

UCLA

Other Work

Title

A Century of Transportation Studies at UCLA: 1925-2025

Permalink

<https://escholarship.org/uc/item/6x49p4f8>

Authors

Garrett, Mark

Taylor, Brian D

Publication Date

2025-12-01

A Century of Transportation Studies at UCLA: 1925–2025



UCLA Reports

Title

A Century of Transportation Studies at UCLA: 1925–2025

Permalink

escholarship.org/uc/item/6x49p4f8

Authors

Mark Garrett and Brian D. Taylor,
UCLA Institute of Transportation Studies

Publication Date

December 2025

About the UCLA Institute of Transportation Studies

The UCLA Institute of Transportation Studies supports and advances cutting-edge research, the highest-quality education, and meaningful and influential civic engagement on the many pressing transportation issues facing our cities, state, nation and world today. The institute is part of the University of California Institute of Transportation Studies, a four-campus consortium that includes UC Berkeley, UC Davis and UC Irvine. UCLA ITS is also a proud partner of the Pacific Southwest Region 9 University of Transportation Center, a federally funded research network with seven other universities.

Acknowledgments

The Institute of Transportation Studies at UCLA acknowledges the Gabrielino/Tongva peoples as the traditional land caretakers of Tovaangar (the Los Angeles basin and So. Channel Islands). As a land grant institution, we pay our respects to the Honuukvetam (Ancestors), ‘Ahihirom (Elders) and ‘Eyoohiinkem (our relatives/relations) past, present and emerging.



Table of Contents

A Century of Transportation Studies at UCLA: 1925–2025 4

Bureau for Street Traffic Research (Two years: 1925–1926) 8

A Series of Transportation Research and Education Events (20 years: 1926–1946) 9

Institute for Transportation and Traffic Engineering (26 years: 1947–1973) 10

A Turn Toward Social- and Policy- Focused Transportation Research at UCLA (18 years: 1974–1992) 15

UCLA Institute of Transportation Studies (22 years: 1993–2015) 19

UCLA ITS Joins the UC Institute of Transportation Studies (9 years: 2016 to present) 21

Looking Ahead..... 26

UCLA HAS BEEN A LEADER IN TRANSPORTATION RESEARCH

establishing a new transportation research center focused on policy and planning from the early 1990s; (v) and finally becoming part of a multidisciplinary, multi-campus research consortium in the mid-2010s. This white paper documents that history and the key individuals who made it possible.

Judge Hahn, who is presiding. Left—Boyle Workman, president of the
 tied as one of the first witnesses.

RESEARCH IN TRAFFIC FOR UNIVERSITY

Studebaker Grant Gives Southern Branch First Bureau in Country

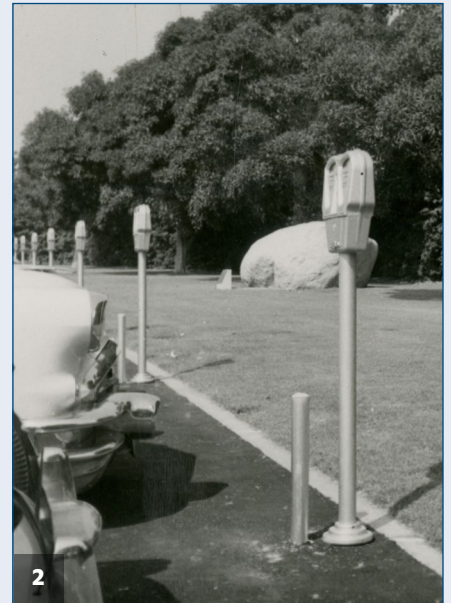
The Board of Regents of the University of California last night announced the creation of what is declared the first bureau of street-traffic research to be maintained at any university. It will be located at the Southern Branch of the University of California in Los Angeles, according to dispatches from San Francisco.



The bureau will be established as the result of a grant by the Studebaker

ES
 t Ch
 Fifth
 Earn

Los Angeles Times, Oct. 14, 1925— An article announcing the establishment of a new research bureau at the Southern Branch of the University of California (now UCLA)



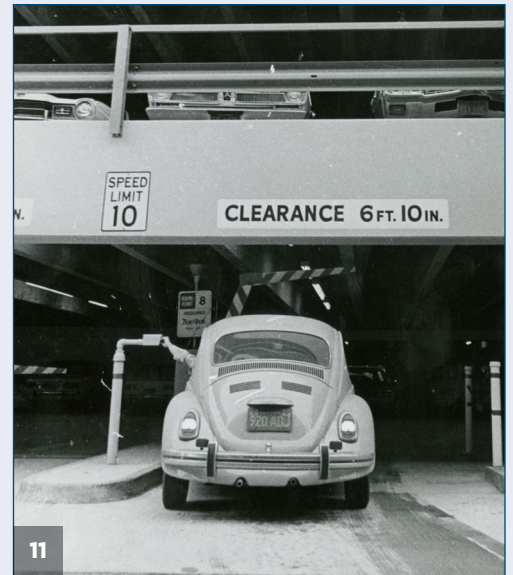
1 Caravan of cars taking equipment from Vermont Ave to new Westwood campus, May 1929. Courtesy of the UCLA Library. **2** Cars parked at metered spaces near Founders Rock on the UCLA campus, late 1950s. Courtesy of the UCLA Library. **3** View of the Hilgard-Strathmore bus stop, 1949. Courtesy of the UCLA Library. **4** Man driving truck with Powell Library in the background, ca. 1930. Courtesy of the UCLA Library. **5** View of the parking lot with campus buildings in the background, n.d. Courtesy of the UCLA Library. **6** View of Janss Staps, Drake Stadium and parking lot, 1965. Courtesy of the UCLA Library.



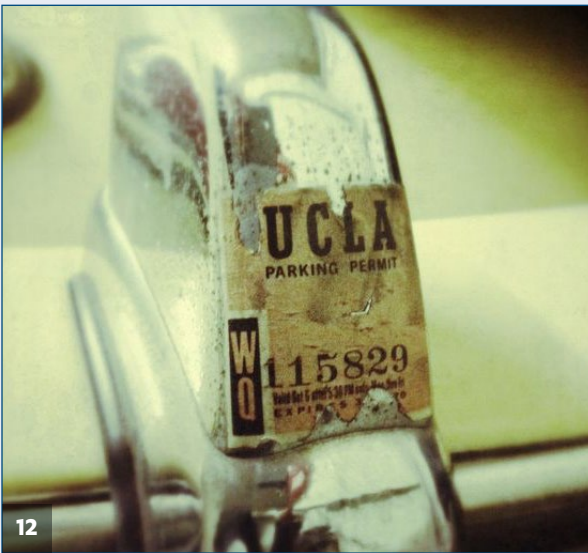
7 Aerial view of UCLA campus showing cluster of buildings surrounded by parking lots and open areas, April 4, 1956. Courtesy of the UCLA Library. **8** Parking lot filled with cars and bicycles, October 1959. Courtesy of the UCLA Library. **9** The Institute for Transportation and Traffic Engineering conducted more than 100 car and bus crash tests staged at an abandoned air strip at the U.S. Naval Station in Long Beach. Credit: UCLA Samueli School of Engineering.



10



11



12



13



14



15

10 BruinBus, early 2000s. UCLA Transportation. **11** Car entering parking structure on UCLA campus, late 1960s. Courtesy of the UCLA Library. **12** UCLA parking permit sticker, ca. 1970. Courtesy of the UCLA Library. **13** UCLA Vanpool first launched in 1984 to counter the anticipated traffic congestion of the Summer Olympics. UCLA Transportation. **14** Postcard showing Bruin Walk looking east from dormitory area, ca. 1970. Courtesy of the UCLA Library. **15** UCLA hydrogen-powered car wins 1972 Urban Vehicle Design Competition. Credit: UCLA Samueli School of Engineering.

Bureau for Street Traffic Research

(Two years: 1925–1926)

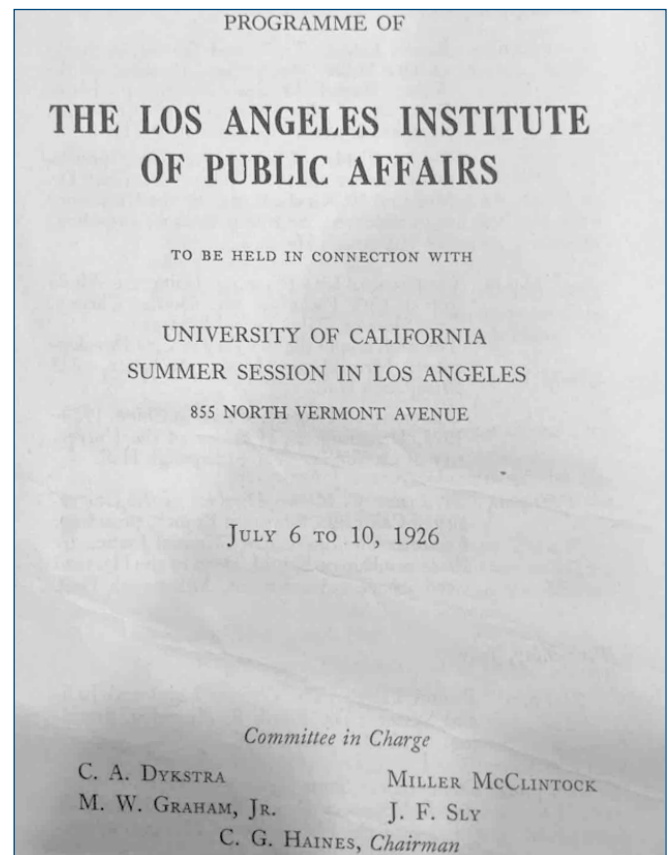
THE YEAR WAS 1925. The formal move by the Southern Branch of the University of California to its new Westwood campus and its rebranding as UCLA was still four years away. Los Angeles was growing rapidly and concern over traffic from increasingly popular automobiles was waxing. Voters had just approved the Los Angeles City Traffic Commission's *Major Traffic Street Plan* which called for the construction of a regional parkway system along with expanded crosstown arterial streets so drivers could avoid passing through the downtown area, streetcar service would improve, and through-traffic could be kept off of residential streets. Wilshire Boulevard — running 16 miles from Downtown L.A. to the Pacific Ocean in Santa Monica to the west — would become L.A.'s (and perhaps the West's) major commercial artery, passing through Westwood just south of UCLA's future home along the way.

