

ANNUAL REPORT 2024

LEONARD TRANSPORTATION CENTER

CALIFORNIA STATE UNIVERSITY, SAN BERNARDINO





www.csusb.edu/ltc



1. A Note from the Executive Director

The LTC team is proud to present the 2024 Annual Report, highlighting a year of impactful research, education, and community engagement. At the Leonard Transportation Center (LTC), we remain dedicated to addressing the Inland Empire's unique transportation challenges while promoting sustainable, equitable solutions that enhance the quality of life for all residents.

This year, we made significant progress through key events and initiatives. Our research initiatives and the Dialogue series brought together stakeholders from diverse backgrounds to exchange ideas and drive meaningful change. I am particularly proud of our involvement in scholarly publications, committee representations, and advisory council meetings, which have solidified our position as leaders in transportation research and advocacy.



Looking ahead to 2025, the Leonard Transportation Center will inaugurate the Transportation Leadership Policy Forum. This Forum will bring together state, regional, and local leaders to address critical issues of housing affordability and transportation accessibility in the Inland Empire. The primary objective is to foster collaboration between practitioners and policymakers, aligning regional challenges with state-level strategies to advance a shared vision of a prosperous and sustainable future.

As we embark on this new chapter, we will continue to collaborate, innovate, and inspire positive change. Together, we can build a more sustainable, equitable, and accessible transportation system for the Inland Empire.

I will end my note with a quote that inspires our work: "Striving for social justice is the most valuable thing to do in life." – Albert Einstein

Dr. Kimberly Collins Executive Director, Leonard Transportation Center, CSUSB December 2024



2. Overview of 2024 Activities

In 2024, the Leonard Transportation Center expanded its research, education, and community outreach efforts significantly. Key accomplishments include the completion of the Fourth Student Research Challenge, which explored the interplay between housing affordability and transportation accessibility, and collaborations with institutions like UCR and CPP, fostering interdisciplinary solutions to pressing regional challenges. The LTC's Regional Mobility Dialogue Series tackled critical topics such as zero emissions, equity in funding, and workforce development, engaging stakeholders to address the Inland Empire's unique transportation needs.

LTC faculty and students engaged with academic, business and community leaders through their presentations in conferences held across the country. It was busy attending the Industry Studies Association (ISA), the Institute for Electrical Electronics Engineers (IEEE), the AltCar Symposium with Western Riverside Council of Governments, the Transportation Research Board (TRB), the American Society of Civil Engineers (ASCE), and the Southern California Association of Governments (SCAG) conferences. At these events, students and faculty presented innovative research on big data analytics, vehicle electrification, and sustainable & equity development in the IE. Community engagement was further amplified through events such as the inaugural Sustainability Workforce Symposium, fostering connections among CSUSB students with academia, policymakers, and industry leaders. Through these efforts, the LTC continues to shape a sustainable and resilient transportation future for the Inland Empire, championing collaboration, research excellence, and workforce development.

3. 2024 Strategic Initiative

3.1. Research and Education

3.1.1. Towards Vehicle Electrification: Traffic Analysis of Medium- and Heavy-Duty Vehicles in the Inland Empire

California is a national leader in sustainable transportation and emission reduction. As part of the state's plan, the California Air Resources Board is developing Medium and Heavy-Duty Electric Vehicles regulations with the goal of achieving zero-emission truck and bus mobility by 2045. The current goal is to get a total of 3000 zero-emission drayage trucks, school buses, and transit buses on-road in 2025. Recently, the port of Long beach announced its plan to be a zero-emission seaport by 2035. The transition from traditional diesel-powered trucks to electric ones is a critical component of these plans, but it presents several challenges, including range anxiety, inadequate charging infrastructure, lengthy charging time, high costs among others.

To address these issues, a better understanding of how medium- and heavy-duty vehicles operate in the region is essential, thus prompting our study.

In this project, we analyzed the traffic of local freight operations and provided insights into achieving California's ambitious goals for vehicle electrification. Furthermore, it laid the



groundwork for exploring innovative solutions, such as opportunity charging and battery swapping, to support a more sustainable logistics industry.

