Eleni Christofa

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EDUCATION

MAY 2012 (EXPECTED)	**University of California, Berkeley** *Doctor of Philosophy in Civil and Environmental Engineering* Minors: City and Regional Planning, Industrial Engineering and Operations Research Dissertation: *'Network Traffic Signal Optimization with Transit Priority'* Advisor: Prof. Skabardonis
MAY 2008	**University of California, Berkeley** *Master of Science in Civil and Environmental Engineering* Program: Transportation Engineering GPA: 3.83/4.00
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. Karlaftis GPA: 8.34/10.00

RESEARCH INTERESTS

Intelligent Transportation Systems
Traffic Operations and Control
Sustainable Infrastructure Management
Incident Detection and Management
Public Transportation Systems

RESEARCH AND WORK EXPERIENCE

Graduate Student Researcher

Partners for Advanced Transportation and TecHnology (PATH); Supervisor: Prof. Skabardonis

2010–PRESENT	**Advanced Signal Control Algorithms** (US DOT Exploratory Advanced Research) Developing Connected Vehicle-based traffic signal control algorithms
2008–2009	**Integrated Corridor Management (ICM)** Modeling and simulation methods for Integrated Corridor Management
2008	**Effectiveness of Adaptive Traffic Control for Arterial Signal Management** Development of signal control strategies that mitigate vehicle delays and emissions

Berkeley Center for Future Urban Transport, A Volvo Center of Excellence; Supervisor: Prof. Skabardonis

2009–2010	**Traffic Signal Optimization with Transit Priority** Development of signal control systems with transit priority for conflicting transit routes

California Center for Innovative Transportation (CCIT); Supervisor: Dr. Mortazavi

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

Summer Internships

2008	**Cambridge Systematics, Inc., Oakland, CA**; Supervisor: Dr. Alexiadis Modeling traffic conditions on California corridors using simulation packages
2005	**Technical Office of Prokopiou Sarantis, Mytilene, Greece** Supervision of pavement construction and maintenance of roads in Lesvos, Greece

HONORS & AWARDS

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
2002, 2004, 2006	Nikolaos G. Papadimitriou Foundation Scholarship
2004	Scholarship from the Greek Institution of National Scholarships
2002	Award for Distinction in the Greek National Chemistry Competition
1998	Award for Distinction in the Greek National Mathematical Competition

PUBLICATIONS

Refereed Journal Publications

Christofa, E., and Skabardonis, A. 2011. Traffic Signal Optimization with Transit Signal Priority: Application to an Isolated Intersection. *Transportation Research Record, Journal of the Transportation Research Board*. [Forthcoming]

Skabardonis, A., Geroliminis, N., and Christofa, E. 2012. Prediction of Vehicle Activity for Emissions Estimation Under Oversaturated Conditions along Signalized Arterials. *Special Issue of Journal of Intelligent Transportation Systems: Applications for the Environment and Energy Conservation*. [Abstract accepted; Manuscript submitted]

Refereed Conference Publications

Christofa, E., Papamichail, I., and Skabardonis, A., 2012. Person-based Traffic Signal Optimization for Real-Time Applications. *91st Annual Meeting Transportation Research Board*, 22–26 January, Washington, D.C., Paper No. 12-2228.

Argote, J., Christofa, E., Xuan, Y., and Skabardonis, A. 2012. Estimation of Arterial Measures of Effectiveness with Connected Vehicle Data. *91st Annual Meeting Transportation Research Board*, 22–26 January, Washington, D.C., Paper No. 12-1493.

Skabardonis, A., Geroliminis, N., and Christofa, E. 2012. Vehicle Emissions Estimation Under Oversaturated Conditions along Signalized Arterials. *91st Annual Meeting Transportation Research Board*, 22–26 January, Washington, D.C., Paper No. 12-3899.

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.

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.

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.

Christofa, E., and Skabardonis, A. 2011. Traffic Signal Optimization with Transit Signal Priority: Application to an Isolated Intersection. *90th Annual Meeting Transportation Research Board*, 23–27 January, Washington, D.C.

