operations	CT-PSR
CSULB	PSR-24-28 TO 005	Liu, Tairan	Bridging Autonomy and Tradition: Optimizing Traffic Flow in Mixed-Vehicle Environments	CT-PSR
UCB	PSR-24-31 TO 006	Shaheen, Susan	Which Way Forward? Learning from Global Informal Networks to Inform Microtransit Services in California	CT-PSR
UCD	PSR-24-32 TO 007	Barajas, Jesus	Disability, mode perceptions, and travel behavior: An intersectional study	CT-PSR
UCI	PSR-24-38 TO 008	Borowski, Elisa	Framework for participatory evaluation of greenery screens in environmental justice communities	CT-PSR
UCI	PSR-24-40 TO 001	Dean, Matthew	Investigating the Impacts of Smart Charging on Electric Vehicle Charging Choices Within an Activity-based Framework	CT-PSR
UCLA	PSR-24-41 TO 009	Wasserman, Jacob	Considerations for Renaming Caltrans Facilities	CT-PSR
UCLA	PSR-24-42 TO 010	Ma, Jiaqi	Evaluating Accessibility Changes of Electric Vehicle (EV) Supported Projects through an Agent-based Simulation Approach	CT-PSR
USC	PSR-24-48 TO 011	Comandon, Andre	Charging station investments' impact on electric vehicle accessibility and adoption	CT-PSR
USC	PSR-24-49 TO 012	Comandon, Andre	Insights from Global South paratransit services for applications to microtransit in California	CT-PSR
USC	PSR-24-50 TO 013	Molisch, Andreas	Integrated Sensing and Communication for intelligent road-traffic management	CT-PSR

USC	PSR-24-51 TO 014	Parkhomenko, Andrii	Quantifying Public Transit Improvements: A Multimodal Evaluation of Recent Improvements to Los Angeles Rail Infrastructure	CT-PSR
USC	PSR-24-52 TO 015	Savla, Ketan	Traffic Flow Management for Mixed Modes on Signalized Networks	CT-PSR
USC	PSR-24-53 TO 016	Dessouky, Maged	Curbing Emissions: Enhancing Sustainability Through Collaborative Shipment in Horizontal Supply Chains	CT-PSR
UCB	PSR-24-56 TO 017	Griswold, Julia	A Time and Space Exploration of Traffic Crash Trends During the Covid Recovery	CT-PSR

During the reporting period, Theresa Gregor (**CSULB**), Associate Professor in the Program in American Indian Studies, completed primary work on an oral history project to examine the intergovernmental relationship between San Diego County Tribal Nations and the San Diego Association of Governments. Tyler Reeb (**CSULB**), who serves as Co-PI with Gregor on the tribal oral history project, developed a white paper summarizing lessons learned and ways that regional transportation and planning agencies can apply similar methods in partnership with tribal governments throughout California and nationally. The project is funded by the Pacific Southwest Region University Transportation Center. Reeb is also the editor and principal author of Empowering the New Mobility Workforce (Elsevier) and is a member of the Transportation Research Board Standing Committee on Native American Transportation Issues.

Mehmet Erdem led efforts on **UNLV's** "Community Partnered Project" which is titled "An Examination of Transportation for Service Employees from Socio-economically Disadvantaged Populations in Las Vegas." Shashi Nambisan and Billy Bai are the co-PIs on this project.

During the reporting period, **UCB** accomplished the following:

1. Administered the 2024-25 Call for Student Research in Fall 2024 and awarded seven new student research projects for academic year 2024-25:
2. Hosted the 2025 PSR UTC Annual Congress held March 24-25 at the University of California, Berkeley.
3. Hosted 13 seminars at the University of California, Berkeley.
4. Supported 21 students traveling to attend the Annual Meeting of the Transportation Research Board in Washington, DC in January 2025. Nine students presented research: five students presented research in lectern sessions and four in poster sessions.
5. Supported a research assistant to develop a database and geographic information system of rail and bus rapid transit stop openings from 2000-2025 to track impacts and project delivery.

Student opportunities for research

Student support is an important component of research project selection. Highlights of how PSR has supported students:

USC sponsored the Institute of Transportation Engineers (ITE) Student Leadership Summit at UCLA in January 2025. The Student Leadership Summit is a conference 100% organized by ITE students, for ITE students (photo on the right). It provided opportunities for ITE students to meet other transportation enthusiasts and grow their professional networks in the space.

During the reporting period, **CSULB** coordinated two activities that allowed Academy Global Logistics (AGL) students to interact with industry professionals at major conferences taking place in Long Beach. At both the Intermodal Association of North America (IANA) Expo in September 2024 and at the Trans-Pacific Maritime (TPM) Conference in March 2025, students at all four grade levels attended the conference, met with participants in Expo halls and on the trade show floor and were assigned tasks that required them to interview participants and leave with a better understanding of the various career opportunities in the industry. At TPM, students took part in specially designed sessions for them that focused on topics such as career pathways and networking. In April 2025, students will also be taking part in the METRANS International Urban Freight Conference.

IANA Staff welcome high school students from the Port of Long Beach's Academy of Global Logistics.

NAU continued supporting undergraduate and graduate transportation students through paid internships and fellowships, as well as engage in outreach activities. During this reporting period, they attended the 2024 ITS Arizona Conference in Mesa, AZ, the Annual Meeting of the Transportation Research Board, and the 2025 PSR Annual Congress in Berkeley, CA. The work presented during these trips and well as the travel to make these presentations, were funded by this grant, in full or in part. As a research group, Drs. Russo and Smaglik completed a project entitled “Analysis of the Operational Impacts of Left-In Left-Out Intersection/Driveway Treatments” which was partially funded by PSR9. We also completed a K-12 outreach event during this period: a visit by high school students to the NAU Traffic Lab in March 2025 as part of the ‘Discover NAU’ event. Lastly, Tony Eschen, a past PSR fellow at NAU and current Masters student here, won both the 2024 ITS Arizona Best Graduate Student paper and the 2025 PSR Masters Student of the Year award.

NAU Group Photo at ITS Arizona

NAU Group Photo at TRB

NAU Group Photo at PSR Congress

Additional accomplishments

i. Research dissemination

UCB hosted the 2025 PSR Annual Congress from March 24-25, 2025. The PSR Congress gathered transportation stakeholders from throughout the region together to share new research results, best practices, and education and training tools produced by PSR. It also serves as a major networking event to build a regional transportation community. Each year the Congress is hosted by one of the consortium schools, in partnership with consortium universities and government and industry partners. We open PSR Annual Congress attendance to scholars and students at any university in Region 9, in or out of PSR, to serve the region, and we collaborate closely with the practice community to be sure they have a role in and benefit from the PSR Annual Congress. This year's annual congress drew approximately 195 attendees, which includes persons from Caltrans, local and state government, public and private industry, students and researchers. For more information about the PSR Congress, click here. The detailed program is available **conference agenda.**

*California State Transportation Agency Secretary **Toks Omishakin** addresses participants at the 2025 PSR UTC Annual Congress. Secretary Omishakin's remarks covered state research priorities, challenges, and opportunities. Following his keynote address, the Secretary fielded questions from students and attended a poster session.*

***Lucy Koury**, Assistant Chief of Research, Product Evaluation, and Library, Nevada Department of Transportation (center), fields questions from the audience during the 2025 PSR UTC Annual Congress. **Marlon Boarnet**, Director of the PSR UTC, METRANS Transportation Consortium Director, and USC Professor (left) leads with questions and moderates the session along with **Brendan Morris**, Associate Professor at the University of Nevada, Las Vegas (right).*

Dissemination highlights

Completed final reports and research briefs are available on the PSR research website at https://www.metrans.org/metrans-research.

A METRANS advisory board meeting was held on February 26, 2025 at LA Metro Headquarters in Downtown, Los Angeles. METRANS Director Marlon Boarnet briefed METRANS associate partners on research updates, upcoming events, and potential collaboration opportunities. METRANS launched a new research dissemination program, METARNS Lunch and Learn, immediately following this meeting. This afternoon research seminar was open to staff of all METRANS associate partners and presented the opportunity for USC faculty and PhD students to connect with the seven associate partner organizations.

USC METRANS hosted a PSR supported METRANS Research Seminars during the reporting period. Recordings of the seminars are available via the links provided.

LA Metro staff members attend the first METRANS Lunch and Learn event at LA Metro Headquarters.

