

# CMS

UNIVERSITY OF FLORIDA

SPRING  
2010

## CMS RESEARCH OPTIMIZES TRAFFIC SIGNAL TIMING TO REDUCE TRAFFIC DELAYS



**UF** UNIVERSITY of  
FLORIDA

*A publication of a USDOT/RITA grant-funded  
Tier 1 University Transportation Center*





## MESSAGE FROM THE DIRECTOR

One of the most gratifying experiences for us academics is the successes of our students. In this issue, I am very proud to highlight some of these accomplishments. Two of our students won prestigious CUTC awards (Yingyan Lou for her Ph.D. dissertation and Dimitra Michalaka for her M.S. thesis), while Matt Weisman, M.E., (UF 2009) was honored as the CMS's Student of the Year at the CUTC annual reception. A complete list of all awards is provided on page 14. And, where do our students go after they graduate? See page 14 as well to learn where our newest alumni are employed.

An important student initiative is the new Women in Transportation Seminar (WTS) student chapter, which is the first student chapter of the WTS in the nation! You can read more about this on page 16. In April, representatives of the WTS Central Florida Chapter (Orlando) came to UF to train members of the new student chapter. They spoke to students about leadership principles and other matters related to the creation of a new organization and gave a detailed overview of WTS International. We appreciate the assistance and support of the WTS Central Florida chapter, and their willingness to serve as mentors to our students!

We also recently had the honor of hosting the U.S. DOT/RITA Administrator Peter Appel, and to present to him our work and showcase our facilities. Darryll Dockstader, FDOT's Director of Research, was also there to discuss partnership opportunities between FDOT and the CMS. Read more about Mr. Appel's visit on page 3.

This newsletter also includes updates on CMS research activities and showcases research related to signal timing optimization and STEWARD, a database that contains summaries of traffic volumes, speeds, occupancies and travel times in Florida. On page 6, read about our featured researcher, Andres Blanco, an assistant professor in the Department of Urban & Regional Planning, and spend some time with UF graduate and former FDOT chief engineer Mr. Ananth Prasad of HNTB on page 8.

And finally, it is with great sadness that I report to you the recent loss of a graduate of our program, Rama Yennamani (UF 2008), who passed away as the result of a swimming accident on a beach in Hawaii. I was Rama's graduate adviser, so I knew him quite well. He was a very intelligent, hardworking and motivated young man. He was also a very kind and thoughtful person who got along with everyone and enjoyed new activities. The TRC family will miss him. Two of his closest friends at the TRC have written a tribute to him on page 17.

For the most recent information regarding our activities, please visit our website at <http://cms.ce.ufl.edu>. We look forward to your feedback and questions.

Sincerely,

Lily Elefteriadou, Ph.D.  
CMS Director

### IN THIS ISSUE:

Message from the Director	2
CMS Goes to Washington, D.C.	3
Committee Activities at TRB	3
RITA Administrator Visits CMS	3
Spotlight on Research	4-5
Richard Long Joins Forces with CMS	5
Featured Researcher	6
Distinguished Professional Lecturer	7
Distinguished Academic Lecturer	7
Q&A with Ananth Prasad	8-9
External Advisory Board Meeting	10
Annual Student Conference	10
CMS Project Update	11
STEWARD (Traffic Database)	12
Student Spotlight	13
Student Awards & Accomplishments	14
International Students & Interns	15
WTS Student Chapter Created at UF	16
In Memory of Rama	17
2010 HCM Workshop	17
Register With Us!	19

# THE CMS GOES TO WASHINGTON, D.C.

Each January, it is common for transportation researchers and practitioners to make a massive migration to Washington, D.C. The purpose? To participate in the Annual Meeting of the Transportation Research Board – where the largest exchange of information related to the transportation profession occurs. And this year was no different for the CMS, as it once again headed north to attend TRB and to host the yearly UF reception at the Marriott Wardman Park hotel.

CMS faculty and affiliates were busy as usual during TRB, as they participated in various committee meetings, gave technical paper presentations, won awards, attended the CUTC banquet and awards ceremony at the Omni Shoreham Hotel and the UF reception. The Joint Subcommittee on Traffic Simulation presented an award at TRB to CMS Director Lily Elefteriadou and her former doctoral student, Daniel Jian Sun (2010 Best Model Development Paper Award) for their paper on “A Driver Behavior Based Lane-Changing Model and Its Implementation in CORSIM.” Elefteriadou was also named chair of the Highway Capacity and Quality of Service Committee of TRB.

The UF reception at TRB was well attended. More than 100 people joined the Gators at the Mezzanine of the Marriott Wardman Park hotel on January 10. The annual reception is a hallmark event for the UF transportation group because it provides an opportunity to reconnect with colleagues and current and former students. Students benefit from attending the yearly reception and conference because they meet up with other students and interact with other transportation professionals. CMS-affiliated students brought posters to the UF reception this year to showcase their research.



## COMMITTEE ACTIVITIES AT TRB:

**Sherrilene Classen**, Associate Professor  
Occupational Therapy  
Member, Committee on Women’s Issues in  
Transportation  
Member, Safe Mobility for Older Persons

**Ken Courage**, Professor Emeritus, CCE  
Member and former chair, Joint  
Subcommittee on Traffic Simulation  
Past Member, Highway Capacity and  
Quality of Service Committee, and former  
Chair, Subcommittee on Signalized  
Intersections

**Lily Elefteriadou**, Professor, CMS Director  
Secretary, Highway Capacity & Quality of  
Service Committee  
Member, Traffic Flow Theory &  
Characteristics Committee  
Past Member, Vehicle Size and Weight  
Characteristics

**Siriphong “Toi” Lawphongpanich**,  
Associate Professor, ISE  
Friend, Network Modeling Committee  
Friend, Congestion Pricing Committee

**Nina Barker**, Director, Center for  
Transportation Training (CTT),  
Member, 10th International Conference on  
Low-Volume Roads Committee

**Bill Sampson**, *McTrans* Director  
Member, Highway Capacity & Quality of  
Service Committee

**Siva Srinivasan**, Assistant Professor, CCE  
Member, Traveler Behavior & Values  
Committee  
Member, Telecommunications & Travel  
Behavior Committee  
Friend, Transportation Demand Forecasting  
Committee  
Friend, Travel Survey Methods Committee

**Ruth Steiner**, Associate Professor, URP  
Member, Transportation & Land  
Development & the Pedestrian Committee  
Transportation & Land Development  
Committee (session moderator)

**Scott Washburn**, Associate Professor, CCE  
Member, Highway Capacity & Quality of  
Service Committee  
Chair, Subcommittee on Freeways/Multilane  
Highways  
Member, ACRP Project Panel on Airport  
Curbside & Terminal-Area Roadway  
Operations

**Yafeng Yin**, Assistant Professor, CCE  
Member, Transportation Network Modeling  
Committee  
Friend, Traffic Signal Systems Committee

## RITA ADMINISTRATOR PETER APPEL VISITS CMS

Peter H. Appel, the Administrator of the U.S. Department of Transportation’s Research and Innovative Technology Administration (RITA), visited the CMS on April 27. Appel met with the center’s Internal Steering Committee (ISC) during which Lily Elefteriadou, CMS director, gave an overview of the CMS and its recent activities. Next, Darryll Dockstader, director of research at FDOT, discussed partnering opportunities with the Florida Department of Transportation (FDOT) and the contributions of the CMS to FDOT’s goals and functions. During lunch several graduate students directly involved in CMS-funded projects presented their research work. Also, the Administrator spoke about RITA and its mission and responded to questions regarding U.S. DOT activities and priorities. Finally, Administrator Appel visited several of UF’s transportation-related laboratories and facilities including the instrumented vehicle, the traffic signals control laboratory, the simulation laboratory, the transportation library, the driving simulator and the GeoPlan Center.