Presentations

IEEE Forum for Innovative Sustainable Transportation Systems (ISTS)

The LTC graduate student research team -- Raffi, Sai, and Bhavik -- had two posters at the Forum for Innovative Sustainable Transportation Systems (ISTS) at the University of California, Riverside, February 26-28, 2024. The first poster provided an analysis of the traffic movement of the MDHD fleet in the Inland Empire. The second poster looked at vehicle traffic patterns for commuters. The posters were well received by the other attendees and highlighted the great work of the CSUSB-LTC graduate students.

Industry Studies Association Annual Conference

Kimberly presented the paper *Electrification and Opportunity Charging of the MDHD Vehicles* at the 2024 Industry Studies Association conference, held on June 13–15 in Sacramento. This research paper presented an in-depth study of the transition to medium- and heavy-duty (MDHD) electric vehicles (EVs) in the Inland Empire. This region's dense transportation and logistics network offers a unique context for examining MDHD EV integration. The research explores the dynamics of the MDHD transportation system, its interaction with urban environments, and diverse scenarios for EV charging infrastructure development. Additionally, it delves into the social equity implications of transitioning to MDHD EVs within government and business sectors. The findings provide critical insights for strategic planning and policy-making in the field of MDHD EVs, specifically tailored for regions with characteristics similar to the Inland Empire. The report serves as a guide for governmental bodies, business leaders, and community stakeholders, offering a well-informed basis for decision-making in the rapidly evolving MDHD EV industry.

The conference theme, "*Empowering Community Wellbeing: Clean Energy, Sustainability, and Industrial Strategy,*" provided a rich platform for interdisciplinary discussions blending research, policy, and real-world applications.

15th Annual California Climate & Energy Forum

Kimberly presented the poster *Leaving No One Behind: The ZEV Transition of MDHD Vehicles* at the 15th Annual California Climate & Energy Forum in Palm Springs California, June 25-26, 2024. The poster highlighted the policy and equity considerations of the MDHD transition to electrification. This poster session aligned seamlessly with the CCEC Forum theme, "Collective Innovation: Cultivating Collaboration for Equitable Climate Action," by embodying the essence of collaborative efforts towards equitable solutions in the electrification of medium- and heavy-duty vehicles (MDHDVs). It emphasizes the importance of bringing diverse stakeholders together, including policymakers, industry experts, and community advocates, to foster a



comprehensive dialogue on sustainable and equitable electrification practices within California's Inland Empire.

2024 Transportation Research Board (TRB)

The Transportation Research Board (TRB) held its Transportation Symposium on Environment, Energy, and Livable Economies from August 25–28, 2024, in Denver, CO. Drawing transportation professionals from around the world, the event featured a comprehensive program covering all modes of transportation.

At the symposium, Kimberly presented a poster titled *Moving Towards the Electrification of Medium- and Heavy-Duty Vehicles in the Inland Empire*. The presentation highlighted the work of the LTC team and showcased the model and policy work.

Student Awards

Two LTC students, Sai Kalyan Ayyagari and Bhavik Pankaj Khatri, received the 2024 Outstanding Graduate Student Award, School of Computer Science and Engineering, CSUSB.

3.1.2. The 4th LTC Student Research Challenge

The Fourth Student Research Challenge launched in summer 2023, focusing on the critical topic of "The Nexus Between Transportation and Housing." Four students from California State University, San Bernardino (CSUSB), Cal Poly Pomona (CPP), and the University of California, Riverside (UCR) were selected to participate in this nine-month research challenge. The research challenge centers on two pressing policy issues for the Inland Empire and California: housing affordability and transportation accessibility.

Their findings highlighted the profound influence of housing and transportation dynamics on the region's economic, social, environmental, and health landscapes. Economically, the growing gap between housing costs and incomes forces many households to make difficult trade-offs, often resulting in longer commutes and higher transportation expenses, especially in areas with limited alternatives to driving. Socially, limited access to public transportation exacerbates challenges for residents, compounding the interconnected issues of housing and mobility.

In response, organizations such as SCAG and WRCOG are spearheading innovative programs and initiatives to address these challenges. These efforts aim to build resilience and foster equitable, sustainable solutions in the Inland Empire's housing and transportation systems, paving the way for a better quality of life for its residents. The project concluded on May 30th with the completion of an activities report and final policy report, both posted on the LTC website.



