

KONSTADINOS (KOSTAS) G. GOULIAS

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EDUCATION

- Ph.D. Civil Engineering - Major in Transportation and Minors in Stochastic Processes and Statistics. Department of Civil Engineering, University of California, Davis, September 1991. Dissertation: Long Term Forecasting with Dynamic Microsimulation. Advisor: Ryuichi Kitamura.
- M.S.C.E. Civil Engineering - Major in Transportation Engineering. Department of Civil Engineering, The University of Michigan, Ann Arbor, Michigan, August 1987. Advisor: Donald Cleveland.
- Laurea Civil Engineering (B.S. & M.S.C.E.), Università degli Studi della Calabria, Dipartimento di Pianificazione Territoriale (Territorial Planning Department), College of Civil Engineering, Cosenza, Italy, March 1986. Thesis: Econometric Models for the Forecast of Travel Demand: A Hierarchical Approach of Mode Choice (*In Italian*). Advisor: Demetrio C. Festa.

EMPLOYMENT IN UNIVERSITIES

Professor: University of California, Department of Geography, Santa Barbara, California (March 2004-present)

Duties and responsibilities: Teaching graduate and undergraduate courses in Transportation Systems Planning and Analysis: Geog 111A/211A - Transportation Planning and Modeling; Geog 111B/211B - Transportation Modeling and Simulation; Geog 211C - Activity and Travel Behavior Analysis; GEOG 288KG - Seminar in the 4 T's in Life: Time-Use, Transportation, Technology, and Telecommunications; GEOG 210B - Analytical Methods in Geography II, Regression Methods; GEOG 210C - Analytical Methods in Geography III, Spatial Statistics; GEOG 5 – People, Place, and Environment: Introductory Human Geography; Freshman Seminar INT94TC – Self-Driving Cars and Green Futures; Freshman Seminar INT94TR – Smart Green Cities.

Co-Founder and Co-Director GeoTrans Laboratory: University of California, Department of Geography, Santa Barbara, California (July 2007-present)

Research initiatives include: Transportation Planning and Modeling, Travel Demand Analysis, Economic and Behavioral Geography, Geographic Information Science, Applied Statistics and Econometrics, Microsimulation in Activity-based Analysis and Forecasting, Travel Behavior, Activity

and Travel Survey Design, Transportation and Air Quality, Travel Demand Management, Congestion Management Systems, Traffic Analysis and Site Impacts, Telecommunications and Travel Behavior/Demand, Optimal Resource Allocation, and Road Transport Informatics/Intelligent Transportation Systems. Goulias has been the Principal Investigator of approximately \$6.0 millions of projects sponsored by regional, state, and federal sponsors from 2004 to 2017.

Associate Director University of California Transportation Center (UCTC): University of California, (2008-2017)

Duties and responsibilities: Set the overall policy direction for the center and assure coordination with the major transportation research and education groups on the partner UC and CalState campuses. Prepare drafts of campus annual reports, coordinate projects, serve as contact for sponsors and press, provide announcements and related news items for the centers web page.

Executive Committee Member and Campus Representative: University of California Center on Economic Competitiveness in Transportation (UC CONNECT): University of California, (2013-2017)

Duties and responsibilities: Same as UCTC above.

Professor: The Pennsylvania State University, Department of Civil and Environmental Engineering, University Park, Pennsylvania. (July 2002- February 2004).

Duties and responsibilities: Teaching graduate and undergraduate courses: CE521 Transportation Networks and Systems Analysis; CE523 Analysis of Transportation Demand; CE 597 Models of Probability; CE 598 Data Analysis in Transportation; CE498/598 Design of Multimodal Facilities; CE598 Activity-Based Approaches to Travel Behavior Research; CE422 Transportation Planning (and Modeling Methods); CE221 Introduction to Transportation Systems. Research in travel behavior and transportation systems analysis (same as at UCSB).

Regional Multi-University Consortium Director: Mid-Atlantic Universities Transportation Center (MAUTC), The Pennsylvania Transportation Institute, The Pennsylvania State University. (September 2002 – February 2004).

Duties and responsibilities: Direct and coordinate a partnership among transportation centers in Region 3 of the US DOT program. Coordinate and conduct research within the PennState component.

Institutional charge: MAUTC was a consortium of Penn State University, University of Pennsylvania, University of Virginia, Virginia Tech, and University of West Virginia. Its charge is to advance the state-of-art and the state-of-the-practice in the use of advanced technologies and management techniques to benefit transportation systems. The PennState component of research in this consortium emphasizes a systems approach that is also human-centered. To this end MAUTC funds were matched with local funding, mainly from the Pennsylvania Department of Transportation but also from local and international partners, in projects to create new modeling and simulation systems and a variety of travel behavior studies using data from the US, Australia, and Europe.

Program Director: The Pennsylvania State University, The Pennsylvania Transportation Institute, Transportation Operations Program (TOP). (November 1997 - February 2004).

Duties and responsibilities: Member of the Institute's Executive Committee to direct, develop and implement the transportation planning, highway engineering, traffic engineering, roadway safety, transportation logistics, and public transportation research activities of the Institute. In fiscal year 2000-2001 TOP has had 92 active projects of contract value \$18.5 million (43.8% of the entire PTI contract value) and expenditures of external funds of 4.5 million (42.4% of the entire PTI annual expenditures). TOP was the largest and most diverse program at PTI and consisted of approximately 60 individuals including 10 faculty/research associates, 4 full time research assistants/engineers, 35 graduate/undergraduate students, and 6 on as needed support staff.

Director: Center for Intelligent Transportation Systems (CITranS), College of Engineering and The Pennsylvania Transportation Institute, The Pennsylvania State University. (December 1997 – February 2004).

Duties and responsibilities: Direct, develop, and coordinate the Intelligent Transportation Systems (ITS) activities at Penn State. ***Institutional charge:*** CITranS was a Center of Excellence within the College of Engineering. The Center promoted interdisciplinary research among the various university colleges and research institutes, centers, and laboratories in Intelligent Transportation Systems and related topics. CITranS coordinated proposal preparation and outreach with public and private sponsors. In a typical year maintained around \$1 million in sponsored research contracts. CITranS also organized an International Conference for ITS America (RATTS 1998) and provided funding on average for 10 to 14 graduate students from a variety of specialties such as Business Logistics, Industrial Engineering, and Civil and Environmental Engineering.

Associate Professor: The Pennsylvania State University, Department of Civil and Environmental Engineering, University Park, Pennsylvania. (July 1997- June 2002).

Program Manager: The Pennsylvania State University, The Pennsylvania Transportation Institute, Transportation Operations Program. (July 1996-November 1997). Duties same as program director above.

Assistant Professor: The Pennsylvania State University, Department of Civil and Environmental Engineering, University Park, Pennsylvania. Same duties as above. (August 1991-June 1997). Duties are the same as associate professor above.

Post Graduate Research Engineer: University of California at Irvine, Institute of Transportation Studies, Irvine, California. (April 1991 - June 1991).

