



Sustainable Transportation Energy Pathways

An Institute of Transportation Studies Program

UC DAVIS

3 Revolutions
Future Mobility

Institute of Transportation Studies

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China Center for Energy
and Transportation

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Energy Futures
Research Program

Institute of Transportation Studies

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Electric Vehicle
Research Center

Institute of Transportation Studies

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Sustainable Freight
Research Program

Institute of Transportation Studies

WEDNESDAY
MAY 17

9:00 a.m. – 3:00 p.m.

STEPS+ 2023 SPRING SYMPOSIUM DAY 1

ARC CONFERENCE CENTER 760 Orchard Dr, Davis CA

8:30 a.m.

Registration and Light Breakfast

9:00 a.m.

Welcome and Introductory Remarks

Lew Fulton, Director, STEPS+ Program

9:05 a.m.

Session 1: Opening Keynote

Bill Charmley, EPA Office of Transportation and Air Quality: “Overview of EPA’s proposed light & medium duty vehicle and heavy-duty truck rulemakings and implications for US transportation”

10:00 a.m.

Session 2: Low Carbon Fuels and International Critical Materials Updates

Moderator – Lew Fulton

- **International Supply Chain and LCA Challenges** – Alissa Kendall
- **Updates on low carbon fuels programs in California and beyond** – Julie Witcover

11:00 a.m.

Break

11:15 a.m.

Session 3: The Path to Decarbonization: The Role of Multimodal Travel and Vehicle Miles Traveled

Moderator – Giovanni Circella

- **US Transportation Post-Pandemic Context: Understanding Changes in Travel Demand and Opportunities to Nudge** – Junia Compostella
 - **Future of Passenger Mobility in the US: Three Scenarios for 2030** – Alimurtaza Kothawala
- Discussant: Yongsung Lee (University of Hong Kong)

12:15 p.m.

Lunch and Poster Session

STEPS students and researchers present in poster format

1:30 p.m.	Session 4: Sustainable Freight – ZEV Truck Challenges Moderator – Marshall Miller <ul style="list-style-type: none"> • Who decides which trucks to buy? Implications for electrifying freight fleets – Claire Sugihara • To commit or not to commit on hard to abate sectors – Miguel Jaller
2:30 p.m.	Session 5: The Next Frontiers on the Voyage to 100% EVs Moderator – Gil Tal <ul style="list-style-type: none"> • EV resistance: I don't care if it's good for me – Ken Kurani • How much will it cost and who will pay for it: LDV charging infrastructure – Gil Tal • Exploring LDVs supply scenarios: Impact of trade policies on the future of global electrification – Minal Chandra
3:30 p.m.	Break
3:45 p.m.	Session 6: ITS-Davis Goes Global: A Discussion of our International Initiatives <ul style="list-style-type: none"> • Yunshi Wang • Gil Tal • Giovanni Circella • Lew Fulton • Aditya Ramji
5:00 p.m.	Closing Remarks, Adjourn
5:30 p.m.	Reception and Dinner, Seasons Restaurant (102 F Street, Davis CA 95616)

MAY 18
DAY 2

STEPS+ 2023 SPRING SYMPOSIUM

ARC Conference Ctr
760 Orchard Rd,
Davis CA

ELECTRIC VEHICLE RESEARCH CENTER DEEP DIVE

8:30 a.m.	Light Breakfast
9:00 a.m.	Welcome and Center Update – Dahlia Garas
9:20 a.m.	Part 1: Research updates on Rural, low-income, and disadvantaged communities <ul style="list-style-type: none">• Overcoming barriers to ZEV adoption in underserved communities – Scott Hardman• Central Valley Project findings – Caroline Rodier• Rural EV Adoption Challenges – Anya Robinson
10:30 a.m.	Break
10:50 a.m.	Part 2: Discussion of proposed EPA emissions standards <ul style="list-style-type: none">• EPA Standards overview – Alan Jenn• Open Discussion – All Attendees
11:40 a.m.	Part 3: Introduction of Proposed 2023 Research Projects
12:00 p.m.	Adjourn (lunch is available)

