METRANS EDUCATION
Vy Phan-Hoang Awarded METRANS Student of the Year 2014-2015

METRANS awarded Vy Phan-Hoang its prestigious Student of the Year Award earlier this year. The Master of Planning candidate at the Sol Price School of Public Policy was presented the award in January at the Transportation Research Board’s 94th Annual Meeting in Washington, D.C.

Eric Shen, an Industry Lecturer at USC’s Sol Price School of Public Policy and the Viterbi School of Engineering, said he foresees Hoang “playing a major role” as a future transportation professional. Shen recommended Hoang for the prestigious award based, in part, upon her outstanding performance in his transportation studio course in the Spring 2014 semester and in a subsequent Traffic Engineering & Control course in the Fall 2014 semester.

Shen, who is also Director of Transportation Planning for the Port of Long Beach, noted that he and his team were also impressed by Hoang’s performance when she filled a vacant Transportation Planning Intern position at the port. He described her "as a dependable and responsive para professional."

Hoang recently accepted a position as Transit Planner at Foothill Transit. She previously interned at the Finance Department in Foothill Transit and at the City of Los Angeles Emergency Management Department. Working in those capacities "helped me realize that city planning and transportation planning play irreplaceable roles in how a city and the people within it function," Hoang said. "To me, city planning is not only about creating a modern-looking city; it is about building a city that provides equitable mobility for all people while facilitating efficient goods movement."

METRANS RESEARCH
Freight Landscape Research Addresses the Freight Data Problem

MetroFreight researchers are developing the concept of a “Freight Landscape” that identifies patterns of freight supply, demand, and flows in metropolitan regions around the world.

"A major challenge to improving urban freight management is the lack of data," said METRANS Director Genevieve Giuliano, who is co-leading the Freight Landscape research initiative with Jean-Paul Rodrigue, Hofstra University. Due to the current lack of freight data, “little is known about freight movements within metropolitan areas,” Giuliano said. The Freight Landscape concept correlates basic population and employment data with goods movement. In theory, goods movement should be a function of population and employment densities – the underlying drivers of goods supply and demand.

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“In the places that have very low density, we’re going to see relatively expensive freight movement because trucks will need to cover more miles,” Giuliano said. She added that areas with moderate population and employment densities appear to be the most efficient because those regions have enough loading facilities and parking but not too much conflict with other modes of transportation.

The areas with high population and employment densities are places “where nobody has enough capacity,” Giuliano said, explaining that public transportation, pedestrians, commuter traffic, and trucks moving freight are all competing for the same finite space. Further compounding the challenges to freight is the high price of land. Real estate is expensive, so businesses pay for less square footage, hold as little inventory as possible, and also try to avoid the additional costs of loading docks, Giuliano explained. “Clearly, freight movement will be more problematic in those areas.”

The researchers developed a set of four levels of population density and four levels of employment density. Combining them yields 16 combinations, ranging from low population and low employment density to high population and high employment density. They mapped these density patterns for Los Angeles, New York, and Paris, using the same geographic scale. The Los Angeles region is mapped on the right. The Los Angeles downtown and Wilshire Corridor stand out as concentrations of high population and employment density (dark red, brown and burgundy). Industrial zones with high employment density and low population density are evident along the I-10 and SR-60 corridors (dark grey). Also evident from the map is the high degree of population and employment intermixing (yellows and blues).

Each of the metro areas has a different pattern of population and employment density. Paris is highly centralized, with a very high level of population and employment intermixing at all levels of density and a large central core of high population and employment density. Giuliano noted that Paris has major conflicts between freight flows and other modes of transportation in its urban core. New York is in between, more centralized than Los Angeles, but with distinct industrial zones as in Los Angeles. Manhattan stands out clearly, and is well known in the U.S. for its serious freight problems. “Los Angeles is much more mixed,” Giuliano said, noting that such differences in population and employment density patterns mean that Paris and New York face different goods movement challenges than Los Angeles.

