

Eleni Christofa

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EDUCATION

- MAY 2012 **University of California, Berkeley**
Doctor of Philosophy in Civil and Environmental Engineering
Thesis: '**Traffic Signal Optimization with Transit Priority: A Person-based Approach**'
Minors: City and Regional Planning, Industrial Engineering and Operations Research
Advisor: Prof. A. Skabardonis
- MAY 2008 **University of California, Berkeley**
Master of Science in Civil and Environmental Engineering
Program: Transportation Engineering
- JULY 2007 **National Technical University of Athens (NTUA), Greece**
Diploma in Civil Engineering with specialization in Transportation Eng. (5-year degree)
Thesis: '**Travel Time Estimation in Signalized Arterials Under Incident Conditions**'
Advisor: Prof. M.G. Karlaftis

RESEARCH INTERESTS

Traffic Operations and Control
Sustainable Traffic Management
Public Transportation Systems
Intelligent Transportation Systems
Transportation Safety

RESEARCH AND WORK EXPERIENCE

University of Massachusetts Amherst

2012–PRESENT *Assistant Professor*, Department of Civil and Environmental Engineering

University of California, Berkeley

2007–2012 *Graduate Student Researcher*

2010–2012 **Advanced Signal Control Algorithms** (US DOT Exploratory Advanced Research)
Partners for Advanced Transportation Technology (PATH)
Developing Connected Vehicle-based traffic signal control algorithms

2009–2010 **Traffic Signal Optimization with Transit Priority**
U.C. Berkeley Center for Future Urban Transport, A Volvo Center of Excellence
Development of signal control systems with transit priority for conflicting transit routes

2008–2009 **Integrated Corridor Management (ICM)**
Partners for Advanced Transportation Technology (PATH)
Modeling and simulation methods for Integrated Corridor Management

2008 **Effectiveness of Adaptive Traffic Control for Arterial Signal Management**
Partners for Advanced Transportation Technology (PATH)
Development of signal control strategies that mitigate vehicle delays and emissions

- 2007 **Traffic Data Collection Technologies for Travel Time Estimation**
California Center for Innovative Transportation (CCIT)
 Feasibility study on innovative ways of estimating travel times (e.g., cell phones)

Cambridge Systematics, Inc., Oakland, CA

- 2008 *Summer Intern*
 Modeling traffic conditions on California corridors using simulation packages

Technical Office of S. Prokopiou, Mytilene, Greece

- 2005 *Summer Intern*
 Supervision of pavement construction and maintenance of roads in Lesvos, Greece

HONORS & AWARDS

- 2016 Innovate@ Symposium Grant, University of Massachusetts Amherst
 2014 Open Education Initiative Grant, University of Massachusetts Amherst
 2014 Sustainability Curriculum Initiative Grant, University of Massachusetts Amherst
 2014 ASCE ExCEEd Fellowship, American Society of Civil Engineers
 2013 Travel Scholarship for the Bicycle and Pedestrian Curriculum Workshop, Portland State University
 2011 University of California Transportation Center Award
 2009–2011 Dwight David Eisenhower Transportation Fellowship
 2007 Gordon F. Newell Memorial Fellowship (U.C. Berkeley)
 2007 Eugenides Foundation Scholarship for Graduate Studies
 2002, 2004, 2006 Nikolaos G. Papadimitriou Foundation Scholarship
 2004 Scholarship from the Greek Institution of National Scholarships

PROJECTS

Funded Projects

- 2015–2018 Christofa, E. (co-PI) with M. Ben-Akiva, J. Trancik, E. Frazzoli, S. Gao, M., L.S. Peh, and F. Pereira. Mobility Electronic Market for Optimized Travel. U.S. Department of Energy, Advanced Research Projects Agency-Energy (ARPA-E).
- 2014–2016 Christofa, E. (PI) with M.A. Knodler. Operational and Emission Analyses of Roundabouts under Varied Vehicle and Pedestrian Demands. U.S. Department of Transportation through the New England University Transportation Center.
- 2014–2016 Christofa, E. (co-PI) with M.A. Knodler, D.L. Fisher, and D. Ni. SAFER SIM University Transportation Center.
 Specific project:
- Christofa, E. (PI) with A. Ganz. Visually Impaired Pedestrian Safety Roundabout and Midblock Crossings.
- 2014–2016 Christofa, E. (PI) with M.A. Knodler. Impact of Deflection Angle on Roundabout Driver Behavior. U.S. Department of Transportation through the SAFER SIM University Transportation Center.
- 2014–2016 Christofa, E. (co-PI) with M.A. Knodler. Development and Evaluation of Infrastructure Strategies for Safer Cycling. U.S. Department of Transportation through the SAFER SIM University Transportation Center.