# Spotlight on Research

LIHUI ZHANG, YAFENG YIN AND SCOTT WASHBURN  
DEPARTMENT OF CIVIL & COASTAL ENGINEERING, UNIVERSITY OF FLORIDA

## CMS Research Optimizes Traffic Signal Timing to Reduce Traffic Delays

Traffic congestion is one of the most severe problems that threaten the economic prosperity and quality of life in many societies. According to a report by Federal Highway Administration, traffic congestion in the U.S. costs approximately \$200 billion a year in wasted gas and time – and poor signal timing is responsible for 5 percent of that cost. Additionally, signal timing imposes huge impact on traffic emissions because it interrupts traffic flow (for good reasons) and creates additional deceleration, idle and acceleration driving modes to the otherwise cruise driving mode. Traffic emissions are very sensitive to the driving modes, thus reducing idleness at intersections likely leads to significantly reduced traffic emissions. While recent research has primarily focused on developing real-time adaptive signal control systems, implementation of such systems on a large scale may be many years away, due to the associated high implementation and maintenance costs. Because a large number of signal control systems in use today are still pre-timed, further improvements in their efficiency can yield significant improvements in the management of traffic flows, and mitigation of congestion and emissions.

Many of state-of-the-practice pre-timed systems are operated in a time-of-day mode in which a day is segmented into a number of time intervals, and a signal timing plan is predetermined for each time interval. Typically, three to five plans are run in a given day. The basic premise is that the traffic pattern within each interval is relatively consistent and the predetermined timing plan is best suited for the condition of this particular time of day. The timing plan is often obtained by using optimization tools such as TRANSYT-7F, with the inputs of design flows, the mean values of traffic flows, for the time-of-day intervals. However, real-world travel demands are intrinsically fluctuating, and traffic flows at intersections may vary significantly even for the same time of day and day of week. As an example, Figure 1 displays hourly arrivals at two crossing streets, 34th Street and University Avenue, in Gainesville, Florida, during 9 a.m. to 11 a.m. on weekdays over a period of four months. The flows present significant day-to-day variations. Consequently, an

issue that traffic engineers may be confronted with is to determine the flows to use to optimize signal timings. This issue was hardly a concern in old days because the data collection used to be resource demanding, and traffic data were only collected for a couple of days. As the advancement of portable-sensor and telecommunications technologies make high-resolution traffic data more readily available, chances for traffic engineers to raise such a question become more prevalent. This is particularly true in re-timing efforts for those closed-loop control systems with fiber optic connections.

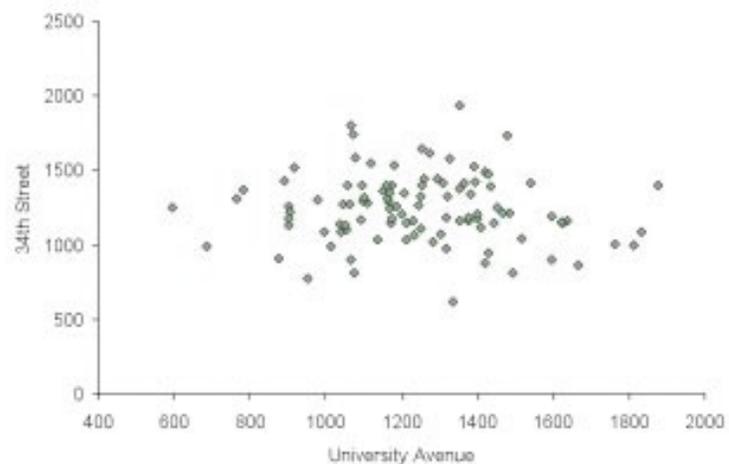


Figure 1. Day-to-day hourly flow rate (in vehicles per hour) at one intersection in Gainesville, Fla.

Use of the average flows may not be a sensible choice. Previous studies have pointed out that if the degree of variability of traffic flows is significant, optimizing signal timing with respect to the average flows may incur considerable additional delay, compared with the timing obtained by taking this variability into account. If the degree of variability is small, use of the average flows in conventional timing methods will only lead to small losses in average performance (efficiency). However, it may still cause considerable losses in the performance against the worst-case scenarios or the stability of performance (robustness), thereby causing motorists' travel times to be highly variable. On the other hand, if the highest observed flows are used instead, the resulting timing plans may be over-protective and unjustifiably conservative. The average performance is very likely to be inferior.

Our goal in this research was to answer the question of what flows to use for signal optimization. More rigorously, our research was to investigate a methodology of signal timing optimization for pre-timed control under demand fluctuations. The proposed methodology proactively considers demand uncertainty in developing robust signal timings. Compared with those from conventional timing approaches, robust timing plans are expected to perform better under high-demand scenarios without compromising the average performance across all possible demand scenarios. Robust timing plans also allow slower deterioration of performance. It is noted that the signal timing process is normally time-consuming. Thus it is rarely repeated unless changes in traffic conditions are so significant that the system begins performing poorly. It has been estimated that traffic experiences an additional 3 percent to 5 percent delay per year as a consequence of not retiming signals as conditions evolve over time. Therefore, it is desirable to have timing plans that accommodate or tolerate these changes in traffic to a greater extent.

Practically, motorists and traffic engineers may be more concerned with worst-case scenarios where substantial delay may occur. To address such a risk-averse attitude on one hand and avoid being too conservative on the other hand, we optimized signal timings against a set of worst-case or high-consequence scenarios. More specifically, given a set of demand scenarios and their corresponding probability of occurrence, and based on a cell-transmission representation of traffic dynamics, we formulated a stochastic programming model to simultaneously determine cycle length, green splits, phase sequences and offsets to minimize the mean of the delays exceeding the alpha-percentile (e.g., 90th percentile) of the entire delay distribution, i.e., mean excess delay. The stochastic programming model is simple in structure but contains a large number of binary variables. Existing algorithms, such as branch and bound, are not able to solve it efficiently, particularly when the optimization horizon is long and

the network size is large. We developed a simulation-based genetic algorithm to solve the model. The model and algorithm were tested on two networks (see Figure 2 for one testing network) and the resulting robust timings were compared with traditional timing plans via a CORSIM simulation study. The results show that the robust timing plans outperform the traditional plans, with the mean delay reduced by approximately 20 percent and the mean excess delay reduced by 18 percent. It demonstrates that the robust timing plans that the robust plans perform much better against high-consequence scenarios. As a side effect, the average performance is also improved.

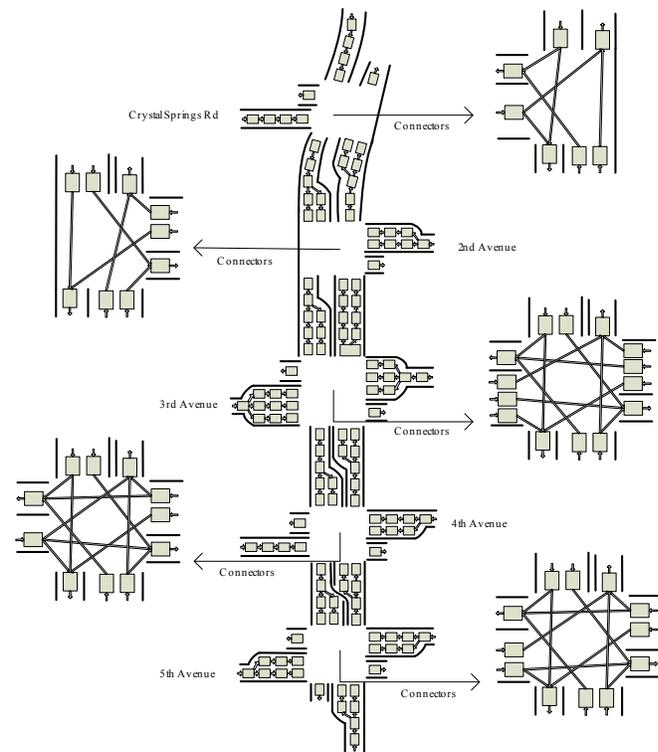


Figure 2. Cell representation of El Camino Real arterial, Calif.

## RICHARD LONG JOINS FORCES WITH CMS

Richard Long, the former director of research at the Florida Department of Transportation (FDOT), has recently joined forces with the CMS to assist in its goals and activities. Long is tasked with assisting the CMS, as well as the Department of Civil & Coastal Engineering (CCE), with strategic planning and prioritization of research agendas. With a career that spans well beyond three decades as an employee of the state of Florida, his knowledge-base and industry contacts in the transportation field will serve to enhance the CMS's mission.