The goal of Freight Landscape research is to document, analyze, and articulate how the structure of cities impacts the movement of freight in a systematic way. “The long-term objective with this research is to gather the data and build evidence to show that these relationships do exist,” Giuliano said. “If you don’t understand the underlying factors that are driving freight problems in the first place, it’s very hard to solve them.”

For the Los Angeles case study, MetroFreight researchers used existing information on truck flows on the regional highway network to test the hypothesis that freight intensity is a function of population and employment characteristics. Taking into account major freight hubs, such as the Los Angeles and Long Beach ports as well as the major airports, they estimated statistical models to compare the intensity of those truck flows to patterns of population and employment density. The hypothesis proved correct, Giuliano said. “There is a relationship between population and employment patterns and the truck flows we see on the ground.”
After conducting a comprehensive study to assess gaps in training and education in the study of urban freight transportation, members of the MetroFreight team have identified a clear need for curriculum that focuses directly on this critical 21st century field impacting urban regions around the globe.

“The study revealed that while some transportation-related fields of study – such as urban planning, geography, and civil engineering – address aspects of urban freight, there is a scarcity of purely freight-focused courses,” said Thomas O’Brien, CITT Executive Director and METRANS Associate Director. That finding established the need for a course that would address the wide range of issues related to a comprehensive study of urban freight transportation.

The Board of the Volvo Research and Educational Foundations (VREF) has funded the MetroFreight team through 2017 to “conduct a comprehensive, multidisciplinary program of research education and training” that addresses local and global challenges of urban freight. To meet that challenge, the MetroFreight Center is collaboratively developing a comprehensive introductory course in City Logistics. The ultimate aim is to take advantage of web-based communications resources to offer the course across multiple university campuses and engage experts and interested students from various relevant disciplines.

In 2014, Dr. Jean-Paul Rodrigue, Professor of Geography at Hofstra University, developed a topical outline for the proposed course, which other MetroFreight consortium researchers subsequently reviewed and refined. Using that foundation, MetroFreight partners launched a City Logistics course earlier this year. The Spring 2015 course is being piloted between the campuses of the City College of New York (CCNY) and the University of Southern California (USC). Dr. Alison Conway, Assistant Professor of Civil Engineering at CCNY, is the primary instructor. METRANS Director, Dr. Genevieve Giuliano, is overseeing the progress of USC’s participating students. In total, fourteen students are participating, including PhD, masters, and senior undergraduate Civil Engineering students from CCNY and masters and PhD students in Urban Planning from USC. Lectures are being webcast between classrooms in New York and Los Angeles, allowing students to interact with each other in real time.

“The course content includes three modules,” Conway said. “The first module provides an introduction to freight and to the fields that underlie city logistics – urban planning, urban geography, urban economics, and supply chain management. The second module focuses on the issues and challenges of city logistics, and the third on practical applications in city logistics.”

The course aims to take advantage of the broad expertise and resources of the MetroFreight Center. “Many course readings are drawn from a database of international city logistics resources compiled by researchers at Cal State Long Beach led by Dr. Tom O’Brien,” Conway said, noting that researchers from the MetroFreight Center and from VREF’s other urban-freight focused center, the Center of Excellence in Sustainable Urban Freight Systems (COE-SUFS), will provide guest lectures via web. They include Dr. Rodrigue, Dr. Qian Wang from the University at Buffalo, and Dr. Jose Holguin-Veras, the Director of COE-SUFS at Rensselaer Polytechnic Institute.

“Students are benefitting from discussing urban freight challenges in the context of the nation’s two largest — but very different — cities,” Conway said. “They also have the opportunity to interact with leading researchers working on both coasts and with students studying in different but related disciplines.”

Members of the Transportation Research Board (TRB) Young Members Committee (YMC) recently extended the tenure of their current committee chair, Alison Conway, through April 14, 2016. The decision extended the YMC Chair’s tenure from one to two years. The move was made to provide more time to familiarize YMC Chairs with the role and to give the Executive Committee a more long term and experienced point person.