- 2013–2015 Christofa, E. (PI). Signal Timing Optimization for Improved Mobility and Air Quality. U.S. Department of Transportation through the New England University Transportation Center.
- 2012–2015 Christofa, E. (PI) with J. Collura. A Person-based Comparison of Transit Preferential Treatments on Signalized Arterial Corridors. U.S. Department of Transportation through the New England University Transportation Center.

PUBLICATIONS (* indicates student co-author)

Refereed Journal Publications

1. Chavis, C., and **Christofa, E.**, A Real-Time Signal Control Strategy for Mitigating the Impact of Bus Stops at Urban Signalized Arterials. *Journal of Intelligent Transportation Systems: Technology, Planning, and Operations*. [accepted]
2. *Farid, Y.Z., **Christofa, E.**, and Paget-Seekins, L. 2016. Short-Term Bus Travel Time Estimation Using Low Resolution Automated Vehicle Location Data. *Transportation Research Record: Journal of the Transportation Research Board*, 2539, doi:10.3141/2539-13
3. *Wolput, B., **Christofa, E.**, and Tampère, C.M.J. 2016. Optimal Cycle Length Formulas for Intersections with or without Transit Signal Priority. *Transportation Research Record: Journal of the Transportation Research Board*, 2558, doi: 10.3141/2558-08
4. *Roach, D., **Christofa, E.**, and Knodler Jr., M.A. 2015. Safety Assessment before and after Implementation of Roundabouts through Microsimulation. *Advances in Transportation Studies, an International Journal*, 2016 Special Issue, Vol.2.
5. **Christofa, E.**, Ampountolas, K., and Skabardonis, A. 2016. Arterial Traffic Signal Optimization: A Person-based Approach. *Transportation Research Part C: Emerging Technologies*, 66:27–47.
6. *Farid, Y.Z., **Christofa, E.**, and Collura, J. 2015. Person-Based Evaluation of Dedicated Bus Lanes and Queue Jumper Lanes at Signalized Intersections with Near-Side Bus Stops. *Transportation Research Record: Journal of the Transportation Research Board*, 2484:182–192.
7. *Khalighi, F., and **Christofa, E.** 2015. Emission-based Signal Timing Optimization for Isolated Intersections. *Transportation Research Record: Journal of the Transportation Research Board*, 2487:1–14.
8. Argote-Cabañero, J., **Christofa, E.**, and Skabardonis, A. 2015. Connected Vehicle Penetration Rate for Estimation of Arterial Measures of Effectiveness. *Transportation Research Part C: Emerging Technologies*, 60:298–312.
9. Gonzales, E.J., and **Christofa, E.** 2014. Empirical Assessment of Bottleneck Congestion with a Constant and Peak Toll: San Francisco-Oakland Bay Bridge. *EURO Journal on Transport and Logistics*, 3(34):267–288.
10. **Christofa, E.**, Papamichail, I., and Skabardonis, A. 2013. Person-based Traffic Responsive Signal Control Optimization. *IEEE Transactions on Intelligent Transportation Systems*, 14(3):1278–1289.
11. **Christofa, E.**, Argote, J., and Skabardonis, A. 2013. Arterial Queue Spillback Detection and Signal Control based on Connected Vehicle Technology. *Transportation Research Record: Journal of the Transportation Research Board*, 2356:61–70.
12. Reger, D., **Christofa, E.**, Guler, I., and Madanat, S. 2013. Estimation of Pavement Crack Initiation Models by Combining Experimental and Field Data. *ASCE Journal of Infrastructure Systems*, 19(4):434–441.
13. Skabardonis, A., Geroliminis, N., and **Christofa, E.** 2013. Prediction of Vehicle Activity for Emissions Estimation Under Oversaturated Conditions Along Signalized Arterials. *Journal of Intelligent Transportation Systems: Technology, Planning, and Operations*, 17(3):191-199.