"I am pleased to have an opportunity to work with the excellent researchers and staff located at CCE/CMS," Long said. "The state of Florida has many challenges that are unique to our climate, demographics and, right now, funding availabilities. I am convinced that the CCE/CMS can and will play a major role in the development of Florida's future transportation system."

Before retiring from the FDOT in June 2009, Long served as a member of the CMS's External Advisory Board.



# Featured Researcher

## ANDRES BLANCO, PH.D., URBAN & REGIONAL PLANNING

Andres Blanco is an assistant professor in the Department of Urban & Regional Planning at the University of Florida. He is an economist focusing on land, housing and urban development issues.



Andres Blanco is from Colombia, a country in South America with a population of approximately 43 million people. It borders Panama, Venezuela, Ecuador, Peru and Brazil. Blanco was born in Bogota, the largest city in Colombia, known by its innovative planning approaches like the bus rapid transit system, Transmilenio. It was in Bogota that Blanco graduated with a bachelor's degree in economics from the Universidad de los Andes. This is also where he conducted research in public policy and received a master's degree in regional development planning.

### From Consultant to Academic

While working as a consultant in Bogota for the Lincoln Institute of Land Policy, a think tank based in Cambridge, Mass., focusing on the use, regulation and taxation of land, he became interested in the economics of land, housing and urban development. The time spent working as a consultant for the Lincoln Institute led him to develop a research agenda and pursue doctoral studies at Cornell University.

"These experiences made me realize the complexities of housing and land development," Blanco said. "That is why I decided to continue my studies with a Ph.D. in urban and regional planning. Currently, I am trying to combine in my research these areas with my initial interest on economic development and with other disciplines such as transportation."

In spring 2009, Blanco was hired by the Department of Urban & Regional Planning (URP) at UF, where he teaches and conducts research on the economic aspects of planning. His teaching agenda includes Urban Economy (URP 6042), Economic Development Planning (URP 6541) and Urban Land Economics (URP 6542), adding the element of economics into the curriculum at URP.

Blanco said that it is not possible to understand land, housing and urban development without understanding transportation, so the combination of economics and transportation as related to urban planning is an important concept for students to grasp. He uses an example:

"A hypothetical situation commonly used in urban economics is to imagine a special technology, say a matter transmitter, which eliminates completely transportation cost for people and goods," Blanco said. "In this zero-transportation-cost economy, cities will disappear since there will be no benefits in agglomeration, only costs (negative externalities of proximity)."

Blanco added that the economic models of location often portray the economic space as a trade-off between transportation costs and areas such as near the central business district (CBD), or any central destination in polycentric regions. "The transportation costs are minimized, but the higher demand and the scarcity of such locations will increase prices and densities," he said. "In the outskirts, transportation costs will be higher but land costs lower."

Blanco said these examples and models are simplifications of how the urban space is configured, but they show why understanding transportation and congestion is so vital for planners and economists. "The costs of transportation, land (and housing) values, densities and land uses are articulated and together define how cities grow," he said.

### The Research Agenda

During his first semester at UF, Blanco became affiliated with the CMS through a Florida Department of Transportation (FDOT) match project (objective: to calculate the cost of congestion in Florida). Blanco, along with Associate Professor Ruth Steiner and Professor Zhong-Ren Peng, also from URP, submitted the proposal and since then have been working on the project. Blanco was also recently awarded a project funded by the CMS titled "The Effects of Impact Fees in Urban Form and Congestion in Florida." Blanco hopes to expand his collaboration with the CMS through future research projects in the area of transportation and land use because it also benefits students and the future workforce.

"As part of the congestion costs project, two graduate students are being funded," Blanco said. "They have become very interested in transportation issues and now are planning to orient their theses and careers to transportation planning. This story is very common in

our department, where many professors and students are taking advantage of the resources offered by CMS, conducting innovative research in areas of common interest between the Center and URP."

Steiner, who is collaborating with Blanco on various research projects, is impressed with the knowledge base and enthusiasm that her colleague has brought to the department.

"As a researcher, he is already taking a lead in applying models of traffic congestion, which were developed at the Texas Transportation Institute for major urban areas, and applying them throughout the state of Florida," Steiner said. "He also brings a knowledge of housing and land markets to a study on the combined costs of housing and transportation. Beyond these substantive and methodological contributions, he brings a positive, can-do attitude to research and teaching activities."

She goes on to say that during his first year in the planning program, Blanco has already made a contribution by introducing students to the economics of planning. Steiner said that students in URP are better prepared to discuss the various dimensions of the economics of urban development "From the economics of transportation, to why crime occurs at higher rates in certain parts of the city and not others," she added.

### Urban Planners on the Rise

Urban & Regional Planning students, interested in transportation, are collaborating with the CMS on transportation-related projects. These students often pursue the concurrent degree program in transportation engineering and urban planning. Blanco said that the creation of this program is important for planning students, especially those with a penchant for transportation engineering, as planning jobs are projected to increase in the next couple of years. Through interactions with students in the concurrent program, he has been impressed with the knowledge they demonstrate, Blanco said.

"I have met some students of the concurrent degree program, and I am always impressed by their professionalism and strong understanding of urban problems and policies," Blanco said. "This degree is an excellent opportunity for students that want to acquire a comprehensive education in a field of growing demand: three years for two master's degrees from two very well-ranked education centers? Seems like a no-brainer to me."

According to US News & World Report, urban planning jobs in the country are expected to grow 19 percent from 38,400 in 2008 to 45,700 by 2018, he said. "That should not be a surprise. Urban population and urban problems are growing across the world, and that makes planning the career of the future," Blanco said.

### Looking Ahead

As for Blanco's perspective on his major professional accomplishments, he said he is satisfied with his research

and teaching agenda, but there is always more to explore, learn and create. "I would say that the best is yet to come," Blanco said.

### Andres Blanco's Other Research Activities

- A two-year project with professors Ruth Steiner and Dawn Jourdan funded by the FDOT to study the impact of parking supply and demand management in traffic congestion, transit performance and sustainable land use in the CBDs of Miami and Fort Lauderdale.

- A long-term multidisciplinary research project funded by Wachovia Bank and developed by a research team from the Shimberg Center for Affordable Housing and the Department of Urban and Regional Planning at the University of Florida.

- Along with Professor Joseli Macedo from URP, a research project funded by the College of Design, Construction and Planning called "Land Tenure and Affordable Housing in Latin America."

- Individual research on the links between urban form and housing markets both in Latin America and the U.S.

# DISTINGUISHED PROFESSIONAL LECTURER

M

Marsha Anderson Bomar, President of Street Smarts, was the inaugural speaker on April 1 for the CMS's new Distinguished Professional Lecturer Series. Using examples from her own life, Anderson Bomar described key elements on how to gain success in a new job and in becoming an experienced professional. She also spoke about discovering and fulfilling that last major goal in one's career, including the value of becoming an active member in one's community (Anderson Bomar serves on the Duluth City Council in Duluth, Ga.). Her lecture titled "A Professional Life in Balance... A Life of Work, Family and Service," was held at the College of Engineering's Electronic Delivery of Graduate Education (EDGE) facilities. The presentation was offered as a live webcast through Elluminate, a web-conferencing tool for higher education. A video recording of the presentation is posted at [http://cms.ce.ufl.edu/news\\_events/distinguished\\_lecturer\\_seminar\\_series.php](http://cms.ce.ufl.edu/news_events/distinguished_lecturer_seminar_series.php).

Anderson Bomar is founder and president of Street Smarts, a planning, design and engineering consulting firm in Duluth, Ga., which is currently celebrating its twentieth anniversary. She is the past international president of the Institute of Transportation Engineers (ITE) and has received numerous awards such as the ITE Burton Marsh Distinguished Service Award, Society of Women Engineers Entrepreneur of the Year Award and the National Association of Women Business Owners (NAWBO) Entrepreneur of the Year Award. Anderson Bomar serves as the president of the American Society of Civil Engineers' Transportation and Development Institute (ASCE).