In the fall of that year, the Regents of the University of California announced the establishment of the Albert Russel Erskine Bureau for Street Traffic Research, funded by the president of the Studebaker Corporation of America, to address the problem of traffic in cities. The bureau would be located on the UC Southern Campus' temporary home on Vermont Avenue, just west of downtown Los Angeles. It was headed by Dr. Miller McClintock (1925–1926), a traffic expert with the Los Angeles Traffic Commission whose work led to the first comprehensive traffic ordinance in the U.S.¹ His path-breaking book, *Street Traffic Control* (1925), would help usher in the “science” of traffic engineering. The Erskine Bureau researched regulating pedestrian movements, conflicts between streetcars and automobiles, parking methods, traffic speeds, street design, grade separation (entailing over- and underpasses), signaling devices, and uniform traffic regulation, among other things. Its patron, Albert Russel Erskine, had great faith in the burgeoning fields of science and engineering, professing that:

Much of the failure of American cities to deal effectively with street traffic may be attributed to a lack of technical information. Traffic is an engineering problem. It can be controlled satisfactorily only by sound engineering methods.

Toward that end, two fellowships of \$1,000 each (equivalent to nearly \$18,000 in 2024 dollars) were awarded to graduate engineering students doing work relevant to transportation.

In July 1926, McClintock hosted a roundtable on Traffic and Transit to open the proceedings of the Los Angeles Institute of Public Affairs on campus [below].² Despite this auspicious beginning, the Erskine Bureau's time at UCLA would prove short-lived. McClintock and the Bureau moved to Harvard University in only its second year at UCLA.³ But its presence at the Southern Branch set the stage for sustained transportation and traffic research in Westwood following the end of World War II.



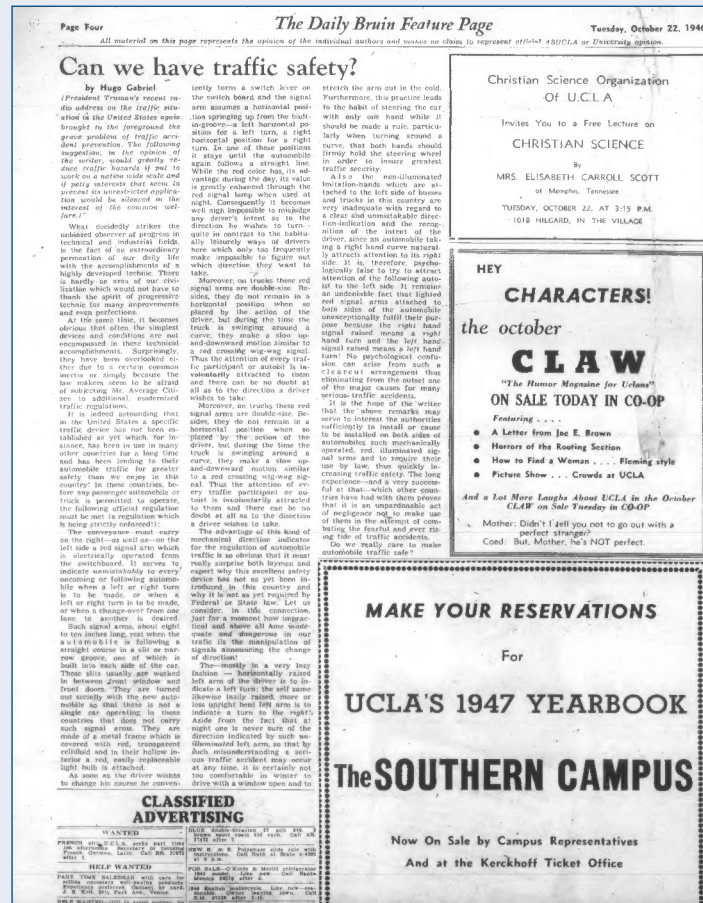
¹ M. Wachs, P.S. Chesney, and YH Hwang. “A Century of Fighting Traffic Congestion in Los Angeles. 2020.”

<https://luskincenter.history.ucla.edu/wp-content/uploads/sites/66/2020/10/A-Century-of-Fighting-Traffic-Congestion-in-LA.pdf>

² Programme of the Los Angeles Institute of Public Affairs, July 6-10, 1926. <https://www.jstor.org/stable/pdf/1945434.pdf>

³ He later worked with Norman Bel Geddes on his 1937 advertising campaign for Shell Oil known as the City of Tomorrow, which prefigured Bel Geddes' influential Futurama display at the 1939 New York World's Fair.

A Series of Transportation Research and Education Events (20 years: 1926–1946)



Daily Bruin, Oct. 22, 1946 — An opinion piece discusses the importance of prioritizing traffic safety nationwide.

WHILE THE ERSKINE BUREAU MOVED EAST, transportation studies and events continued intermittently at the new Westwood campus. For example, in both 1938 and 1941, the university sponsored the Pacific Coast Traffic Institute, and in 1946 UCLA organized both a Safety Education Institute and hosted a Fleet

Education Traffic Safety Institute, the latter jointly with the University of Pennsylvania. At this time, the Traffic Safety Council urged the university to establish a formal Traffic Safety Institute at UCLA to address the long-term problem of crashes, monetary losses, and injuries.⁴

⁴ Letter to Governor Earl Warren from Robert S. Sproul, August 15, 1946.

Institute for Transportation and Traffic Engineering (26 years: 1947–1973)



The Institute for Transportation and Traffic Engineering researchers arrange bus crash test dummies. Credit: UCLA Samueli School of Engineering

IN 1947, THE CALIFORNIA LEGISLATURE authorized the establishment and funding of the Institute for Transportation and Traffic Engineering (ITTE) headquartered at UC Berkeley, with a separate branch unit at UCLA housed in the College of Engineering.⁵ The Legislature was responding to the critical need “to define and pursue research and training supporting renewal and improvement of transportation facilities, undernourished during the Great Depression and overworked during World War II.”⁶

The Institute was tasked to “carry on instruction and research related to the design, construction, operation, and maintenance of highways, airports, and related facilities for public transportation”⁷ and give attention to the interrelated problems of highway design,

traffic control, and safety. The UCLA unit would emphasize so-called “human factors” in transportation and conduct laboratory and field studies and experiments related to “vehicle performance, analysis of physio-engineering systems inherent in motor vehicle collisions, driving simulation, accident prevention research, interrelationship of transportation and comprehensive planning, mathematical theories of traffic flow, and related computer analysis.”⁸ Facilities included equipment for physiological and psychological measurements of vehicle operation; off-campus sites for full-scale automotive collision studies and traffic studies; a state-of-the-art driving simulator and visual-acuity laboratory; and an automotive components evaluation and reliability facility.⁹

5 California Statutes of 1947, Chapter 1573.

6 Institute for Transportation and Traffic Engineering, Historical Research Highlights, UCLA Samueli School of Engineering, <https://samueli.ucla.edu/historical-research-highlights/>

7 California Statutes of 1947, Chapter 1573.

8 Ibid.

9 Institute for Transportation and Traffic Engineering, Historical Research Highlights, UCLA Samueli School of Engineering, <https://samueli.ucla.edu/historical-research-highlights/>

The Legislature also called for the ITTE to cooperate with the California State Division of Highways (which would later become known as Caltrans) and other transportation agencies to conduct research on the interrelated problems of design, traffic, and safety, and research on best practices to be disseminated to state, county, and city officials and practitioners.¹⁰

In keeping with the tradition established two decades earlier by Erskine Bureau Director McClintock, four of the eight UCLA ITTE programs related to roadway safety:

1. **Traumatic transportation injuries and effects** (headed by UCLA engineering professor Derwyn Severy), which consisted of collision injury research, including human-materials impact studies and pioneering tests of adult harness and child safety belts and headrests as a protection against whiplash.
2. **Accident analysis** (led by Robert Brenner), which focused on statistical analysis, causality studies, and investigation.
3. **Driver performance** (directed by Slade Hulbert), which looked at Information communication, judgment and decision-making, reaction and response skills, including an early study of alcohol levels on driving performance.
4. **Sensory factors** (headed by A. Burg), which examined visual, auditory, vestibular, cutaneous, and kinesthetic cues that travelers use in making decisions.

The planned research program was rounded out by:

5. **Training, Learning, Licensing** (led by E. Levonian).
6. **Engine emissions** (C.K. Wojcik), which focused on vehicle and engine design, driver performance, and roadway design.
7. **Street and Highway Systems** (W.W. Mosher Jr.), which was tasked with research on traffic control devices, automatic surveillance, geometric design, and roadway grade separation.
8. **Urban Ecology and Transportation** (Dean L.M.K. Boelter); this program examined both comprehensive master planning and the health-degrading effects of transportation systems.¹¹

The founding director of the UC ITTE was Harmer E. Davis (Professor of Civil Engineering, UC Berkeley), serving from 1948 to 1973. He received his bachelor's degree in civil engineering in 1928 and his master's degree in civil engineering from UC Berkeley in 1930, and taught at the university's Department of Civil Engineering in the 1930s–1940s. He was an international leader in transportation policy. He founded the ITTE in 1947, the first such program that combined research and teaching, and worked closely with the State of California's highway department (now Caltrans). He chaired the Highway Research Board of the National Research Council in 1959. The Transportation Library at UC Berkeley is named in his honor.¹²

CHAPTER 1573

An act making an appropriation to the Regents of the University of California for establishing and operating an institute of transportation and traffic engineering.

[Approved by Governor July 19, 1947 Filed with Secretary of State July 19, 1947]

In effect
September
19, 1947

I object to the item of appropriation in Section 1 of Senate Bill No. 1423 and I reduce that appropriation to three hundred fifty-five thousand dollars (\$355,000). As so reduced I approve the bill. In making this reduction it is my intention to eliminate all money for land and headquarters building and to make available for expenditure as provided in the bill during the Fiscal Year 1947-1948, \$225,000 for field station instruments and facilities, \$50,000 for highway materials and structures, and \$80,000 for administration (including maintenance and supplies).