14. **Christofa, E.**, and Skabardonis, A. 2011. Traffic Signal Optimization with Application of Transit Signal Priority to an Isolated Intersection. *Transportation Research Record: Journal of the Transportation Research Board*, 2259:192-201.

Refereed Conference Publications

1. *Farid, Y.Z., and **Christofa, E.** Short-Term Bus Travel Time Estimation Using Low Resolution Automated Vehicle Location Data. *Transportation Research Board 95th Annual Meeting*, 10–14 January, Washington, D.C., Paper No. 16-0166.
2. *Fournier, N., **Christofa, E.**, and Knodler, M. The Bicycle Cycle: A Sinusoidal Modal for Predicting Bicycle Demand. *Transportation Research Board 95th Annual Meeting*, 10–14 January, Washington, D.C., Paper No. 16-4182.
3. *Wolput, B., **Christofa, E.**, and Tampère, C.M.J. Optimal Cycle Length Formulas for Intersections with or without Transit Signal Priority. *Transportation Research Board 95th Annual Meeting*, 10–14 January, Washington, D.C., Paper No. 16-1804.
4. *Roach, D., **Christofa, E.**, and Knodler Jr., M.A. 2015. Roundabout Safety Assessment through Microsimulation. *2015 Road Safety & Simulation International Conference*, 6–8 October, Orlando, FL.
5. *Tainter, F., Knodler, Jr., M.A., *Fitzpatrick, C., and **Christofa, E.** 2015. Analysis of Driver Performance and Operations at Intersection Auxiliary Through Lanes. *2015 Road Safety & Simulation International Conference*, 6–8 October, Orlando, FL.
6. *Wolput, B., Tampère, C.M.J., and **Christofa, E.** 2015. A New Stochastic Mesomodel for Optimizing Multi-Modal Signal Settings for Networks. *2015 IEEE 18th International Conference on Intelligent Transportation Systems*, 15–18 September, Canary Islands, Spain.
7. *Farid, Y.Z., **Christofa, E.**, and Collura, J. 2015. Person-Based Evaluation of Dedicated Bus Lanes and Queue Jumper Lanes at Signalized Intersections with Near-Side Bus Stops. *Transportation Research Board 94th Annual Meeting*, 11–15 January, Washington, D.C., Paper No. 15-1426.
8. *Khalighi, F., and **Christofa, E.** 2015. Emission-based Signal Timing Optimization for Isolated Intersections. *Transportation Research Board 94th Annual Meeting*, 11–15 January, Washington, D.C., Paper No. 15-5871.
9. *Roach, D., **Christofa, E.**, and Knodler Jr., M.A. 2015. Evaluating the Applicability of SSAM for Modeling the Safety of Roundabouts. *Transportation Research Board 94th Annual Meeting*, 11–15 January, Washington, D.C., Paper No. 15-5207.
10. *Wolput, B., **Christofa, E.**, Carbonez, A., Skabardonis, A., and Tampère, C.M.J. 2015. Updating Webster Formula for Optimal Traffic Signal Settings with Transit Signal Priority. *Transportation Research Board 94th Annual Meeting*, 11–15 January, Washington, D.C., Paper No. 15-2658.
11. *Farid, Y.Z., **Christofa, E.**, and Collura, J. 2014. A Person-based Evaluation of Transit Preferential Treatments on Signalized Arterials. *Transportation Research Board 93rd Annual Meeting*, 12–16 January, Washington, D.C., Paper No. 14-2995.
12. *McKinnon, I., Knodler, M., and **Christofa, E.** 2013. Operational and Safety-based Analyses of Varied Toll Plaza Configurations. *Road Safety and Simulation–International Conference*, 22–25 October, Rome, Italy.
13. **Christofa, E.** and Skabardonis, A., 2013. Robust Signal Timing Optimization vs. Adaptive Control on High Volume Arterials. *mobil.TUM 2013, International Scientific Conference on Mobility and Transport*, 18–19 June, Munch, Germany.
14. **Christofa, E.**, Aboudolas, K., and Skabardonis, A. 2013. Arterial Traffic Signal Optimization: A Person-based Approach. *Transportation Research Board 92nd Annual Meeting*, 13–17 January, Washington, D.C., Paper No. 13-3395.