Post Graduate Research Engineer: University of California at Davis, Department of Civil Engineering, Davis, California (September 1988 - August 1991).

Transportation Lab Coordinator: Engineering Summer Residency Program. Organized labs and demonstrated traffic engineering techniques (June 1990).

Teaching Assistant: Traffic Engineering and Transportation Facilities Design (January 1990-June 1990).

Research Assistant: Bureau Goudappel Coffeng, Deventer, The Netherlands. (Summers of 1989 and




1990).

Research Assistant: University of California at Davis, Department of Civil Engineering, Davis, California. (September 1987-June 1988).


EMPLOYMENT IN CONSULTANT COMPANIES AND PUBLIC AGENCIES

Duties and responsibilities: Provide transportation engineering and planning consulting services to State/Federal agencies and International organizations and firms. Has worked in *Australia, Germany, Greece, Italy, Japan, the Netherlands, Portugal, Qatar, and the United States* developing new data collection and modeling techniques, simulation frameworks, and expert reviews of technologies and engineering practice and policies.

BOOKS AND JOURNALS

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|  | Transportation Systems Planning: Methods and Applications. This is an edited volume by K.G. Goulias in the CRC Press (Boca Raton, FL) series New Directions in Civil Engineering, 2003. The content is also available in electronic form at ENGnetBASE. |
|  | Transport Science and Technology. This is an edited volume by K.G. Goulias with a selection of papers from the TRANSTEC Athens 2004 conference published by Elsevier in 2006. |
|  | Transportation Letters: The International Journal of Transportation Research is a quarterly journal that publishes high-quality review and min-review papers as well as major contributions to the state of the art in transportation research. Journal Editors-in-Chief: Kostas Goulias, University of California , Santa Barbara (goulias@geog.ucsb.edu) Kouros Mohammadian, University of Illinois , Chicago (kouros@uic.edu). Taylor & Francis. |

CONFERENCE PROCEEDINGS

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|  | Transtec Prague, Transport Science & Technology Congress, 13 - 15 September 2007: Proceedings of International Conference. This is an edited volume by M. Novak and K.G. Goulias. 594 pages. ISBN: 9788001037829 |
| CEUP 2014 | Civil Engineering and Urban Planning III. This is an edited volume by K. Mohammadian, K.G. Goulias, E. Cicek, J. Wang, and C. Maraveas. CRC Press. 520 pages. ISBN: 9781138001251 |

PUBLICATIONS ([HTTP://WWW.GEOG.UCSB.EDU/GEOTRANS/PUBLICATIONS.PHP](http://www.geog.ucsb.edu/geotrans/publications.php))

1. McBride E.C., A.W. Davis, and K.G. Goulias (2017) A Spatial Latent Profile Analysis to Classify Land Uses for Population Synthesis Methods in Travel Demand Forecasting. Paper (18-06631) accepted for presentation at the 97th Annual Transportation Research Board Meeting, January 7-11, 2018, Washington D.C. and inclusion in the TRB proceedings.

2. Davis A.W., E.C. McBride, and K.G. Goulias (2017) A Latent Class Pattern Recognition and Data Quality Assessment of Non-commute Long-distance Travel in California. Paper (18-04945) accepted for presentation at the 97th Annual Transportation Research Board Meeting, January 7-11, 2018, Washington D.C. and inclusion in the TRB proceedings.
3. Davis A.W., E.C. McBride, K. Janowicz, R. Zhu, and K.G. Goulias (2017) A Tour-based Path Analysis of Long Distance Non-commute Travel Behavior in California. Paper (#18-00160) accepted for presentation at the 97th Annual Transportation Research Board Meeting, January 7-11, 2018, Washington D.C. and inclusion in the TRB proceedings.
4. Lee J.H. and K.G. Goulias (2017) Statewide Comparison of Origin-Destination Matrices between California Travel Model and Twitter. Paper (#18-00857) accepted for presentation at the 97th Annual Transportation Research Board Meeting, January 7-11, 2018, Washington D.C. and inclusion in the TRB proceedings.
5. Lee J. H. and K.G. Goulias (2017) A Decade of Dynamics of Residential Location, Car Ownership, Activity, Travel and Land Use in the Seattle Metropolitan Region. *Transportation Research Procedia: Papers selected for the 22nd International Symposium on Transportation and Traffic Theory*, Chicago, Illinois, USA, 24-26, 2017. Pages 420-439.
6. Lee J. H. and K. G. Goulias (2017) Companionship and Time Investment in Social Fields at Different Life Cycle Stages: Implications for Activity and Travel Modeling and Simulation. Paper presented in *Frontiers in Transportation 2015 workshop*, Beaumont Estate, Windsor, July 24, 2015. *Research in Transportation Economics (in press & available online February 2017)*.
7. Lee J.H. A.W. Davis, S.Y. Yoon, and K.G. Goulias (2017) Exploring Daily Rhythms of Interpersonal Contacts: Time of day dynamics of human interactions using latent class cluster analysis. *Transportation Research Record: Journal of the Transportation Research Board - No. 2669 (in press)*. DOI 10.3141/2669-09.
8. McBride E., A.W. Davis, J.H. Lee, and K.G. Goulias (2017) Incorporating Land Use in Synthetic Population Generation Methods and Transfer of Behavioral Data. *Transportation Research Record: Journal of the Transportation Research Board - No. 2668 (in press)*. DOI 10.3141/2668-02.
9. Ravulaparthi S. , K.C. Konduri, and K.G. Goulias (2017) Exploring the role of activity time-use frontiers on emotional well-being: an evidence from disability and use of time survey. *Transportation Research Record: Journal of the Transportation Research Board – No. 2665 (in press)*. DOI: 10.3141/2665-10.
10. Lee J., Davis A. W., and K. G. Goulias (2017) Triggers of Behavioral Change: Longitudinal Analysis of Travel Behavior, Household Composition and Spatial Characteristics of the Residence. *Journal of Choice Modelling (in press & available online)*.
11. Lee J.H. A.W. Davis, E. McBride, and K.G. Goulias (2017) Exploring Social Media Data for Travel Demand Analysis: A comparison of Twitter, household travel survey and synthetic population data in California, Paper presented at the 96th Annual Meeting of the Transportation

Research Board, Washington, D.C., January 8-12, 2017. *In TRB Compendium of Papers*.