The 4th LTC Student Research Challenge Team

Throughout the challenge, the LTC Fourth Student Research Challenge team presented their research at conferences, gaining invaluable experience in communication while contributing to critical discussions on housing affordability and transportation accessibility in the Inland Empire (IE). Their success was supported by the guidance and expertise of four dedicated faculty advisors, who offered assistance and ideas throughout the challenge.

Faculty Advisors		Student Researchers	
Dr. Kimberly Collins	CSUSB	Carolina Carlos	CSUSB
Dr. Raffi Der Wartanian	CSUSB	Dorlins Villalobos	UCR
Dr. Rick Bishop	UCR	Jordan Leffew	UCR
Dr. Yongping Zhang	Cal Poly Pomona	Yasmin Rasooli	Cal Poly Pomona

Presentations

2024 Southern California Association of Governments (SCAG) Regional Conference General Assembly

Carolina Carlos, a member of the LTC Fourth Student Research Challenge team, presented the team's findings in the Student Showcase Poster Board Competition at the 2024 Regional Conference General Assembly in Palm Desert, California.

The poster showed the complex relationships between income, education, housing affordability, and transportation accessibility in the IE. To quantify these interactions, they developed several indices, including the Disadvantage Index, Housing Burden Index, and Transportation

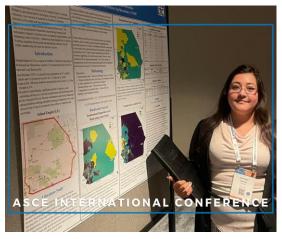


Accessibility Index. Their research uncovered significant socioeconomic disparities, highlighting that disadvantaged communities face disproportionately higher housing burdens and transportation costs. The team's impactful findings, combined with Carolina's strong presentation, earned them the Southern California Association of Governments (SCAG) Student Showcase Poster Jury Award.



American Society of Civil Engineers (ASCE) International Conference

Carolina Carlos represented the Student Research Challenge Team at the ASCE International Conference on Transportation and Development (ICTD) on June 15-18 in Atlanta, Georgia. She presented the poster on Balancing Housing Affordability and Transportation Efficiency in the Inland Empire. This international conference provided an exclusive opportunity to network, interact, and exchange information with worldwide leaders in the fields of transportation & development. It brought together transportation systems and infrastructure practitioners and researchers, operation



managers, project/construction managers, academics, and transportation & development practitioners, consultants, and contractors from around the world.

2024 Colorado River Basin - Symposium Energy, Environment, and Urban Development (CRB-SEED)



The LTC team presented their research findings at the 2024 CRB-SEED Symposium hosted at the University of Nevada, Las Vegas on March 14 & 15, 2024. The conference aimed to foster collaboration and innovation in sustainable development from several perspectives and students from various disciplines and universities. The symposium facilitated dialogue among researchers, policymakers, and industry leaders, advancing knowledge and promoting actionable solutions to enhance the resilience and well-being of the communities. The student presentations included:

- Bhavik, B. (2024). Moving Towards the Electrification of Medium- and Heavy-Duty Vehicle in the Inland Empire. Presented at the Colorado River Basin Symposium on Sustainable Energy, Environment, and Urban Development (CRB-SEED), March 2024, Las Vegas, NV, USA.
- Ayyagari, S. K. (2024). San Bernardino County vehicle traffic patterns. Presented at the Colorado River Basin Symposium on Sustainable Energy, Environment, and Urban Development (CRB-SEED), March 2024, Las Vegas, NV, USA.
- Carlos, C. (2024). Sustainable Pathways: Connecting Affordable Housing with Inclusive Infrastructure. Presented at the Colorado River Basin Symposium on Sustainable Energy,



Environment, and Urban Development (CRB-SEED), March 2024, Las Vegas, NV, USA. (Special Recognition, Sustainable Environment track)

3.1.3. Analysis of Vehicle Miles Traveled (VMT) in San Bernardino County: A Data-Driven Approach for Sustainable and Equitable Transportation Planning

The LTC team worked with StreetLights data to showcase how the data can be used to approach sustainable and equitable transportation planning. This work was presented at the online StreetLight Customer Summit held February 8-9, 2024.

3.1.4. AltCar

Kimberly moderated a discussion between Southern California Association of Governments, Southern California Air Quality Management District, and the California Air Resources Board at the AltCar Symposium sponsored by the Western Riverside Council of Governments on February 22, 2024. This conversation looked at the state and regional policies in the transition of the MDHD fleet in the IE.