1. Education and Careers in Transportation, Roxana Javid, Director of the Transportation Engineering Program, Viterbi School of Engineering, USC
2. Stochastic Ride Sharing System with Flexible Pick-Up and Drop-off, Maged Dessouky, Professor of Industrial and Systems Engineering, Viterbi School of Engineering, USC
3. Meet Michael Schneider, CEO and Founder of Streets for All, Michael Schneider, Streets for All
4. California's Advanced Clean Fleets Regulation- Prospects, Pathways, and Challenges, Marlon Boarnet, Professor of Public Policy and METRANS Director, USC; Genevieve Giuliano, Professor of Public Policy, USC
5. Evaluating the Impact of the Clean Miles Standard Program on the Transportation System: A Microscopic Simulation in San Francisco, Peng Hao, Adjunct Professor of Electrical and Computer Engineering, UC Riverside

PCC's autonomous certificate is currently in program review. They have an advisory committee with well-known autonomous trucking companies providing feedback. While hiring won't happen for another year-18 months, they are working on evolving the program with their feedback. The program is not currently viable at this point but they are proactively seeking to inactivate the certificate program and convert it to a Marketable Skills Achievement award.

In October 2024, a USDOT press conference was held at the Center to announce the award of the USDOT Commercial Motor Vehicle Operator Safety Training grant to **PCC** (photos below). The grant provides scholarships to military, veterans and their families, along with other community members

specified in the grant. USDOT officials, including Vinn White, spoke at the event in addition to Pima Community College administrators and the program's academic director. Photos from the event are below (photo credit: US Dept of Transportation):

The following photos below were taken by **UNLV** at seminars and field trips during the reporting period.

Field Trip hosted by RTC FAST: Exploring Traffic Signal Cabinet Operations (October 18, 2024)

Seminar: Role of Cybersecurity in Safe Transportation Systems: Kevin Heaslip, Professor & Director, Center for Transportation Research, University of Tennessee Knoxville (November 15, 2024)

Conference - Professional Networking Event: 2024 Fall Transportation Conference (Paper Competition) (October 24, 2024)

Community Service: Safe Santa Event (December 6, 2024)

Resume Review - Professional development (February 21, 2025)

During the period of performance, **CSULB** research team supported the review and acceptance of abstracts and the promotion of pre-summit activities related to the TRB National Summit on the Future of the Transportation Workforce that will be held June 2-4, 2025 in Westminster, Colorado (near Denver). The purpose of the summit is to convene national leaders in transportation workforce development to address the challenges faced in each of the workforce life cycle steps and help identify the research needs of practitioners to ensure a resilient and skilled workforce for our changing modes and communities. CITT Executive Director Tyler Reeb will serve as co-chair alongside Glenn McRae. CITT staff have also assisted with the organization and promotion of pre-summit webinars designed to jumpstart the engagement and research that the TRB National Summit for the National Workforce is designed to move forward.

The Pacific Southwest Regional (PSR) University Transportation Center (UTC) served as the lead UTC sponsor for the peer exchange that gathered transportation leaders from tribal nations and transportation experts, hosted on the campus of Esri in Redlands, California in October, 2024. That peer exchanged was organized in collaboration with the Upper Great Plains Transportation Institute (UGPTI),

the Small Urban, Rural and Tribal Center on Mobility (SURTCOM), and the National Center for Sustainable Transportation (NCST). Photos of that peer exchange are below.

Group photo taken during tour of Esri facilities (left); Tribal Transportation Program Manager Ron Hall and Esri founder Jack Dangermond (right)

UCI held a major colloquium on The Future of Freight November 13, 2024. Hosted by ITS-Irvine Director Stephen Ritchie and moderated by transportation expert Sarah Catz, Esq. the colloquium explored how freight can and must evolve to support our new e-commerce economy while helping to meet California's sustainability goals. Panelists for this event included: Aaron Katzenstein, Deputy Executive Officer of the Technology Advancement Office for AQMD, Elissa Konove, California Division Administrator with the Federal Highway Administration (FHWA), Fatemeh Ranaiefar, freight travel demand forecasting expert, Fehr and Peers and Eric C. Shen, P.E., PTP, Founder and CEO of Shen and Associates, LLC.

UCB held 12 seminars:

- Harper, Corey, Assistant Professor of Civil and Environmental Engineering at Carnegie Mellon University. "Advancing Towards a Smarter and More Sustainable Transportation System." October 11, 2024.
- Yang, Lina, Head of Intelligent Systems, Supernal. "Emerging Aviation Technology: Autonomy." October 18, 2024.
- Wang, Kai, Associate Professor in Smart Transportation, School of Vehicle and Mobility, Tsinghua University. "Vertiport Planning for Urban Air Mobility." October 24, 2024.
- Hill, Linda, Distinguished Professor, Director of Transportation Research and Education for Driving Safety, and Associate Dean for Community Relations at the Herbert Wertheim School of Public Health, UC San Diego. "The Use of Technology to Improve Commercial Motor Vehicle Safety." October 25, 2024.
- Munoz Sanchez, Manuel, PhD Researcher, Eindhoven University of Technology. "Bridging Gaps in Trajectory Prediction for Automated Vehicles." October 29, 2024.
- Gordon, Kate, CEO California Forward "Transportation Planning in a Time of Transition" November 1, 2024.

- Zardini, Gioele, Rudge (1948) and Nancy Allen Assistant Professor, Massachusetts Institute of Technology. ""Compositional Design of Complex Systems: From Autonomy to Future Mobility."" January 24, 2025.
- Leachman, Robert, Professor Emeritus, Industrial Engineering and Operations Research, University of California, Berkeley. "Conception and Development of the Alameda Corridor." February 7, 2025.
- Wu, Manxi, Assistant Professor, Civil and Environmental Engineering, University of California, Berkeley. "Atomic Proximal Policy Optimization for Electric Robo-Taxi Dispatch and Charger Allocation." February 21, 2025
- Carpio-Pineda, Jose, Associated Professor of Urban and Regional Planning, Universidad Politecnica de Madrid. "Urban form, land use mix, and transport networks: towards a synthetic indicator for the 3 D's in multimodal metropolis." February 28, 2025
- Epps Martin, Amy, A.P. & Florence Wiley Professor II, Texas A&M University. "Engineering Sustainable Asphalt Pavements." March 7, 2025.
- Nonnecke, Brandie, Director, CITRIS Policy Lab; Pierce, Phil, Zoox, City Policy Lead; Friedlander, Julia, Automated Driving Policy, SFMTA; Bayen, Alex, UC Berkeley Professor and CITRIS Director; Lazarus, Jessica Lazarus, LBNL Post-Doc. "Robotaxis and AI: Navigating Mobility Innovation and the Public Good." March 14, 2025.

UCD's Scott Hardman and his team kicked off their PSR project "Investigating Unmet Travel Needs in Disadvantaged and Rural Communities: Can sustainable transportation meet these needs?" and completed the literature review and data analysis during the reporting period. The project will continue through 2025.

In December 2024, **UCD** sent out award notices for the Fall 2024 Call for Proposals for Dissertation Grants to award both PSR and National Center for Sustainable Transportation BIL funding. One proposal was selected for PSR funding, titled, "Analyzing Safety and Traffic Behavior in Work Zones: Integrating Statistical and Machine Learning Methods," by PhD Candidate Ghazaleh "Gigi" Jafarsalehi. Ms. Jafarsalehi will begin using her dissertation grant in April 2025. UC Davis also released its Spring 2025 Call for Proposals for Dissertation Grants at the end of March.

During the reporting period, three ITS-Davis Friday Seminars were supported by PSR. Recordings of the seminars are available via the below links:

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- "The New Case for Transit: How 3 Major US Markets are Sparking a Transit Revival," with Chris Mitchell, CEO of Fehr & Peers. https://its.ucdavis.edu/seminar/november-22-2024/
- "Rethinking AV Development with AV Foundation Models," with Marco Pavone, Associate Professor of Aeronautics and Astronautics and Director of the Autonomous Systems Laboratory and the Center for Automotive Research, Stanford University. https://its.ucdavis.edu/seminar/february-14-2025/

- "Beyond a Ride: The Complexity of Transportation for Individuals with ESKD Treated with In-Center Hemodialysis," with Bethney Bonilla, Health Researcher, UC Davis Center for Healthcare Policy and Research (CHPR), and Na'amah Razon, Family physician, medical anthropologist, and Assistant Professor in the Department of Family and Community Medicine, UC Davis. https://its.ucdavis.edu/seminar/february-21-2025/

ii. Plans for next reporting period

The next reporting period is April 1, 2025 through September 30, 2025.