EARL WARREN
Governor of California

The people of the State of California do enact as follows:

SECTION 1. Out of any money in the State Treasury not otherwise appropriated there is hereby appropriated the sum of nine hundred twenty thousand dollars (\$920,000) to the Regents of the University of California for the establishment of an Institute of Transportation and Traffic Engineering in the Department of Engineering of the University of California, at Berkeley. Said institute shall carry on instruction and research related to the design, construction, operation, and maintenance

Appropriation for
Institute of
Transportation
and Traffic
Engineering

The state Legislature had recently adopted the Collier-Burns Act to finance improvements to the state's transportation infrastructure, which had been neglected during the war. It recognized that "a substantial corps of new, educated, trained personnel would be needed to aid in carrying out effectively the proposed program." At the request of Dean O'Brian, Davis and several other faculty members presented their ideas to President Sproul, who transmitted them to Senator George Hatfield, who sponsored the legislation establishing the ITTE. The Legislature followed up the Collier-Burns Act by funding a highway needs study conducted by the Automotive Safety Foundation on the conditions of state and county roads and streets that became the foundation for the proposed highway program.

A temporary committee consisting of Davis, L.M.K. Boelter, dean of Engineering at UCLA, and other engineering faculty began to lay out a research agency to spend the nearly \$1 million state appropriation. Davis was asked to investigate activities at other universities and soon discovered that no institutes were engaged in the types of activities contemplated for the ITTE — they would be trailblazers. While his field was soils and construction materials, Davis was well familiar with the problems of highways, railroads, transit, and airfields, and agreed to become the Institute's first director. Davis began to put together a faculty to teach transportation engineering and engaged Dean Boelter at UCLA (formerly chair of the Department of Mechanical Engineering at Berkeley) to establish a section of the ITTE concerned with transportation safety. Boelter believed that greater attention should be paid to the human factors in transportation, and the UCLA branch was soon staffed with a psychologist and a physiologist in addition to engineers to focus on that issue. The Berkeley unit began developing laboratories, instructional facilities, staff offices, and a library at its off-campus Richmond Field Station site. It also initiated an extension program (aka "annual road show"), which provided critical feedback to the academic side of the Institute on potential research projects.

¹⁰ California Statutes of 1947, Chapter 1573.

¹¹ Case, Harry W., (1966) "Application for Graduate Training Grant, Appendix 3." Application submitted to the United States Department of Health, Education, and Welfare Public Health Service Division of Accident Prevention.

¹² Harmer Davis: Founder of the Institute for Transportation and Traffic Engineering. Interviews of Harmer E. Davis by Wolfgang S. Homberger, 1992, 1993, & 1997. University of California History Series, Berkeley, CA, Regional Oral History Office, 1997.

John H. Mathewson (Professor of Engineering, UCLA), who had a background in traffic research and an interest in human factors, was appointed the assistant director of the ITTE on the UCLA campus in the 1950s. As part of a larger effort to decentralize operations to the individual campuses, the UC ITTE was later reorganized as a “joint department” between Berkeley and Los Angeles in 1960, with activities coordinated through a single director who reported to the chancellor on each of the two campuses regarding the operations of the Institute located there. Associate directors at Berkeley and Los Angeles would report to the director, and the Institute would be served by a 20-member advisory committee.¹³

In its first full decade, UCLA ITTE engaged in projects as diverse and, for the time, cutting-edge as:

- » **Automatic recording of traffic information**
- » **Automobile collisions**
- » **Driver attitudes, personality, and driving behavior**
- » **Driver characteristics**
- » **Driving simulation**
- » **Dynamic visual acuity**
- » **Freeway signage**
- » **Mass accident data and driving risk**
- » **Psychology of trip geography**
- » **Theories of traffic flow and queuing**¹⁴

By 1960, the Institute had about 25 full-time academic and professional staff, most holding dual appointments in the Institute and various academic departments, and taught transportation at the master’s and doctoral levels. In addition to human factors-focused safety research, studies were also conducted on traffic flow theory; transportation engineering, economics and administration; highway planning and design; airport planning; design and operations; traffic engineering, vehicles, equipment, illumination and sound; and materials and structures.

In 1966, when Harry W. Case (Professor of Engineering and Psychology) directed the UCLA ITTE, the U.S. Department of Health, Education, and Welfare awarded the Institute a Pre-doctoral Training Grant to fund research into the causes of traffic accidents and the resulting injuries and fatalities they caused.

ITTE Research Milestones

ITTE researchers participated in national organizations such as the Highway Research Board of the National Research Council. Courses, conferences, and other programs were made available statewide through cooperation with University Extension.

As the now School of Engineering website recalls:

In the Fifties and Sixties, transportation problems broadened from those of providing and maintaining facilities to problems of planning, intermodal integration, and traffic management of different kinds of systems.

...

The majority of the ITTE research projects were concerned with improving highway safety. The automobile and school bus impact and crash injury studies focused on safety belts, which were not in widespread use at the time. The media and local and statewide officials were often spectators at the more than 100 car and bus crash tests staged at an abandoned air strip at the U.S. Naval Station in Long Beach. This collision and lab research generated much of the scientific data that Detroit manufacturers needed to design safer cars.

*For example, researchers at ITTE were the first to measure the potential hazards of brain concussions and lacerations when windshields or side windows are shattered. Scientists applied their backgrounds in engineering and psychology to study driver behavior and characteristics, including highway hypnosis, and examination of the “wrong way” freeway driver. And the institute was one of the first to propose bicycle pathways alongside some roadways.*¹⁵

In April of 1967, George A. Hoffman from the Institute proposed a hybrid gas-electric vehicle that would utilize electric motors at each wheel, powered by a small internal combustion engine hooked to a generator and to a sizable secondary battery. A computer would allocate power to the wheels to maximize utility. In November of 1969, a study by Edward Levonian of the Institute found that youngsters’ “psychological expediency” or “orientation toward self-benefit at the expense of others, or, less formally, as looking out for number one, even if it means hurting someone else” was often related to a record of driving violations. The results were based on a 220-item questionnaire given to 1,080 15-year-old students enrolled in driver’s education classes in City of Los Angeles high schools.¹⁶

The 1960s and ’70s were a time of great change in the transportation field. The Interstate Highway System was mostly constructed during these two decades. Automobile ownership and use were becoming increasingly ubiquitous. Chronic traffic congestion and air pollution increasingly marred life and health in burgeoning metropolitan Los Angeles and many other cities around the U.S. California was a trendsetter, informed at least in part by UCLA ITTE research, when it became the first state in the U.S. to place vehicle emissions regulations on new cars in 1961, which were followed by the first national Clean Air Act in 1963 and by an amended and more stringent federal Clean Air Act in 1970, the same year as the first Earth Day.

¹³ Letter to Harmer E. Davis, Director, ITTE, from H.R. Wellman, September 1, 1960; Letter to Vice President Henry R. Wellman from H.E. Davis, Director, ITTE, September 26, 1960; Letter to Harmer E. Davis, Director, ITTE, from H.R. Wellman, November 3, 1960.

¹⁴ Representative Research Activities for inclusion in Directory of Research, University of California Department of Engineering, Los Angeles Division of the Institute for Transportation and Traffic Engineering, February 1960.

¹⁵ Institute for Transportation and Traffic Engineering, Historical Research Highlights, UCLA Samueli School of Engineering, <https://samueli.ucla.edu/historical-research-highlights/>

¹⁶ History, UCLA Samueli School of Engineering. <https://samueli.ucla.edu/history/>



A few examples of the variety and number of projects undertaken by UCLA ITTE:

- » Study of on-ramp and off-ramp length
- » Study of alcohol level and driving performance
- » Automobile door latch research
- » Automotive restraint analysis, tests of adult harness and child safety belts
- » Testing automobile headrests as a protection against whiplash
- » Development of a full-scale wide-view driving simulator
- » Analysis of the reliability of accident information obtained from off-scene sources
- » Study of the interface between transportation and land use planning in urban areas
- » Study of automatic computers for traffic control
- » Examining distance judgment of colored objects
- » Effectiveness of traffic safety films in driver education
- » Engineering analysis of cargo handling
- » Design of the electric automobile
- » Examining the ecology of air transport
- » Analyzing transportation planning for the development and management of National Forests
- » Study of asphalt paving and the rate of driver fatigue
- » Determining safe standard length and degree of slope for aircraft runways

ITTE Research Highlights, Historical Research Highlights, UCLA Samueli School of Engineering.
samueli.ucla.edu/historical-research-highlights

Denouement of the ITTE

Back at UC Berkeley, an ad hoc committee was appointed in 1971 to review the organizational structure of the ITTE.¹⁷ The review recommended reevaluating the program to include or intensify work on ongoing as well as emerging transportation topics, many of which remain important topics in the 2020s, including:

- » **Air pollution**
- » **Automatization of traffic flow**
- » **Emergency evacuation procedures**
- » **Failure modes (“crashes”)**
- » **High-speed rail**
- » **Highway noise abatement**
- » **Human factors**
- » **Seismic behavior of transportation structures**
- » **Structural design failures in crashes**
- » **Transportation of perishables**
- » **Transportation systems analysis**

The review also encouraged the university to adopt a policy to expand graduate and undergraduate instruction related to transportation, and to develop graduate and undergraduate programs on UC campuses beyond Berkeley and UCLA.¹⁸

While an active home for transportation research, the UCLA ITTE branch was a smaller and less well-endowed sibling to the Berkeley unit. Just 21% of the University support channeled to the two UC ITTE branches went to UCLA, forcing UCLA to provide more support from extramural grants. Berkeley had close ties to the Department of Civil Engineering, a larger number of ladder transportation faculty, and transportation graduate students. The UCLA ITTE had just four ladder faculty and relied more heavily on research staff. With no formal transportation degree programs, UCLA awarded just 43 graduate degrees in transportation between 1949 and 1970 compared to Berkeley’s 371 — a discrepancy the ad hoc committee attributed in part to the lack of interest in transportation by UCLA’s engineering faculty.

While the research facilities at UCLA were regarded as high quality, the ad hoc committee noted that the future of the UCLA ITTE would depend on expanding its graduate programs and recruiting qualified transportation engineers into academic appointments. In light of the campus’s budgetary problems at the time, the lack of lab and field space for transportation testing and evaluation, and the

17 The committee members consisted of M.A. Greenfield, P.G. Hoel, P. Kamnitzer, H.D. Koontz, S.B. Roberts, and R.A. Westmann.