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.

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.

Christofa, E.M., and Madanat, S.M. 2010. Development of Pavement Crack Initiation Models by Combining Experimental and Field Data. *89th Annual Meeting Transportation Research Board*, 10–14 January, Washington, D.C.

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 Publications

Christofa, E. 2007. Travel Time Estimation in Signalized Arterials Under Incident Conditions. Bachelor Thesis (completion requirement for the Diploma of Civil Engineering in NTUA; In Greek).

CONFERENCE PRESENTATIONS & INVITED TALKS

Christofa, E. 2012. Network Traffic Signal Optimization with Transit Priority. Workshop for Doctoral Student Research in Transportation Operations and Traffic Control *91st Annual Meeting Transportation Research Board*, 22–26 January, Washington, D.C.

Christofa, E. 2011. Network Traffic Signal Optimization with Transit Priority. Sensys Networks, 6 December, Berkeley, CA. **(Invited Talk)**

Christofa, E. 2011. Traffic Signal Optimization with Transit Signal Priority: Application to an Isolated Intersection. *17th UCTC Student Conference*, 24–25 February, Berkeley, CA.

Christofa, E. 2011. Network Traffic Signal Control with Transit Priority. 2011 Eisenhower Research Showcase, *90th Annual Meeting Transportation Research Board*, 23–27 January, Washington, D.C.

Christofa, E., 2010. Transportation and Technology. General Meeting of Cal Institute of Transportation Engineers (ITE), 30 September, Berkeley, CA. **(Invited Talk)**

Kopelias, P., Papadimitriou, F., Skabardonis, A., and Christofa, E., 2010. Applications of Advanced Analysis Tool for Freeway Performance Measurement. *12th World Conference on Transportation Research*, 11–15 July, Lisbon, Portugal.

Christofa, E. 2010. Traffic Signal Control Optimization with Transit Priority for Conflicting Transit Routes. *16th UCTC Student Conference*, 1–2 April, Irvine, CA.

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.

TEACHING EXPERIENCE

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

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

REFEREE WORK

Transportation Research Board
Journal of Intelligent Transportation Systems
ASCE Journal of Transportation Engineering
International IEEE Annual Conference on Intelligent Transportation Systems
IET Intelligent Transport Systems
WCTR - World Conference on Transport Research

MEMBERSHIPS

Transportation Research Board (Affiliate):
- AHB25 Traffic Signal Systems Committee, friend
- AHB40 Highway Capacity and Quality of Service Committee, friend
- AHB45 Committee on Traffic Flow Theory and Characteristics, friend

Institute of Transportation Engineers
Institute for Operations Research and the Management Sciences
Hellenic Institute of Transportation Engineers
Hellenic Society of Civil Engineers
Technical Chamber of Greece

LEADERSHIP EXPERIENCE

FALL 2011 **Institute of Transportation Studies Friday Seminar Series**, *Organizer*
Invited academics and professionals to speak; Coordinated the seminar

2009–2011 **National Hellenic Student Association of America**, *Vice Pres. of Internal Affairs*
Managed communications among existing members, recruiting of new members, and organization of bi-annual nationwide conventions

2008–2009 **Hellenic Student Association at Berkeley**, *President*
Coordinated operations, fundraising, and social events

2006–2004 **National Technical University of Athens Senate**, *Student Representative*
Represented Civil Engineering undergraduate students in NTUA's Senate, the Civil Engineering Administrative Board, and the Transportation Group Administrative Board

2005–2004 **National Technical University of Athens Class of 2007**, *President*
Organized with Professors an international educational trip on geotechnical related infrastructure failures; Raised funds to financially support the trip

SKILLS

Computer: MS Office, LaTeX, MATLAB, C++, AIMSUN, PARAMICS, CORSIM, SYNCHRO, TOPL, LIMDEP, STATA
Languages: Greek (native), English (fluent), French (basic)