USC plans for the next period includes:

1. Host the 2025 International Urban Freight Conference will take place from April 9 to 11 at the USC Hotel. A special pre-event will be held on April 8 to convene an industry-led discussion on the future of freight and goods movement. Confirmed attendees for that discussion are from major truck manufacturers, infrastructure providers, ports, warehouse developers, ocean shippers, logistics firms, and public agencies. The conference program contains over 150 abstract- and six panel presentations from researchers from 15 countries. Conference presenters will have the chance to submit full-length papers based on their abstracts for publication in a Transportation Research Interdisciplinary Perspectives special issue for publication.
2. Launch the Transportation Pathways Program with an estimated program launch date in January of 2025, additional details in the following section.
3. We plan on selecting year 3 projects.
4. Continue with seminar series.

UCB's plans for the next reporting period includes:

1. Complete research and publish reports on seven student research projects from the 2024-25 student research awards.
2. Administer call and award seven student research grants for 2025-26.
3. Host seminars at Berkeley in April, May, August, and September.
4. Finalize a report on a database and geographic information system of rail and bus rapid. transit stop openings from 2000-2025 to track impacts and project delivery.

UCD expects to do the following in the next reporting period:

1. In June, UC Davis will select proposals for funding from the 2025-26 PSR RFP for research grants, with awards announcements expected by July 1st, and projects to begin between January and June 2026.
2. UC Davis's Spring 2025 Call for Proposals for Dissertation Grants will close in early May. UC Davis expects to award one PSR-funded dissertation grant from this call, contingent on year 3 funding for the center.
3. During the next reporting period, two research projects and one dissertation (all federally funded) are expected to be completed, with final deliverables to be produced soon thereafter: "Grassroots Shared Mobility Community-Partnered Project," "Investigating Unmet Travel Needs in Disadvantaged and Rural Communities: Can sustainable

transportation meet these needs?" and "Data-Driven Road Safety: Systemic Analysis Through A Knowledge Graph Framework" (dissertation grant).

4. PSR funds will be used to support ITS-Davis Friday Seminars during the next reporting period.

UCLA plans to:

1. Select and support newly funded Faculty Research Projects funded under the PSR-wide RFP program.
2. Host the 2025 UCLA Los Angeles Transportation Forum on May 19, 2025 to continue the conversation from this past Fall's UCLA Lake Arrowhead Symposium on "Mega Events, Major Opportunities." The spring conference will focus on understanding progress since the fall's symposium and discussing next steps in the preparation for the major upcoming events in Los Angeles.
3. Publish Issue 12 of Transfers Magazine in spring 2025.
4. Award student 8-12 student fellowships to support incoming MURP and MPP students as they enter the UCLA degree programs in the fall.

UH plans to fund a project on the PSR-UTC DOT funds focused on ways to improve accessibility for wildfire evacuees with disabilities and limited mobility.

PPC's first cohort of the Logistics Fast Track program will commence. This short-term, noncredit program is built with industry input and creates a short pathway for guests of Gospel Rescue Mission, resulting in a transcripted credential and student entry into the workforce. Outreach events will continue as well as rewrite of Logistics courses. The Center will also continue to work with our Autonomous Vehicle Driver and Operations Specialist advisory committee to seek input and ensure workforce readiness when industry is ready to hire in approximately 18 months.

During the next reporting period, the **CSULB** research team will:

1. Convene a community education event at the Toyota terminal located in the Port of Long Beach to demonstrate the viability of hydrogen to Cabrillo High School students, CSULB students, and members of the media.
2. Begin planning the Town Hall, which will be held in Fall 2026. CSULB plans to hold the event at the Cabrillo High School auditorium. Holding the Town Hall there signals the CITT commitment to education and community engagement.
3. CITT and partners will develop a documentary. The documentary—working title "Bring the Docks to the University and the University to the Docks"—will draw inspiration from founding members of CITT and document education and workforce development success stories. The documentary will conclude with a candid assessment of current challenges in trade and transportation and explore ways that community-based education can democratize education, public policy, and land-use planning.

NAU plan to use funds to continue funding a graduate research fellow, undergraduate research interns, and student and faculty travel for dissemination, outreach, and workforce development. Regarding travel, they expect to provide support for travel to the ITE/IMSA Spring Conference in Phoenix, AZ, the

ITE Mountain District Annual Meeting in Santa Fe, New Mexico, the IMSA Annual Meeting in Cleveland, OH, and the Arizona Roads and Streets Conference in Tucson, AZ. They expect to submit items for dissemination to the TRB Annual Meeting / Transportation Research Record, as well as other journals and conferences. Regarding outreach, NAU plans to continue in-school K-12 presentations on transportation engineering as part of the Flagstaff Festival of Science In-School Speaker Series. Additionally, NAU AZTrans will continue to submit our exhibit entitled "Behind the Scenes: How Our Roadways are Designed & Operated" for presentation at local STEM events and festivals. The transportation-focused exhibit has equipment set up to show how traffic signal systems detect vehicles and efficiently move traffic through intersections, among other items.

UCI will conclude a search for a new Director for the Institute of Transportation Studies in the next period. Following 19 years of leadership as director and a 40 year career at UCI, Stephen Ritchie decided to step down as the Director of the Institute for Transportation Studies (ITS) at the end of this academic year and retire. Under Ritchie's leadership the Institute of Transportation Studies at UCI has been pivotal to the highly successful interdisciplinary transportation research and education enterprise on the UCI campus, and has grown to become one of the major transportation research centers in the nation. Among the many accomplishments during his tenure, he expanded the Institute's research contributions to a better understanding of the nation's transportation system and its potential for improvement through the adoption of sustainable mobility systems and emerging technologies. He was instrumental in the selection of the Institute as a core partner in the award and renewal of two prestigious US DOT University Transportation Centers, in partnering with UC and California leaders to create an annual Statewide Transportation Research Program, and in guiding the Institute to develop the workforce, leaders and faculty of the future to tackle society's most pressing transportation problems.

B. Educational Accomplishments

Student Programs

i. Workforce development

PSR offers many ongoing workforce development programs that have been written about in-depth in past SAPRs. These programs include: ***Commercial Driver License (CDL) Training*** (PCC), an innovative Truck Driver Training Program that reaches out to a rural/tribal audience to provide the training and certifications necessary to start a career; ***Southern California Workforce Development Needs Assessment for Supply Chain and Transportation Industries*** (CSULB), identifies existing and future workforce skills gaps for middle-skill occupations in southern California's supply chain and transportation chain industries; ***Academy of Global Logistics (AGL)*** (CSULB), this collaborative partnership combines academic curriculum with industry-led training to support academic and career development for high school students; ***AZTrans*** (NAU), supports STEM outreach activities that provide exposure to transportation to K-12 students and members of the public. Those are continuing with the BIL PSR UTC.

As part of **UCLA's** ongoing commitment to supporting the next generation of transportation planners and researchers, we awarded nine fellowships to Master of Urban and Regional Planning (MURP) students and one PhD Engineering Dissertation Year Fellowship during this grant period. Each fellowship supports a student as they develop their capstone project, which serves as the culmination of their graduate studies. All selected projects focus on timely and relevant transportation topics—including

public transit access, active transportation, and mobility innovation—and are directly aligned with the research and workforce development goals of the grant.

UCLA's fellowship program plays a critical role in shaping these capstone projects by providing not only financial assistance, but also structured mentorship and opportunities for students to engage with practitioners and policymakers. This ensures the projects are both rigorous and grounded in real-world application. In doing so, the fellowship program advances the PSR's broader mission to foster applied transportation research that can inform policy, improve systems, and address the needs of historically underserved communities. Project information can be found in the section "Participants and Collaborating Organizations."

ii. Education and Workforce Development goals for next reporting period

During the next reporting period, PSR partners will continue to administer degree and non-degree training programs to a broad array of students. We will continue the PSR seminar series at USC, UCD, UCI, and UCLA. Seminars will continue to be offered in a hybrid format.

USC METRANS is working on developing the Transportation Pathways program and will launch the program during the next reporting period. This new program will provide students, counselors, educators, and community leaders with information and resources on education pathways available at PSR institutions in order to engage students and draw them into transportation careers. The program's primary component will be the Transportation Pathways website which will include information and resources on transportation-related degree and non-degree programs available across the PSR consortium. Additional resources such as financial aid and admissions information from each institution will also be provided for students.

Mock up of the Transportation Pathways Web Site Home Page, to launch in the next reporting period.