3.2. Community Outreach and Development

3.2.1. Regional Mobility Dialogue Series (RMDS)

Over the past eight years, the LTC has successfully hosted 44 Regional Mobility Dialogues (RMDS) to address mobility concerns in the Inland Empire. These Dialogues aim to bring together stakeholders from the public and private sectors, as well as community members, to improve mobility and promote economic growth for the region.

The LTC Dialogues serve as a comprehensive platform addressing key facets of transportation in the Inland Empire. Covering topics ranging from public transit safety to workforce development and state legislative policies, these discussions reflect the region's dynamic transportation landscape. Participants engage with experts from various sectors, including government, academia, and industry, to understand challenges and explore solutions. From the imperative of equitable transportation funding allocation to the forefront of hydrogen integration and the evolving needs of the transportation workforce, the Dialogues foster collaboration and innovation. Moreover, they emphasize the crucial role of effective governance and legislative policies in shaping the region's transportation future, ensuring resilience and sustainability in the face of evolving demands and opportunities.

The table below outlines the topics, dates, and participant engagement for each Dialogue in the series. Over the past three years, these Dialogues have been hosted both in-person at Omnitrans and virtually via Zoom, creating a dynamic platform for critical conversations. The series fostered meaningful discussions on pivotal issues, including safeguarding public transit networks, bridging equity gaps in transportation funding, advancing hydrogen technology and infrastructure,



strengthening the regional transportation workforce, and exploring the interplay between aviation and ground transportation in goods movement.

Date	Dialogue Topic	Number of
Date	Dialogue Topic	Participants
Feb 20, 2024	Safeguarding Inland Empire's Public Transportation Networks: Challenges and Solutions for Transit Security	47
Apr 16, 2024	Equity and Inclusivity in Transportation Funding: Bridging Gaps for the Inland Empire's Future Mobility	52
June 18, 2024	Fueling the Future: Advancing Hydrogen Technology and Infrastructure in the Inland Empire	40
Aug 20, 2024	Strategies for Strengthening the Inland Empire's Transportation Workforce	18
Oct 15, 2024	The Interplay of Aviation and Ground Transportation in the Inland Empire's Good Movement Sector	44
2024	Total Participants	201





The 2024 series was sponsored by:

Platinum Sponsors:



After eight insightful years of fostering discussion and engagement around the Inland Empire's transportation sector, we have officially wrapped up the Dialogue Series. This series has generated a wealth of knowledge, leading to numerous publications and resources. We would like to extend our gratitude to all our sponsors and supporters over the years; especially the leadership from the planning committee members -- HNTB, the San Bernardino International Airport Authority, Foothill Transit, Omnitrans, and the San Bernardino County Transportation Authority. Their mentorship and guidance have been invaluable and bode well for the future of the region.

For those interested in exploring the insights shared throughout the Dialogue Series, we invite you to review the following resources:

- <u>Contemporary Conversations</u>: A collection of policy reports capturing key discussions and emerging trends in transportation.
- **<u>Proceedings</u>**: Research publications detailing findings and recommendations from past events.
- <u>Transportation Talks</u>: Archived discussions with industry experts, policymakers, and community leaders on critical transportation issues.

While the Dialogue Series has concluded, we remain committed to advancing transportation research and collaboration in the Inland Empire, and we look forward to future opportunities to engage with our community.



3.2.2. 2024 Sustainability Workforce Symposium

The Leonard Transportation Center and the Institute of Watershed Resiliency hosted the first Sustainability Workforce Symposium on Tuesday, October 29th, 2024, providing a dynamic opportunity for students, faculty, and staff to engage with sustainability initiatives and career pathways across the Inland Empire. Hosted at both the San Bernardino and Palm Desert campuses, the event featured an engaging agenda that included networking sessions, expert panel discussions with leaders in sustainability, and showcases of student research posters. Attendees also had access to a lunch-hour job fair and connected with organizations such as the City of Riverside, the San Bernardino Valley Municipal Water District, and the U.S. Green Building Council. The symposium fostered community-university partnerships, promoted innovative research, and empowered attendees with tools to advance sustainability in their fields



4. Online Presence

4.1. Social Media

The LTC has continued to grow its web presence through social media platforms over the past year. Instagram, Facebook, and LinkedIn have played a pivotal role in engaging with our stakeholders and community. We have steadily increased our followers throughout the year. As of December 2024, we have 248 followers on Instagram, 91 on Facebook, and 253 on LinkedIn. These platforms continue to serve as informational and educational resources for the community, as we post regular updates on the Center's activities and event invitations.