ARC Conference Ctr
760 Orchard Rd,
Davis CA

3 REVOLUTIONS FUTURE MOBILITY PROGRAM DEEP DIVE

8:30 a.m.	Light Breakfast
9:00 a.m.	3RFM Research Program Updates – Grant Matson
9:20 a.m.	Air Travelers at the Four Major Airports in Northern California and Their Opinion about Airport Ground Access Options – Keita Makino
9:40 a.m.	Post-COVID Era Travel Behavior Studies: How Can We Track Changing Work Arrangements and Explore Their Impacts on Vehicle Miles Traveled? – Basar Ozbilen
10:00 a.m.	Disability and Transportation in California: First Results from a Survey – Prashanth Venkataram
10:20 a.m.	Lessons Learned from Abroad: Potential Influence of California High-Speed Rail on Economic Development, Land Use Patterns, and Future Growth of Cities – Carolina Lecompte
10:40 a.m.	Break
11:00 a.m.	American Cities and "Smartness": American City Profiles Based on Existing Smart Infrastructure Deployment and Future Potential – Alimurtaza Kothawala
11:20 a.m.	Empirical Evidence of Heterogenous Recovery of Travel Demand After the Pandemic: A Case Study of Northern California Using Passively Collected Data – Siddhartha Gulhare
11:40 a.m.	Can AI Decision-Making be Made Safer, Faster and Cheaper? – Junshan Zhang and Mollie D'Agostino
11:50 a.m.	Additional 3RFM Initiatives and Discussions – Giovanni Circella
12:00 p.m.	Adjourn (lunch is available)

MAY 18
DAY 2

STEPS+ 2023 SPRING SYMPOSIUM

ARC Conference Ctr
760 Orchard Rd,
Davis CA

ENERGY FUTURES DEEP DIVE

8:30 a.m.

Light Breakfast

9:00 a.m.

Energy Futures Deep Dive

- Spatial analysis of low carbon transportation – Tri Dev Acharya
- Transition and investment cost analysis – Hong Yang
- Modeling California LCFS targets for 2030 and beyond – Colin Murphy

10:30 a.m.

Break

10:45 a.m.

Energy Futures/ Sustainable Freight Deep Dive

- Evaluation and application of vehicle choice factors for ZEV cars and trucks – Andy Burke
- How will we pay for the near- to mid-term excess cost of transitioning to ZEVs? – Qian Wang
- Hydrogen system analysis updates, including station cost scaling analysis – Lew Fulton (*this can continue as a lunchtime discussion if we run out of regular time*)

12:00 p.m.

Adjourn (lunch is available)

ARC Conference Ctr
760 Orchard Rd,
Davis CA

SUSTAINABLE FREIGHT DEEP DIVE

8:30 a.m.

Light Breakfast

9:00 a.m.

Sustainable Freight Deep Dive

- Determinants of Medium and Heavy-Duty Truck Fleet Turnover – Ken Kurani
- ACT/ACF stakeholder feedback – the good, the bad, the potentially ugly – Marshall Miller
- Data Analytics and Truck Parking and Idling – Miguel Jaller

10:30 a.m.

Break

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Energy Futures/ Sustainable Freight Deep Dive

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12:00 p.m.

Adjourn (lunch is available)

WED&THU
MAY 17 & 18

STEPS+ 2023 SPRING SYMPOSIUM

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WED&THU
MAY 17 & 18

STEPS+ 2022 SPRING SYMPOSIUM

MAY 17
DAY 1

LOCATIONS

ARC Conference Center (760 Orchard Rd, Davis CA)

- **ARC Parking:** The parking lot nearest the ARC Conference Center is Parking Lot 25. The visitor parking rate is \$12 for a daily permit. To pay for parking you must download the [ParkMobile app](#).

Seasons Restaurant (102 F Street, Davis CA)

- Evening reception

MAY 18
DAY 2

DEEP-DIVE LOCATIONS

ARC Conference Center (760 Orchard Rd, Davis CA)

- **ARC Parking:** The parking lot nearest the ARC Conference Center is Parking Lot 25. The visitor parking rate is \$12 for a daily permit. To pay for parking you must download the ParkMobile app.