15. **Christofa, E.**, Argote, J., and Skabardonis, A. 2013. Arterial Queue Spillback Detection and Signal Control based on Connected Vehicle Technology. *Transportation Research Board 92nd Annual Meeting*, 13–17 January, Washington, D.C., Paper No. 13-4903.
16. **Christofa, E.**, Papamichail, I., and Skabardonis, A. 2012. Person-based Traffic Signal Optimization for Real-Time Applications. *Transportation Research Board 91st Annual Meeting*, 22–26 January, Washington, D.C., Paper No. 12-2228.
17. Argote, J., **Christofa, E.**, Xuan, Y., and Skabardonis, A. 2012. Estimation of Arterial Measures of Effectiveness with Connected Vehicle Data. *Transportation Research Board 91st Annual Meeting*, 22–26 January, Washington, D.C., Paper No. 12-1493.
18. Skabardonis, A., Geroliminis, N., and **Christofa, E.** 2012. Vehicle Emissions Estimation Under Oversaturated Conditions along Signalized Arterials. *Transportation Research Board 91st Annual Meeting*, 22–26 January, Washington, D.C., Paper No. 12-3899.
19. Argote, J., **Christofa, E.**, Xuan, Y., and Skabardonis, A. 2011. Estimation of Measures of Effectiveness based on Connected Vehicle Data. *14th International IEEE Conference on Intelligent Transportation Systems*, 5–7 October, Washington, D.C.
20. Skabardonis, A., and **Christofa, E.** 2011. Impact of Transit Signal Priority on Level of Service at Signalized Intersections. *6th International Symposium on Highway Capacity and Quality of Service World Congress*, June 28–July 1, Stockholm, Sweden.
21. Skabardonis, A., and **Christofa, E.** 2011. Evaluation of Methodologies for the Design and Analysis of Freeway Weaving Sections. *1st International Conference on Access Management*, 14–17 June, Athens, Greece.
22. **Christofa, E.**, and Skabardonis, A. 2011. Traffic Signal Optimization with Transit Signal Priority: Application to an Isolated Intersection. *Transportation Research Board 90th Annual Meeting*, 23–27 January, Washington, D.C., Paper No. 11-3092.
23. Skabardonis, A., Geroliminis, N., and **Christofa, E.** 2010. Improved Analysis Framework for Emissions Estimation Under Oversaturated Conditions Along Signalized Arterials. *5th International Congress on Transportation Research in Greece*, 27–28 September, Volos, Greece.
24. **Christofa, E.M.**, and Skabardonis, A. 2010. Traffic Signal Optimization with Conditional Transit Signal Priority for Conflicting Transit Routes. *12th World Conference on Transportation Research*, 11–15 July, Lisbon, Portugal.
25. **Christofa, E.M.**, and Madanat, S.M. 2010. Development of Pavement Crack Initiation Models by Combining Experimental and Field Data. *Transportation Research Board 89th Annual Meeting*, 10–14 January, Washington, D.C., Paper No. 10-1096.
26. **Christofa, E.M.**, and Vlahogianni, E.I. 2008. Incident Impacts on Travel Time on Urban Signalized Arterials. *10th ASCE International Conference on Application of Advanced Technologies in Transportation (AATT)*, 27–31 May, Athens, Greece.

Other Conference Proceedings

1. Chavis C., **Christofa, E.**, 2014. A Real-Time Signal Control Strategy for Mitigating the Impact of Bus Stops on Urban Arterials. *Symposium Celebrating 50 Years of Traffic Flow Theory*, 11–13 August, Portland, OR.
2. Kopelias, P., Papadimitriou, F., Skabardonis, A., and **Christofa, E.**, 2010. Applications of Advanced Analysis Tools for Freeway Performance Measurement. *12th World Conference on Transportation Research*, 11–15 July, Lisbon, Portugal.

Other Publications

1. Skabardonis, A., Shladover, S., **Christofa, E.**, et al. 2013. Advanced Traffic Control Signal Algorithms. Final Report for Interagency Agreement #65A0376, FHWA Exploratory Advanced Research Program Cooperative Agreement DTFH61-10-H-00002.