Platform	Instagram	Facebook	LinkedIn
Followers	248	91	253

4.1.1. YouTube

The Regional Mobility Dialogues are edited and uploaded on YouTube. A full version is provided along with a highlight video. These videos are accessible to the general public via links on the Center's website. Presented below are the analytics:

Content	Views	Watch time (hours)	Subscribers	Impressions	Impressions click-through rate
Total	705	49.8	28	12,800	1.6%

4.1.2. Website

The LTC website has been built with the community in mind. We hope that community members from CSUSB and stakeholders from across the IE, the state, and beyond will use it as a resource to learn more about our ongoing activities and advances in transportation research. The website has undergone a number of improvements and revisions over the past year to increase user friendliness and content navigation. The analytics for 2024 are provided below.

Page	Page views	Unique page views	Views per user	Event count	Key events
LTC	5,837	2,589	2.11	16,066	0



5. Activities and Outcomes

5.1. End of the Academic Year Celebration

The LTC hosted an End of the Academic Year Celebration on April 26, 2024, to recognize the hard work and dedication of our students, faculty, and staff who continually uphold the vision and mission of the LTC. During the lunch, we also celebrated the completion of the Fourth Research Team Challenge and the graduation of two student assistants, Bhavik Pankaj Khatri and Sai Kalyan Ayyagari. This celebration provided an opportunity to reflect on the year's accomplishments, and honor the contributions that drive the center's ongoing success.



5.2. 2024 Advisory Council Meeting



The Advisory Council meetings take place four times a year, providing an ongoing platform reflecting for on past accomplishments, identifying areas for improvement, and fostering meaningful networking and dialogue among members. We are thankful for the members as they provide insights, resources, and incredible support to the operations of the LTC.



5.3. Publications

Conference Papers:

- Sun, Q., Ayyagari, S. K., Hou, Y., and Dajani, K., (2024). A Dual-Modal Human Activity Recognition System Based on Deep Learning and Data Fusion. ICAIBD 2024.
- Chen, Y., Granco, G., Hou, Y., Macias, H., Gomez, F., (2024). AI for Social Good Education at Hispanic Serving Institutions. AAAI 2024.

Journal Articles:

- Hou, Y., McIntyre, M. M., Fu, J., Herrera, J., Aldirawi, H., & Van Wart, M. (2024). Post-COVID-19 Student and Faculty Perceptions of Online Computing Labs: Better Targeted, Better Perceptions, but Still Need Improvement. Education Sciences.
- Kelly, A., Khan B., Ayub, M., Hussain, A., Dajani, K., Hou, Y., Khan W.,(2024). Video Dataset of Sheep Activity for Animal Behavioral Analysis via Deep Learning. Data in Brief.

Technical Reports:

• Collins, K., Der Wartanian, R., Hou, Y., Beer, F., (2024). Moving Towards the Electrification of Medium- and Heavy-Duty Vehicles in the Inland Empire. Mineta Transportation Institute.

Title	Representative
Regional Work-Based Learning Oversight Committee	Kimberly Collins, LTC Staff
Distribution Management Association (DMA) of Southern California	Kimberly Collins
Inland Southern California Climate Collaborative	Kimberly Collins
ETruc Workforce Development Advisory Committee	Kimberly Collins
SBD Hydrogen Hub	Kimberly Collins
SBVC Pits / Transportation Parking Advisory Board	Kimberly Collins
Association of Borderland Scholars, Board of Directors	Kimberly Collins
Good Neighbor Environmental Board	Kimberly Collins

5.4. LTC Committee Representation



Redlands Friends of Prospect Park	Kimberly Collins
IEEE International Conference on Computer Communications and	Yunfei Hou
Networks	
ACM Technical Symposium on Computer Science Education	Yunfei Hou
Computer Science Conference for CSU Undergraduates	Yunfei Hou
ACM SIGKDD Conference on Knowledge Discovery and Data Mining	Yunfei Hou
NSF Review Panel: Directorate for Computer and Information Science	Yunfei Hou
and Engineering	
NSF Review Panel: Directorate for STEM Education	Yunfei Hou
Colorado River Basin Symposium on Sustainable Energy,	Yunfei Hou
Environment, and Urban Development	
California Alliance for Data Science Education	Yunfei Hou