18 Report on Institute for Transportation and Traffic Engineering, [date]. The report suggested changing the name to “The Institute for Transportation” to reflect the interdisciplinary nature of the field since “it now involves not only engineering but also the social sciences, urban and regional planning, and the aesthetic arts also.”



The Institute for Transportation and Traffic Engineering conducted more than 100 car and bus crash tests staged at an abandoned air strip at the U.S. Naval Station in Long Beach. Credit: UCLA Samueli School of Engineering.

overall lack of Civil Engineering departmental interest in recruiting transportation faculty, the decision was ultimately made to relocate the UCLA ITTE to the new and fast-growing UC Irvine campus 50 miles to the south.¹⁹

Interestingly, the impending relocation of the ITTE to UC Irvine may have spurred renewed interest in transportation as the renamed School of Engineering proposed creating a multidisciplinary

graduate program in transportation as part of their Engineering Systems Department, and indeed some extramurally funded transportation research continued under the UCLA ITTE banner until its formal dissolution in June 1973.²⁰

¹⁹ Letter to Vice President Angus E. Taylor from Vice Chancellor David S. Saxon, May 6, 1971; Letter to Vice President Chester O. McCorkle from Vice Chancellor David S. Saxon, August 19, 1971; Letter to Chancellor Charles Young from Vice President C.O. McCorkle, September 23, 1971.

²⁰ Letter to Vice Chancellor David Saxon from Dean Chauncy Starr, March 14, 1972; Letter to Chancellor Charles Young from Dean Chauncy Starr, July 24, 1972; Letter to Chancellor Young from Vice President C.O. McCorkle, July 20, 1972.

A Turn Toward Social- and Policy-Focused Transportation Research at UCLA (18 years: 1974–1992)

WHILE TRANSPORTATION STUDIES were most often linked to engineering in this era, they also had disciplinary roots in business, economics, geography, and planning as well. At UCLA, several prominent social science faculty made important contributions to transportation studies.

In 1962, **George Hilton** joined UCLA's faculty as a professor of economics. He was a *summa cum laude* graduate at Dartmouth College, attended the London School of Economics from 1953 to 1955, and earned his PhD from the University of Chicago in 1956. He taught at the University of Maryland, College Park, and Stanford University before joining the UCLA faculty in 1962.²¹ Hilton specialized in transportation economics, with a focus on the competitive organization of interstate commerce broadly and the railroads in particular. His research was credited with contributing to a series of laws weakening and ultimately abolishing the Interstate Commerce Commission. These changes substantially deregulated the airline, intercity bus, railroad, and trucking industries, which subsequent analyses have suggested increased competition and lowered costs to consumers and businesses. The author of 15 books, Hilton was also a noted transportation historian who chronicled several of America's historic forms of transportation, notably a book on the SS Eastland disaster of 1915, where the top-heavy passenger ship capsized in the Chicago River taking the lives of 844 passengers and crew, the most significant loss of life from a single shipwreck in the history of the Great Lakes²² (1995, *Eastland: Legacy of the Titanic*, Stanford University Press). Hilton also penned *Cable Railways of Chicago* (1954, Electric Railway Historical Society) and *The Ma & Pa: A History of the Maryland & Pennsylvania Railroad* (1999, Johns Hopkins University Press). In his capacity as a renowned transportation historian, Hilton served from 1968 to 1969 as the acting curator of Rail Transportation at the Smithsonian Institution.²³

William A. V. Clark (PhD University of Illinois, 1964; D.Sc. University of Auckland, 1994) is research professor of geography at UCLA and a long-time affiliate of the California Population Center. Clark moved to UCLA in 1970 and was a fellow at the Netherlands Institute for Advanced Studies in the Humanities and Social Sciences in 1993, was awarded a Guggenheim Fellowship in 1994–95, and in 2018 was awarded the Lifetime Achievement Award from the Association of American Geographers. He was elected to the National Academy of Sciences in 2005 and received the Academy's "Decade of Behavioral Research Award" for the influence of his research on public policy. Clark's research examines internal changes in U.S. cities, especially concerning residential mobility and migration, suburbanization, and commuting. With respect to the latter, Clark served for many years on the executive committee of the Transportation Research Board of the National Academies of Sciences, Engineering, and Medicine.²⁴

The Graduate School of Architecture and Urban Planning becomes the primary locus of transportation studies

In 1967, the University of California authorized the establishment of a School of Architecture and Urban Planning (SAUP) on the Los Angeles campus, and began accepting students for a two-year Master of Urban Design program in 1966. Former aide to President John F. Kennedy, Harvey Perloff, was appointed dean of the new school in the fall of 1968. The following year, Perloff received a grant from the U.S. Department of Transportation for research and to establish a training program in urban transportation.

In 1971, Perloff recruited **Martin Wachs** to UCLA's new Urban Planning program in the school. Wachs received his PhD from Northwestern University in 1967 and was an Assistant Professor of Civil Engineering there following a two-year stint in the U.S. Army. Wachs was a pioneer in the then-nascent movement in

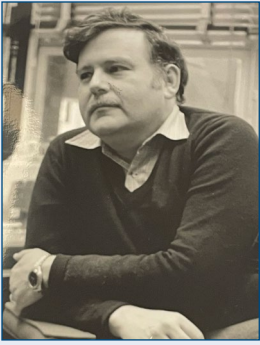
21 In Memoriam: Transportation economist George Hilton, UCLA Newsroom, August 12, 2014.

<https://newsroom.ucla.edu/dept/faculty/in-memoriam-transportation-economist-george-hilton>

22 For context, 29 times more lives were lost in the Eastland disaster than the 29 souls who perished in the wreck of the Edmund Fitzgerald on Lake Superior 60 years later – the disaster made famous in the popular ballad by the musician Gordon Lightfoot.

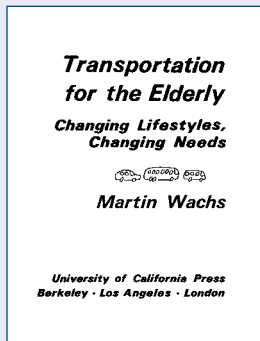
23 George Hilton (historian), *Wikipedia*, [https://en.wikipedia.org/wiki/George_Hilton_\(historian\)](https://en.wikipedia.org/wiki/George_Hilton_(historian))

24 William A. V. Clark, UCLA Geography, <https://geog.ucla.edu/person/william-a-v-clark/>



transportation planning and engineering that shifted planners' and engineers' focus from mobility of vehicles to people's accessibility to destinations. His landmark 1973 article, "Planning Accessibility as a Social Indicator," argued for a focus on social factors as the principal outcomes of travel, rather than simply the inputs to transportation forecasts. This idea continues to gain ground to the present day.

Wachs held numerous leadership positions over the course of his career. In 1975, he was named head of the Urban Planning Program, a position he would come to hold three times. In addition, he later directed the re-booted UCLA Institute for Transportation studies from 1993 to 1996 (discussed further below), the University of California Transportation Center from 1996 to 1999, the UC Berkeley Institute for Transportation Studies from 1999 to 2005, and the Transportation, Space, and Technology Program at The RAND Corporation from 2006 to 2010, before returning to UCLA as a distinguished professor emeritus to finish out his career.



Wachs brought a decidedly new perspective to transportation research to UCLA, and over time to the transportation field more broadly. His pathbreaking research focused on the social aspects of transportation, which helped to move the field away from a primarily technical focus toward greater concern for social justice, sustainability, and human rights. For example, he was among the first scholars to examine

transportation challenges faced by the nation's aging population, penning *Transportation for the Elderly: Changing Lifestyles-Changing Needs*, published by UC Press in 1979.

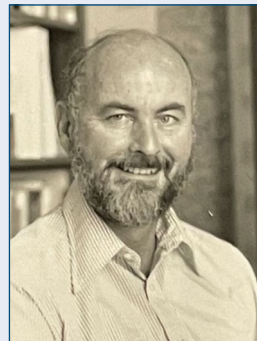
In the early 1990s, Wachs served as a neutral technical expert assisting federal district court Judge Thelton E. Henderson in a landmark case over conformity between transportation plans and federal environmental legislation. The Sierra Club and a local citizens group against the San Francisco Bay Area Metropolitan Transportation Commission, the Bay Area Air Quality Management District, the California Air Resources Board, and the U.S. Environmental Protection Agency brought the litigation. The case hinged on whether these agencies were doing enough to reduce regional air pollution through their transportation plans and programs. Wachs advised the court and the parties about the role that transportation models played in forecasting automobile travel and, in turn, vehicle emissions, including the significant limitations in then-current modeling practices. The case led to subsequent EPA regulations requiring greater consistency in travel and emissions forecasts. Wachs was later centrally involved in the federal Transportation Model Improvement Program and co-authored, with current UCLA staff researcher Mark Garrett, *Transportation Planning on Trial: The Clean Air Act and Travel Forecasting*, published by Sage in 1996.

Wachs was also an early scholar of both gender and travel, and planning ethics. He received a Guggenheim Fellowship in 1977 and

Rockefeller Foundation Fellowships for a study on "Ethical Dilemmas in Forecasting for Public Policy" in 1980 and the "Effects of the Automobile on Social Relations Between Men and Women" in 1986. In 1985, he edited *Ethics in Planning* (Center for Urban Policy, Rutgers University), in which he explored the practice of forecasting and modeling in transportation planning, as well as in planning more generally.

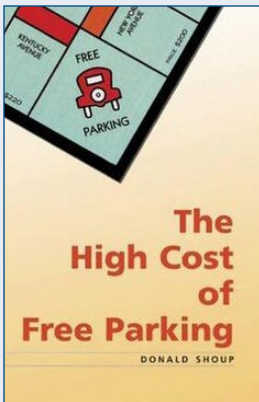
Wachs long viewed transportation from a multidisciplinary perspective, and toward that end actively recruited faculty from other intellectual domains such as economics, management, urban design, geography, economic development, and sociology to undertake socially focused transportation research on a variety of topics, collaborating with many of them. Examples include transit crime and gender (with UCLA professors Anastasia Loukaitou-Sideris and Robin Liggett), residential location and travel (UCLA faculty Paul Ong and Ned Levine), transportation and environment (Mark Garrett and Michael Storper), public transit use and transportation finance (Brian Taylor), and travel by older adults (Evelyn Blumenberg and Anastasia Loukaitou-Sideris).