2. Campbell, R., **Christofa, E.**, Argote, J., Gayah, V., Guler, I., and Skabardonis, A. 2012. Operating a Diverging Diamond Interchange: A signal timing optimization strategy. Report submitted to the Transportation Research Board Traffic Signal Systems Committee.
3. **Christofa, E.** 2012. Traffic Signal Optimization with Transit Priority: A Person-based Approach. PhD Dissertation, University of California, Berkeley.
4. **Christofa, E.** 2007. Travel Time Estimation in Signalized Arterials Under Incident Conditions. Diploma Thesis, National Technical University of Athens (In Greek).

PRESENTATIONS

Conference Presentations

1. Guler, S.I., and **Christofa, E.** 2015. Bus Lanes and Pre-signals with Transit Signal Priority: Domains of Application, *2015 MASITE Annual Meeting*, 4–5 October, King of Prussia, PA.
2. **Christofa, E.**, and Guler, S.I. 2015. Bus Lanes and Signal Priority, *2015 Northeastern District Annual Meeting*, 13-15 May, Albany, NY.
3. *Farid, Y.Z., **Christofa, E.**, and Collura, J. 2015. Tools to Assess the Impacts of Transit Preferential Treatments: Analytical Techniques and Simulation Model. *ITS Massachusetts 20th Annual Meeting*, 5–6 May, Boston, MA.
4. Rahimi, M., Gonzales, E.J., **Christofa, E.**, Knodler, M., Riessman, R., and Gazillo, J. 2015. Uses of Data for Transportation System Analysis, *Data Science Launch Symposium*, University of Massachusetts, Amherst, 9 April, Amherst, MA.
5. *Farid, Y.Z., **Christofa, E.**, and Collura, J. 2015. Person-Based Evaluation of Dedicated Bus Lanes and Queue Jumper Lanes at Signalized Intersections with Near-Side Bus Stops. *16th UMass Annual Technical Day and Student Research Symposium*, March 26, Amherst, MA.
6. *Khalighi, F. and **Christofa, E.** 2015. A Real-Time Signal Control System to Minimize Emissions at Isolated Intersections. *16th UMass Annual Technical Day and Student Research Symposium*, March 26, Amherst, MA.
7. *Farid, Y.Z., **Christofa, E.**, and Collura, J. 2014. Person-Based Evaluation of Queue Jumper Lanes and Transit Signal Priority Strategies, *2014 Northeastern District Annual Meeting*, 14-16 May, Long Branch, NJ.
8. *Farid, Y.Z., **Christofa, E.**, and Collura, J. 2014. Evaluating the Impact of Transit Preferential Treatments on the Person Delay and Person Discharge Flow of Signalized Arterial Corridors. *10th Annual Transportation Student Research Symposium*, 2 April, University of Connecticut, Storrs, CT.
9. *Khalighi, F., and **Christofa, E.** 2014. Real-Time Signal Control System to Minimize Person Delay and Emissions. *10th Annual Transportation Student Research Symposium*, 2 April, University of Connecticut, Storrs, CT.
10. *Roach, D., **Christofa, E.**, and Knodler, M. 2014. Before and After Study of Double Roundabout: Queue Length, Gap Availability, and Gap Acceptance. *15th UMass Annual Technical Day*, March 27, Amherst, MA.
11. *Khalighi, F., and **Christofa, E.** 2014. Real-Time Signal Control System to Minimize Person Delay and Emissions. *15th UMass Annual Technical Day*, March 27, Amherst, MA.
12. *Farid, Y.Z., **Christofa, E.** and Collura, J. 2014. A Person-based Evaluation of Transit Preferential Treatments on Signalized Arterials. *15th UMass Annual Technical Day*, March 27, Amherst, MA.
13. *Farid, Y.Z., **Christofa, E.**, and Collura, J. 2014. Person-based Evaluation of Queue Jumper Lanes and Transit Signal Priority Strategies on Urban Arterials. *Institute of Transportation Engineers (ITE) 2014 Technical Conference and Exhibit*, 9-12 March, Miami, FL.