5.5. Activity Highlights

Month	Activity	Participants
January		Staff, students, faculty, council members
February	First Dialogue Series 2024: Safeguarding Inland Empire's Public Transportation Networks: Challenges and Solutions for Transit Security	All staff, students, council members, public and private sector stakeholders, community members
	Institute for Electrical Electronics Engineers (IEEE)	All staff, students, faculty, council members
	Analysis of Vehicle Miles Traveled (VMT) in San Bernardino County: A Data-Driven Approach for Sustainable and Equitable Transportation Planning	All staff, students, faculty, council members
	AltCar	All staff, students, faculty, council members
March	Advisory Council Meeting	All staff, students, faculty, council members



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	2024 Colorado River Basin - Symposium Energy, Environment, and Urban Development (CRB-SEED)	All staff, students, faculty, council members
April	Second Dialogue Series 2024: Equity and Inclusivity in Transportation Funding: Bridging Gaps for the Inland Empire's Future Mobility	All staff, students, council members, public and private sector stakeholders, community members
	End of the Academic Year Celebration	All staff, students, faculty, council members
May	4th LTC Student Research Challenge Team	6 students from CSUSB, CPP, and UCR, led by 3 faculty from each institution
	SCAG Regional Conference & General Assembly	6 students from CSUSB, CPP, and UCR, led by 3 faculty from each institution
June	Third Dialogue Series 2024: Fueling the Future: Advancing Hydrogen Technology and Infrastructure in the Inland Empire	All staff, students, council members, public and private sector stakeholders, community members
	Advisory Council Meeting	All staff, students, faculty, council members
	American Society of Civil Engineers (ASCE) International Conference	6 students from CSUSB, CPP, and UCR, led by 3 faculty from each institution
	15th Annual California Climate & Energy Forum	All staff, students, faculty, council members
	Industry Studies Association Annual Conference	All staff, students, faculty, council members



July		All staff, students, faculty, council members
August	Fourth Dialogue Series 2024: Strategies for Strengthening the Inland Empire's Transportation Workforce	All staff, students, council members, public and private sector stakeholders, community members
	Transportation Research Board (TRB)	All staff, students, faculty, council members
September	Advisory Council Meeting	All staff, students, faculty, council members
		All staff, students, faculty, council members
October	Fifth Dialogue Series 2024: The Interplay of Aviation and Ground Transportation in the Inland Empire's Goods Movement Sector	All staff, students, council members, public and private sector stakeholders, community members
	Sustainability Workforce Symposium	All staff, students, faculty, council members
November		All staff, students, faculty, council members
December	Advisory Council Meeting	All staff, students, faculty, council members
	LTC Holiday Lunch Gathering	All staff, students, faculty, council members



6. Personnel

6.1.2024 Advisory Council Member

Every three months the LTC's advisory council comes together to discuss the research agenda, possible projects, and funding and gain their feedback and advice. Below are the members of the 2024 Advisory Council.

Member	Position	Affiliation
Bassem Muallem	Council Chair	HNTB
Carrie Gilbreth	Senior Partner	Westbound
Christopher Gray	Director of Transportation	WRCOG
Doran J. Barnes/ Josh Landis	Executive Director/ Planning Manger	Foothill Transit
Erin Rogers	CEO	🐬 OmniTrans
Kenny Melancon	Professor and Department Head	San Bernardino Valley College
Kome Ajise / Sarah J. Jepson	Executive Director/ Planning Director	SCAG.
Liza Wilson	Director	sanofi
Miguel Georgie	Cajon HS	
Mike Burrows	Executive Director	International Airport