12. Ravulaparthi S. and K.G. Goulias (2016) Fundamental Linkages Between Activity Time-Use and Subjective Well-Being for Elderly Population: A Joint Exploratory Analysis Framework for In-Home and Out-Of-Home Activities. *Transportation Research Record: Journal of the Transportation Research Board*, No. 2566, pp. 31-40. DOI: 10.3141/2566-04.
13. Ravulaparthi S. and K.G. Goulias (2016) Exploring the Role of Location in Dynamics of Birth and Death of Business Establishments: Case Study Analysis of Santa Barbara County, California. *Transportation Research Record: Journal of the Transportation Research Board*, No. 2564, pp. 106–117. DOI: 10.3141/2564-1.
14. Kroesen M. and K. G. Goulias (2016) Modelling Activity-travel Behaviour Dynamics with Panel Data: The State-of-the-art. *European Journal of Transport and Infrastructure Research Issue 16(4)*, 2016 pp. 633-637 ISSN: 1567-7141.
15. McBride, E., Lee, J. H., Lundberg, A., Davis, A. W., & Goulias, K. G. (2016). Behavioral Micro-dynamics of Car Ownership and Travel in the Seattle Metropolitan Region from 1989 to 2002. *European Journal of Transport and Infrastructure Research Issue 16(4)*, 2016 pp. 735-753 ISSN: 1567-7141.
16. Davis A. W., Lee, J.H. & Goulias K.G. (2016) Taking Place Attitudes into Travel Behavior Research. *Paper presented at the 95th Annual Meeting of the Transportation Research Board. Washington, DC. In TRB Compendium of Papers*.
17. Lee, J. H., Davis, A. W., & Goulias, K. G. (2016). Activity Space Estimation with Longitudinal Observations of Social Media Data. *Paper presented at the 95th Annual Meeting of the Transportation Research Board. Washington, DC. Transportation, Volume 43, Issue 6, pp 955–977. doi:10.1007/s11116-016-9719-1*.
18. Shao, C., Xia, J. C., Lin, T. G., Goulias, K. G., & Chen, C. (2015). Logistic regression models for the nearest train station choice: A comparison of captive and non-captive stations. *Case Studies on Transport Policy*, 3(4), 382-391.
19. Lee J., S. Gao, and K. G. Goulias (2015) Can Twitter data be used to validate travel demand models? Paper presented the 14th International Conference on Travel Behaviour Research, Windsor 19-23, July.
20. Davis A. W., J. H. Lee, K. Deutsch-Burgner, E. McBride, K.G. Goulias (2015) Perception and Reality: Linking Metrics of Place Perception to Measurable Attributes of Place Using Cross-Classified SEM Analysis. Paper presented the 14th International Conference on Travel Behaviour Research, Windsor 19-23, July.
21. Tsouros I., A. Polydoropoulou, K.G. Goulias, and A. Tsirimpa (2015) Rhythms in Urban and Island Areas: Does Lifestyle Affect Daily Dynamics? Paper presented the 14th International Conference on Travel Behaviour Research, Windsor 19-23, July.

22. Goulias K.G. (2015) An Overview of GeoSimulation for Smart City Planning, Design, and Operations. Smart Cities Symposium Prague 2015. Faculty of Transportation Sciences, June 24 - 25, 2015, Prague, Czech Republic.
23. Goulias K.G. (2015) Design and Implementation of a Simulator of Activities, Greenhouse Gas Emissions, Networks, and Travel (SimAGENT) in Southern California. *International Conference on Foresight*. 22-24 June 2015, Athens, Greece.
24. Lee J.H., A.W. Davis, and K.G. Goulias (2015) Triggers of Behavioral Change. Paper presentation at the 4th International Choice Modelling Conference, Austin, TX. May 10-13, 2015.
25. Davis A.W., J.H. Lee, K. Deutsch-Burgner, E. McBride, and KG Goulias (2015) Perception and Reality: Linking Metrics of Place Perception to Measurable Attributes of Place Using Cross-Classified SEM Analysis. Paper presentation at the 4th International Choice Modelling Conference, Austin, TX. May 10-13, 2015.
26. Goulias, K., Lee, J. H., Deutsch-Burgner, K., Davis, A. W., & Wu, F. (2015, May). Detection and Measurement of Latent and Manifest Heterogeneity of Familiarity, Perceptions, and Attractiveness of Places Using Multilevel Analysis. Paper presentation at the 4th International Choice Modelling Conference, Austin, TX. May 10-13, 2015.
27. Lee J.H., A.W. Davis, and K.G. Goulias (2015) Exploratory Analysis of the Relationships Among Long Distance Travel, Sense of Place, and Subjective Well-Being of College Students. Paper presentation at the *94th Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 11-15, 2015. Also published as GEOTRANS Report 2014-8-01, Santa Barbara, CA.
28. Lee J.H. and K.G. Goulias (2015) Examining Differences and Commonalities of Life Cycle Stages in Daily Contacts and Activity-Travel Time Allocation. Paper presentation at the *94th Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 11-15, 2015. Also published as GEOTRANS Report 2014-8-02, Santa Barbara, CA.
29. Davis A.W., J.H. Lee, and K.G. Goulias (2015) Analyzing Bay Area Bikeshare Usage in Space and Time. Paper presentation at the *94th Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 11-15, 2015. Also published as GEOTRANS Report 2014-8-03, Santa Barbara, CA.
30. Goulias K. G., J.H. Lee, and A.W. Davis (2015) Longitudinal Mixed Markov Latent Class Analysis of the 1989 to 2002 Puget Sound Transportation Panel Data. Paper presentation at the *94th Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 11-15, 2015. Also published as GEOTRANS Report 2014-8-04, Santa Barbara, CA.
31. Ravulaparthi S.K. and K.G. Goulias (2015) Exploring locational influences on technical efficiency of business establishments in Santa Barbara County using stochastic frontier modeling framework. Paper presentation at the *94th Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 11-15, 2015. Also published as GEOTRANS Report 2014-8-06, Santa Barbara, CA.

32. Deutsch-Burgner K and K.G. Goulias (2015) Measuring Heterogeneity in Spatial Perception for Activity and Travel Behavior Modeling. Paper presentation at the *94th Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 11-15, 2015. Also published as GEOTRANS Report 2014-8-07, Santa Barbara, CA.
33. Lin, T. G., Xia, J. C., Robinson, T. P., Goulias, K. G., Church, R. L., Olaru, D., ... & Han, R. (2014). Spatial analysis of access to and accessibility surrounding train stations: a case study of accessibility for the elderly in Perth, Western Australia. *Journal of Transport Geography*, 39, 111-120.
34. Ravulaparthi S.K. and K.G. Goulias (2014) A comprehensive evaluation of locational determinants on birth and death of business establishments. GEOTRANS Report 2014-8-05, Santa Barbara, CA.
35. Dalal P. and K. G. Goulias (2014) An Analysis of Jobs, Business Establishments, Housing, and Commuting Travel in the Smart Growth Centers of the Puget Sound Region. GEOTRANS Report 2014-3-01, Santa Barbara, CA.
36. Yoon S., S.K. Ravulaparthi, and K.G. Goulias (2014) Dynamic diurnal social taxonomy of urban environments using data from a geocoded time use activity-travel diary and point-based business establishment inventory. *Transportation Research Part A: Policy and Practice*, 68, 3-17. Also published as GEOTRANS Report 2013-11-01, Santa Barbara, CA.
37. Deutsch-Burgner, K., Ravulaparthi, S., & Goulias, K. (2014). Place happiness: its constituents and the influence of emotions and subjective importance on activity type and destination choice. *Transportation*, 41(6), 1323-1340. Also published as GEOTRANS Report 2013-07-02. Santa Barbara, CA.
38. Ravulaparthi, S.K., and K.G. Goulias (2014) Characterizing the Composition of Economic Activities in Central Locations: A Graph-Theoretic Approach to Urban Network Analysis. *Transportation Research Record: Journal of the Transportation Research Board*, 2430(1), 95-104. Also published as GEOTRANS Report 2013-07-01. Santa Barbara, CA.
39. Isbell, N. A., and K.G. Goulias (2014) Modeling Second-by-Second Traffic Emissions in a Mega-Region. Paper accepted for presentation at the *93rd Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 12-16, 2014. Also published as GEOTRANS Report 2013-08-03, Santa Barbara, CA.
40. Chen, Y. Goulias K. G., C. R., Bhat, and R.M. Pendyala (2014) Residential Geolocation of Households in a Large-Scale Activity-based Microsimulation Model and Development of a High Definition Spatial Distribution of Vehicle Miles Traveled. Paper accepted for presentation at the *93rd Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 12-16, 2014. Also published as GEOTRANS Report 2013-08-02. Santa Barbara, CA.
41. Goulias K. G., S. Ravulaparthi, K. Konduri, and R.M. Pendyala (2014) Using Synthetic Population Generation to Replace Sample and Expansion Weights in Household Surveys for Small Area Estimation of Population Parameters. Paper also accepted for presentation at the *93rd*