Conway is an Assistant Professor at City College of New York, which is a member of the Volvo Research and Education Foundations consortium. The YMC was established in 2011 to recognize the importance of the next generation of TRB researchers, Conway said. “Our focus is to try to integrate young members into ongoing TRB programs,” she said, adding that the YMC seeks to develop and promote opportunities for involvement, resources, connections, and representation in all levels of TRB.

The YMC members represent a range of technical specializations and lead ten discipline-specific subcommittees, which include: Aviation, Design and Construction, Freight Systems and Marine, Legal Resources, Operations and Preservation, Planning and Environment, Policy and Organization, Public Transportation, Rail, and Safety and Systems Users.

By integrating the young members into all aspects of TRB programs and events, Conway said experienced members are able to mentor the next generation while the younger members bring their fresh perspectives and insights into technological innovation. “I think it really is working both ways,” she said, noting that webinars and the annual Transportation Camp DC (or as YMC members affectionately call it, an “unconference”) have been especially effective in engaging young TRB members.

YMC’s TRB Outstanding Young Member Award is another great way to promote young member engagement, Conway said. The award, which is sponsored by Stantec, Inc., recognizes exceptional young member service to TRB and achievements in transportation research, policy, or practice.

For more information about YMC or to access YMC resources for new and young members, please visit the YMC’s website at: www.trb.org/abouttrb/ymc.aspx.
The 2015 Transportation Research Board (TRB) conference proved a fruitful venue for METRANS faculty and students representing the center’s four research centers.

“This impact of the diverse range of research from METRANS’ four constituent centers proved very significant,” said Thomas O’Brien, CITC Executive Director and METRANS Associate Director. This year’s TRB conference surpassed 12,500 attendees, he said, adding that the conference “is a great forum to meet with decision-makers and who’s who in transportation research.”

The TRB conference also served as an excellent forum to conduct public engagement for the METRANS Southwest Regional Surface Transportation Workforce Center, said O’Brien, who serves as the director for the newly launched center, which is funded by the Federal Highway Administration.

METRANS faculty and doctoral students presided over sessions, chaired a committee, and served as presenters and discussants at a wide variety of TRB conference sessions. The participants representing METRANS included the following:

**Adrien Beziat**
University of Paris East, IFSTTAR, AME/SPLOTT
Poster Session: Parking for Freight Vehicles in Dense Urban Centers

**Marlon Boarnet**
University of Southern California
Presentation: Impact of Urban Form and Gasoline Prices on Vehicle Usage: Evidence from 2009 National Household Travel Survey
Presentation: Innovative Analyses of National Household Transportation Survey

**Alison Conway**
City College of New York
Poster Session: Empirical Analysis of Delivery Vehicle On-Street Parking Pattern in Manhattan Area (Co-presenters: Wei Zou, Cara Xiaokun Wang, Quanquan Chen)

**Laetitia Dablanc**
University of Paris East, IFSTTAR, AME/SPLOTT
Presentation: Impacts of Environmental Access Restrictions on Freight Delivery Activities: The Example of Low Emission Zones in Europe (Co-presenter: Antoine Montenon)
Poster Session: Logistics Spatial Patterns In Paris: The Rise Of The Paris Basin As A Logistics Megaregion (Co-presenter: Adeline Heitz)

**Genevieve Giuliano**
University of Southern California
Presentation: Volvo Research Education Center: A Case Study of an International Consortium of Public and Private Partners
Presider: Setting the Table – How Overarching Policies and Strategic Initiatives Affect the Treatment of Freight Transportation

**Camille Kamga**
City College of New York
Presentation: Toll Price Elasticities of Demand for Toll Bridges and Tunnels in New York City (Co-presenters: Dan Wan and Anil Yazici)
Presentation: Traffic Impacts of an Electronic Payment Biased Toll Pricing Initiative on Toll Bridges and Tunnels in New York City (Co-presenter: Agyenim Oti)

**Thomas O’Brien**
California State University, Long Beach
Presentation: Transportation Workforce Centers Panel
Presentation: Stakeholder Input for New Regional Surface Transportation Workforce Centers
Presider: Port Drayage and Chassis Management Part 1: Current Issues