A gifted teacher and mentor, Wachs was responsible for training generations of young transportation planners and scholars. He received the UCLA Alumni Association Distinguished Teaching Award and the California Planning Foundation Planning Educator of the Year Award in 1986. Wachs chaired dozens of PhD committees, and his former students include numerous prominent transportation academics, including (in alphabetical order) Asha Weinstein Agrawal (San José State), Robert Cervero (UC Berkeley), Jennifer Dill (Portland State), Karen Trapenberg Frick (UC Berkeley), Aaron Golub (Portland State), Jianling Li (Texas, Arlington), Cornelius Nuworsoo (Cal Poly San Luis Obispo), Megan Ryerson (University of Pennsylvania), Gian-Claudia Sciarra (University of Texas, Austin), and Brian Taylor (UCLA), among others.



Donald Shoup, a land use economist who joined the Urban Planning faculty three years after Wachs in 1974, was the earliest and perhaps most notable example of a UCLA scholar from outside of transportation studies who would have an enormous influence on the transportation field. Like Martin Wachs, Shoup attained the University of California title of distinguished professor, directed UCLA ITS (1996–2001), was

chair of Urban Planning (1998–2002), and, like Wachs, was named a "distinguished educator," the highest honor bestowed by the Association of Collegiate Schools of Planning. Trained in electrical engineering and economics at Yale, Shoup's early writing on land development taxation and regulation led him to publish "Problems with Parking Requirements in Zoning Ordinances" in a 1978 issue of *Traffic Quarterly* with (then) doctoral student Don Pickrell. This would begin a nearly five-decade research agenda focused on bringing attention to the central role that parking plays in linking land use and transportation systems, the enormous social, economic, and environmental costs of minimum parking requirements imposed by local governments, and the equally enormous benefits that better pricing and management of parking would bring to life in cities.



Shoup began as a lonely voice on a seemingly obscure and quotidian topic. Still, over the years, his growing cadre of former students, who dubbed themselves *Shoupistas*, began to tout his ideas in planning departments and at transportation agencies around the globe. But it would be the publication in 2005 of his 700-page magnum opus, *The High Cost of Free Parking* (Planners Press, revised edition in 2011, Routledge), that moved his seemingly heretical ideas — that free parking should not

be mandated, but priced instead — into the mainstream of public policy and planning practice. His 2018 follow-on edited book, *Parking and the City*, focused on turning Shoup's ideas into practice, as he and 45 other academic and practicing planners showcased the ways that cities have adopted parking reforms and improved city life, local economies, and the environment. One measure of Shoup's extraordinary influence on the transportation field is that, when he passed away in 2025, both *The Economist* and the *New York Times* published featured obituaries about his life, work, and remarkable influence.

Multidisciplinary approaches distinguish transportation studies at UCLA

More scholars from diverse disciplinary backgrounds who would come to study and publish on a wide array of social and economic topics related to transportation soon followed Wachs and Shoup to UCLA. **Robin Liggett** was trained in mathematics (BA, Pomona College) and operations research (MS and PhD, UCLA) and taught quantitative methods and computer applications in both Architecture and Urban Planning for four decades beginning in 1974. Her transportation research included evaluating multimodal street performance measures, predictors of bicycle and pedestrian crashes, as well as the effect of the built environment on transit crime.

Ned Levine, a social psychologist and sociologist (BA psychology, Berkeley; PhD social psychology and sociology, London School of Economics), was on the Urban Planning faculty for 15 years between 1979 and 1994. A spatial and behavioral analyst, Levine regularly published on transportation topics, including studies of motor vehicle safety, transit crime, growth management, and the transportation implications of jobs-housing balance in metropolitan areas.

Paul Ong, a labor market economist (PhD economics, Berkeley), joined the Urban Planning and Asian American Studies faculties in 1985 and remains active at UCLA to the present day. His research centers on economic and racial inequality, much of it related to transportation, including the effect of car ownership on economic outcomes in low-income and BIPOC households, spatial mismatch and transportation, and freeway displacement in minority communities, among others. Ong also played numerous campus leadership roles over the years, including as Urban Planning Department chair and director of both the Lewis Center for Regional Policy Studies and more recently the Center for Neighborhood Knowledge.

Anastasia Loukaitou-Sideris joined the Department of Urban Planning as a lecturer in 1989 and became a tenure-track member of the faculty in 1991. An architect by profession, she earned her PhD in urban and regional planning from USC. Her research focuses on the social dimensions of urban design: the public environment of the city, its physical representation, aesthetics, social meaning, and impact on those who live and work there. In a now familiar theme for transportation studies at UCLA, Loukaitou-Sideris' research gradually evolved to examine the social dimensions of transportation infrastructure, including freeways, sidewalks, crosswalks, bus stops, and public transit vehicles. Her research on social, cultural, and equity elements of built environments — including transportation environments — has made her arguably the nation's leading scholar of the social dimensions of urban design broadly, and transportation system design in particular. She has examined the displacement of disenfranchised people due to freeway construction, the physical and economic retrofit of inner city commercial corridors, gentrification and displacement around transit stations and neighborhoods, sexual harassment in transit environments, transit safety and security, and replacing street parking with parklets. Loukaitou-Sideris has also played numerous leadership roles at UCLA, serving two terms as Urban Planning Department chair, a dozen years as associate dean of the Luskin School of Public Affairs, and has served as dean (interim) of the Luskin School since 2023.

Public events link social- and policy-focused transportation research to action

With this growing cadre of ostensibly non-transportation-focused scholars increasingly influencing the direction of transportation scholarship, a series of public events began to elevate the profile of transportation studies at UCLA in the years between the first and second iterations of the UCLA Institute for Transportation Studies. In 1988, the renamed Graduate School of Architecture and Urban Planning (GSAUP) hosted a major conference — *The Car and the City: The Automobile, the Built Environment and Daily Life in Los Angeles* — which attracted scholars and students from a wide array of academic disciplines. The many commissioned papers for the conference were assembled into a book edited by Martin Wachs and UC Berkeley Architecture and Urban Design Professor Margaret Crawford, entitled *The Car and the City: The Automobile, The Built Environment, and Daily Urban Life*.

The very next year, Wachs collaborated with public policy scholar LeRoy Graymer on a three-day symposium at the UCLA Lake Arrowhead Conference Center in the San Bernardino Mountains on new environmental regulations mandating that employers in California work to reduce vehicle emissions associated with employee commuting. The mix of researchers and practitioners on the panels and the mountain retreat atmosphere of the new UCLA conference center were so popular with the attendees that Wachs and Graymer organized a follow-on event at the same venue on the *Transportation - Land Use - Air Quality Connection* two years later in 1991.

This second 1991 event proved even more popular with sponsors and attendees than the first; so popular that the annual *UCLA Lake Arrowhead Symposium on the Transportation - Land Use - Environment Connection* was born. It would later become the marquee yearly event of the reborn UCLA Institute of Transportation Studies.

More than a conference, the symposium has long fostered interaction among a diverse array of leaders and stakeholders from the public, private, nonprofit, and academic sectors for thoughtful discussion around the connections and conflicts among transportation, land use, and the environment. Guided by a Program Steering Committee of transportation, land use, and environmental leaders, the symposium explicitly mixes public officials, researchers, senior government staff, industry representatives, and transportation, environmental, and community activists, which has long set the UCLA Lake Arrowhead Symposium apart from similar events that tend to attract more homogeneous participants. The diversity of attendees and viewpoints expressed at the event has both kept the series vibrant and occasionally sparked controversy.

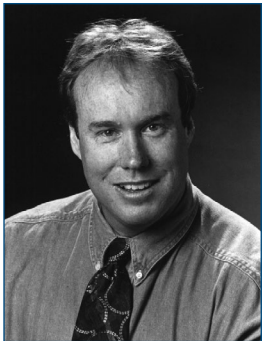
Wachs, in collaboration with Graymer, led the program content development during the first six years of the series (1991–1996). Brian Taylor then assumed this role for the next 12 years (1997–2008). After that, Taylor and UCLA ITS Associate Director Allison Yoh co-led program development for four years (2009–2012), then Taylor and UCLA ITS Deputy Director Juan Matute co-led the symposium for two years (2013–2014). Since then, Matute or UCLA Lewis Center Deputy Director Madeline Brozen has led the program development (2015–2025), sometimes in collaboration with others. To peruse the titles of the UCLA Arrowhead Symposiums over the years (see box below) is to track the evolution of the most pressing transportation policy issues of the day over the past three and a half decades. Institutionally, the symposium was co-produced by the UCLA ITS and the UCLA Extension Public Policy Program through 2010, and since 2011 has been produced entirely by UCLA ITS, principally under the guidance of ITS Assistant Director Whitney Willis (since 2016), aided each year by a plethora of ITS staff and students. Indeed, the Institute’s capacity to organize and stage this and other high-profile events linking researchers with the worlds of practice would become a hallmark of the newly reborn UCLA ITS.