- Annual Meeting of the Transportation Research Board, Washington, D.C., January 12-16, 2014. Also published as GEOTRANS Report 2013-08-01. Santa Barbara, CA.*
42. Paleti R., C.R. Bhat, R.M. Pendyala, K.G. Goulias, T.J. Adler, A. Bahreinian (2013) Assessing Impact of Transportation Policies on Fuel Consumption and Greenhouse Gas Emissions Using Household Vehicle Fleet Simulator. *Transportation Research Record: Journal of the Transportation Research Board*, 2430(1), 182-190.
 43. Ravulaparthi S. K., K. G. Goulias, S.Y. Yoon, and A. Polydoropoulou (2013) Transport Mobility, Activity, and Subjective Well-being. In *Travel Behaviour Research: Current Foundations, Future Prospect* (Roorda, M. and E. Miller eds), Lulu Publishers, USA.
 44. Goulias K.G. and R.M. Pendyala (2014) Choice Context. Chapter in *Handbook of Choice Modelling* (eds Stephane Hess and Andrew Daly), Emerald. Also published as GEOTRANS Report 2013-02-01. Santa Barbara, CA.
 45. Ravulaparthi, S. K., Goulias, K.G., Sweeney, S. and Kyriakidis, P.C. (2013). Exploring the spatial and temporal patterns of business concentration and dispersion: A case-study analysis for County of Santa Barbara. Paper presented at the 52nd Annual Meeting of Western Regional Science Association, February 24-27, Santa Barbara, CA
 46. Goulias K. G., S. K. Ravulaparthi, A. Polydoropoulou (2013) An Exploratory Analysis on the Time-of-Day Dynamics of Episodic Hedonic Value of Activities and Travel. Paper 13-0521 presented at the 92nd Annual Meeting of the Transportation Research Board, Washington, D.C., January 13-17, 2013.
 47. Ravulaparthi S.K., S.Y. Yoon, and K.G. Goulias (2013) Linking Elderly Transport Mobility and Subjective Well-being: Multivariate Latent Modeling Approach. *Transportation Research Record: Journal of the Transportation Research Board*, 2382(1), 28-36.
 48. Paleti R., C.R. Bhat, R.M. Pendyala, and K. G. Goulias (2013) Modeling of Household Vehicle Type Choice Accommodating Spatial Dependence Effects. Paper 13-3920 presented at the 92nd Annual Meeting of the Transportation Research Board, Washington, D.C., January 13-17, 2013. This paper received the **Pyke Johnson Award by TRB**. *Transportation Research Record: Journal of the Transportation Research Board*, 2343(1), 86-94.
 49. Deutsch K. and K. G. Goulias (2013) Decision Makers and Socializers, Social Networks, and the Role of Individuals as Participants. *Transportation*, Volume 40, Issue 4, pp 755-771.
 50. Tang D., S.K. Ravulaparthi, and K. G. Goulias (2013) Geolocating Activities to Business Establishment Locations Using Time-Dependent Activity Assignment for Travel Demand Modeling. Paper 13-4455 presented at the 92nd Annual Meeting of the Transportation Research Board, Washington, D.C., January 13-17, 2013.
 51. Dalal P. and K.G. Goulias (2013) Preparation and Adaptation Processes in Travel Behavior Dynamics: A Latent Growth Modeling Approach. Geotrans Report 2013-01-01. Santa Barbara, CA.

52. Deutsch K., S.Y. Yoon, and K. G. Goulias (2013) Modeling travel behavior and sense of place using a structural equation model, *Journal of Transport Geography*, Volume 28, pages 155-163.
53. Goulias K.G., R.M. Pendyala, and C. R. Bhat (2013) Chapter 2: Keynote - Total Design Data Needs for the New Generation Large-Scale Activity Microsimulation Models. In *Transport Survey Methods: Best Practice for Decision Making* (eds J. Zmud, M. Lee-Gosselin, M. Munizaga, and J. A. Carasco). Emerald Group Publishing, Bingley, UK.
54. de Abreu e Silva, J.C. Morency, and K.G. Goulias. (2012) Using structural equations modeling to unravel the influence of land use patterns on travel behavior of workers in Montreal. *Transportation Research Part A: Policy and Practice*, Volume 46, Issue 8, pages 1252-1264
55. Goulias K. G. (2012) Geosimulation, activity microsimulation, and safety analysis: commonalities and the potential gain in merging analytical methods. *Journal of Transport and Shipping*. Vol. 5, pages 85-96.
56. Goulias K.G., C. R.Bhat, R.M. Pendyala, Y. Chen, R. Paleti, K. Konduri, G. Huang, and H. Hu (2012) Simulator of Activities, Greenhouse Emissions, Networks, and Travel (SimAGENT) in Southern California. Paper 12-0845 presented at the January 2012 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012.
57. Ravulaparthi S.K., P. Dalal, Y. Chen, and K. G. Goulias (2012) Exploratory Analysis of Spatial Hierarchical Clustering in Los Angeles County, California. *Transportation Research Record: Journal of the Transportation Research Board*, Volume 2307, Issue 1, pages 132-140.
58. Lei T., Y. Chen, and K. G. Goulias (2012) Opportunity-Based Dynamic Transit Accessibility in Southern California: Measurement, Findings, and Comparison with Automobile Accessibility. *Transportation Research Record: Journal of the Transportation Research Board*, Volume 2276, Issue 1, pages 26-37.
59. Bhat C. R., K.G. Goulias, R.M. Pendyala, R. Paleti, R. Sidhartan, L. Schmitt, and H. Hu (2012) A Household-Level Activity Pattern Generation Model: Simulator of Activities, Greenhouse Emissions, Networks, and Travel (SimAGENT) System in Southern California. Paper 12-4226 presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012.
60. Vyas G., R. Paleti, C.R. Bhat, K.G. Goulias, R. M. Pendyala, H. Hu, T. J. Adler, A. Bahreinian (2012) A Joint Vehicle Holdings (Type and Vintage) and Primary Driver Assignment Model with an Application for California. Paper 12-3701 presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012. (in press)
61. Seraj S., R. Sifhartan, C.R. Bhat, R.M. Pendyala, and K.G. Goulias (2012) Parental Attitudes Toward Children Walking and Bicycling to School: Multivariate Ordered Response Analysis. *Transportation Research Record: Journal of the Transportation Research Board*, Volume 2323, pp. 46-55.
62. de Abreu e Silva J., K.G. Goulias, and P. Dalal (2012) A Structural Equations Model of Land Use