**Eric Shen**
University of Southern California
Chair: Ports and Channels Committee

**Qian Wang**
University at Buffalo, The State University of New York
Poster Session: Contemporary Theories and Practices in Freight Planning and Logistics
Presentation: Sustainable Transportation Indicators & Measures
Poster Session: Advanced Research and Practices in Urban Freight Transportation
Poster Session: Urban Freight Parking Research
Poster Session: Contemporary Research in Land Use and Transportation Planning
METRANS OUTREACH
New Faces at METRANS

Susan Bradforth joined the METRANS team as a Development Officer in January 2015. She is responsible for managing the METRANS Advisory Board and METRANS Associates Program as well as increasing philanthropic support for METRANS.

“I’m passionate about the METRANS mission to solve transportation issues facing metropolitan regions, and I look forward to advancing that cause,” Bradforth told METRANS NEWS.

Previously at USC, Bradforth was Assistant Director of the IBEAR Executive Program, managing professional educational programs for international businesses, including the Asia Pacific Business Outlook conference. Immediately prior to joining METRANS, she was the development director for an independent school in the Pasadena area and, as a development professional, has experience raising funds for UNICEF and Human Rights Watch. As a program officer, Bradforth worked with Rotary International’s PolioPlus program. She holds a B.A. in History from University of California, Berkeley and an M.A. in International Relations from San Francisco State University.

METRANS RESEARCH
METRANS Upcoming Events

Spring 2015
12:00 noon to 1:30 pm
USC Main Campus
RSVP to Janet Kleinman (Janetkle@usc.edu)

Wednesday, March 25
Jointly Sponsored by VREF & WLPPD
Seaport Mergers: Why Not Los Angeles and Long Beach?
Speaker: Geraldine Knatz, Ph.D.
Former Executive Director, Port of Los Angeles
Professor of Practice of Policy and Engineering
USC Sol Price School of Public Policy and USC Viterbi School of Engineering

For a list of all METRANS seminars, see www.metrans.org/seminars

LATC Extends Further Support to CITT Programs

The Los Angeles Transportation Club (LATC) added $5,000 to its CSULB Center for International Trade and Transportation (CITT) scholarship fund as part of an effort to reach $100,000 in contributions toward an endowment to support students enrolled in programs supported by CITT.

“The LATC started its own endowment in 2010, and we’ve raised $34,900 so far,” said Steven Finley, Presidents Advisor for the LATC and owner of Re-Trans, Inc. “Our goal is to reach $100,000 in the next five years,” he said, adding that the LATC has already given more than $112,000 in scholarships to CITT students.

“Our organization is not just about trucks, trains, ships, or planes, it’s about people,” said LATC President Mario Morales, explaining that expanding the endowment represented the LATC’s commitment to supporting education that will develop future leaders for the logistics industry.

METRANS EDUCATION

Thursday, March 26
Jointly Sponsored by Sol Price School, Dean’s Merit Scholar Event
Development and Application of a “Big Data” Archive:
The ADMS Project
Speaker: Sandip Chakrabarti, PhD Candidate, Urban Planning, USC Sol Price School of Public Policy

Wednesday, April 8
Student Transportation Research Showcase
Unraveling the Effects of Residence in an Ethnic Enclave on immigrant Travel Mode Choice and Social Activities and Does Reliability Determine Ridership?
Speakers: Eun Jin Shin, PhD Candidate, Sandip Chakrabarti, PhD Candidate, USC Price School of Public Policy
Since the founding of METRANS in 1998, its advisory board has provided essential policy guidance for the center. In recent years, METRANS has expanded from one research center to four research and workforce development programs. To ensure that top priorities for all four centers are addressed, the METRANS Advisory Board is expanding the scope of its oversight and the depth of its membership. The four METRANS centers are as follows:

- MetroFreight, a Volvo Research and Education Foundation Center of Excellence on urban freight;
- METRANS UTC, a USDOT Tier 1 University Transportation Center conducting research, education and outreach on increasing the economic competitiveness of large metropolitan areas by improved transportation system performance;
- National Center for Sustainable Transportation, a USDOT National University Transportation Center led by University of California, Davis, with METRANS conducting research, education and training on sustainable freight transportation; and;
- Southwest Regional Surface Transportation Workforce Center, a workforce development center funded by the Federal Highway Administration.