2026	New Mobility, Automated Vehicles, and Cities	2007	Planning for Growth
2024	Mega Events, Major Opportunities	2006	Global Energy and Climate Change
2023	Transforming Transportation	2005	Healthy Regions, Healthy People
2022	California’s Housing Crossroads	2004	Linking Goods Movement to Economic Prosperity and Environmental Quality
2021-22	Transit in Transition	2003	Finance: The Critical Link
2020	Not ‘Back to Normal’: Mapping a Just Transportation Recovery from COVID-19	2002	Tackling Traffic Congestion
2019	Routes to Opportunities	2001	Reinventing Transit
2018	From Public Transit to Public Mobility	2000	Growth and Quality of Life
2017	Global Climate Change: Local Growing Pains	1999	Inter-regional Travel and Local Development
2016	Paying It Forward: Investment in Sustainable Mobility	1998	Financing the Future
2015	Planning for Change: from Fragile to Agile	1997	Transportation and the Economy
2014	Resilient Cities and Regions	1996	ISTEA Reauthorization: Will It Refine, Redefine, or Forge New Policy Linkages?
2013	Smart Technologies: Smart Policies	1995	Putting Advanced Technologies to Work: Promises, Prospects, and Policy Issues
2012	Financing the Future	1994	Taking Strategies from Concept to Adoption to Implementation
2011	Energy Policy	1993	The Role of Land Use Strategies for Improving Transportation and Air Quality
2010	Infrastructure Investment for Sustainable Growth	1992	The Role of Pricing and Market-Based Strategies
2009	Economic Crisis as Opportunity for Reform	1991	Overview of Strategies for Making Connections Between Transportation, Land Use and Air Quality
2008	The Future of Cities and Travel		

UCLA Institute of Transportation Studies (22 years: 1993–2015)

IN 1993, THE UCLA INSTITUTE FOR TRANSPORTATION STUDIES

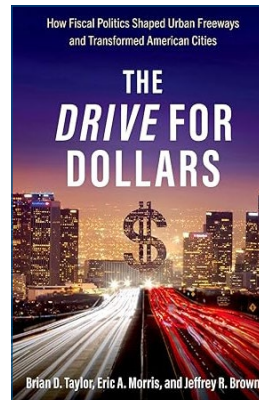
was (re)established at UCLA, headquartered in what would become the Luskin School of Public Affairs. The Luskin School has hosted UCLA ITS 3.0 from its inception to the present day — which sets UCLA ITS apart from the other three UC ITS branches, all of which are housed in schools of engineering at Berkeley, Davis, and Irvine. A shoestring operation early on, primarily supported by the federal funds through the Regional University Transportation Center headquartered at UC Berkeley, Martin Wachs was the first UCLA ITS 3.0 Director from 1993 to 1996, followed by Donald Shoup from 1996 to 2001.



Just after the (re)establishment of UCLA ITS, the UCLA transportation faculty was expanded with the appointment of UCLA alumnus (BA Geography, PhD Urban Planning) **Brian Taylor** as an Urban Planning faculty member in the new School of Public Policy and Social Research in 1994.²⁵ Taylor, who also holds transportation master's degrees from UC Berkeley in civil engineering and city & regional planning, was the first explicitly

transportation-focused faculty hire since Martin Wachs more than two decades earlier. Taylor was a transportation planner/analyst for the San Francisco Bay Area Metropolitan Transportation Commission before enrolling in the UCLA Urban Planning doctoral program to study under Professors Wachs, Ong, and Shoup. He began his academic career in City & Regional Planning at the University of North Carolina at Chapel Hill in 1992, before returning to join the UCLA faculty two years later.

Taylor has published extensively on travel behavior, public transit, shared mobility, and the politics of transportation finance. His work on the latter culminated in 2023 with the publication of *"The Drive for Dollars: How Fiscal Politics Shaped Urban Freeways and Transformed American Cities,"* published by Oxford University Press. The book was co-authored with two former UCLA doctoral students (Eric Morris and Jeffrey Brown) and assisted significantly by a third (Mark Garrett). Taylor has continued the tradition begun by Professors Wachs and Shoup of routinely co-authoring with students, which represents a commitment to mentoring



young scholars shared by nearly all transportation faculty at UCLA. Indeed, perhaps his most notable accomplishment has been his mentoring of future transportation leaders and scholars: his doctoral advisees or co-advisees hold 15 tenured or tenure-track faculty appointments at Berkeley (Daniel Chatman), Clemson (Eric Morris), Florida State (Jeffrey Brown & Fariba Siddiq), Harvard (Carole Turley Voulgaris), Maryland-College Park (Hiroyuki Iseki), Occidental (Madeline Wander), Oregon (Anne Brown), Rutgers (Kelcie Ralph & Michael Smart), SUNY Buffalo (Daniel Baldwin Hess), Texas-Arlington (Julene Paul), UC San Diego (Teo Wickland), USC (Lisa Schweitzer), and Virginia (Andrew Mondschein).

Another round of disciplinarily diverse transportation scholars comes to UCLA

Following Taylor's appointment, and in a return to form, the next generation of UCLA transportation faculty was again composed of non-transportation-first scholars who nonetheless contributed substantially and influentially to transportation research. UCLA alumna **Evelyn Blumenberg** (MA, PhD in Urban Planning) joined the Luskin School faculty in 1997 as an economic development scholar who studied low-wage labor markets, gender and planning, and the spatial structure of cities. Over the years, her research increasingly integrated these topics with the role that transportation access plays in explaining economic outcomes for immigrants, women, teens, young adults, and low-wage workers. While a large share of transportation scholarship over the past half-century has understandably focused on ways to reduce the environmental and public health costs of driving, Blumenberg's research focused on the benefits of transportation access and has consistently shown that auto access in most U.S. metros significantly improves employment, health, and other outcomes for disadvantaged travelers. In 2014, President Obama honored Blumenberg as a "Champion of Change" for her pioneering research on the links between transportation access, employment, and poverty. Like so many other transportation scholars at UCLA, Blumenberg has played numerous leadership roles

25 The School of Public Policy and Social Research was generously endowed by Meyer and Renee Luskin and renamed Luskin School of Public Affairs in 2011.



Evelyn Blumenberg at a White House Champions of Change event, 2014

at UCLA, including serving as Urban Planning Department chair from 2013 through 2016, and as director of the Lewis Center for Regional Policy Studies from 2018 to 2026.

Two years later, in 1999, **Randall Crane** joined the UCLA faculty as an environment, housing, and transportation scholar. Crane, who received his PhD in urban studies & planning from MIT, published on municipal taxes, fees, and prices, understanding smart growth, housing demographics, and, later, Chinese urbanization. His most significant contributions to transportation scholarship centered on transportation and land use broadly, and the effects of urban development on travel behavior in particular, most notably in the book *“Travel by Design: The Influence of Urban Form on Travel*, co-authored with Marlon Boarnet and published by Oxford University Press in 2001. Crane retired and left UCLA in 2017.

Rui Wang (BS Natural Resources & Environmental Ecology, BA Economics, and MS Physical Geography from Peking University, and PhD Public Policy, Harvard) joined the Urban Planning faculty in 2008. He was a scholar of Chinese urbanization and environmental policy whose research in both of these realms frequently intersected with urban transport systems. Wang left UCLA in 2016.

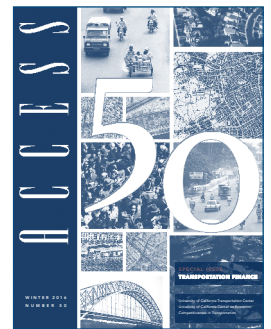
Gregory Pierce (BA Economics and History, MA, PhD Urban Planning, UCLA) is an adjunct associate professor of urban planning, the research and co-executive director of the UCLA Luskin Center for Innovation, director of the Human Right to Water Solutions Lab, and a faculty affiliate of the UCLA ITS. He joined the UCLA faculty in 2016. His research centers on addressing persistent inequities in access to water and other essential environmental services and how infrastructure planning and policy can affect those inequities. His transportation research has examined access to jobs and other essential destinations for disadvantaged travelers, parking management, and electric vehicle access, among other topics.

UCLA ITS enters a steep growth trajectory

Taylor succeeded Donald Shoup as director of UCLA ITS in 2001 and served in that role for 23 years until 2024. During that time, he also served as Urban Planning Department chair for three years and as the director of the Lewis Center for Regional Policy Studies for seven years. This was a period of significant expansion for the Institute, enabled in no small part by its close partnership with the Lewis Center, which is an endowed center in the Luskin School that focuses on housing, transportation, and economic development issues in Greater Los Angeles. Taylor directed both UCLA ITS and the Lewis Center from 2011 to 2018.

In addition to the Lewis Center partnership, UCLA ITS’ growth also benefited from:

- 1. Its ongoing membership in the University of California Transportation Center (UCTC, from 1988–2013) and University of California Center on Economic Competitiveness in Transportation (UCConnect, from 2013–2016).** These were Federal Region 9 (southwestern U.S.) transportation centers that provided federal and state matching funds to support UCLA faculty and student transportation research.
- 2. Its membership in the UC Sustainable Transportation Research Multi-Campus Research Program Initiative (MRPI).** Supported by a \$6.25 million grant from the UC President’s Office, the MRPI supported faculty, staff, and student researchers at the Berkeley, Davis, Irvine, Los Angeles, Riverside, and Santa Barbara campuses from 2010 through 2014.
- 3. The publication of ACCESS magazine at UCLA, which Donald Shoup meticulously edited.** The goal of *ACCESS*, which had a large and loyal readership, was to translate often technical transportation research into lively, well-written, accessible prose for members of the media, students, and the general public.
- 4. The addition of the annual UCLA ITS Downtown Forum in 2008 to the Institute’s slate of public events.** This one-day event complements the UCLA Lake Arrowhead Symposium by connecting UCLA ITS research to a much larger audience of practicing transportation professionals.



These developments, and a steady growth in the number of UCLA faculty, staff, and students interested in, and working on, transportation issues helped to transform UCLA ITS from a relatively small operation with limited staff and resources into a nationally influential research center by the 2020s, with more than 75 scholars and staff conducting cutting-edge research in eight program areas: Access to Opportunities, Environment, New Mobility, Parking, Public Transit, Traffic, Transportation & Communities, and Transportation Finance.

UCLA ITS Joins the UC Institute of Transportation Studies (9 years: 2016 to present)



California Assemblymember Bill Quirk (second from left) presents UC Institute of Transportation Studies staff with a \$10 million check supporting the launch of the Resilient and Innovative Mobility Initiative, October 2021. Credit: UC Institute of Transportation Studies

BEFORE 2016, THE ITS BRANCHES AT BERKELEY, Davis, and Irvine were part of a multi-campus research unit (MRU) overseen by the UC President's Office in Oakland and supported with direct funding from the State of California. UCLA ITS, while bearing the same name as the other three Institute of Transportation Studies campuses, operated separately from the ITS MRU and without any annual funding from the state.

But the many cross-campus collaborations between UCLA ITS and the other UC ITS campuses over the years, via the federal university transportation centers (UCTC and UCCONNECT) and the Sustainable Transportation MRPI, led to increasing engagement among the four ITS branches and eventually a joint four-campus effort to increase direct state support of policy-relevant transportation research, which had been just under \$1 million annually for decades.