- Patterns, Location Choice, and Travel Behavior in Southern California. Paper 12-3422 presented at the *91st Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 22-26, 2012. (in press)
63. Deutsch K. and K.G. Goulias (2012) Understanding Places Using a Mixed Method Approach. Paper 12-2984 presented at the *91st Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 22-26, 2012. (in press)
 64. Yoon SY, K. Deutsch, Y. Chen, and K.G. Goulias (2012) Feasibility of using time-space prism to represent available opportunities and choice sets for destination choice models in the context of dynamic urban environments. *Transportation*, Volume 39(4), pp. 807-823.
 65. Yoon S.Y. and K.G. Goulias (2012) Exploratory Analysis of Differences Between Men and Women in Time and Travel Task Allocation Patterns and Time-Space Prism Accessibility in Dual-Income Households With and Without Children. Paper 12-2668 presented at the *91st Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 22-26, 2012.
 66. Pendyala R.M., C.R. Bhat, K.G. Goulias, R. Paleti, K.C. Konduri, E. Sidhartan, H. Hu, G. Huang, and K. P. Christian (2012) The Application of Socioeconomic Model System for Activity-Based Modeling: Experience from Southern California Paper 12-2186 presented at the *91st Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 22-26, 2012.
 67. Ravulaparthi S.K., P. Dalal, Y. Chen, and K. G. Goulias (2012) An Exploratory Analysis of Spatial Hierarchical Clustering Using Opportunity-based Accessibility and Reported Land Values and its Relationship with Residents Characteristics in Los Angeles County. Paper 12-1297 presented at the *91st Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 22-26, 2012.
 68. Deutsch K. E., S.Y. Yoon, and K.G. Goulias (2012) Using Sense of Place to Model Behavioral Choices. Paper 12-0144 presented at the *91st Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 22-26, 2012.
 69. Kamargianni M., A. Polydoropoulou, and K.G. Goulias (2012) Teenagers' Travel patterns for School and After-School Activities. *Procedia-Social and Behavioral Sciences*. Volume 48. pp. 3635-3650. (Paper presented at the Conference Transport Research Arena Europe, Athens 2012).
 70. Goulias K.G. and S.Y. Yoon (2011) On the Relationship Among Travel Behavior, Time Use Investment and Expenditures in Social Networks. Paper presented at the 16th HKSTS International Conference, Hong Kong, China, December 17-20, 2011, and published in the conference proceedings, pp. 429-436.
 71. de Abreu e Silva J., Martinez L., and K. G. Goulias (2011) Using a multi equation model to unravel the influence of land use patterns on travel behavior of workers in Lisbon. Paper prepared for presentation at the Computers in Urban Planning and Urban Management 2011 Conference, Lake Louise, Alberta, Canada, July 5-8, 2011.
 72. Isbell A. N. and K.G. Goulias (2011) A Method for Computing Flight Emissions and Identifying

- Potential Point-to-Point Aviation Market. Paper in proceedings of the Institute of Electrical and Electronics Engineers (IEEE) Forum on Integrated and Sustainable Transportation System, Vienna, Austria, June 29 to July 1, 2011, pp.333-338.
73. Goulias K.G., C. R. Bhat, R. M. Pendyala, Y. Chen, R. Paleti, K. C. Konduri, G. Huang, and H. Hu (2011) Simulator of Activities, Greenhouse Emissions, Networks, and Travel (SimAGENT) in Southern California: Design, Implementation, Preliminary Findings, and Integration Plans. Paper in proceedings of the Institute of Electrical and Electronics Engineers (IEEE) Forum on Integrated and Sustainable Transportation System, Vienna, Austria, June 29 to July 1, 2011, pp. 164-169.
 74. Yoon S.Y., K. Deutsch, Y. Chen, and K.G. Goulias (2011) Feasibility of using time-space prism to build choice sets for destination choice models. Paper prepared for presentation at the International Choice Modelling Conference 2011, Oulton Hall, UK, July 4-6, 2011. (<http://www.icmconference.org.uk/index.php/icmc/ICMC2011/schedConf/presentations>)
 75. Deutsch K., S.Y. Yoon, and K. G. Goulias (2011) Unpacking the theory of sense of place. Is it useful to choice modeling? Paper prepared for presentation at the International Choice Modelling Conference 2011, Oulton Hall, UK, July 4-6, 2011. (<http://www.icmconference.org.uk/index.php/icmc/ICMC2011/schedConf/presentations>).
 76. Yoon S. Y. and K.G. Goulias (2011) Life cycle dynamics of the impact of land use on time use and intra-household interaction. Paper presented at the 16th HKSTS International Conference, Hong Kong, China, December 17-20, 2011, and published in the conference proceedings.
 77. Deutsch K., S.Y. Yoon, and K. G. Goulias (2011) Unpacking the theory of sense of place. Is it useful to choice modeling? Paper prepared for presentation at the International Choice Modelling Conference 2011, Oulton Hall, UK, July 4-6, 2011. (<http://www.icmconference.org.uk/index.php/icmc/ICMC2011/schedConf/presentations>)
 78. Yoon S.Y., K. Deutsch, Y. Chen, and K.G. Goulias (2011) Feasibility of using time-space prism to build choice sets for destination choice models. Paper prepared for presentation at the International Choice Modelling Conference 2011, Oulton Hall, UK, July 4-6, 2011. (<http://www.icmconference.org.uk/index.php/icmc/ICMC2011/schedConf/presentations>)
 79. Goulias K.G., C. R. Bhat, R. M. Pendyala, Y. Chen, R. Paleti, K. C. Konduri, G. Huang, and H. Hu (2011) Simulator of Activities, Greenhouse Emissions, Networks, and Travel (SimAGENT) in Southern California: Design, Implementation, Preliminary Findings, and Integration Plans. Paper in proceedings of the Institute of Electrical and Electronics Engineers (IEEE) Forum on Integrated and Sustainable Transportation System, Vienna, Austria, June 29 to July 1, 2011, pp. 164-169.
 80. Isbell A. N. and K.G. Goulias (2011) A Method for Computing Flight Emissions and Identifying Potential Point-to-Point Aviation Market. Paper in proceedings of the Institute of Electrical and Electronics Engineers (IEEE) Forum on Integrated and Sustainable Transportation System, Vienna, Austria, June 29 to July 1, 2011, pp.333-338.