*When in historic downtown Duluth, Ga., don't forget to stop by Chocolate Perks, a bistro founded by Marsha Anderson Bomar. The bistro is currently celebrating its one-year anniversary. Chocolate lovers, beware!*



# DISTINGUISHED ACADEMIC LECTURER

P

Panos Michalopoulos, Ph.D., was this semester's Distinguished Academic Lecturer for the CMS on April 23. Michalopoulos is a professor in the Department of Civil Engineering at the University of Minnesota. He is also an alumnus of the transportation program at UF (M.S. 1972; Ph.D. 1975). Michalopoulos is the inventor of AUTOSCOPE, the most widely used machine vision-based vehicle detection and surveillance system, with more than 20,000 installations worldwide. He is also the founder of Image Sensing Systems, Inc., the company producing AUTOSCOPE and other products for the Intelligent Transportation Systems (ITS) sector and related markets.

Michalopoulos' lecture was titled "Advanced Modeling of Traffic Flow Dynamics and the Need for Wide Area Detection." He spoke on the simplistic one-dimensional flow modeling developed in the '50s and '60s, and then spoke on updates to wide-area detection for data collection and model validation. The lecture included examples of advances in detection technology along with applications in traffic management.

The seminar was held at the UF College of Engineering's Electronic Delivery of Graduate Education (EDGE) facilities. Faculty, students and transportation professionals attended the presentation and included remote participants via Elluminate (an educational web-conferencing tool provided by UF). A video recording of the presentation is provided at: [http://cms.ce.ufl.edu/news\\_events/distinguished\\_lecturer\\_seminar\\_series.php](http://cms.ce.ufl.edu/news_events/distinguished_lecturer_seminar_series.php)



From left: Yafeng Yin, Siva Srinivasan, Panos Michalopoulos, Lily Elefteriadou, and Scott Washburn



QUESTION

Q & A

WITH ANANTH PRASAD, P.E.  
VICE PRESIDENT, HNTB CORPORATION

ANSWER

1. How did you become interested in transportation?

My dad is a civil engineer, and I grew up fascinated by the concrete bridges being built around us. With that background, I never really considered following any other path than in my dad's footsteps.

2. What is your proudest professional achievement?

My proudest professional achievement was to be recognized by Leadership in FDOT on my skills and abilities and subsequently being appointed as the Director of Construction and the Chief Engineer. I always remind folks of my story that if you work hard and be inclusive rather than exclusive, things will turn out just fine. However, I was lucky to having worked under very good managers (and even better individuals).

3. In your opinion, what are Florida's greatest transportation-related concerns? Do you believe those will remain in the future? How should Florida address these present and future concerns? What is your vision for Florida's transportation system?

The biggest challenge facing the Florida today is sustainable funding for transportation, which results in an uncertain future for our state's transportation infrastructure. Florida boasts one of the best transportation systems in the nation, but the recent economic downturn has really put transportation funding front and center. Florida will again continue to grow and will become the third-largest State of the Union. There are just too many good things that Florida has to offer. Unfortunately, at the present time, there is no leadership from the elected officials on how to create a sustainable funding source and more often than not, this debate gets lost in the ideological battles rather than for our elected officials to rise above and do the right thing.

In the short term, this will be a bigger problem than it has been ever. I say that on the heel of Florida Legislature trying to sweep \$400 million from the State Transportation Trust Fund to balance the budget. I fully recognize that Florida has a huge budget shortfall, but this action in itself demonstrates the concern.

In the coming decade, I envision a [funded] transportation system that embodies [an] intermodal system: a system where the ports, airports, recreational places and places of commerce are connected by highways, rail (high speed and commuter system) and transit. A system that is paid through a combination of funding mechanisms that are in synch with what we envision the system to be and to do; and private equity in the form of public-private partnerships.

4. What technologies or policies do you see as the most promising in transportation nationally?

Development of both high-speed rail and commuter rail, Intelligent Transportation Systems and the concept of a systems approach to transportation, the migration to a user fee based on the miles driven rather than a gas tax, and increased use of toll roads, managed lanes and congestion pricing.

5. What priorities should public agencies set to anticipate present and future changes and challenges?

Develop staff and core competencies to the emerging technologies and policies. Retention of staff will also be very critical. Public agencies should look to streamline their process to deliver the improvements faster. I am always reminded of a saying that goes something like, "Don't look for new destinations using an old map."

6. What is your opinion about the current developments in high-speed rail between Tampa and Orlando?

The development of a high-speed rail network in Florida is very important piece of the Transportation Systems of the future. Therefore, it is very important that the first segment between Tampa and Orlando is established in a manner that it is compatible with a network at large within Florida and the

country. But we also need to be mindful that with the advent of high-speed rail, we have now added another high-cost variable to the sustainable transportation-funding dilemma that I mentioned earlier.

7. What are three areas of research that you believe universities should undertake?

The three areas of research are (1) a systems management and operations approach to transportation; (2) alternative models of funding transportation; and (3) innovative materials, techniques and methods.

8. How important do you believe is interdisciplinary collaborative research? What expertise do you believe is necessary in dealing with transportation problems?

Interdisciplinary collaborative research is very important as the current problems that we are facing extend beyond Civil Engineering 101 (soils, concrete and asphalt). The research that will help us solve the problems of the future that will need expertise of business processes, financing, economics and systems engineering to name a few.

9. In your experience, what area(s) do new graduates who are entering the transportation engineering profession need to work on the most to be successful?

In the past decade, engineering economics may have de-emphasized, but we will enter into an era where different forms of funding/financing will provide the revenue for transportation, therefore, renewed focus on engineering economics – and financing is vital. Understanding the issues of different modes of transportation and their interconnectivity is very important as we are beginning to embark on a “true” intermodal transportation system nationwide.

10. What are advantages and disadvantages of working in the private vs. public sector, and what advice would you give graduating students regarding such a career choice?

I am biased toward starting in the public sector since that is what I did. The public sector offers a new graduate the broad knowledge base that working in the private sector may not. Furthermore, the public sector offers more opportunity for training and expanding the knowledge base without the pressures of being billable. Having said that, the private sector offers graduates the opportunity to work on unique and challenging projects across the country (even in the world) while being mentored by a seasoned professional. In the ideal world, a graduate greatly benefits from working in both public and private sector so as to appreciate each other's unique perspective.

11. What advice would you offer to our students who are just beginning their professional careers in transportation?

Be humble, respect your peers and fully understand the background of why it is being done in a certain way. I will quote a saying that goes something like “the further we look into history, the clearer we can look into the future.” You will have your opportunity to put “your stamp” on what we do and it will more than likely come very soon – but until then, learn and soak up all you can.





## CMS ANNUAL EXTERNAL ADVISORY BOARD MEETING

The annual meeting of the CMS's External Advisory Board (EAB) took place March 4 and 5 at Emerson Alumni Hall, a facility located across from the University of Florida campus. This year, the EAB provided feedback on the transportation program's undergraduate and graduate curricula, including its continuing education and professional development programs. Scott Washburn, who is a member of the CMS's Internal Steering Committee (ISC) and also an associate professor in the Department of Civil & Coastal Engineering, gave the EAB an overview of the transportation program's current curriculum. Based on Washburn's presentation, EAB member Ananth Prasad of HNTB provided feedback on the current curriculum and made recommendations. Bill Sampson, CMS member and director of McTrans, spoke on the center's existing continuing education and professional development activities. Suggestions and

recommendations of the existing activities in this area were provided by EAB members Elizabeth Birriel of the Florida Department of Transportation (FDOT) and Max Crumit, of PBS&J. On day two of the annual meeting, Robert Bertini, Ph.D., USDOT/RITA deputy administrator; Curtis Tompkins, director of University Transportation Centers Program; and Robin Kline, university programs specialist joined the EAB meeting via video conference from their headquarters in Washington, D.C.