C. Outreach Accomplishments

PSR conducts many outreach efforts that have been described in past SAPRs. Ongoing outreach activities include: ***CSULB CITT Center Updates***, bimonthly e-blasts to industry/academia consisting of brief articles covering relevant Center activities with a focus on the freight sector and workforce development; ***Logistics Peer Exchange*** (CSULB), a peer exchange on best practices in regional freight planning and coordination; ***Mobility Matters*** (CSULB), a CITT podcast series dedicated to addressing mission-critical issues facing the professionals who design, develop, operate, and maintain mobility systems.

METRANS News: During this past reporting period, USC METRANS and CSULB continued the newsletter issues with newsletters in October 2024, November 2024, January 2025, February 2025 and March 2025. Each monthly newsletter includes an example of transformative research, summarizing a recently

completed PSR research project. METRANS News also summarizes education and outreach and includes coverage of NCST and other METRANS projects and activities. The average opening rate was 41.4%, compared to 38.48% during the previous reporting period. This is generally consistent with Constant Contact's overall average of 35% and the newsletter's open rate slightly exceeds this range. For this reporting period, newsletters also include promotion of the International Urban Freight (INUF) Conference. The monthly newsletters are archived here.

To promote the International Urban Freight Conference (INUF), **USC** and **CSULB** staff have sent various eblasts to all program committee members, track chairs, METRANS principle investigators, and the CITT Policy and Steering Committee. The INUF conference is the premier conference dedicated to all aspects of urban freight transportation, and a signature PSR activity. See here. Copies of the flyer have also been distributed via the METRANS network and CITT LinkedIn page. The program chairs have promoted the event extensively through their own personal networks and have sent flyers and call for abstracts to contacts at state and federal DOTs. USC and CSULB promotes the event though weekly eblasts and other reminder emails. The organizing committee has also managed to arrange for a special issue of *Transportation Research Interdisciplinary Perspectives*, for which participants can submit full-length papers if interested.

Transfers Magazine

During this period, Transfers Magazine has been editing articles for the 12th issue magazine, currently slated to release in 2025, along with recruiting authors for future issues. The articles under consideration come from authors representing UCLA, UCB, NAU, and UCI. The Transfers student team has created content for The Circulator blog, including posts about UCLA graduate student's award-winning national capstone prize, a write-up of PSR research on freeway siting, and a memorial post in dedication to Donald Shoup, founding senior editor and longtime contributor of Transfers. With constant decreased engagement on Twitter/X social channels, Transfers launched a showcase page on LinkedIn to expand its audience reach and engagement. Future efforts will go toward growing this channel. The goal of the magazine is to translate the research of faculty, staff, and students at the PSR campuses into highly accessible content for an audience of elected officials, transportation planners, members of the media, and the general public.

transfers
FROM KNOWLEDGE TO ACTION

FED Talks

Since October 2020, **UCLA** has assembled professors and graduate students to discuss and present new research and best practices around public transit, transportation finance, innovative mobility, infrastructure, housing, and much more in a Forum for Education/Engagement and Discussion (FED). The lunchtime talks were attended by students, faculty, staff, and partners of the institute and PSR research over the reporting period. The impact of these talks has been a stronger community of researchers (Faculty, staff, and PhD Students) to share ideas and research that could strengthen PSR research in the future. Below is a table listing all the FED talks we have hosted since October 2024.

UCLA Arrowhead Symposium

This past fall, **UCLA** hosted the annual UCLA Lake Arrowhead Symposium on the Transportation - Environment - Land Use Connection, which was held October 13-15, 2024. The theme was titled "Mega Events, Major Opportunities," which include in-depth discussions on how planning for large-scale events such as the 2026 World Cup and 2028 Olympics, can help host cities including Los Angeles, to maximize their planning efforts to create lasting benefits for host citings and the people that live in them. The Symposium included solutions and case studies for professionals, elected officials, and advocates working on transportation and regional planning issues. The conference was attended by 174 guests. More information can be found on the symposium website at www.uclaarrowheadsymposium.org.

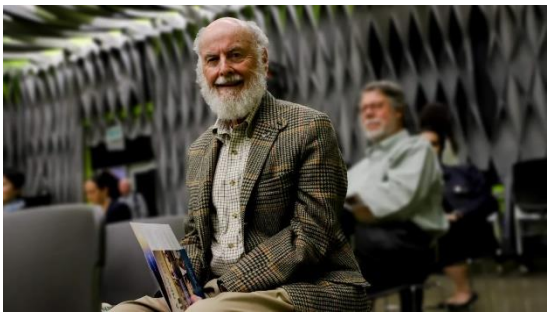
In the spring, the **UCLA** Los Angeles Transportation Forum will gather attendees to continue the conversation, understanding areas of progress and what else needs to be done in two legacy areas: enhancing LA's transit system and universal access including fixing the city's sidewalks. More information on the UCLA Los Angeles Transportation Forum can found at: https://www.its.ucla.edu/tribe-event/ucla-transportation-forum-mega-events-major-opportunities/

Veronica De Santos (photographed on the right), a graduate student pursuing a Master in Urban and Regional Planning, recently spent time abroad last fall, where she had the opportunity to address the United Nations Forum of Mayors in Geneva, Switzerland. During her first year of graduate school, she was also a UCLA ITS fellow which has also pushed her to where she is now and will be completing her Master of Urban and Regional Planning this spring.

Carolyn Pugh (photographed on the right), UCLA MURP '24, has been named the latest recipient of the Council of University Transportation Centers' (CUTC) Neville A. Parker Memorial Award for her groundbreaking research on freeway removal and redesign. She accepted this award on January 4 at the CUTC's Annual banquet ceremony in Washington, D.C. The Parker Award recognizes two students each year for exceptional master's projects in relation to transportation policy and planning, and science and technology. With Pugh's recognition, this marks the third consecutive year that a UCLA student has won.

Faculty News

We are deeply saddened by the passing of Donald Shoup (photographed below), a longtime member of our UCLA ITS community, second director of UCLA ITS, former editor of Transfers Magazine, and a prolific intellectual whose work reshaped the way we think about parking and cities.



A distinguished research professor at the UCLA Luskin School of Public Affairs, Don dedicated his career to understanding the crucial link between parking policy, transportation, and land use. His groundbreaking book, *The High Cost of Free Parking*, changed how cities around the world approach parking, inspiring policies that promote economic vitality, sustainability, and better urban design. After five decades of advocacy, cities and even entire states have adopted the policies he championed.

i. Outreach plans for the next reporting period

The PSR Advisory Council advises specifically on PSR, met in March 2025 at the PSR Annual Congress, and will reconvene in June 2025 to link our stakeholders to research projects selected for funding. Members of the PSR Advisory Council include representatives from state DOTs, MPOs, local governments, tribal organizations, transportation service providers, non-profit organizations, and the goods movement industry. See a list of advisory council members here. The METRANS Advisory Board, which advises METRANS on all its activities extending beyond PSR, met in February will convene next in June. The next issue of ***Transfers Magazine*** will be released this summer, https://transfersmagazine.org/.

2. Participants & Collaborating Organizations

Participants contribute to the work of the PSR through financial or other support, or directly in research, education, or technology transfer. Collaborating organizations participate in Center activities, provide advisement, or support the center.

1. Financial support

Over the course of the grant, these are among the entities who provided match funding for PSR research projects. This list is a sample and is not exhaustive.

- California Department of Transportation (Caltrans)
- Los Angeles Business Council (LABC)
- California Air Resources Board
- Peterson Foundation

2. Other support

The following organizations provide or have provided in the past (e.g. Fast Act UTC or BIL UTC) indirect or in-kind support to PSR:

- **California**: Council of Supply Chain Management Professionals (CSMCP); Fehr & Peers; Foothill Transit; Gateway City Council of Governments; Governor's Office of Business and Economic Development (GO-Biz); HDR; International Longshoremen and Warehousemen's Union (ILWU) Local 13; Long Beach Transit; Long Beach Unified School District; Majestic Realty; MetroLink; Nixon Peabody; Orange County Transportation Authority (OCTA); Port of Long Beach, Port of Los Angeles; San Francisco Metropolitan Transportation Commission; San Francisco Municipal Transportation Agency; Southern California Association of Governments (SCAG); Southern California Edison; ; UC Davis Road Ecology Center; UC Institute of Transportation Studies (UC-ITS); Yusen Terminals LLC
- **Arizona**: Arizona Board of Regents, Chamberlin Group, Pima Association of Governments, Northern Arizona University, Southern Arizona Anti-Trafficking United Response Network (SAATURN)
- **Hawaii**: National Disaster Preparedness Training Center (NDPTC), University of Hawaii
- **Others**: Federal Highway Administration; King County Metro (Seattle, WA); staff from state DOTs in California, Colorado, Maine, Minnesota, Nevada, and Virginia.