14. *Farid, Y.Z., **Christofa, E.**, and Collura, J. 2013. Person-Based Transit Preferential Treatments on Signalized Arterials. *Institute of Transportation Engineers (ITE) Northeastern District Annual Meeting*, 22-24 May, Northampton, MA.
15. **Christofa, E.**, and Campbell, R.J. 2013. Impact of Bus Stops on the Capacity of Signalized Intersections. *Institute of Transportation Engineers (ITE) Northeastern District Annual Meeting*, 22-24 May, Northampton, MA.
16. Gonzales, E.J., and **Christofa, E.** 2012. Bottleneck Congestion with a Fixed and Peak Toll: San Francisco - Oakland Bay Bridge. *1st European Symposium on Quantitative Methods in Transportation Systems*, 4-7 September, Lausanne, Switzerland.
17. Campbell, R., **Christofa, E.**, Argote, J., Gayah, V., Guler, I., and Skabardonis, A. 2012. Contest: Can You Operate a Diverging Diamond? *Transportation Research Board Traffic Signal Systems Committee Midyear Meeting*, 23-24 July, Irvine, CA.
18. Campbell, R., **Christofa, E.**, and Skabardonis, A. 2012. Impact of Transit Operations on Intersection Capacity. *Innovations in Traffic Flow Theory and Characteristics, and Highway Capacity and Quality of Service Symposium*, 19-22 June, Fort Lauderdale, FL.
19. Argote, J., **Christofa, E.**, and Skabardonis, A. 2012. Minimum Connected Vehicle Penetration Rate for Accurate Arterial Measures of Effectiveness Estimation. *18th University of California Transportation Center Student Conference*, 20 April, Berkeley, CA.
20. **Christofa, E.** 2012. Traffic Signal Optimization with Transit Priority. *Institute of Transportation Studies Seminar Series*, University of California, Berkeley, 16 March, Berkeley, CA.
21. **Christofa, E.** 2012. Network Traffic Signal Optimization with Transit Priority. *Workshop for Doctoral Student Research in Transportation Operations and Traffic Control, Transportation Research Board 91st Annual Meeting*, 22-26 January, Washington, D.C.
22. **Christofa, E.** 2011. Advanced Traffic Signal Control Algorithms with Connected Vehicle. *U.C. Berkeley Transportation Engineering Open House*, 1 April, Berkeley, CA.
23. **Christofa, E.** 2011. Traffic Signal Optimization with Transit Signal Priority: Application to an Isolated Intersection. *17th University of California Transportation Center Student Conference*, 24-25 February, Berkeley, CA.
24. **Christofa, E.** 2011. Network Traffic Signal Control with Transit Priority. *2011 Eisenhower Research Showcase, Transportation Research Board 90th Annual Meeting*, 23-27 January, Washington, D.C.
25. **Christofa, E.** 2010. Traffic Signal Control Optimization with Transit Priority for Conflicting Transit Routes. *16th University of California Transportation Center Student Conference*, 1-2 April, Irvine, CA.
26. **Christofa, E.M.**, and Skabardonis, A. 2009. System-wide Signal Timing Optimization with Transit Priority for Conflicting Bus Routes. *INFORMS Annual Meeting 2009*, 11-14 October, San Diego, CA.

Invited Talks

1. **Christofa, E.**, Farid, Y.Z., and Khalighi, F. 2016. Sustainable Urban Traffic Management using Advanced Technologies, *T3e Webinar, ITS PCB Program, Volpe National Transportation Systems Center*, 26 May.
2. **Christofa, E.**, 2016. Real-time Signal Control for Sustainable Traffic Management, *Meet the Jury Seminar, University of Leuven*, 25 May, Leuven, Belgium.
3. **Christofa, E.**, 2015. Signal Control Strategies for Improved Person Mobility and Air Quality in Multimodal Transportation Systems, *Department of Transportation Planning and Engineering, School of Civil Engineering, National Technical University of Athens*, 16 December, Athens, Greece.
4. **Christofa, E.**, 2015. Assessing the Accuracy of SSAM for Modeling Roundabout Safety, *Research to Practice Safer-Symposium*, 25-27 February, San Juan, Puerto Rico.