## CMS ANNUAL STUDENT CONFERENCE

The CMS Annual Student Conference was held March 5 at Emerson Alumni Hall. UF students, faculty and staff, and members of the center's External Advisory Board (EAB) and other transportation professionals attended the half-day conference. Students from the Departments of Civil & Coastal Engineering (CCE), Industrial & Systems Engineering (ISE), and Urban & Regional Planning (URP) participated in this event and presented their work on transportation-related issues. Students were also invited to present their work during a poster session held as part of the conference. The EAB evaluated presentations and posters, and students received awards for best presentation and best poster. The first-place winner in the oral presentation category was Qipeng (Phil) Zheng, a doctoral candidate from ISE. The second-place winners were Max Shmaltsuyev and Ruoniu (Vince) Wang, both graduate students in URP. The third-place winner was Irene Soria, a graduate student in CCE. The poster presentation winners were: Ziqi Song, first place (Ph.D. student, CCE); Liyuan Zhao, second place (Ph.D. student, URP); Bilge Tutak, third place (Ph.D. student, CCE).

### STUDENT PRESENTERS:

**NAGENDRA DHAKAR (PH.D. STUDENT, CCE)**  
Modeling Face-to-Face and Internet-Based Social Activity Participation Decisions

**JING LI (PH.D. STUDENT, CCE)**  
Implementation of Two-Lane Highway Modeling Into the CORSIM Simulation Program

**HARISH MANDA (M.S. STUDENT, CCE)**  
Comparison of Capacities of HOV Lanes and GP Lanes

**IRENE SORIA (M.S. STUDENT, CCE)**  
Comparison of Car-Following Models to Field Data

**BARBARA MARTIN (M.S. STUDENT, CCE)**  
Evaluating the Impacts of Advanced Driver Assistance Systems using a Driving Simulator

**XIAOYU ZHU (PH.D. STUDENT, CCE)**  
Risk Factors Affecting the Injury Severity of Large-Truck Crashes

**QIPENG ZHENG (PH.D. STUDENT, ISE)**  
Advancing Scheduling Models and Solution Algorithms for Real-Time Disaster Evacuation

### POSTER SESSION PARTICIPANTS:

**MAX SHMALTSUYEV AND RUONI (VINCE) WANG (M.A. STUDENTS, URP)**  
The Economic Costs of Traffic Congestion in Florida

**HEATHER HAMMONTREE (M.S. STUDENT, CCE)**  
LOSPLAN

**JACOB KAIN (M.A. STUDENT, URP)**  
The University of Florida Auto-Restricted Zone

**CUIE LU (PH.D. STUDENT, CCE)**  
Impacts of Incidents on Freeway Operations

**QING-CHANG LU (PH.D. STUDENT, URP)**  
Vulnerability Analysis of Transportation Networks as a Result of Climate Change

**SUWAN SHEN (M.A. STUDENT, URP)**  
Impacts of Vertical Data Accuracy on Estimating the Effects of Sea Level Rise on Local Highway Infrastructure

**ZIQI SONG (PH.D. STUDENT, CCE)**  
Optimal Deployment of High-Occupancy Vehicle/Toll Lanes in General Networks

**BILGE TUTAK (PH.D. STUDENT, CCE)**  
Development of a Multimodal Transportation Educational Virtual Appliance (MTEVA) to Study Congestion during Extreme Tropical Events

**LINJUN YU (PH.D. STUDENT, URP)**  
An Approach for Disseminating Prodigious Volumes of Vector Data Using Google Earth

**LIYUAN ZHAO (PH.D. STUDENT, URP)**  
A Quantitative Evaluation of the Relationship between Land Use Allocation and Transportation

**LIYUAN ZHAO (PH.D. STUDENT, URP) AND HEMANT SALOKHE (M.S. STUDENT, URP)**  
CA and Agent-based Land use Forecasting Model for Transportation Demand

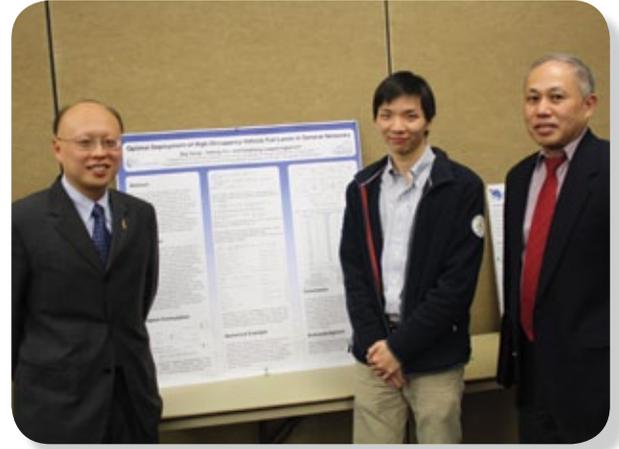
*A complete list of participants, including the winners of the student presentation and poster competitions, is provided at:*

[http://cms.ce.ufl.edu/news\\_events/conferences.php](http://cms.ce.ufl.edu/news_events/conferences.php)

# CMS PROJECTS STATUS

The first round of CMS projects from 2008 (Year 1) is nearly complete. Visit the following website to obtain the posted final reports:  
[http://cms.ce.ufl.edu/research/completed\\_projects.php](http://cms.ce.ufl.edu/research/completed_projects.php)

2009 (Year 2) projects are currently underway, and most are scheduled to be completed soon. Visit the following website for a list of those projects:  
<http://cms.ce.ufl.edu/research>.



## NEW CMS 2010 PROJECTS

CMS Project # 2010-001

PI: Panos Pardalos, Ph.D.

Title: Novel Approaches for Road Congestion Minimization  
Department: Industrial & Systems Engineering

CMS Project # 2010-002

PI: Yafeng Yin, Ph.D.

Title: Protecting Public Interests in Public-Private-Partnership Arrangements for Highway Improvement Projects  
Department: Civil & Coastal Engineering – Transportation

CMS Project # 2010-005

PI: Yafeng Yin, Ph.D.

Title: Enhancing CORSIM for Simulating High Occupancy/Toll Lane Operations  
Department: Civil & Coastal Engineering – Transportation

CMS Project # 2010-007

PI: Scott Washburn, Ph.D.

Title: Development of an Analytical Methodology for Two-Lane Highway Facility Analysis  
Department: Civil & Coastal Engineering – Transportation

CMS Project # 2010-012

PI: Sherrilene Classen, Ph.D.

Title: Validity and Usability of a Safe Driving Behaviors Measure for Older Adults: Strategy for Congestion Mitigation  
Department: Occupational Therapy

CMS Project # 2010-013

PI: Andres Blanco, Ph.D.

Title: The Effects of Impact Fees in Urban Form and Congestion in Florida  
Department: Urban & Regional Planning

CMS Project # 2010-016

PI: Siriphong (Toi) Lawphongpanich, Ph.D.

Title: Nonlinear Road Pricing for Congestion and the Environment  
Department: Industrial & Systems Engineering

CMS Project # 2010-017

PI: Ralph Ellis, Ph.D.

Title: Enhancement of a Network Analysis Tool to Accommodate Multiple Construction Work Zone Analysis  
Department: Civil & Coastal Engineering

CMS Project # 2010-018

PI: Joseph Geunes, Ph.D.

Title: Impacts of Efficient Transportation Capacity Utilization via Multi-Product Consolidation on Transportation Network Usage and Congestion  
Department: Industrial & Systems Engineering



Lily Elefteriadou with Justin Davis, a coastal engineering faculty, during the CMS Student Conference in March 2010.

# STEWARD



The Statewide Transportation Engineering Warehouse for Archived Regional Data (STEWARD) was designed and implemented in 2008 under a project sponsored by the Florida Department of Transportation (FDOT) and the University of Florida's Center for Multimodal Solutions for Congestion Mitigation (CMS).

Its primary function is to provide a repository for traffic data generated by SunGuide traffic management centers within Florida. Traffic volume, speed, occupancy, etc., are provided to users in 5-, 15- and 60-minute data intervals.

STEWARD provides pre-customized daily analysis and performance measure reports.