“The advisory board has a much bigger job with an international center, an emphasis on workforce development, and a focus on sustainable transportation in addition to existing priorities,” said METRANS Director Genevieve Giuliano. “The portfolio is much broader than it was before,” she said, noting that to address those challenges, METRANS as has already added three new members: Jake Racker, Senior Director, Network Strategy and Engineering, Kroger Company; Seleta Reynolds, General Manager, Los Angeles Department of Transportation; and Jon Slangerup, Chief Executive, Port of Long Beach. “We are planning to add three to six additional members to provide more representation from private sector transport industries and from public sector leadership,” she added.

The second purpose of the advisory board is to offer guidance on ways to develop the METRANS Associates Program. “Board members are critical in helping us to diversify our funding strategies independent of any specific grant,” Giuliano said.

Members of the METRANS Advisory Board as of 3/15/2015 are as follows:

- **Dan Beal** (Emeritus), Principal, Transportation Policy Consulting
- **Coco Briseno**, Acting Chief, Division of Research, Innovation and System Information, California Department of Transportation
- **Michael Christensen**, Senior Executive for Supply Chain Optimization, Port of Long Beach
- **Stephen Finnegan**, Manager, Government Affairs and Public Policy, Automobile Club of Southern California
- **Hasan Ikhrata**, Executive Director, Southern California Association of Governments
- **Fran Inman**, Senior Vice President, Majestic Realty Co.
- **Randell Iwasaki**, Executive Director, Contra Costa Transportation Authority
- **Arthur Leahy**, Chief Executive Officer, LA Metro (Effective 4/20/2015, Chief Executive Officer, Metrolink)
- **Jack Levis**, Senior Director of Process Management, United Parcel Service
- **Domenick Miretti**, ILWU Senior Liaison, Ports of Long Beach and Los Angeles
- **Mark Pisano**, Professor of the Practice of Public Administration, Sol Price School of Public Policy, University of Southern California
- **Jake Racker**, Senior Director, Network Strategy and Engineering, Kroger Company
- **Seleta Reynolds**, General Manager, Los Angeles Department of Transportation
- **Gene Seroka**, Executive Director, Port of Los Angeles
- **Jon Slangerup**, Chief Executive, Port of Long Beach
- **Barry Wallerstein**, Executive Officer, South Coast Air Quality Management District

Members of the METRANS Advisory Board gathered at USC in February for their annual meeting to discuss research, outreach, and education priorities as well as potential funding opportunities and new candidates for the advisory board.

Advisory board members are leaders from sponsor agencies, other agencies, and private industry. They serve as liaisons to their agencies and industries, and also contribute funding support. Advisory Board members are appointed by the METRANS Director with the advice of the Executive Committee.

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**2015 I-NUF**

6th METRANS International Urban Freight Conference
October 21-23, 2015  The Westin Long Beach Hotel, CA
For info, go to www.metrans.org
When METRANS started its METRANS Associates Program (MAP) in 2005, its goal was to promote collaboration between the academic community, corporations, and government bodies to share industry insights and best practices in the field to address emerging trends in goods movement and international trade. Majestic Realty was on the ground floor of the METRANS Associates Program and has remained an abiding supporter ever since.

“Majestic Realty was critical in helping us launch the METRANS Associates Program and is a very important industry partner for us,” said METRANS Director Genevieve Giuliano. “As a voice for the warehousing and trade industry, it adds a very important dimension to our Advisory Board.”

With a 70-million square-foot portfolio that includes industrial, office, and retail space, as well as sports, entertainment and hospitality projects, Majestic Realty is the largest, privately-held developer and owner of master-planned business parks in the United States. Such credentials underscore why the Majestic Realty name adds considerable heft and credibility to the MAP roster. But beyond such industry success, Majestic Realty contributes a vital industry perspective to METRANS research initiatives.