5. **Christofa, E.**, 2014. ITS America University Workshop on Incorporating ITS Education into University Curriculum and Learning Programs, 25–26 September, Washington, DC.
6. **Christofa, E.**, 2014. Public Transportation Systems (Short Course), University of Santa Catarina, 4–8 August, Florianopolis, Brazil.
7. **Christofa, E.**, 2014. Transit Preferential Treatments: Person-based Evaluation and Control. *Penn State Transportation Seminar*, 1 May, State College, PA.
8. **Christofa, E.**, 2014. Transit Priority in Urban Traffic: Real-time Signal Control and Person-based Evaluation. SincroBUS International Project, Real-time Information and Control Systems for Buses, ZAPTA, 3 April, Florianopolis, Brazil
9. **Christofa, E.**, 2014. The Future of Transportation (Panel). *15th UMass Annual Technical Day*, March 27, Amherst, MA
10. **Christofa, E.**, 2014. Incorporating Pedestrian and Bicycle Transportation in a Transportation Sustainability Course. Pedestrian and Bicycle University Education Joint Subcommittee of Bicycle Transportation and Pedestrians Committees, *Transportation Research Board 93rd Annual Meeting*, 12–16 January, Washington, D.C.
11. **Christofa, E.**, 2013. Graduate School Academic Panel: I'm interested in pursuing a career in academics or research. What do I need to know and do? Engineering and Computer Science Women faculty Group, University of Massachusetts, Amherst, 9 October, Amherst, MA.
12. **Christofa, E.**, 2013. Sustainable Management of Multimodal Traffic. Landscape Architecture and Regional Planning Zube Seminar Series, University of Massachusetts, 14 February, Amherst, MA.
13. **Christofa, E.**, 2011. Network Traffic Signal Optimization with Transit Priority. Sensys Networks, 6 December, Berkeley, CA.
14. **Christofa, E.**, 2010. Transportation and Technology. General Meeting of Cal Institute of Transportation Engineers (ITE), 30 September, Berkeley, CA.

TEACHING EXPERIENCE

University of Massachusetts Amherst

SPRING 2014 **Transportation (CEE 310)**

SPRING 2016 *Course Instructor*

This junior level course introduces students to transportation operations, planning, and design, with an emphasis on the highway mode. Topics include: vehicle, operator, and roadway characteristics, traffic control, capacity, geometric design objectives and plan formulation, demand forecasting, and economic, social, and environmental evaluation.
INSTRUCTOR EVALUATION: 4.30/5.00 (SPRING 2014)

FALL 2013 **Transportation Sustainability (CEE 597S/697G)**

SPRING 2015 *Course Instructor*

This senior/graduate level course covers concepts of sustainable transportation management strategies and policies. Such topics include: life-cycle assessment for transportation infrastructure systems, vehicle emission estimation models, alternative fuel vehicles, non-motorized modes, and transit preferential treatments.
INSTRUCTOR EVALUATION: 4.83/5.00 (2013); 4.56/5.00 (2015)

SPRING 2013 **Public Transportation Systems (CEE 410/510)**

Course Instructor

This undergraduate/graduate level course covers the concepts of designing fixed-route and flexible transit systems, fleet and crew management methods and the evaluation and financing of transit projects.
INSTRUCTOR EVALUATION: 4.05/5.00

FALL 2012, 2014 **Traffic Flow Theory and Simulation I (CEE 520/697E)**
Course Instructor
 This senior/graduate level course covers the fundamentals of traffic flow theory, macro and microscopic mathematical models, capacity analysis, and queueing.
 INSTRUCTOR EVALUATION: 4.95/5.00 (2012); 4.30/5.00 (2014)

Federal University of Santa Catarina, Florianopolis, Brazil

AUGUST 2014 **Public Transportation Systems (short course)**
Course Instructor
 Taught a 5-day course on public transportation systems to faculty and graduate students of the Department of Automation and Systems

University of California, Berkeley

FALL 2010 **Intelligent Transportation Systems (CEE 253)**
Graduate Student Instructor; Prof. Skabardonis
 Developed course assignments; Taught lab section; Held office hours

SPRING 2010, 2012 **Highway Traffic Operations (CEE 255)**
Graduate Student Instructor; Prof. Skabardonis
 Developed & graded course assignments; Taught discussion section; Held office hours

ADVISING

PhD Students

JAN.2013–NOW Yashar Zeinyali Farid (UMass)
 International Road Federation Road Scholar Fellowship (2013)
 SEPT.2015–NOW Farnoush Khalighi (UMass)
 WTS Boston Chapter Claire Barrett Memorial Graduate Scholarship (2015)