The data and the various reports from STEWARD database are available through the web-interface:

<http://cdwserver.ce.ufl.edu/steward/index.html>

The current status of available traffic data on the STEWARD website are summarized below:

<u>District (City, No. of Detectors)</u>	<u>Dates Available</u>
District 2 (Jacksonville, 214)	06/2007 to present
District 4 (Ft. Lauderdale, 130)	05/2008 to present
District 5 (Orlando, 452)	09/2009 to present
District 6 (Miami, 233)	05/2008 to present
District 7 (Tampa, 281)	To be uploaded soon

## CONTACT INFORMATION:

Scott S. Washburn, Ph.D.  
Associate Professor  
Email: [swash@ce.ufl.edu](mailto:swash@ce.ufl.edu)  
Phone: (352) 392.9537 x 1453

Vipul Modi, M.S.  
Research Associate  
Email: [vipulmodi@ufl.edu](mailto:vipulmodi@ufl.edu)

# Student Spotlight: A CONVERSATION WITH MATTHEW WEISMAN, M.E. (UF 2009)

**Aviles-Spadoni:** Why did you become interested in transportation engineering?

**Weisman:** I love to drive. In high school I would study roadmaps and drive all over south Florida. Being such an avid driver, I always wondered what new technologies were being applied to traffic signals that could provide for better efficiency of the roadways.

**Aviles-Spadoni:** How did you choose your area of specialization within transportation?

**Weisman:** I was always fascinated with traffic signals. Making signal timings work for the public is a large dynamic puzzle that needs constant attention and technology to keep it all working together.

**Aviles-Spadoni:** Describe the project you worked on as a grad student.

**Weisman:** I helped get the Weil Hall signal lab online with the Traffic Management System, giving the program access to live streaming traffic cameras from around Gainesville. I updated the signal lab's working traffic signal with new LEDs and traffic controller. Also worked with Dr. Washburn to have the real traffic signal cabinet at Stadium Drive and Gale Lemerand Drive replaced with a special plexi-glass door so that pedestrians can see the inside of the traffic signal cabinet.

**Aviles-Spadoni:** What did you like the most about your project?

**Weisman:** By utilizing my traffic engineering position with the City of Gainesville, I was able to give back to the department by making these enhancements so that future students will have a better educational experience.

**Aviles-Spadoni:** What was the strangest thing you experienced while gathering and collecting data in the field?

**Weisman:** Because of my youth, I've often been approached by police questioning my authorization for working in a signal cabinet. I am also amazed by the number of people that drive and talk on their cell phone.

**Aviles-Spadoni:** You were this year's (2010) student of the year for the CMS and you went to TRB to receive the honor. Describe to me how you felt about that.

**Weisman:** I think being awarded the Student of the Year is the highest achievement that one can achieve as a student in this profession. I was truly honored and grateful to accept this prestigious award.

**Aviles-Spadoni:** You worked for the City of Gainesville while you were a graduate student at UF. Describe your job-related responsibilities while working for the city.

**Weisman:** Upon my 2007 graduation, I was hired by the City of Gainesville to spearhead the \$18.2 million implementation of the County-wide Traffic Management System. Because it is a large ITS (Intelligent Transportation Systems) project, my job title is ITS



Operations Engineer. The project includes changing out all the traffic signal controllers and cabinets, installing traffic monitoring cameras, signal retiming and building a fiber communications network. Now that over 50 percent of the project is complete, the system is used every day to detect malfunctions, clear out incidents, and for special event management. I get to positively impact the daily lives of all the Alachua County citizens, as well as Gators fans that use our roadways before and after sporting events.

**Aviles-Spadoni:** What benefit did working for the city while attending graduate school have on your technical performance?

**Weisman:** The grad program goes into considerable detail of the calculations and algorithms I use all the time with city. I am able to adjust models better because of my education with the program.

**Aviles-Spadoni:** Your feelings on the transportation program at UF?

**Weisman:** The University of Florida is one of the best-known transportation programs in the world. We have Dr. Courage to thank for building our foundation. Our other professors also bring wide recognition to the program.

**Aviles-Spadoni:** What advice do you have for students considering a graduate degree in transportation engineering? Survival tips?

**Weisman:** Take the time to really understand the concepts. Pick your elective courses wisely so that they are transportation-related to your areas of interest.

**Aviles-Spadoni:** And now, for something light: Any favorite pastimes?

**Weisman:** I have always been a huge Gators football fan. I enjoy going on road trips to many road games with friends. Now that I can make the pre and post-game traffic flow faster and less stressful for the fans, I feel I am giving back to the program. I also like to pass time playing and listening to music.

**Aviles-Spadoni:** Thank you for taking the time to 'speak' with us. I'd like to give you the last words...

**Weisman:** I'd like to thank the City of Gainesville's Public Works Department, Teresa Scott, Director, Phil Mann, Transportation Services Manager, for affording me the job opportunity as well as the time and resources to complete my master's degree.

*Matt Weisman is currently working as a traffic operations engineer for the City of Gainesville Public Works Department. Weisman was recently featured in The Gainesville Sun on April 7, 2010 in an article titled "Cameras at Intersections Help with Traffic Flow."*

*Ines Aviles-Spadoni is the Coordinator of the Center for Multimodal Solutions for Congestion Mitigation. She is also the managing editor of the center's newsletter.*

## STUDENT AWARDS & ACCOMPLISHMENTS

Council of University Transportation Centers (CUTC) Awards  
(Presented at the 2010 CUTC Awards Banquet on January 9, Omni Shoreham Hotel, Washington, D.C.)

Dimitra Michalaka, M.S. (UF 2009)  
Pikarsky Award for Outstanding M.S. Thesis in Science & Technology

Yingyan Lou, Ph.D. (UF 2009)  
Pikarsky Award for Outstanding Ph.D. Dissertation in Science & Technology

Matt Weisman, M.E. (UF 2009)  
Outstanding Student of the Year Award

### CMS ANNUAL STUDENT CONFERENCE AWARDS

#### Awards for Student Presentations

1st Place – Qipeng Zheng (Ph.D. Student, ISE)  
Advancing Scheduling Models and Solution Algorithms for Real-Time Disaster Evacuation

2nd Place – Max Shmaltzuyev and Ruoniu (Vince) Wang (M.A. Students, URP)  
The Economic Costs of Traffic Congestion in Florida

3rd Place – Irene Soria (M.S. Student, CCE)  
Comparison of Car-Following Models to Field Data

#### Awards for Student Posters

1st Place – Ziqi Song (Ph.D. Student, CCE)  
Optimal Deployment of High-Occupancy Vehicle/Toll Lanes in General Networks

2nd Place – Liyuan Zhao (Ph.D. Student, URP)  
A Quantitative Evaluation of the Relationship Between Land-Use Allocation and Transportation

3rd Place – Bilge Tutak (Ph.D. Student, CCE)  
Development of a Multimodal Transportation Educational Virtual Appliance (MTEVA) to Study Congestion during Extreme Tropical Events

#### Women's Transportation Seminar (WTS) Awards

Amy Cavaretta  
2009 Frankee Hellinger Undergraduate Scholarship (C. Fla. Chapter)

Heather Hammtree  
2009 Undergraduate Leadership Scholarship (C. Fla. Chapter)

Barbara Martin  
2009 Frankee Hellinger Graduate Scholarship (C. Fla. Chapter)

### LIFE AFTER GRADUATE SCHOOL

*Finishing graduate school is one of the greatest accomplishments in a student's life. Find out where some of our graduates are today.*

Cristina Barone, MAURP (UF 2009)  
Transportation Planner, Tindale-Oliver & Associates

Andrew Batson, MAURP (UF 2009)  
Planning Associate, Michael Baker Associates; Harrisburg, Penn.

Carlos Cruz, M.S. (UF 2007)  
Kimley Horn & Associates, Inc.; Ft. Lauderdale, Fla.

Jeffrey Davis, MAURP (UF 2008)  
Fehr and Peers, Walnut Creek, California

Aaron Elias, M.S. (UF 2009)  
Associate Transportation Engineer, Dowling Associates, Inc.

Allison Fischman, MAURP (UF 2009)  
Attending law school at the University of Florida

David Kanarek, MAURP (UF 2009)  
Gardens Home Management Services (Palm Beach, FL)

Abishek Komma, M.S. (UF 2008)  
Transportation Analyst, AECOM Consult, Inc.

Alexandra Kondyli, Ph.D. (UF 2009)  
ANKA Consulting (Greece)

Ana Lai, M.S. (UF 2009)  
Traffic Engineer, Urban Systems Associates, Inc.