		San Bernardino County Transportation Authority
Otis Greer	Director of Legislative and Public Affairs	nanoportadon / automy
Paul Granillo	President and CEO	
Ray Desselle	Deputy District Director of Planning	Caltrans
Rick Bishop	Professor of Electrical and Computer Engineering Director	
William "Bill" R. Leonard	Leonard Family representative. Capitol Commission volunteer. State Legislator 1978-2002; Board of Equalization 2003-2010, Secretary of State and Consumer Services 2010	
Kimberly Collins, Ph.D.	Executive Director and Professor of Public Administration	CALIFORNIA STATE UNIVERSITY SAN BERNARDINO
Leslie Trainor	Research Fellow	CALIFORNIA STATE UNIVERSITY SAN BERNARDINO
Ki Eun Kang, Ph.D.	Research Fellow	CALIFORNIA STATE UNIVERSITY SAN BERNARDINO
Tomás Gómez-Arias, Ph.D.	Dean, Jack H. Brown College of Business and Public Administration	CALIFORNIA STATE UNIVERSITY SAN BERNARDINO
Yunfei Hou, Ph.D.	Associate Director and Assistant Professor Computer Science & Engineering	CALIFORNIA STATE UNIVERSITY SAN BERNARDINO



6.2. LTC Staff



Dr. Collins is the Executive Director of the William and Barbara Leonard Transportation Center and a Professor in the Public Administration Department. Her current research focuses on social equity, sustainability, networks, and democracy in search of developing 21st-century institutions to respond to the future. She currently is a Professor of Public Administration, serves on the Good Neighbor Environmental Board (a U.S. EPA Presidential Advisory Commission) in 2018, and is the North American Regional Editor for the Journal of Borderlands Studies.

Kimberly Collins, PhD



Yunfei Hou, PhD



Raffi Der Wartanian, PhD

Dr. Hou is the Associate Director of the Leonard Transportation Center and Assistant Professor School of Computer Science and Engineering. He received his Ph.D. from the Department of Computer Science and Engineering, University of Buffalo, SUNY, in 2016. His current research interests include applications in transportation cyberphysical systems and data and information analysis for transportation engineering. Recent projects span intersection management with connected vehicle technologies, electric taxi-sharing, and taxi fleet dispatch.

Dr. Der Wartanian is a research fellow specializing in transportation policy, data science, sustainability, and equity. His research endeavors at the Leonard Transportation Center at California State University, San Bernardino, his multifaceted research interests encompass the electrification of medium and heavy-duty vehicles, big data analytics in traffic and transportation modeling, geospatial analysis, and public policy.





Dr. Kang is an assistant professor in the Department of Public Administration in the Jack H. Brown College of Business and Public Administration at California State University, San Bernardino and a faculty research fellow at Leonard Transportation Center. Her research interests include community and local economic development, resilience, environmental and urban policy, behavioral public policy, and conflict resolution. Currently, her research delves into the resilience policies and programs of the 101 largest cities in the U.S.

Ki Eun Kang, PhD



Leslie L. Trainor, M.B.A.



Leslie L. Trainor, M.B.A., is an advanced doctoral student in Organizational Behavior at Claremont Graduate University and a Research Associate at LeAD Labs. Leslie researches women's unique barriers to leadership and the structural systems that harbor those barriers. As part of her dissertations, Leslie has developed a unified definition of organizational structure and taxonomy of its systems, and is testing an organizational equity audit to identify and mitigate structural impediments for women who aspire to become leaders. Leslie is a lecturer at CSUSB's JHBC. She currently works as an independent research, writing, and analytical consultant, supporting nonprofits and government agencies in achieving their missions.

Itzel Olguin is the Administrative Support Coordinator of the William and Barbara Leonard Transportation Center (LTC) at California State University, San Bernardino. Itzel completed her Bachelor of Arts in International Business from CSUSB in the Fall of 2017. As of May 2023, Itzel has transitioned into her current role at Leonard Transportation Center (LTC) marking a significant milestone in her career journey. Filled with enthusiasm and anticipation, she looks forward to embarking on new challenges and opportunities for personal and professional growth.

Itzel A. Olguin



LTC Student Assistants



Vaishnavi is an aspiring graduate student at CSUSB, majoring in Information Systems & Technology and holding a bachelor's degree in computer applications. She contributes as a Student Assistant for LTC and handles the dialogue editing and content creation for our organization. She is inclined towards cyber security and her goal is to make significant contributions to the field of Cyber & Incident handling by applying her past experience in Critical Incident handling to drive progress in various industries.

Vaishnavi Rode



I am Yasamin Rasouli, a 24-year-old from Iran. Five years ago, my family and I immigrated to the USA and have been residing in Orange County ever since. Currently, I am a junior student at Cal Poly Pomona, studying Civil Engineering. Last fall, I transferred from Saddleback College to continue my academic journey. I am passionate about shaping the built environment and look forward to making valuable contributions in the field of Civil Engineering.