“We’re long-term stakeholders in the region,” said Fran Inman, Senior Vice President for Majestic Realty and a member of the METRANS Advisory Board. “Clearly the global supply chain is very important for our ongoing business operations to remain successful. So we have been actively involved in public debates dealing with the supply chain and our supply chain partners,” said Inman who is also a member of the California Transportation Commission. Additionally, she serves on the National Freight Advisory Committee with Giuliano and other goods movement experts.

METRANS and Majestic Realty have both benefited from their collaboration over the years, said Kevin D. McCarthy, Majestic Realty Senior Vice President and Director of Development. “A lot of what we do as a commercial and industrial real estate developer directly relates to transportation and logistics,” he said, emphasizing the value of METRANS research. “We asked METRANS to conduct a study on dray rates from the ports of Los Angeles and Long Beach,” he said, explaining that the study proved very useful in understanding the function between dray rates and how far Majestic Realty clients should locate their businesses from the ports. McCarthy noted that his firm has shared findings from the dray rate study with clients seeking to determine the most cost-effective location for potential build-to-suit and existing buildings.

McCarthy emphasized the value of METRANS research in not only Majestic Realty’s Southern California operations but also in other national markets. “We started in 1948 as a local developer, but we have become a national developer largely as a result of having Fortune 500 clients who wanted to expand,” McCarthy said. He noted that METRANS research has proven useful in understanding Majestic Realty’s development efforts in Atlanta, Dallas, Denver, Las Vegas and Bethlehem, Pennsylvania. “Genevieve Giuliano has been invaluable in understanding specific markets – whether that be intermodal facilities in Dallas, or goods movement at the ports of Los Angeles and Long Beach.”

Working with METRANS offers an effective means to focus on global supply chain partnerships and elevate the freight discussion, Inman said. “We try to balance the sustainable issues with the economic issues.” Inman noted that Majestic Realty has also been a regular participant in the Center for International Trade and Transportation’s annual State of the Trade and Transportation Town Hall, which she described as “a great forum for bringing various supply chain stakeholders together.”

Giuliano commended Majestic Realty for its commitment to community and economic development in Southern California. “They’re very engaged in METRANS research that examines goods movement data and new aspects of the global supply chain,” she said.

“METRANS’ partnership between USC and CSULB offers a tremendous balance of research and practical application,” Inman said. “I’m a student of the supply chain and am fascinated by it. I appreciate that METRANS has put a flag in the ground and engaged this issue.”

Majestic Realty’s ties with METRANS and USC run deep, McCarthy said. “We have worked with METRANS since 2005,” he said, adding that Edward P. Roski, Jr., President and Chairman of the Board of Majestic Realty, is a member of the USC Board of Trustees and previously served as board chairman.
METRANS Associates Program

The METRANS Associates Program (MAP) provides the core support for the METRANS Transportation Center. METRANS appreciates and thanks our current partners:

To learn more about MAP and its benefits, see www.metrans.org/metrans-associates-program

METRANS MANAGEMENT TEAM

Genevieve Giuliano, Director
Senior Associate Dean, Research & Technology, Price School of Public Policy, USC

Marlon Boarnet, Associate Director, National Center for Sustainable Transportation
Professor, Senior Associate Dean for Academic Affairs, and Director of Graduate Programs in Urban Planning, Price School of Public Policy, USC

Anastasios Chassiakos, Member
Professor and Chair, Dept. of Electrical Engineering, College of Engineering, CSULB

Maged Dessouky, Associate Director of Special Programs
Professor, Epstein Dept. of Industrial and Systems Engineering, USC

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Professor, Electrical Engineering Systems; Director, Center for Advanced Transportation Technology, Hsieh Dept. of Electrical Engineering, USC

Thomas O’ Brien, Associate Director, CSULB
Executive Director, Center for International Trade and Transportation, College of Continuing and Professional Education, CSULB

Hamid Rahai, Member
Associate Dean for Research; Professor, Dept. of Mechanical & Aerospace Engineering, College of Engineering, CSULB

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