Seokjoo Lee, Ph.D. (UF 2009)  
Research Associate, Korea Transport Institute

Yingyan Lou, Ph.D. (UF 2009)  
Assistant Professor, The University of Alabama at Tuscaloosa

Dimitra Michalaka, M.S. (UF 2009)  
Doctoral student, University of Florida (transportation)

Vipul Modi, M.S. (UF 2009)  
Research Associate  
UF Transportation Research Center (TRC)

Stephanie Murray, MAURP (UF 2009)  
Pursuing a master's degree in the Rinker School of Building Construction at the University of Florida

Abigail Osei-Asamoah, M.S. (UF 2009)  
Doctoral student, University of Connecticut

Benito Perez, M.S./MAURP (UF 2009)  
Transportation Engineer, Hampton Roads Transportation Planning Organization

Andrew Persons, MAURP (UF 2008)  
Marion County, FL Growth Management Division

Chad Riding, MAURP (UF 2009)  
Transportation Planner, California Department of Transportation (Caltrans)

Jeff Schmucker, MAURP (UF 2009)  
Employed by the Department of Urban and Regional Planning at the University of Florida

Jian (Daniel) Sun, Ph.D. (UF 2009)  
Assistant Professor, Tong-Ji University, China

Matt Weisman, M.E. (UF 2009)  
ITS Operations Engineer II  
Traffic Management Division  
City of Gainesville - Public Works Department

*The transportation program at UF has alumni all over the world working in some of the very best companies and institutions. If you are a former student of the transportation program at UF, visit [http://cms.ce.ufl.edu/contact\\_us/](http://cms.ce.ufl.edu/contact_us/) and let us know where in the world you are today.*



Yingyan Lou, Ph.D.



Dimitra Michalaka, M.S.



Jian (Daniel) Sun, Ph.D.



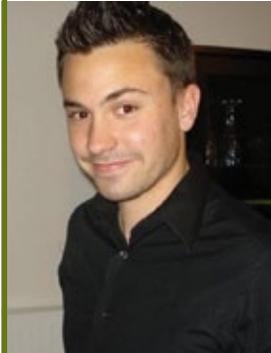
From left: Irene Soria, Qipeng "Phil" Zheng, Max Shmaltzuyev, and Ruoniu "Vince" Wang



# INTERNATIONAL STUDENTS & INTERNS

## JEAN-PHILIPPE DELORME

Jean-Philippe Delorme comes to us from the Ecole Nationale des Travaux Publics de L'Etat (ENTPE). ENTPE is located in Lyon, a city in east-central France in the Rhône-Alpes region. It is situated between Paris and Marseille. Lyon is also where Delorme has spent most of his life and has enjoyed playing soccer, hanging out with his friends and playing the piano. At the ENTPE, Delorme is majoring in transportation engineering through the National Graduate School of Civil Engineering and Sustainable Development. He decided to come to this country to fulfill his internship requirements and because he was interested in visiting the United States. "The internship was a very good opportunity for me to come here," Delorme said. "It is the first time I come to the USA, and I really like it." Delorme is working with Professor Lily Elefteriadou, Ph.D., director of the CMS, on a project related to the impact of advanced vehicle technologies on congestion. His responsibilities on this project include data collection and analysis.



## WILCO MIDDAG

Wilco Middag, a fan of cycling and soccer, is a civil engineering student at the University of Twente, the Netherlands. As an intern at the CMS, Middag worked with Yafeng Yin, Ph.D., an assistant professor in the Department of Civil & Coastal Engineering. Middag's project was related to the cumulative prospect theory, which describes a driver's decision on whether to pay a fee to use a high-occupancy/toll (HOT) lane. "For me, the project has two interesting subjects: one is the concept of HOT-lanes. In The Netherlands we don't have anything like toll lanes or carpool lanes," Middag said. "And the second is drivers' behavior toward the pricing ideas; how do they react and how that can be modeled? It is nice opportunity that I can do the research here with the expertise and the support." After completing his bachelor's degree, Middag has plans to pursue a graduate program in transportation at the University of Twente. "After that I'm not sure yet, maybe working on the research side of transportation or engineering consultancy."



## BOUKE VOGELAAR

Bouke Vogelaar is also from the University of Twente, in the Netherlands, and was hosted by the CMS in fall 2009 as an intern with Siva Srinivasan, Ph.D., an assistant professor in the transportation program. Under the supervision of Srinivasan, Vogelaar used data from the National Household Travel Survey to analyze the travel patterns of children. Vogelaar specifically looked at differences in patterns between school-going days and non-school-going days. While working on this project, Vogelaar said he gained insight into how to manage a research project. "I have learned more than I ever expected about research work, travel behavior and data analyzing," Vogelaar said. "Besides the technological knowledge I have gained, I learned a lot about self-motivation, work effort and planning. It is a joy to work together with Dr. Siva Srinivasan who is helping and guiding me in a fantastic way." In his spare time, Vogelaar likes to be involved in outdoor sports-related recreational activities. "In the winter, I enjoy long-track ice speed skating," Vogelaar said. "There is a speed skating hall about 800 yards from my home in the Netherlands, so I try to go there at least once a week." Vogelaar also likes to ski in the Alps in the winter. In the warmer months, he enjoys soccer, rugby and cycling.



## HONGLI XU

The CMS is hosting Hongli Xu, a Ph.D. student from Nanjing University in Wuhan, China. Wuhan, one of the biggest cities in China, is divided into three parts by the Yangtze and Han rivers. It is densely populated and congested. It serves as a hub to most of the overland communications in China. At UF, Xu is conducting research related to her dissertation. Her mentor is Yafeng Yin, Ph.D., an assistant professor in the Department of Civil & Coastal Engineering. He also serves as co-adviser on her doctoral committee at Nanjing University. Xu's project is related to User Equilibrium Route Flows. Xu was awarded a scholarship by the Chinese government to conduct research for her dissertation in the United States. "Since Dr. Yin is a popular researcher in my research area, I asked him to be my co-supervisor and luckily obtained his permission," Xu said. "I benefit a lot from his guidance." Xu said she has enjoyed the interaction with the students and faculty in the transportation program at UF. "The learning environment is great, and the teachers and students are very nice," Xu said. She also finds the transportation seminars organized by the CMS useful because they give her "insight on the current transportation management and research in the United States."



## WTS STUDENT CHAPTER CREATED AT UF

A student chapter of the Women's Transportation Seminar (WTS), an international professional association dedicated to the advancement of women in transportation, has been formed at UF by a group of energetic and enthusiastic students in the Department of Civil & Coastal Engineering. This is the first of its kind for WTS International.

"We have written a constitution that meets both Student Government and WTS requirements," said Barbara Martin, the chapter's founder and president. Martin is also a graduate student in the transportation program. "This is an extremely important undertaking, and we have a lot of work ahead of us, but we are making this happen. I firmly believe that establishing a student chapter of the WTS will benefit students at the professional level. We have many activities and events planned for the next year."

Martin is joined in this endeavor by Heather Hammontree, Genesis Harrod, Irene Soria, Dimitra Michalaka, Xiaoyu Zhu, Jing Li and Zhuofei Li, all transportation graduate students at UF. Ines Aviles-Spadoni, coordinator of the CMS, currently serves as the adviser to the student chapter.

The WTS student chapter at UF will be under the guiding arm of the WTS Central Florida Chapter located in Orlando. Eileen LaSeur, president of WTS Central Florida, is impressed with the group's energy and enthusiasm.

"I've recently had the privilege of working with an outstanding group of young women from the University of Florida," LaSeur said. "These young women had become aware of WTS through our Annual WTS Scholarship Program. Each year, we offer three scholarships totaling \$5,000 to outstanding female students enrolled in a degree program in a transportation-related field. For the year 2009, all three of our scholarships were awarded to UF students."

Last fall, the Central Florida Chapter's Scholarship Chair, Hong-Ting Chen of PBS&T's National Toll Technology Division, Ines Aviles-Spadoni, CMS coordinator, and Lily Eleferiadou, CMS director, initiated preliminary discussions regarding a potential student chapter at UF.