Additional Support

PSR has a tremendous network of partners. Thomas O'Brien (CSULB) and Genevieve Giuliano (USC) are past presidents and past executive committee members of the ***Council of University Transportation Centers (CUTC)***, and Susan Handy (UCD) and Marlon Boarnet (USC) are current members of the CUTC board; USC is the lead for the **U.S. Department of Transportation's University Partnership Program for the US-ASEAN Smart Cities Program**, partnering with the University of Indonesia, University of Technology Malaysia, Institute of Technology Cambodia, and Chulalongkorn University (Thailand); ***Institute of Transportation Studies (ITS)*** (UCD, UCI, UCLA), provides match funding and other resources; ***MetroFreight Center of Excellence*** (USC, CSULB), METRANS is the home of the Volvo Research and Education Foundation (VREF) Center of Excellence on urban freight and offers many opportunities for international collaboration and partnerships; ***National Center for Sustainable Transportation (NCST UTC)*** (UCD, USC), strengthens and expands our work in sustainable freight transport; ***Southwest Transportation Workforce Center*** (CSULB), provides significant infrastructure and professional capacity in support of workforce development programs for PSR; ***The Center for International Trade and Transportation*** (CSULB), uses its media and social media channels to announce events and other opportunities to a network of students and industry and government partners; ***TuSimple*** (PCC), offers program support and priority hiring to graduates; ***UCLA Lewis Center for Regional Policy Studies***, provides workspace and matching funds researchers and staff at UCLA ITS; ***Velodyne Lidar*** (UCI), provided a donation of two LiDAR units that are supporting current graduate student fellowship and faculty research projects. The following **METRANS Associates** provide additional financial support: LA Metro, Majestic Realty, Port of Long Beach, Southern California Association of Governments, WSP USA, Western States Petroleum Association, Los Angeles World Airports.

3. Collaborations

PSR has an extensive network of collaborations with academic, public and private organizations. Many of these have been described in past SAPRs.

USC partners with:

1. The Los Angeles Business Council (funding) and several industry partners (knowledge supporting, partners include the Harbor Trucking Association and trucking firms) on research into California's Advanced Clean Fleets zero-emission truck regulation.
2. The World Bank's Global Transportation Group
3. The California Air Resources Board
4. The Southeast Los Angeles Collaborative
5. METRANS Associates Program and wider knowledge and technology transfer interactions, a range of entities including: The Gateway Cities Council of Governments, the City of Los Angeles, L.A. Metro, the Southern California Association of Governments, the San Diego Association of Governments, the Ports of Long Beach, Los Angeles, Hueneme, and San Diego, Los Angeles World Airports, and several other public, private, and non-profit entities.

UCI partnered with Brownstone's Caltrans match funded project, titled "Modeling the impacts of California electric vehicle policies with emphasis on the used vehicle market".

UNLV is partnered with the following organizations:

1. National Science Foundation in Washington D.C.
2. Regional Transportation Commission of Southern Nevada in Las Vegas, Nevada
3. Culinary Workers Union Local 226 in Las Vegas, Nevada
4. William Werner, Associate Dean of Faculty, College of Hospitality, UNLV, Las Vegas NV – expert in hotel industry labor relations.
5. Donald Bren School of Information & Computer Sciences, University of California, Irvine, CA
6. University of the Federal Armed Forces, Munich.

NAU is partnered with the following organizations:

1. MAG (Maricopa Association of Governments): They have an ongoing partnership with MAG that is ongoing, and they expect to wrap up an emerging technology grant this coming spring.
2. Phoenix: They wrapped up a task order to provide guidance to the city on implementation of LPIs (Leading Pedestrian Intervals) and other signalized intersection pedestrian treatments across the city.
3. Arizona Transportation Institute (AzTI), which connects experts from NAU, the University of Arizona, and Arizona State University to solve problems identified by ADOT.
4. Furthermore, NAU has maintained our established relationship with the Arizona Institute of Automated Mobility (IAM). The IAM was established by the Arizona Governor in 2018 to provide technical guidance and coordination aimed at fostering the implementation of automated mobility across Arizona.
5. Furthermore, NAU has maintained our established relationship with the Arizona Institute of Automated Mobility (IAM).

CSULB is partnered with the following organizations:

1. California Hydrogen Business Council - https://californiahydrogen.org/
2. Evolectric - https://evolectricnow.com/
3. Fuel Cell Integration Group at Toyota Motor North America Research and Development - https://www.toyota.com/usa/operations/map/ttc_ann_arbor_and_saline

4. Sunstone Management Inc. - https://www.sunstoneinvestment.com/
5. Hyzon Motors - https://www.hyzonfuelcell.com/

At **UH**, they are collaborating with:

1. Lisa Staes, Director, Center for Urban Transportation Research
2. Nick Barilo, Hydrogen Safety Program Manager, Pacific Northwest National Laboratory, Executive Director of the Center for Hydrogen Safety at the American Institute of Chemical Engineers.
3. Mitch Ewan, Hydrogen Systems Program Manager, Hawaii Natural Energy Institute, University of Hawaii at Manoa.
4. Michael Vorce and Dylan Faraone, SiteTour 360.
5. Jessica London, State Mitigation Planning Unit Manager, CALOES

At **UCLA**, they are collaborating with some organizations below:

1. Siskiyou County Local Transportation Commission at Los Angeles on the project, "Siskiyou County LTC: Transit Revitalization Recommendations (Mia Lewis)"
2. Office of Council member Bob Blumenfiled on the project, "Los Angeles' ADU Ordinance & Its Impact on Neighborhoods in the Greater Western San Fernando Valley (Miles Cressy)"
3. Southern California Association of Governments on the project, "Transitioning Transportation Pilot Projects into Long-term Programs (Josephine Dine)"
4. Los Angeles Department of Transportation (LADOT) on the project, "Enhancing Mobility and Access for Carless/Car-Deficient Household in Los Angeles (Alyssa Suzukawa)"
5. California Air Resources Board on the project, "Tolling for Tomorrow: Road Pricing as a Climate Strategy in California (Alexandria Florin)"

UCB is collaborating with Self-eSTEM in Oakland, California to host a workforce development summer camp.

UCD is currently collaborating with:

1. California Department of Transportation
2. California Air Resources Board
3. Miocar

4. Outputs

PSR outputs include publications, reports, papers, presentations, media, and others. Our target for peer-reviewed publications is 25 per year; our target for presentations is 30. During this reporting period, we have produced 36 **peer-reviewed** journal publications and **41 presentations**.

A. Websites

The PSR website is the central, authoritative source of information regarding our center. Our consortium members also maintain additional sites that contain information relevant to PSR's research and activities. Some of these sites are:

- CITT (CSULB): https://www.cpie.csulb.edu/center-for-international-trade-and-transportation
- CITT Articles: https://ww2.cpie.csulb.edu/news/citt-news/citt-in-the-news
- eScholarship (UCD, UCI, UCLA): https://escholarship.org/
- ITS-Davis: https://its.ucdavis.edu/
- METRANS: https://www.metrans.org/
- NAU PSR UTC: https://in.nau.edu/aztrans/psr-region-9/
- NAU's Cyclist Routing Algorithm for Network Connectivity (https://rc.nau.edu/cranc)
- PCC's Center for Transportation Training has a facebook, instagram and twitter page: @pcctruckdriver for all
- Transfers Magazine (PSR flagship publication): http://www.transfersmagazine.org/
- UC Berkeley Digital Repository of ITS Berkeley research reports: https://escholarship.org/uc/its
- UC Berkeley news: https://its.berkeley.edu/
- UC Davis eScholarship: https://escholarship.org/uc/itsdavis
- UCI seminar series: www.its.uci.edu/seminars
- UCLA ITS YouTube channel: https://www.youtube.com/c/UCLAInstituteofTransportationStudies/
- UCLA ITS: http://www.lts.ucla.edu
- UCLA Lake Arrowhead Symposium: http://www.uclaarrowheadsymposium.org
- UCLA Transfers Magazine: http://www.transfersmagazine.org
- Open access to UCLA Institute of Transportation Studies reports, capstone projects, and policy briefs: https://escholarship.org/uc/ucla_its
- UH website (includes posts on PSR research): https://ndptc.hawaii.edu
-
- UNLV website: https://smartcities.sites.unlv.edu/

B. New methodologies, technologies, or techniques

Nothing to report.