Yasamin Rasouli



Jordan Leffew

I am Jordan Leffew, a first-generation college student born and raised in the San Fernando Valley. I recently earned my B.A. in Sociology from the University of California, Riverside, where I am also pursuing my M.A. in Public Policy. Utilizing my personal and lived experiences, I decided to take my advocacy work to the next level by pursuing a career in policy. I understood the importance of establishing equitable, effective, and sustainable policy solutions that could aid regions like the IE and its community members. "Solutions for the Region, Solutions for the World." - UCR, School of Public Policy





Dorlins Villalobos

My name is Dorlins Villalobos, and I am a student-parent firstgeneration, non-traditional student. I returned to school in the fall of 2018 to pursue higher education, hoping for career options. At first, returning to school was just a means to an end. However, after the pandemic, I saw historical racial disparities within my community in Compton. I realized my community was disproportionately affected by the lack of meaningful public policy. My interest in public policy came from lived experience, and I decided that a master's degree would bring me closer to making a change for the benefit of my community. My purpose now is to play a role in helping our society be better for my son, my community, and our future.

Hey there! I'm Carolina Carlos, a first-generation college student with a dual bachelor's degree in Business Administration, specializing in Marketing, and Sports and Entertainment Marketing. I am also the student representative for the Association of Latino Faculty, Staff and Student (ALFSS). Currently, I'm pursuing my passion for making a difference in my community as a grad student in Public Administration, with a concentration in Leadership.

Carolina Carlos



Bhavik Khatri

Bhavik Khatri is an aspiring graduate student at CSUSB, majoring in Computer Science and holding a bachelor's degree in computer engineering. With a deep-rooted passion for software development and data science, he actively contributes as a research assistant at the LTC, focusing on transportation projects in the Inland Empire. Bhavik leverages his technical expertise to address real-world challenges in logistics and data analysis. He strives to continuously learn and stay updated with emerging technologies, aiming to make a significant societal impact through his contributions to ongoing research.





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Sai Kalyan Ayyagari

Sai Kalyan is a Master's in Computer Science student with a Bachelor's degree in Computer Engineering. Passionate about machine learning and data science, he works as a research assistant at the Leonard Transportation Centre. With a focus on leveraging cutting-edge technologies, he actively contributes to projects, collaborating with fellow researchers to develop innovative solutions and gain valuable insights from complex datasets. He stays updated with the latest advancements in the field and actively participates in conferences and workshops. His goal is to make significant contributions to computer science by applying his expertise in machine learning and data analysis to drive progress in various industries.



Ahmed Sahlem Burgos Nagi

Ahmed Sahlem Burgos Nagi, an American of Colombian descent, spent 15 formative years in Colombia before returning to his homeland the US. During this time, he gained insights into various social classes and developed a deep appreciation for humanity. Ahmed is proficient in English; he looks forward to exploring diverse cultures and broadening his horizons. Pursuing a major in Philosophy with minors in Management & Social Change, Ahmed aspires to positively impact the world through his startup, WeilAI, an AI research company.



Paul Sena is driven by a deep-seated ambition to effect positive change within his community, which fuels his unwavering commitment to the study of political science. His ultimate goal is to leverage his education and diverse experiences to enhance the well-being of the people he aims to represent and to contribute to broader improvement of the political environment.

Paul Sena



7. 2025 Plans

In the coming year, we remain dedicated to advancing sustainable transportation research and initiatives in the Inland Empire. We are also excited to launch the inaugural Transportation Leadership Policy Forum, an event designed to bring together state, regional, and local leaders to address critical issues such as housing affordability and transportation accessibility in the Inland Empire. The Forum will feature the 4th Student Research Challenge final paper and serve as a platform for fostering collaboration between policymakers, industry experts, and community stakeholders. By aligning regional challenges with state-level strategies, the Forum aims to advance shared goals and drive meaningful solutions. Additionally, we expect our research fellows to publish studies on big data and transportation, regional impacts, and the connections to medium-and heavy-duty vehicles, as well as a look at vehicle miles traveled (VMT) in the Inland Empire. Through these efforts, we aim to drive innovation, strengthen partnerships, and contribute to a more equitable and sustainable future for the region.