81. de Abreu e Silva J., Martinez L., and K. G. Goulias (2011) Using a multi equation model to unravel the influence of land use patterns on travel behavior of workers in Lisbon. Paper prepared for presentation at the Computers in Urban Planning and Urban Management 2011 Conference, Lake Louise, Alberta, Canada, July 5-8, 2011.
82. Goulias K.G., C. R. Bhat, R.M. Pendyala, Y. Chen, R. Paleti, K. C. Konduri, S. Y. Yoon, S. Ravulaparthi, K. Deutsch, P. Dalal, T. Lei, N. Isbell, G. Huang, and H. Hu. (2011) Geography Aspects of a Simulator of Activities, Greenhouse gas Emissions, Networks, and Travel (SimAGENT) in Southern California. Paper prepared for presentation at the 2011 Annual Meeting of the European Association of Geographers, June 2-5, 2011, Athens, Greece.
83. Dalal P., Y. Chen, S. Ravulaparthi, and K G. Goulias (2011) Dynamic Opportunity-based Multipurpose Accessibility Indicators in California. *European Journal of Geography*, Vol. 2, Number 2, pp.6-20.
84. Yoon S.Y., K. Deutsch, Y. Chen, and K.G. Goulias (2011) Using time-space prism to represent available opportunities and choice sets for destination choice models in the context of a dynamic urban environment. Paper prepared for presentation at the 2011 Annual Meeting of the European Association of Geographers, June 2-5, 2011, Athens, Greece.
85. Ravulaparthi S., N. Isbell, Y. Chen, and K. G. Goulias (2011) Hedonic Price Model: Neighborhood Spatio-Temporal effects on home prices. Paper prepared for presentation at the 2011 Annual Meeting of the European Association of Geographers, June 2-5, 2011, Athens, Greece.
86. Henson K. and K. Goulias (2011) Travel Determinants and Multiscale Transferability of National Activity Patterns to Local Populations. *Transportation Research Record: Journal of the Transportation Research Board*, No. 2231, Transportation Research Board of the National Academies, Washington D.C., 2011, pp. 35-43.
87. Deutsch K. E, S.Y. Yoon, and K.G. Goulias (2011) Modeling Sense of Place Using A Structural Equation Model. Paper 11-0079, Accepted for presentation at the 90th Annual Transportation Research Board Meeting, Washington D.C., January 23-27, 2011.
88. Dalal P. and K.G. Goulias (2011) Geovisualization of Opportunity Accessibility in Southern California: an exploration of spatial distribution patterns using geographic information systems for equity analysis, Paper 11-0784 Accepted for presentation at the 90th Annual Transportation Research Board Meeting, Washington D.C., January 23-27, 2011.
89. Yoon S.Y., M. Doudnikoff, and K.G. Goulias (2011) Spatial Analysis of the Propensity to Escort Children to School in Southern California. *Transportation Research Record: Journal of the Transportation Research Board*, No. 2230, Transportation Research Board of the National Academies, Washington D.C., 2011, pp. 132-142.
90. Chen, Y., S. Ravulaparthi, K. Deutsch, P. Dalal, S.Y. Yoon, T. Lei, K.G. Goulias, R.M. Pendyala, C.R. Bhat, and H-H. Hu (2011) Development of Indicators of Opportunity-based Accessibility. *Transportation Research Record: Journal of the Transportation Research Board*,

- No. 2255, Transportation Research Board of the National Academies, Washington D.C., 2011, pp.58-68.
91. Goulias K. G. (2011) Transportation Planning and Modeling, Chapter 10 in Handbook of Transportation Engineering, Volume I: Systems and Operations, 2nd Edition, (eds Myer Kutz), McGraw-Hill, New York, NY. Pages 10-3 to 10-27.
 92. Paleti, R., N. Eluru, C.R. Bhat, R.M. Pendyala, T.J. Adler, and K.G. Goulias (2011) The Design of a Comprehensive Microsimulator of Household Vehicle Fleet Composition, Utilization, and Evolution. *Transportation Research Record: Journal of the Transportation Research Board*, No. 2254, Transportation Research Board of the National Academies, Washington D.C., 2011, pp.44-57.
 93. Sidhartan, R., C.R. Bhat, R.M. Pendyala, and K.G. Goulias (2011) Model of Children's School Travel Mode Choice Behavior Accounting for Effects of Spatial and Social Interaction. *Transportation Research Record: Journal of the Transportation Research Board*, No. 2213, Transportation Research Board of the National Academies, Washington D.C., pp.78-86.
 94. Shiftan Y. and K.G. Goulias (2010) Applications of Discrete Choice Models - Selected papers from the 11th World Conference on Transport Research (editorial). *Journal of Choice Modeling* Vol 3(1), pages 1-4.
 95. de Abreu e Silva J., C. Morency, A. Daurien, and K.G. Goulias (2010) Using Structural Equations Modeling to unravel the influence of land use patterns on travel behavior of workers in Montreal. Presentation at the World Conference on Transport Research, July 11-15, Lisbon Portugal.
 96. Goulias K.G., Y. Chen, C.R. Bhat, N. Eluru, R.M. Pendyala, and L.C. Konduri (2010) Greenhouse Gas Emission Scenarios of Land Use Change Using a Large Scale Continuous-Time Activity-Based Microsimulation Model System in Southern California: Design, Implementation, Preliminary Findings, and Future Plans. Presentation at the World Conference on Transport Research, July 11-15, Lisbon Portugal.
 97. Yoon S.Y. and K.G. Goulias (2010) An Intra-Household Assessment of Land Use and Activity-Travel Behavior Patterns in California. Presentation at the World Conference on Transport Research, July 11-15, Lisbon Portugal.
 98. Yoon S.Y. and K.G. Goulias (2010) Impact of Time-Space Prism Accessibility on Time Use Behavior and its Propagation Through Intra-Household Interaction. *Transportation Letters: The International Journal of Transportation Research*, 2, pages 245-260.
 99. Yoon, S.Y. and K. G. Goulias (2010) Constraint-Based Assessment of Intra-household Bargaining on Time Allocation to Activities and Travel Using Individual Accessibility Measures. Paper presented at the 89th Annual Transportation Research Board Meeting and included in the CD ROM proceedings (Paper10-1820).
 100. Deutsch K. E. and K.G. Goulias (2010) Exploring Sense-of-Place Attitudes as Indicators of