These efforts eventually paid off with the California Legislature appropriating an initial one-year \$3 million UC ITS funding augmentation from the Public Transportation Account in 2016. A year later, the Legislature passed the Road Repair and

Accountability Act of 2017, which included an ongoing \$5 million funding augmentation (to a total of just under \$6 million/year) shared across the four UC ITS branches to fund, primarily, policy-relevant research on pressing transportation and transportation-related issues facing the State of California. This ongoing funding proved transformational for UCLA ITS, enabling the Institute to dramatically scale up its support for transportation research at UCLA (see box below).

With funding from the new MCU, UCLA ITS organizational capacity increased dramatically. Core staff (as of 2025):

Juan Matute, Deputy Director

Whitney Willis, Assistant Director

Claudia Bustamante, Communications Manager

Georgina Prevost, Events and Operations Coordinator

In concert with this successful funding augmentation effort, UCLA ITS joined the UC ITS multi-campus research unit in 2016 to form a new four-campus Institute of Transportation Studies consortium. This expanded MRU significantly increased the profile of Berkeley, Davis, Irvine, and UCLA ITS research and researchers in the state, particularly among public officials and transportation leaders in Sacramento and around the state. The UC ITS convened a Board of Advisors to formalize research and policy connections with the California State Legislature, executive branch, and transportation professionals in California.²⁶ This Board of Advisors informs an annual request for research proposals relevant to California transportation policy through the Statewide Transportation Research Program.²⁷ This program funds research, translation, and stakeholder engagement with the State of California and local governments. Because of UCLA ITS's longstanding focus on policy- and planning-relevant transportation research, its faculty, research staff, and students were a natural fit with this expanded new enterprise.

In 2021, the State of California again invested in leveraging the research capabilities of the UC ITS to address transportation challenges and opportunities with a \$10 million Resilient and Innovative Mobility Initiative. This four-year initiative funded research and engagement activities that informed the transportation policy response to the COVID-19 pandemic and looked forward to sustainable, resilient, and equitable mobility solutions. The RIMI research program was organized around three core pillars: carbon-neutral transportation, public transit and shared mobility, and emerging transportation technology and Innovation.

UCLA ITS significantly expands its research capabilities

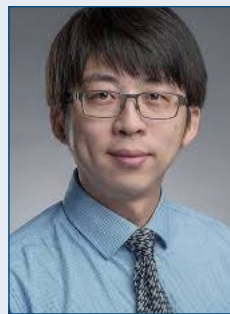
Coincident with and following the establishment of UCLA ITS 4.0, there was a substantial expansion of transportation faculty, research staff, postdoctoral scholars, and senior fellows — and not just in urban planning, as in years past.



Michael Manville (MA, PhD Urban Planning, UCLA) moved from Cornell to UCLA in 2017, is currently professor and chair of Urban Planning, and he studied with both Donald Shoup and economic geographer Michael Storper during his doctoral studies at UCLA. Manville's research sits at the intersection of land use, housing, and transportation, and is relatively unique among urban scholars in contributing substantively to each of these

three areas of scholarship. Manville's recent research has examined road and parking pricing; the determinants of driving and transit use; and the influence of land use regulations on the supply and price of housing.

Jiaqi Ma is an associate professor at the UCLA Samueli School of Engineering and associate faculty director of UCLA ITS. He is also the director of the Center of Excellence on New Mobility and Automated Vehicles (see below). Ma joined the UCLA faculty in 2020 as just



the third explicitly transportation-focused faculty member hired at UCLA and the first in engineering in half a century. He earned his PhD in transportation engineering from the University of Virginia in 2014. He began his career as a project manager and research scientist at the Federal Highway Administration's Turner-Fairbank Highway Research Center. Following that, he was an assistant/associate professor and academic director of the University of Cincinnati

Advanced Transportation Collaborative. Ma leads the UCLA Mobility Lab and studies smart transportation systems, including vehicle-highway automation, Intelligent Transportation Systems (ITS), connected vehicles, shared mobility, and large-scale smart system modeling and simulation, as well as artificial intelligence and advanced computing applications in transportation.



A year later, in 2021, **Adam Millard-Ball** joined the UCLA urban planning faculty. Prior to joining UCLA, Millard-Ball (MA Geography, University of Edinburgh; PhD in Environment & Resources, Stanford) was on the Environmental Studies faculty at UC Santa Cruz and previously served on the Geography faculty at McGill University. Before becoming an academic, Millard-Ball was a practicing transportation planner with Nelson\Nygaard Consulting

Associates. He teaches courses on data science and environmental policy, and his research focuses on the environmental consequences of transportation and land use decisions and the effectiveness of policies to reduce greenhouse gas emissions.



A year after Millard-Ball was hired, two new faculty members who focused explicitly on questions of transportation and equity joined the UCLA faculty. **Tierra Bills** joined the UCLA faculty in 2022 as just the fourth explicitly transportation-focused faculty member to join the UCLA faculty in half a century. Bills (BS Civil Engineering, Florida A&M; MS, PhD Civil & Environmental Engineering, UC Berkeley) is an assistant professor of both civil & environmental

engineering and public policy in the Luskin School. She leads the Transportation Equity Innovation (TrEI) Lab, where her graduate and undergraduate students develop new tools to assess fairness in transportation infrastructure, systems, and policies. Bills focuses on evaluation and travel demand modeling — with a particular emphasis on transportation equity. Before joining the UCLA faculty, Bills was a research scientist at IBM Research, Michigan Society fellow at the University of Michigan, and an assistant professor of civil & environmental engineering at Wayne State University.

That same year, **Regan Patterson** (BS Chemical Engineering, UCLA; MS, PhD Environmental Engineering, UC Berkeley) moved to UCLA as an assistant professor in civil & environmental

²⁶ UC ITS Board of Advisors. <https://ucits.org/our-advisors/>

²⁷ UC ITS. Request for Proposals. <https://ucits.org/request-for-proposals/>



engineering, where she currently leads the Engineering Environmental Justice Lab. Her lab focuses on the air quality and equity implications of transportation and infrastructure policies, and her research interests include environmental justice, air pollution, air quality modeling, exposure assessment, sustainable transportation, and transportation equity. Prior to joining the UCLA faculty, she worked as the

transportation equity research fellow

for the Congressional Black Caucus Foundation in Washington, D.C., and was a postdoctoral research fellow at the University of Michigan Institute for Social Research.



In 2025, Assistant Professor **Youngseo Kim** (BS Civil and Environmental Engineering, Seoul National University; MS and PhD in Transportation Engineering, Cornell University) began at UCLA. Her research focus is on solving design and operational problems in complex transportation systems, with an emphasis on human behavior. Her research interests include the development of efficient computational

tools, such as travel behavioral analysis models, that support problem identification and problem solving.

In addition to new faculty hires, UCLA ITS 4.0 has substantially scaled up research staff capacity as well, often with researchers focused on applied, actionable research.

Research Staff

Madeline Brozen (Deputy Director, Lewis Center): A spatial analyst (and occasional GIS instructor), her research focuses on the transportation needs for vulnerable populations and how transportation connects people to opportunities, including health care. She has also studied parklet design and evaluation and street performance metrics.

John Gahbauer (Research Consultant, UCLA ITS): Leads and supports a wide array of transportation policy projects, including, among others, visioning transportation/land use futures for California, measuring and evaluating regional transportation projects and plans, and reforming public transit finance in California.

Mark Garrett, JD, PhD (Research Consultant, UCLA ITS and Editor, UC ITS): Studies transportation history, transportation and land use policy, and social equity. He is a former attorney who has published on a variety of topics, including regional transportation planning and air quality (with Martin Wachs), and California fuel tax policy (with Martin Wachs and Anne Brown). He is the General Editor of the *Encyclopedia of Transportation: Social Science and Policy* (2014, Sage Publications), named a Choice Outstanding Academic Title for 2015.

Adonia Lugo, PhD (Equity Research Manager, UCLA ITS): Studies transportation, race, and space broadly, and human infrastructure, sustainable mobility, and mobility justice in particular. Lugo is a cultural anthropologist, a core organizer of The Untokening, co-creator of the Los Angeles open street event CicLAvia, and People for Mobility Justice, and is a recent appointee to the California Transportation Commission.

Juan Matute (Deputy Director, UCLA ITS): Conducts research and teaches on transportation, public transit, and shared mobility, environmental assessment, and climate planning, with a particular focus on influencing practice and affecting outcomes. He has served on advisory and technical committees related to transit and transportation technology and is a recent appointee to the California Transit Transformation Task Force.

Ellen Schwartz (Parking Policy Center Manager, UCLA ITS): Leads research translation and policy engagement for the UCLA Center for Parking Policy, working to deliver research-based assistance to city and state government officials who are engaging in parking reforms.

Jacob Wasserman (Research Program Manager, UCLA ITS): Leads the public transit research program at UCLA ITS and manages research on a variety of topics at the intersection of transportation and other social issues. His recent research has examined falling public transit ridership, public transit labor, post-pandemic transit finance, racial bias in freeway routing, and transportation finance equity.

Postdoctoral Scholars

Hao Ding (PhD, Urban Planning, UCLA): Studies the equity and justice impacts of urban design regulations, the interaction between urban form and transportation, and transportation equity. Recent research examines the effects of conventional planning practices on housing production and affordability, design regulations on place identities in the Asian American ethnoburbs, sexual harassment on public transit, and homelessness in transit environments.

Sang-O Kim (PhD, City & Regional Planning, Cornell): Studies at the intersection of travel behavior, aging, and gender. Recent research has examined the travel behavior of family caregivers in particular, as well as ways for cities and civic institutions to better prepare for an aging society.

Amy Lee (PhD, Transportation Technology & Policy, UC Davis): Studies the politics of transportation investments and highway expansions, effects of transportation and land use policies on automobile dependence, induced travel, transportation programming and finance, active travel behavior, transportation impact analysis, and the implications of replacing automobile level-of-service metrics with vehicle miles traveled measures.

Senior Fellows

Hasan Ikhata: The former Chief Executive Officer of the San Diego Association of Governments (SANDAG) and Southern California Association of Governments (SCAG), and before that, decades of experience in public and private sector transportation policy, planning, and engineering. An expert on innovative transportation policies and program implementation, Ikhata teaches courses in both the Luskin (on transportation politics and policy) and Samueli (transportation engineering) schools.