C. Other products

Nothing to report.

5. Outcomes

PSR's goal is to effectively and efficiently move research to practice so that new knowledge can be shared, acted upon, and contribute to a more efficient, sustainable, and equitable transportation system. We achieve our goal through technology transfer activities: events, communications, training, and client-based research. We define outcomes as any changes made to the transportation system, or its regulatory, legislative, or policy framework, resulting from research and development outputs.
UH used 360 panoramic imagery data was collected to support the California Office of Emergency Services (CALOES) after the Los Angeles wildfire in Palisades and Altadena. The imagery is being used to determine damages to infrastructure, including roads and other critical infrastructure, identify burned

electric and non-electric vehicles, and evaluate how effective street configurations (grid pattern vs. cul-de-sacs) were in facilitating emergency evacuation.

Suen Sze-Chuan (**USC**) met with their partners at the LA County Department of Public Health to better understand the problem constraints and receive parameters. The problem realism has been enhanced by incorporating routing from supply depots and nurse home departures and arrivals at the beginning/end of each workday; these are important considerations in practice, but are challenging to incorporate within the VRP framework. This has resulted in several iterations of problem formulations, which range from most general (which are complete but may only be solved on small scale problems) to those with additional assumptions (but run more quickly on large scale problems).

Brendan Morris (**UNLV**) created the Smart Cities project website, received applications, made offers, and are completing logistics for the summer program. The majority of the project, and all the research, activities will occur during the summer when the 12 students will be on the UNLV campus to take part in mentored research projects.

Miguel Jaller (**UCD**)will be implementing a modified version of the methodology developed in his "Dynamic Monitoring of Supply Chain Resilience" project in a new Caltrans-sponsored project to evaluate the impact of disruptions in the freight flows in California.

The GIS methods used in Caroline Rodier's (**UCD**) "Grassroots Shared Mobility Community-Partnered Project" project will be replicated in another CARB planning grant for the entire San Joaquin Valley.

PCC had a few of the commercial driver license (CDL) graduates. Photos are below.
Some of the commercial driver license (CDL) graduates' photos and stories from this reporting period are below:

Graduate Doreen Mitchell, who graduated with her Class B CDL with passenger endorsement, was the student speaker at a USDOT press conference announcing the Commercial Motor Vehicle Operator Safety Training grant to Pima Community College.

Francisco Hernandez completed his Class B CDL to upskill for his current City of Tucson job.

Tracie Williams completed the Class A CDL and was researching over the road opportunities with a family member.

Student Awards

Xiatian (Summer) Iogansen (**UCD**) was the USDOT PSR student of the year (SOY) recipient.

The following students received PSR SOY awards:

1. PSR Undergraduate SOY: William Van Verlin, **UNLV**
2. PSR Master's SOY: Anthony Eschen, **NAU**
3. PSR Doctoral SOY: Jaehyun Ha, **USC**
4. PSR Non-degree/ Certificate SOY: Angela Andrade, **PCC**

Scholarly Awards:
Ketan Savla (**USC**) received the 2024 Outstanding Application Award on traffic signal control. The award recognizes Savla's groundbreaking work in developing and road testing a high-performance next generation traffic signal control system algorithm.

Juliana Byzyka (**UNLV**) is the recipient of the 2025 Advanced Materials Young Scientist Medal. This will be awarded to her by the International Association of Advanced Materials in Sweden, Europe, in May 2025. As part of her recognition, Dr. Byzyka will deliver a lecture titled "Maximizing Infrared Heating Efficiency of Asphalt Concrete in Pavement Maintenance Activities: The Influence of Asphalt Thermal Properties".

6. Impacts

PSR defines an impact as that which influences the transportation system, or society in general, such as reduced fatalities, decreased capital or operating costs, community impacts, or environmental benefits. The journey of generating outputs and impacts is uncertain and happens over time. PSR's research products are made available to the public.

During this reporting period, **USC** researchers had influenced the transportation system and society:

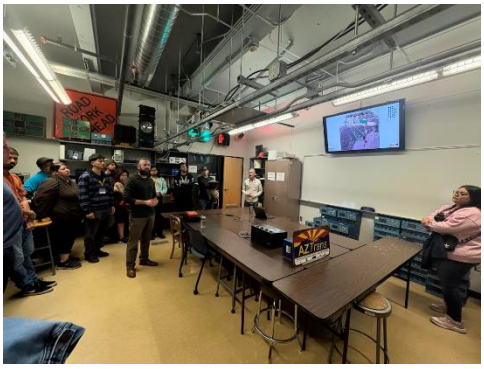
1. Boarnet presented at the Future of Transportation UTC Summit at US DOT, August, 2024.
2. Boarnet briefed Caltrans leadership, staff to the California Assembly and Senate Transportation Committees, the board of the Los Angeles Business Council (LABC), and attendees at the LABC-

USC Sustainability Summit on results of research and resulting policy recommendations related to California's Advanced Clean Fleets regulation.

3. Shahabi used methods to sense trucks in video and algorithms to integrate truck observations for flow estimation. He also educated Caltrans personnel regarding the capabilities of existing sensors for truck sensing.
4. Molish used New Machine Learning tools to channel prediction. Methodology of deep meta learning can be generalized to other scientific areas.

Gehrke **(NAU)** continues to update the Cyclist Routing Algorithm for Network Connectivity (CRANC) decision support tool (https://rc.nau.edu/cranc). At present, he is participating in the National Science Foundation's Innovation Corps (I-Corps) program for the Desert and Pacific Region Hub (Fall 2024, Cohort 7) to better understand the business environment that would use decision support tools for bicycle planning.

On March 1st 2025, a group of high school students (photographed on the right) visited the NAU Traffic Lab for the Discover NAU event. During this visit, students were given a presentation and demonstration by NAU faculty Dr. Brendan Russo, NAU Graduate Research Assistants Anthony Eschen and Omkar Chorge, and NAU undergraduate student Ava Elia on how traffic signal controllers work and were given a talk regarding traffic operations and detection at signalized intersections. A total of 45 students attended this event.



7. Changes/Problems

Changes in approach and reasons for change
We are continuing to face delays in executing the parent agreement for the PSR contract with Caltrans. Caltrans provides a funding for additional research to California universities, and has been a long-time supporter of PSR and of UTC's in California. We anticipate that we will successfully complete the master contract during the next reporting period. We are tracking match funding and are making good progress.

Erdem's **(UNLV)** project schedule is behind schedule by about 6+ months due to unanticipated challenges related to developing and administering the survey.

For the efforts led by Morris **(UNLV)**, due to late start recruiting students the REU had to limit the summer 2024 cohort to local Las Vegas area residents.

Change of primary performance site location
Nothing to report.

8. Special Reporting Requirements

Nothing to report.

9. Appendix A

This appendix includes lists (non-exhaustive) of PSR researchers' publications and presentations from the current reporting period.