- Travel Behavior. *Transportation Research Record: Journal of the Transportation Research Board*, 2157, pages 95-102.
101. Dalal P. and K.G. Goulias (2010) Literacy, Access, and Mobility: An Analysis from Sylhet, Bangladesh. *Transportation Research Record: Journal of the Transportation Research Board*, 2193, pages 132-139.
 102. Goulias K. G. (2009) Travel Behavior and Demand Analysis and Prediction, Part 20 in *Encyclopedia of Complexity and Systems Science* (eds Robert Myers, section editor Boris Kerner), Springer, Pages 9536-9565.
 103. Yoon S. Y. And K.G. Goulias (2009) Impact of Individual Accessibility on Travel Behavior and its propagation Through Intra-household Interaction. Paper presented at the 12th International Conference on Travel Behavior Research, December 13-18, Jaipur, India, and included in the CD ROM proceedings.
 104. Goulias K. G. (2009) Travel Behavior Dynamics from a Lifespan Development Perspective. Paper presented at the 12th International Conference on Travel Behavior Research, December 13-18, Jaipur, India, and included in the CD ROM proceedings.
 105. Burbidge S. K. and K. G. Goulias (2009) Evaluating the Impact of Neighborhood Trail Development on Active Travel Behavior and Overall Physical Activity Among Suburban Residents. Paper presented at the 12th International Conference on Travel Behavior Research, December 13-18, Jaipur, India, and included in the CD ROM proceedings and in *Transportation Research Record*, 2135, pp. 78-86.
 106. Pendyala R.M., K.G. Goulias, and C. Chen (2009) Remembering a teacher. *Transportation*, Vol. 36(6), pages 643-645
 107. Yoon S.Y, T. Golob, and K. Goulias (2009) California Statewide Exploratory Analysis Correlating Land Use Density, Infrastructure Supply and Travel Behavior. Paper 09-0130 in the CDROM proceedings and presented at the 88th Annual Transportation Research Board Meeting, January 11-15, 2009, Washington D.C.
 108. Abreu J. and K.G. Goulias (2009) Structural Equations Model of Land Use Patterns, Location Choice, and Travel Behavior in Seattle and Comparison with Lisbon. *Transportation Research Record, Journal of the Transportation Research Board*, **2135**, pages 106-113.
 109. Burbidge S. K. and K. G. Goulias (2009) Active Travel Behavior. Paper 09-0265 included in the CDROM proceedings and presented at the 88th Annual Transportation Research Board Meeting, January 11-15, 2009, Washington D.C. Also published in *Transportation Letters*, **Vol 1(2)**, pages 147-167.
 110. Burbidge S. K. and K. G. Goulias (2009) Evaluating the Impact of Neighborhood Trail development on Active Travel Behavior and Overall Physical Activity Among Suburban Residents. Paper 09-0264 included in the CDROM proceedings and presented at 88th Annual Transportation Research Board Meeting, January 11-15, 2009, Washington D.C.

111. Deutsch K.E. and K.G. Goulias (2009) Investigating Impact of Sense of Place on Travel Behavior Using Intercept Survey Methodology. Paper 09-2217 included in the CDROM proceedings and presented at the 88th Annual Transportation Research Board Meeting, January 11-15, 2009, Washington D.C.
112. Beckman J.D. and K.G. Goulias (2008) Immigration, Residential Location, Car Ownership, and Commuting Behavior: Multivariate Latent Class Analysis from California. *Transportation*, Volume 35, Number 5, pp. 655-671.
113. Goulias K. G. (2008) Supply Chain and Transportation: A Smorgasbord of Issues. In *Agri-food logistics in the Mediterranean area* (ed. D. Gattuso), Franco Angeli.
114. Alam Md. J. B., J. W. Polak, and K.G. Goulias (2008) Regional Efficiency and Accessibility Demand Assessment Using Stochastic Data Envelopment Analysis. Paper presented at the 87th Transportation Research Board Annual Meeting, January 13-17, 2008, and included in the CD ROM proceedings.
115. Goulias K. G. (2008) Companionship and Altruism in Daily Activity Time Allocation and Travel by Men and Women in the Same Households. Paper presented at the 87th Transportation Research Board Annual Meeting, January 13-17, 2008, and included in the CD ROM proceedings.
116. Kemel E., S.Y. Yoon, and K.G. Goulias (2008) Inequality Assessment Tool for Urban Development Using GIS-Based Accessibility Measures and Fractal Version of Theil's Index. Paper presented at the 87th Transportation Research Board Annual Meeting, January 13-17, 2008, and included in the CD ROM proceedings.
117. de Abreu e Silva J. and K. G. Goulias (2007) Using Structural Equations Modelling to Unravel the Influence of Land Use Pattern on Travel Behaviour of Urban Adult Workers of Puget Sound Region. Paper presented at the European Transport Conference 2007, 17-19 October, Leeuwenhorst Conference Centre, The Netherlands.
118. Goulias K. G. (2007) An Optimal Resource Allocation Tool for Urban Development Using GIS-based Accessibility Measures and Stochastic Frontier Analysis. Paper presented at the 86th Transportation Research Board Annual Meeting, January 21-25, 2007, Washington, D.C. and included in the CD ROM proceedings.
119. Goulias K. G., L. Blain, N. Kilgren, T. Michalowski, and E. Murakami (2007) Catching the Next Big Wave: Are the Observed Behavioral Dynamics of the Baby Boomers Forcing us to Rethink Regional Travel Demand Models? *Transportation Research Record: Journal of the Transportation Research Board*, No. 2014, Transportation Research Board of the National Academies, Washington D.C., pp 67-75.
120. T. Kim and K.G. Goulias (2006) A Multivariate Multilevel Analysis of Information Technology Choice. Chapter 18 In *Transport Science and Technology* (Ed. K.G. Goulias), Elsevier, pp. 233-246.

121. T. Kim and K.G. Goulias (2006) A Dynamic Analysis of Daily Times Uses, Mode Choice, and Information and Communication Technology. Chapter 18 In *Transport Science and Technology* (Ed. K.G. Goulias), Elsevier, pp. 247-262.
122. Goulias K. G. (2006) Transportation Policy Analysis and Planning. Invited Resource Paper. Paper presented at the IATBR Conference, August 2006, Kyoto, Japan, forthcoming in IATBR conference book.
123. Henson K., K.G. Goulias, and R. Golledge (2006) An Assessment of Activity-based Modeling and Simulation for Applications in Operational Studies, Disaster Preparedness, and Homeland Security. Paper presented at the IATBR Conference, August 2006, Kyoto, Japan, and published in *Transportation Letters*, pp.19-39.
124. Goulias K.G. and K. Henson (2006) On Altruists and Egoists in Activity Participation and Travel: Who are they and do they live together? *Transportation*, Volume 33, Number 5, pp.447-462.
125. de Abreu J. Da Silva, T. Golob, and K.G. Goulias (2006) The effects of land use characteristics on residence location and travel behavior of urban adult workers. *Transportation Research Record: Journal of the Transportation Research Board*, No. 1977, *Transportation Research Board of the National Academies*, Washington D.C., pp 121-131.
126. Burbidge S. K., K. G. Goulias, T. Kim (2006) Travel Behavior Comparisons of Active-Living and Inactive Living Lifestyles. Paper presented at the 85th Transportation Research Board Annual Meeting, January 23-26, 2006, Washington, D.C. and included in the CD ROM proceedings.
127. Henson K. and K.G. Goulias (2006) Preliminary Assessment of Activity and Modeling for Homeland Security Applications. Paper presented at the Transportation Research Board 2006 Annual Meeting. *Transportation Research Record: Journal of the Transportation Research Board*, No. 1942, *Transportation Research Board of the national Academies*, Washington D.C., pp 23-30.
128. Goulias K.G. and T. Kim (2005) Behavioral dynamics in activity participation, travel, and information and communications technology. In *Transportation and Traffic Theory: Flow, Dynamics and Human Interaction* (Ed. Hani S. Mahmassani), Elsevier, pp. 467-486.
129. Pribyl O. and K.G. Goulias (2005) Simulation of daily activity patterns. Chapter 3 in *Progress in Activity-Based Analysis* (Ed. Harry Timmermans), Elsevier, pp. 43-65.
130. Goulias, K.G. and T. Kim (2005) An analysis of activity type classification and issues related to the *with whom* and *for whom* questions of an activity diary. Chapter 14 in *Progress in Activity-Based Analysis* (Ed. Harry Timmermans), Elsevier, pp. 309-334.
131. Goulias K. G. and T. Rossi (2005) Data Needs for Innovative Modeling. In Data for Understanding Our Nation's Travel. National Household Travel Survey Conference, November 1-2, 2004. Transportation Research Circular, Number E-C071, Washington, D.C. pp.56-59.