MSc Students

SEPT.2015–NOW Nicholas Fournier (UMass)
 Eisenhower Graduate Fellowship (2015)
 People's choice award for poster at the 16th UMass Annual Technical Day and Student Research Symposium (2015)
 SEPT. 2015 Farnoush Khalighi (UMass, now PhD student at UMass)
 2nd position for best poster at the 16th UMass Annual Technical Day and Student Research Symposium (2015)
 DECEMBER 2014 Derek Roach (UMass, now at Vanasse & Associates, Andover, MA)
 MAY 2014 Ethan Minott (UMass)

Undergraduate Students

SUMMER 2015 Jin Rui Yap (Smith College)
 SPRING 2015 Nathan Ziegler (UMass, now at Metro North Railroad, New York, NY)

Graduate Committee Member

MSc Students

IN PROGRESS Foroogh Hajiseyedjavadi (UMass)
 JULY 2015 Jonathan Freeman (UMass)
 DECEMBER 2014 Christina Dube (UMass)
 AUGUST 2014 Ralph Burgener (École Polytechnique Fédérale de Lausanne)
 MAY 2013 Ian McKinnon (UMass)

PhD Students

IN PROGRESS	Cole Fitzpatrick (UMass)
IN PROGRESS	Marie Louis (UMass)
IN PROGRESS	Bart Wolput (Katholieke Universiteit Leuven, Belgium)
APRIL 2015	Rooholamin Shabihkhani (Rutgers University)
AUGUST 2014	Elizabeth Ebacher (UMass)

UNIVERSITY & PROFESSIONAL SERVICE

Professional Service

2015	Scientific review committee for the 19 th EURO Working Group on Transportation (EWGT)
2015–PRESENT	Member of TADD55 Task Force on Arterials and Public Health
2013–PRESENT	Paper Review Chair for the TRB AHB25 Traffic Signal Systems Committee
2015	Presiding officer for session titled: 'Multimodal Traffic Control' at the Transportation Research Board 94 th Annual Meeting
2014	Chaired session titled: 'What's new in University ITS Research?' at the ITS Massachusetts/New England Meeting and Conference
2014	Presiding officer for session titled: 'Traffic Signals for Multimodal Systems' at the Transportation Research Board 93 rd Annual Meeting
2013–PRESENT	Member of AHB25 Traffic Signal Systems Committee
2013–PRESENT	Associate Editor for the International IEEE Annual Conference on Intelligent Transportation Systems

University Service

2015	PhD Comprehensive Written Exam Coordinator
2014–2015	CEE Faculty Search Committee
2014–PRESENT	CEE Scholarship Committee
2013–2015	CEE Faculty Meeting Secretary
2012–PRESENT	Undergraduate Advising

Journal Referee Work

Advances in Mechanical Engineering
 Applied Sciences
 ASCE Journal of Infrastructure Systems
 ASCE Journal of Transportation Engineering
 EURO Journal on Transport and Logistics
 IATSS Research
 IEEE Transactions on Intelligent Transportation Systems
 IET Intelligent Transport Systems
 International Journal of Transportation
 Journal of Intelligent Transportation Systems
 Journal of Professional Issues in Engineering Education and Practice
 Transportation Letters
 Transportation Research Record
 Transportation Science
 Transportmetrica B: Transport Dynamics
 Transportation Research Part C: Emerging Technologies
 Transportation Research Part D: Transport and Environment

Conference Referee Work

European Symposium on Quantitative Methods in Transportation Systems
19th EURO Working Group on Transportation
International IEEE Annual Conference on Intelligent Transportation Systems
Road Safety & Simulation International Conference
Transportation Research Board
World Conference on Transport Research (WCTR)

MEMBERSHIPS

Transportation Research Board (Affiliate):

- TADD55 Task Force on Arterials and Public Health, member (2015–2018)
- AHB25 Traffic Signal Systems Committee, member (2013–2017)
- AHB40 Highway Capacity and Quality of Service Committee, friend
- AHB45 Committee on Traffic Flow Theory and Characteristics, friend

American Society of Civil Engineers

Institute of Transportation Engineers

Hellenic Institute of Transportation Engineers

Hellenic Society of Civil Engineers

OUTREACH ACTIVITIES

2014	Participant at the Museum of Science Climate Education Symposium, Boston, MA
2016	New England Future City Competition: Presentation Judge
2014 & 2015	New England Future City Competition: Judge for the Best Transportation System
2013 & 2014	Lecturer at the Summer Engineering Institute (UMass Amherst)