STUDENT POSTERS

#	Primary Research Center	Title	Author/Team
1	3RFM	Understanding and Influencing Uptake of Shared E-scooters: Portland and Washington DC	Aurojeet Jena, Ali Kothawala, Basar Ozbilen, Giovanni Circella
2	3RFM	Disability and Transportation in California: First Results from a Survey	Justin Flynn (presenter), Giovanni Circella, Prashanth Venkataram
3	3RFM	Exploring Factors Impacting the Changes in Household Vehicle Ownership during the Pandemic	Xiatian logansen (presenter), Yongsung Lee, Jai K Malik, Giovanni Circella
4	3RFM	High Speed Rail: Lessons learned from abroad for California	Maria Carolina Lecompte, Lucia Rossignol, Giovanni Circella, Anastasia Loukaitou-Sideris
5	3RFM	Residential Location Changes and Transportation Impacts: A Longitudinal Survey Analysis During the COVID-19 Pandemic	Marcus Chan, Siddhartha Gulhare, Yongsung Lee, Giovanni Circella
6	3RFM	Early Impacts of the Clean Miles Standard on California Rideshare Drivers	James Giller (presenter), Xiatian logansen, Junia Compostella, Giovanni Circella, Mischa Young
7	EV Research Center	Exploring the Impact of the Federal Tax Credit and the California Rebate on the Decision to Lease or Purchase a PEV in California	Kelly Hoogland, Scott Hardman, Debapriya Chakraborty, Theodora Konstantinou, David S. Bunch
8	EV Research Center	Understanding the Influence of the Clean Vehicle Assistance Program on Buyers of Electric Vehicles in California	Amrita Chakraborty, Scott Hardman, Theodora Konstantinou
9	EV research center	Transportation Needs of Disadvantaged Communities in California: Preliminary Results from Listening Sessions	Tayo Ogunmayin (presenter), Scott Hardman, Juan C Garcia Sanchez, Jesus Barajas
10	EV Research Center	Evaluating the emissions impacts of investor-owned utility EV charging infrastructure programs in California: Preliminary Results	Peter Ambiel (presenter), Gil Tal, Alan Jenn
11	EV Research Center	Exploring factors related to future electric vehicle ownership across rural California	Anya Robinson (presenter), Theodora Konstantinou, Gil Tal

#	Primary Research Center	Title	Author/Team
12	EV Research Center	Reliability of Corridor DC Fast Chargers and the Prevalence of no-charge events	Tisura Gamage, Alan T. Jenn, Gil Tal
13	EV Research Center	Developing a Deep Learning Tool to Detect Electric Vehicle Supply Equipment Failures	Vaishnavi Karanam, Gil Tal
14	EV Research Center	Exploring Tools for Maximizing the Potential for Electrified Transit Buses in Mexico	Peter Benoliel, Kevin Hernandez Rios, Juan Carlos Garcia Sanchez, Gil Tal
15	EV Research Center	A Machine Learning-Based Model for Estimating Unnecessary EV Charging Events	Hanif Tayarani, Vaishnavi Karanam, Chris Nitta, Gil Tal
16	EV Research Centre & Energy Futures	Regional Analysis of Electric LDV Portfolio Choices by Vehicle Manufacturer	Aditya Ramji, Hanif Tayarani
17	Energy Futures	Can US and Europe both achieve ambitious EV sales targets?	Hong Yang, Lewis Fulton
18	Energy Futures	Reviewing Colombia's Goals for Hydrogen in Transportation	Laura Restrepo, Lewis M. Fulton
19	Energy Futures	Looking into the future of the US transportation System: An urban perspective for transportation sustainability	Farhana Sharmin, Lew Fulton
20	Energy Futures	Technology and Fuel Transition Pathways to Low Greenhouse Gas Futures for Cars and Trucks in the United States	Qian Wang, Marshall Miller, Lewis Fulton
21	Energy Futures	Vehicle Choice Modelling for ZEVs in California	Andrew F. Burke, Jingyuan Zhao, Marshall Miller, and Lewis Fulton
22	Transit	Racial Representation and Diversity on Non-Elected Transit Advisory Bodies	Noah Thoron
23	Transit - smart mobility	Productivity of SmarT Ride	Marcus Chan, Raina Joby, Sam Pikelney, Noah Thoron
24	Transit	Transit Ridership Prediction for Student-Centric Communities: A Case Study of Unitrans and UC Davis	Marcus Chan, Kari Watkins
25	Transit	Service improvements on Capital Corridor and impacts on ridership	Maha Ahmad, Kari Watkins, David Bunch and Susan Pike
26	Transit	SB 375 Streamlining for Transit Oriented Development	Bailey Affolter, Graham DeLeon, Jamey Volker, Susie Pike