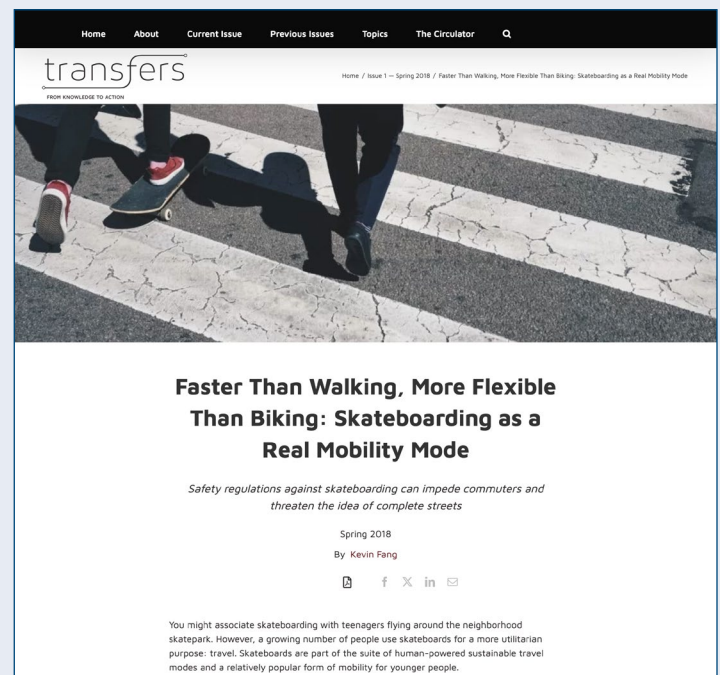
Jody Litvak (MPP, Harvard Kennedy School of Government): A long-time community engagement strategist working for Los Angeles Metro, its predecessor agency, and the 1984 Los Angeles Olympic Organizing Committee, she is known for innovating community engagement tactics for the digital era and for building alliances and coalitions among public officials. She is also a long-time adviser to UCLA ITS for the annual Arrowhead Symposium.

Joshua Schank (PhD, Urban Planning, Columbia): Studies innovation in the public sector, public transit system management, microtransit, airports and airport access, and the politics of transportation finance and policy. His publications include the 2008 book, *All Roads Lead To Congress: The \$300 Billion Fight Over Highway Funding*, co-authored with Costas Panagopoulos. Teaches courses on innovation in the transportation sector.

A shift and expansion of federal transportation center partnerships

At about the same time that UCLA ITS was joining the UC ITS as the fourth member of the multi-campus research unit, the federal University Transportation Centers program was rebid. So in 2017, UCLA ITS became a lead partner in the new Pacific Southwest Region (PSR) University Transportation Center, the new federally funded regional center led by USC, and including California State University, Long Beach; Northern Arizona University; Pima Community College; UC Irvine; UCLA; and the University of Hawai'i. In a subsequent successful re-bid of the regional center, UC Berkeley, UC Davis, and the University of Nevada, Las Vegas were added to the consortium.

With the shift to the PSR consortium came a switch from editing the now-defunct *ACCESS* magazine to UCLA ITS, creating, editing, and publishing *Transfers*, an attractive, entirely digital transportation research magazine and blog with the same goals as *ACCESS* — to translate cutting-edge transportation research for lay readers. *Transfers* was developed and designed by Lewis Center Deputy Director Madeline Brozen and UCLA ITS Communications Manager Claudia Bustamante, and its editors have included Brozen, Martin Wachs, Donald Shoup, Brian Taylor, and Michael Manville.



In addition to the new regional federal University Transportation Center, UCLA ITS Associate Faculty Director Jiaqi Ma and Deputy Director Juan Matute won a competitive university consortium proposal for a federally funded Center of Excellence on New Mobility and Automated Vehicles. The center considers how advances in transportation technologies will, when adopted at scale, change cities, government policies and budgets, and the transportation system. Congress authorized the Center under the Infrastructure Investment and Jobs Act of 2021.

Two UCLA ITS products: Transportation ideas, and transportation graduates with ideas

While the primary focus of UCLA ITS is supporting and disseminating cutting-edge transportation research, the Institute operates in concert with transportation degree programs that have produced a dizzying array of accomplished and influential alumni. At its centennial, UCLA ITS supports faculty and students in five graduate transportation degree programs in three UCLA academic departments that have recently climbed in their most widely recognized national rankings — Civil & Environmental Engineering (#12), Public Policy (#14) and Urban Planning (#1) — with the largest of these, by far, the Master of Urban and Regional Planning (MURP) transportation degree.

- » **Civil & Environmental Engineering** re-established MS and PhD programs with a transportation specialization in 2020, and both are increasing applications, enrollments, and graduates year over year. In 2025, the number of graduates is:
 - ♦ **MS Transportation Graduates: ~10 per year.**
 - ♦ **PhD Transportation Graduates: ~2 per year.**
- » **The Department of Public Policy** was formed in the 1990s, and its then-new Master of Public Policy (MPP) program included a transportation specialization. While all formal specializations in the MPP program were later dropped, the program annually enrolls students pursuing a transportation policy course of study:
 - ♦ **MPP Transportation Graduates: ~3 per year.**
- » **Urban Planning** established the MA (later changed to MURP) and PhD programs, which included courses of study in transportation, in the 1970s. These programs had annual cohorts of students pursuing transportation studies within a Social Policy and Analysis concentration. A formal Transportation Policy & Planning concentration was adopted in the 1990s. Since then, it has either been the largest MURP concentration or one of the largest each year ever since:
 - ♦ **MURP Transportation Graduates: ~20 per year.**
 - ♦ **PhD Transportation Graduates: ~1 per year.**

Since the formation of UCLA ITS 3.0 in 1993, the Institute has provided more than \$3 million in fellowship funding to support graduate transportation students, and more in paid research assistantships, and in addition informs and supports students in applying to myriad external transportation scholarship and fellowship programs.

UCLA transportation graduates have won more awards for the best transportation PhD dissertation, master's thesis, or graduate capstone project from the Council of University Transportation Centers — 20 to date — than the graduates of any other university.

These transportation studies graduates have left UCLA for the worlds of practice and academia with many fresh ideas generated by UCLA ITS-supported research, and they have accomplished much. Here is just a small sampling:

Transportation Practice

Marisa Espinosa: Director, Major Studies, TransLink, Greater Vancouver, British Columbia, Canada

Agustin Garcia Aguilar: Deputy Director of Quantification of Rights and Obligations, Instituto Federal de Telecomunicaciones, Mexico City, Mexico

Earl Kaing: Senior Strategy Manager, Lyft, San Francisco

Tomoko Kanda: Senior Manager, JP CPEX/BIML, Business and Financial Planning, Amazon, Tokyo, Japan

Kurt Luhrsen: Chief Operating Officer, Metropolitan Transit Authority of Harris County, Houston, Texas

Lance MacNiven: Senior Vice-President, WSP, Los Angeles

Bill McCullough: Vice President and Founding Partner, System Metrics Group, San Francisco

Melissa (Davidson) Sather: Executive Vice President, Transportation Management & Design, Inc., San Diego County

Alexandra Sigmon: Deputy Director of Aviation, New Orleans International Airport, New Orleans

Ray Sosa: Chief Planning Officer, LA Metro, Los Angeles

Allison Yoh: Deputy Chief Planning Officer, LA Metro, Los Angeles

On the research side, UCLA has placed more transportation planning PhD graduates in tenured or tenure-track faculty positions than any other university. Here again is a sampling:

Transportation Scholarship

Robert Cervero: Professor Emeritus of City & Regional Planning, UC Berkeley

Daniel Chatman: Professor and Chair of City & Regional Planning, UC Berkeley

Hiroyuki Iseki: Associate Professor of Urban Studies & Planning, University of Maryland-College Park

Andrew Mondschein: Associate Professor of Urban & Environmental Planning and Associate Dean of Research, University of Virginia

Kelcie Ralph: Associate Professor of Planning and Public Policy, Rutgers University-New Brunswick

Lisa Schweitzer: Professor Emerita of Planning, Sol Price School of Public Policy, University of Southern California

Michael Smart: Associate Professor of Planning and Public Policy, Rutgers University-New Brunswick

Carole Turley Voulgaris: Associate Professor of Urban Planning, Harvard University

Teo Wickland: Assistant Professor of Urban Studies and Planning, UC San Diego

Looking Ahead



TODAY, UCLA ITS BOASTS MORE THAN 25 ANNUAL RESEARCH AND TRANSLATIONAL PROJECTS and hosts nearly 80 affiliated faculty and staff researchers. UCLA ITS continues to collaborate with the Lewis Center for Regional Policy Studies, the Center of Excellence on New Mobility and Automated Vehicles, Sustainable LA Grand Challenge, the UCLA Mobility Lab, the Luskin Center for Innovation, the Smart Grid Energy Research Center, and the B. John Garrick Center for the Risk Sciences. Its current research portfolio covers the following topics:

- » **Access to Opportunities**
- » **The Environment**
- » **New Mobility**
- » **Center for Parking Policy**
- » **Public Transit and Shared Mobility**
- » **Traffic**
- » **Transportation & Communities**
- » **Transportation Finance**

After directing UCLA ITS for 23 years, Brian Taylor stepped down in 2024. He was succeeded by Adam Millard-Ball, who previously served as acting director of UCLA ITS during the 2022–23 academic year. During that time, Millard-Ball oversaw TRACtion: Transformative Research and Collaboration, an initiative that brought together academic researchers and community advocates to identify barriers to a just and sustainable future for the Los Angeles region. The TRACtion initiative increases capacity for community-engaged research.

The stage is now set for UCLA ITS to increase its collaborations with engineering faculty, postdocs, and students in the future, signaling a return to the Institute's roots established a century ago with the founding of the Bureau for Street Traffic Research. But the focus of UCLA ITS research on the social, behavioral, economic, environmental, health, and equity aspects of transportation research, which has significantly shaped the transportation field, is sure to remain a hallmark of transportation research at UCLA in the second century of transportation studies.

The future indeed looks bright.