The enthusiasm to establish a WTS student chapter solidified after a conference call in September, which included the WTS Central Florida Chapter board members, UF students and CMS staff members.

In February 2010, the UF students were invited to join WTS Central Florida chapter in their annual retreat, where discussions regarding the future activities of the newly formed student chapter were included. Then, in April 2010, members of the Central Florida Chapter traveled to UF to train students on new chapter responsibilities. Information was provided

Barbara Martin (M.S. student) – Frankee Hellinger Graduate Scholarship

Heather Hammontree (M.S. student) – Frankee Hellinger Undergraduate Scholarship (Heather is currently an M.S. student. The award was given to her while she was completing her bachelor's degree in fall 2009.)

Amy Cavaretta (B.S. student) – Frankee Hellinger Leadership Undergraduate Scholarship

## 2009 WTS INTERNATIONAL AWARDEE

Amy Cavaretta (B.S. student) – Sharon D. Banks Memorial Undergraduate Scholarship (national award).

on topics related to roles and responsibilities, accounting basics, resources, scholarships, chapter growth (recruitment) and programs (professional development/leadership, technical, political and diversity). WTS Central Florida chapter members in attendance included Barbi Stiles, Eileen LaSeur, Kory Alger, Depali Patil and Hong-Ting Chen. Leena Patil, past president of the WTS Northeast Florida chapter was also in attendance. Chen, a strong supporter of WTS, has high hopes for the student chapter and is committed to providing assistance.

"WTS has provided me great opportunities for my professional career growth since graduation in 2005," Chen said. "I believe in WTS because I have seen the difference it has made not only in my own career but also in many others. I am looking forward to serve as the student liaison for the WTS UF chapter."

This is the first time in the history of WTS International that a student chapter will be formed, and WTS International sees this as an opportunity to create other chapters across the nation and internationally, LaSeur said.

"They would like to document our process as we assist these young women in creating a WTS Student Chapter in Gainesville as part of our Orlando chapter," LaSeur said. "They will then use this example to encourage other chapters across the United States, as well as internationally, to reach out to colleges and universities in other areas. We applaud the UF students and their advisers for taking the initiative to join this international organization whose purpose is dedicated to the advancement of women in transportation, and create their own student chapter."



From left: Hong-Tin Cheng and Ines Aviles-Spadoni



Front row, from left: Dimitra Michalaka, Hong-Tin Chen, Ines Aviles-Spadoni, Barbara Martin  
Back row, from left: Barbi Stiles, Irene Soria, Depali Patil, Genesis Harrod, Heather Hammontree, Leena Patil, Kory Alger, and Eileen LaSeur at the WTS training session at UF for the newly formed student chapter in April 2010.

# IN MEMORY OF RAMA

Mr. Ramakrishna Yennamani, transportation planner at Parsons Brinckerhoff, passed away on June 1, 2009 from a tragic swimming accident on a beach in Hawaii. It's been almost a year since he left us, and some of us still don't have the courage to sit down and digest what happened.

Rama, as he was called, completed his bachelor's degree in civil engineering from the prestigious Indian Institute of Technology Madras, Chennai followed by a master's degree in transportation engineering at the University of Florida.

At only 24 years of age, he scaled heights in his professional and academic career that perhaps only few could dream of. A born leader and an entertainer, he always looked to initiate and participate at social and sports events. He lived life with a "never give-up attitude" and with an unbounded enthusiasm and coolness. The times we have shared living with him as roommates and learning with him as classmates have etched countless happy memories in our hearts. We feel fortunate to have had interacted at many levels with this daring, bold, super smart, honest, fun loving, always smiling (and bringing smiles around him) friend. A great son, brother, student and friend, he made his presence speak for him in any surrounding or gathering. Even though he is not with us in person anymore, his memories will last in our hearts and souls forever. We miss you Macha!!

*Written by former CMS students Vipul Modi and Abishek Komma*

Rama Yennamani with his parents on the evening of his graduation in front of the College of Engineering.



## 2010 HIGHWAY CAPACITY MANUAL WORKSHOP

August 12, 2010  
8:00 AM to 4:30 PM  
Royal Plaza Hotel  
(in the Walt Disney World Resort Lake Buena Vista, Florida)

The workshop has been developed for transportation professionals interested in the latest updates and software applications to the 2010 HCM. Six Professional Development Hours (PDHs) will be offered for attending the workshop.

### WORKSHOP PRESENTERS:

- \* Gina Bonyani, Florida Department of Transportation
- \* Ken Courage, University of Florida
- \* Janice Daniel, New Jersey Institute of Technology
- \* Doug McLeod, Florida Department of Transportation
- \* Bill Sampson, McTrans, University of Florida
- \* Scott Washburn, University of Florida
- \* John Zegeer, Kittelson & Associates, Inc.

### REGISTRATION FEES:

Early-birds \$195 USD (register by July 15, 2010)  
Regular or on site \$245 USD (if on site, with credit card only)  
Workshop sponsors \$145 USD

Registration & Hotel Information:

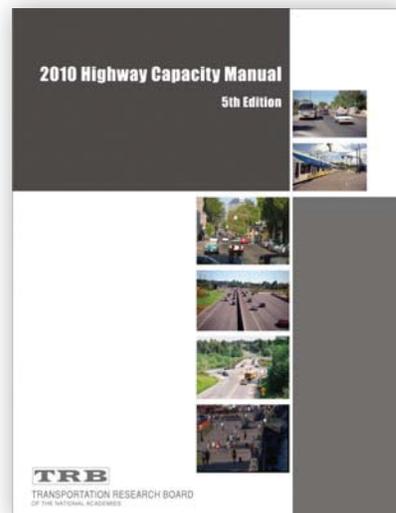
Visit: [http://trc.ce.ufl.edu/news\\_and\\_events/hcm\\_2010\\_Workshop.php](http://trc.ce.ufl.edu/news_and_events/hcm_2010_Workshop.php)

Sponsorship Opportunities Available!

There are various sponsorship levels which will provide your company a discounted workshop registration rate and more. Your generous contribution will help to support this workshop and future technology transfer activities.

Questions?

For more information on the workshop, registration and sponsorship opportunities, contact Ines Aviles-Spadoni at 352-392-9537, Ext. 1409 or at [iaviles@ce.ufl.edu](mailto:iaviles@ce.ufl.edu).







## REGISTER WITH US!

Help keep our database up to date by registering with us at [http://cms.ce.ufl.edu/contact\\_us/](http://cms.ce.ufl.edu/contact_us/). The CMS will provide you with notices on transportation-related activities such as conferences, workshops, webcasted seminars, alumni events and other activities, and we will send you our annual report and bi-annual newsletter. Also, if you have moved or are receiving duplicate copies of this newsletter, or if you are receiving mail for people who are no longer with your institution, agency or company, please let us know. You may reach us by e-mailing [javiles@ce.ufl.edu](mailto:javiles@ce.ufl.edu).



CENTER FOR MULTIMODAL SOLUTIONS FOR CONGESTION MITIGATION  
 512 Weil Hall  
 P.O. Box 116580  
 Gainesville, FL 32611-6580  
 Phone: 352.392.9537, Ext. 1409  
 Fax: 352.846.1699  
<http://cms.ce.ufl.edu>

Non-Profit Org  
 US Postage  
 P A I D  
 Gainesville, FL  
 Permit No. 94

# ASK THE EXPERT!

Do you have a transportation-related question or concern?  
 If so, we want to hear from you.

Contact us by visiting:  
[http://cms.ce.ufl.edu/contact\\_us/](http://cms.ce.ufl.edu/contact_us/)

PUBLISHER	LILY ELEFTERIADOU, PH.D. CMS Director Kisinger Campo Professor of Civil Engineering <a href="mailto:elefter@ce.ufl.edu">elefter@ce.ufl.edu</a>
MANAGING EDITOR	INES AVILES-SPADONI, M.S. CMS Coordinator <a href="mailto:iaviles@ce.ufl.edu">iaviles@ce.ufl.edu</a>
COPY EDITOR	KIM FULSCHER, B.S.
DESIGNER	HOLLY FRANKLIN, B.F.A.