Publications

Peer-reviewed journal publications

1. Arcaro, A.[*], Zhuang, B.[*], Gencturk, B.[§], and Ghanem, R. (2024). "Damage Detection and Localization in Sealed Spent Nuclear Fuel Dry Storage Canisters using Multi-task Machine Learning Classifiers," *Reliability Engineering & System Safety (Elsevier)*, 252(December 2024), 110446.
2. Bas, S.[§], Hunt, J., Gencturk, B., Jampole, E., Sonmezer, B., Chancellor, B., Bassal, P., Celiker, M., Apaydin, N., and Sezen, H., (2024). "Seismic Performance and Damage Assessment of Bridges during the 2023 Kahramanmaras Turkey Earthquakes (Mw = 7.8, Mw = 7.6)," *Earthquake Spectra*, 40(4), 2339-2363.
3. Borello Vargas, J., Spencer, B., and Jones, T. (2024, January 2). Understanding Accessibility as Lived Experience: The Case of Walking and Cycling in Porto Alegre, Brazil. Area Development and Policy. https://doi.org/10.1080/23792949.2023.2290155.
4. Bhuiya, M. R. (2025, March 24). Do people with similar types of disability travel the same? An examination of the variability of mode choice among people with travel-limiting disabilities. *2025 Pacific Southwest Region UTC Annual Congress*, Berkeley, CA.
5. Chen, P., P. Ioannou, M. Dessouky and G. Giuliano, "Freight Routing for System Efficiency and Sustainability," 2024 Forum for Innovative Sustainable Transportation Systems (FISTS), Riverside, CA, USA, 2024, pp. 1-7, doi: 10.1109/FISTS60717.2024.10485604
6. Comandon, S. Rodnyansky, M. Boarnet, 2024, Deepening Megaregional Interrelatedness Through Migration: The Case of the Northern California Megaregion. Growth and Change. December (online first), https://doi.org/10.1111/grow.70010.
7. Hong, H.[*], Gencturk, B.[§], and Saiidi, M. S. (2024). "Material Characterization of Iron-based Shape Memory Alloys for Use in Self-centering Columns," *Smart Materials and Structures (IOPScience)*, 33(7), 075001.
8. Hong, H.[*], Gencturk, B.[§], Araki, Y., Saiidi, M. S., and Kise, S. (2024). "Machinability of Cu-Al-Mn Shape Memory Alloys," *ASCE Journal of Materials in Civil Engineering (ASCE)*, 36(7), 04024188.
9. Hong, H.[*], Gencturk, B.[§], Kise, S., Araki, Y., Jain, A.[*], Saiidi, M. S., and Uruma, K. (2024). "Headed Coupling Behavior of Large Diameter Cu-Al-Mn Shape Memory Alloy Bars: Mechanical Testing and Microstructural Analysis," *Construction and Building Materials (Elsevier)* 424(19 April 2024), 135862.
10. Ji, J., D. Chakraborty, & A. Jenn. (2024). The present and future of road Financing: Leveraging knowledge from the tolling industry to implement road-usage charge programs in the U.S. Transportation Research Interdisciplinary Perspectives, Volume 27, https://doi.org/10.1016/j.trip.2024.101240.
11. Kim, K., Yamashita, E., Houghton, B., Boothman-Shepard, N., Bui, L. (2024) Modeling Roadway Impacts and Recovery from Volcanic Ashfall from the 2021 St. Vincent Eruption. Journal of Emergency Management. 22(3), 249-260.
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16. Nambisan, S., Byzyka, J., Vlerin, W. V., Mehmet, E., & Bai, B. (2025). Transportation needs and economic opportunities of socio-economically disadvantaged populations in the hospitality and tourism industry: A case study in Las Vegas, Nevada in the United States. *In preparation*.
17. O'Malley, G., Wishart, J., Zhao, J., and B. Russo, "A Scenario-Based Test Selection and Scoring Methodology for Inclusion in a Safety Case Framework for Automated Vehicles", SAE Technical Paper, 2024.
18. Pooladsanj, Z. Li, K. Savla, and P. Ioannou. Performance evaluation of ramp metering under
19. different traffic measurement scenarios. In Transportation Research Board Annual Meeting, Washington,DC, 2024.
20. Raha, F., Eschen, A., Gehrke, SR., Smaglik, E., and Russo, BJ. "Analysis of Factors Associated with the Frequency and Severity of Turning Vehicle-Bicycle Crashes at Signalized Intersections." Accepted for presentation at the 2024 International Road Safety and Simulation Conference, 2024.
21. Reda, M., Belarbi, A.§, Gencturk, B., and Dawood, M. (2024). "Experimental Investigation of Full-Scale Post-tensioned Composite AASHTO Beams with Prestressing Carbon Fiber Reinforced Polymers Cables," *PCI Journal (Precast/Prestressed Concrete Institute)*, January-February.
22. Reeb, T., Chris Swarat, and Barbara Taylor, "Talent Pipelines for the Fourth Industrial Revolution: How California PaCE Units Can Bridge Critical KSA Gaps," UC Berkeley: Center for Studies in Higher Education, Research and Occasional Papers Series, no. Special Issue: Opportunities and Challenges for California Higher Education (June 7, 2024), https://escholarship.org/uc/item/5hh3904k.R
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29. Zhuang, W. (2024). Transit to California's National Parks: An Assessment of Visitation and Sociodemographic Barriers (UCB-ITS-PSR-2024-04). https://escholarship.org/uc/item/4vv0h2sp
30. Zhuang, B.[*], Gencturk, B.[§], Sinkov, A., Good, M., Meyer, R., and Oberai, A. (2024). "Non-invasive Ultrasonic Sensing of Internal Conditions on a Partial Full-scale Spent Nuclear Canister Mock-up," *NDT & E International (Elsevier)*, 148(December 2024), 103242.
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32. Zhang S*, Jin J*, Yu H*, Hong Y*, Sood N, Suen SC. The Impact of COVID-19 Vaccination Rate on Traffic Recovery. *Sci Rep 14, 22066 (2024).*
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34. Zhuang, B.[*], Gencturk, B.[§], Oberai, A., Ramaswamy, H., Meyer, R., Sinkov, A., and Good, M. (2024). "Impurity Gas Detection for SNF Canisters Using Probabilistic Deep Learning and Acoustic Sensing," *Measurement Science and Technology (Elsevier)*, 35(12), 126005.
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Other publications
Conference papers

37. Handy, S. L., Volker, J. M., & Hosseinzade, R. (2024). Assessing the effectiveness of potential vehicle-miles-traveled (VMT) mitigation measures. *UC Davis: Institute of Transportation Studies, Research Report*. Retrieved from https://escholarship.org/uc/item/1pf307sp
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39. Iogansen, X. (2025, January). Investigating heterogeneity in private vehicle ownership, preferences towards alternative-fuel vehicles, and adoption of shared mobility options. *Transportation Research Board's 104th Annual Meeting, Workshop*, Washington, DC.
40. Jaller, M., Lopez, J. C., & Jenn, A. (2024). Development of public dynamic spatio-temporal monitoring and analysis tool of supply chain vulnerability, resilience, and sustainability. *Pacific Southwest Region University Transportation Center, Research Report*. https://doi.org/10.25554/8a5s-dd40
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42. Kim, K., Riley, S., Yamashita, E., Marasco, D., & Webster, L. (2024). Promoting porosity: Adaptation of urban roadways for flooding. *Transportation Research Record: Journal of the Transportation Research Board, 2678*(7), 549–562.

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44. Martinez, Y., & Bein, W. (in press). Methods for identifying issues with traffic signal timing parameters and potential adjustments: A survey. *22nd International Conference on Information Technology: New Generations (ITNG)*, 2025.
45. Martinez, Y., & Bein, W. (2025). Road traffic congestion exploration and visualization using open spatial-temporal data and HCI principles. *2025 IEEE 15th Annual Computing and Communication Workshop and Conference (CCWC)*, 15, 286–291. https://doi.org/10.1109/CCWC62904.2025.10903860
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Presentations

50. Akbari, A., & Dean, M. D. (2025). Peer-to-peer residential charger sharing: Exploring public perceptions in California. *Presentation at the 2025 Transportation Research Board Annual Meeting*, Washington, DC.
51. Ahmed, T., & Hyland, M. (2025). Effects of activity-travel chaining propensity on peak and off-peak travel: Workers vs. non-workers. *Presentation at the 2025 Transportation Research Board Annual Meeting*, Washington, DC.
52. An, S., Jayakrishnan, R., & Hyland, M. (2025). MaaS portfolios for travelers with mobility supplier and consumer roles in shared and multimodal transportation systems. *Presentation at the 2025 Transportation Research Board Annual Meeting*, Washington, DC.
53. Bai, B., Byzyka, J., Erdem, M., Koneti, S., Nambisan, S., & Werner, W. B. (2024). Transportation needs and economic opportunities of socio-economically disadvantaged populations in the hospitality and tourism industry: A case study in Las Vegas, Nevada in the United States. *15th International Conference on Transportation Planning & Implementation Methodologies for Developing Countries*, Mumbai, India.
54. Beverly, B., Birdsall, J., Keisler, J., Reeb, T., Schumaker, C., & Taylor, B. (2024). Building a zero-emission vehicle ecosystem. *Presented at the IEEE International Conference on Green Energy & Smart Systems*, Long Beach, CA.

55. Bhuiya, M. R. (2025, March 24). Do people with similar types of disability travel the same? An examination of the variability of mode choice among people with travel-limiting disabilities. *2025 Pacific Southwest Region UTC Annual Congress*, Berkeley, CA.
56. Byzyka, J., Nambisan, S., & Vlerin, W. V. (2024). A methodology to evaluate safety and mobility factors to develop complete streets in small towns: A case study from Nevada, USA. *15th International Conference on Transportation Planning & Implementation Methodologies for Developing Countries*, Mumbai, India.
57. Byzyka, J., & Rahman, M. (2024). Infrared heated pothole repairs: A sustainable solution for long-lasting repairs. *Nevada Asphalt Conference*, Las Vegas, NV.
58. Cooper, J., Kim, K., Liu, D., Tran, C., & Yamashita, E. (2025). Planning for resilience hubs: Learning from the 2023 Lahaina fire disaster. *Presentation at the 2025 Transportation Research Board Annual Meeting*, Washington, DC.
59. Dean, M. D., & Akbari, A. (2025). Peer-to-peer residential charger sharing: Exploring public perceptions in California. *Presentation at the 2025 Transportation Research Board Annual Meeting*, Washington, DC.
60. Elia, A., Eschen, A., Gehrke, S. R., Smaglik, E., & Russo, B. J. (2025). How do leading pedestrian intervals (LPIs) impact turning vehicle-pedestrian conflict frequencies and severities? An observational study before and after LPI implementation. *Presented at the 2025 TRB Annual Meeting*, Washington, D.C.
61. Erdem, M., Nambisan, S., Bai, B., Byzyka, J., Koneti, S., & Werner, W. B. (2024). An examination of transportation needs and challenges for employees from socio-economically disadvantaged populations in Las Vegas hospitality and tourism industry. *UNLV Interdisciplinary Research Symposium*, Las Vegas, NV.
62. Eschen, A., Gehrke, S. R., Smaglik, E., & Russo, B. J. (2025). Testing and mapping the sensitivity of no-touch pedestrian push buttons in a laboratory setting. *Presented at the 2025 TRB Annual Meeting*, Washington, D.C.
63. Feng, G., Li, Y., Ritchie, S. G., & Tok, A. Y. C. (2025). Advancing gross vehicle weight rating classification through the integration of inductive loop and side fire camera system. *Presentation at the 2025 Transportation Research Board Annual Meeting*, Washington, D.C.
64. Gehrke, S. R., & Allam, M. K. (2025). High-stress cycling accessibility and cyclist-involved crashes in Arizona metropolitan regions. *Presented at the 2025 TRB Annual Meeting*, Washington, D.C.
65. Ho, P. (2025). Evaluating accessibility and impacts of pandemic transit service adjustments: A case study of the San Francisco Bay Area. *Session: Considering Mobility for All: Addressing Barriers and Shaping an Equitable Future*, *2025 Transportation Research Board Annual Meeting*, Washington, D.C.
66. Ho, P. (2025). A comparative study of planning practices in the United States and South Korea. *Session: Innovative Approaches to Transportation Planning: Evaluation and Emerging Trends*, *2025 Transportation Research Board Annual Meeting*, Washington, D.C.
67. Hong, J., & Jin, W. (2025). Detecting traffic sensor malfunctions through lane-to-lane correlation analysis: A comparative study using NGISM and PeMS datasets. *Presentation at the 2025 Transportation Research Board Annual Meeting*, Washington, D.C.
68. Islam, K., Nambisan, S. (2024, October 28-31). Analyzing Rural-Urban Road Safety in Nevada for Informed Strategic Planning, 2024 Road Safety and Simulation International Conference, Lexington, KY.

69. Jaller, M., & Lopez, J. C. (2025, January). Forecasting supply chain performance during disruptions: A Bayesian model averaging approach using news-based metrics. *Presentation at the 2025 Transportation Research Board Annual Meeting*, Washington, DC.
70. Ju, M. (2025, Month Day). Transitioning ride-hailing fleets to zero emission: Economic insights for electric vehicle acquisition. *Presentation at the 2025 Conference Name*, Location.
71. Kim, K., Spirandelli, D., Rother, D., Yamashita, E., & Toner, M. (2025). Tracking wildfire risk to California railroads: Integrating environmental data and railway operations. *Presentation at the 2025 Transportation Research Board Annual Meeting*, Washington, DC.
72. Kafashana, S., & Saphores, J. D. (2025). Electrification of off-road construction vehicles: A comparative economic analysis of electric and diesel machinery. *Presentation at the 2025 Transportation Research Board Annual Meeting*, Washington, D.C.
73. Kim, K., Boothman-Shepard, N., & Schlegelmilch, J. (2025). Lessons from recent wildfires and extreme heat disasters. *2025 RESCON*, March 11-13, 2025.
74. Liu, Y. (2025). Does commuting really make you unhappy? The causal relationship between commuting and depression—Evidence from China. *Session: Travel Behavior Studies: Insights from Pre-, During, and Post-COVID-19 Pandemic Periods*, *2025 Transportation Research Board Annual Meeting*, Washington, D.C.
75. Martinez, Y. (2025). Road traffic congestion exploration and visualization using open spatial-temporal data and HCI principles. *IEEE 15th Annual Computing and Communication Workshop and Conference (CCWC)*, UNLV, Las Vegas, NV.
76. Martinez, Y. (2025). Traffic congestion analysis using an autoencoder for feature selection and anomaly detection. *Southwest Region University Transportation Center Annual Congress 2025*, UC Berkeley, Berkeley, CA.
77. Nambisan, S., Byzyka, J., & Vlerin, W. V. (2024). Some comments on infrastructure for electric vehicles: Nevada, USA vis-à-vis India. *Keynote Address at the 15th International Conference on Transportation Planning & Implementation Methodologies for Developing Countries*, Mumbai, India.
78. Nambisan, S., Nellutla, S., & Koneti, S. (2024). Evaluating accessibility and mobility impacts of urban transport modes: A case study of the Vegas Loop. *15th International Conference on Transportation Planning & Implementation Methodologies for Developing Countries (TPMDC)*, Mumbai, India.
79. Nambisan, S., Byzyka, J., Erdem, M., Bai, B., Koneti, S., & Werner, W. B. (2024). Transportation needs and challenges for employees from socio-economically disadvantaged populations in Las Vegas hospitality and tourism industry. *UNLV Interdisciplinary Research Symposium*, Las Vegas, NV.
80. Nambisan, S. (2024, October 17-18). Data and Emerging Technology Considerations to Enhance Road User Safety, International Passive Safety Seminar (IPASS -2024), International Centre for Automotive Technology, Manesar, New Delhi, India. Invited Keynote Speaker.
81. Peer-to-Peer Residential Charger Sharing: Exploring Public Perceptions in California, Amin Akbari & Matthew D. Dean, Ph.D. (2025).
82. Raha, F., Eschen, A., Gehrke, S. R., Smaglik, E., & Russo, B. J. (2024). Analysis of factors associated with the frequency and severity of turning vehicle-bicycle crashes at signalized intersections. *Presented at the 2024 International Road Safety and Simulation Conference*, 2024.
83. Reeb, T., Taylor, B., Beverly, B., Birdsall, J., Keisler, J., & Schumaker, C. (2024). Building a zero-emission vehicle ecosystem. *Presented at the IEEE International Conference on Green Energy & Smart Systems*, Long Beach, CA.

84. Saw, J. (2025, Month Day). Exploring distributed acoustic sensing (DAS) for pedestrian monitoring: Signal characteristics and identification using fiber optic cables embedded in roadways. *Session: Human mobility: Estimating nonmotorized volumes and missing network links*, *Conference Name*, Location.
85. Timmerman, K., & Gehrke, S. R. (2025). Accommodating visitor activity and vehicle travel at Grand Canyon National Park's North Rim. *Presented at the 2025 TRB Annual Meeting*, Washington, D.C.
86. Tran, C., Santiago, E. D., Yamashita, E., & Kim, K. (2025). Greenways for disaster recovery and resilience. *Presentation at the 2025 Transportation Research Board Annual Meeting*, Washington, D.C.
87. Wang, W. (2025, March 24–25). Investigating unmet travel needs in underserved communities in California. *2025 PSR Congress*, University of California, Berkeley, CA, United States. https://2025psr.sched.com/event/1vJme/access
88. Xu, J. (2025, Month Day). Estimating values of slot substitutions in GDP. *Session: Airport slot allocation and capacity management*, *Conference Name*, Location.
89. Yao, M., & Ritchie, S. G. (2025). Analyzing public sentiment variations towards electric vehicles in the US: Evidence from Twitter. *Presentation at the 2025 Transportation Research Board Annual Meeting*, Washington, D.C.
90. Zhuang, W. (2025, Month Day). Transit to California's national parks: An assessment of visitation and sociodemographic barriers. *Conference Name*, Location.

Research Reports

91. Jaller, M., & Jenn, A. (2024). *Development of public dynamic spatio-temporal monitoring and analysis tool of supply chain vulnerability, resilience, and sustainability* (No. PSR-22-46). Pacific Southwest Region 9 UTC, University of Southern California.