132. Alam J. B., S. H. Sikder and K. G. Goulias (2005) Assessing Time Lag Between Transportation Investment and Economic Development by the Data Envelopment Approach. *Transportation Research Record 1932, Journal of the Transportation Research Board*, pp. 79-88.
133. Ettema, D. , H. Timmermans, and K. Goulias (2004) 'Editorial: Behavioral Responses to ITS: Further Evidence', *Journal of Intelligent Transportation Systems*, 8: 4, pp. 87 — 188
134. Kim T. and K.G. Goulias (2004) Dynamic analysis of time use and frequency of activity and travel using Latent Class Clustering and Structural Equation Modeling. Paper presented at the Conference on Progress in Activity-Based Analysis, May 28 - 31, 2004, Vaeshastel Castle, Maastricht, the Netherlands. Also accepted for presentation at the 84th Transportation Research Board Annual Meeting, January 9-13, 2004, Washington, D.C.
135. Alam J. B., S. H. Sikder and K. G. Goulias (2004) Role of transportation in regional economic efficiency in Bangladesh: Data Envelopment Analysis. *Transportation Research Record 1864, Journal of the Transportation Research Board*, pp.112-120.
136. Goulias K.G. (2004) Transportation planning and modeling, Chapter 29. In *Handbook of Transportation Engineering* (Editor M. Kutz), McGraw-Hill, New York, NY. Pp. 29.3-29.25.
137. Patten M.L. and K.G. Goulias (2004) Integrated Survey Design for a Household Activity-Travel Survey in Centre County, Pennsylvania. Centre SIM3 Report, Submitted to McCormick Taylor Associates and Mid-Atlantic Universities Transportation Center, University Park, PA, 2004. This report is re-issued as GEOTRANS 2004-03-01.
138. Kim T. and K. G. Goulias (2003) Cross sectional and longitudinal relationships among information and telecommunication technologies, daily time allocation to activity and travel, and modal split using structural equation modeling. Paper presented at the 83rd Annual Transportation Research Board Meeting, Washington, D.C., January 11-15, 2004.
139. Goulias K.G., N. Kilgren, and T. Kim (2003) A decade of longitudinal travel behavior observation in the Puget Sound region: sample composition, summary statistics, and a selection of first order findings. Paper Submitted for presentation at the 10th International Conference on Travel Behaviour Research, Moving through nets: The physical and social dimensions of travel, Lucerne, 10-14 August 2003.
140. Goulias K.G., T. Kim, and O. Pribyl (2003) A longitudinal analysis of awareness and use for advanced traveler information systems. *Journal of Intelligent Transportation Systems: Technology, Planning, and Operations*, 8(1), 3-17.
141. Goulias K.G. (2003) On the role of qualitative methods in travel surveys. In *Transport Survey Quality and Innovation* (editors Peter Stopher and Peter Jones), Pergamon, Amsterdam, NL, pp. 319-329.
142. Pribyl O. and K. G. Goulias (2003) Application of Adaptive Neuro-Fuzzy Inference System to Analysis of Travel Behavior. *Transportation Research Record, Journal of the Transportation Research Board*, 1854, pp. 180-188.

143. Patten M. L., K.G. Goulias, and O. Pribyl (2003) Patterns of information and telecommunication use and attitudes in the Pennsylvania turnpike traveler information system. Paper presented at the 82nd Transportation Research Board Meeting and included in the CD ROM proceedings, Washington D.C., January 2003.
144. Hallinan M, M. Patten, and K.G. Goulias (2003) Survey of travel information use in Southeast Pennsylvania. Proceedings of the 2003 ITS America Annual Meeting and Exposition, May 19-22, 2003, Minneapolis, Minnesota
145. Goulias K.G. and T. Kim (2003) A longitudinal analysis of the relationship between environmentally friendly modes, weather conditions, and information-telecommunications technology market penetration. In *Ecosystems and Sustainable Development Volume 2* (eds. E. Tiezzi, C.A. Brebbia, and J.L. Uso), WIT Press, pp. 949-958.
146. Kim T. and K.G. Goulias (2003) Travel behavior changes: Evidence from a longitudinal travel survey. In *Urban Transport IX: Urban Transport and the Environment in the 21st Century* (eds L.J. Sucharov and C.A. Brebbia), WIT Press, pp. 437-446.
147. Goulias K.G. (2003) Transportation Systems Planning, Chapter 1 in *Transportation Systems Planning: Methods and Applications*. Edited by K.G. Goulias, CRC Press, Boca Raton, FL, pp. 1-1 to 1-45.
148. Goulias K.G. (2003) Statistical and Econometric Data Analysis, Chapter 8 in *Transportation Systems Planning: Methods and Applications*. Edited by K.G. Goulias, CRC Press, Boca Raton, FL, pp. 8-1 to 8-7.
149. Goulias K.G. (2003) Multilevel Statistical Models, Chapter 9 in *Transportation Systems Planning: Methods and Applications*. Edited by K.G. Goulias, CRC Press, Boca Raton, FL, pp. 9-1 to 9-22.
150. Sundararajan A. and K. G. Goulias (2003) Demographic Microsimulation with DEMOS 2000: Design, validation, and Forecasting, Chapter 14 in *Transportation Systems Planning: Methods and Applications*. Edited by K.G. Goulias, CRC Press, Boca Raton, FL, pp. 14-1 to 14-23.
151. Kuhnau J. and K.G. Goulias (2003) Centre SIM: First-generation Model Design, Pragmatic Implementation, and Scenarios, Chapter 15 in *Transportation Systems Planning: Methods and Applications*. Edited by K.G. Goulias, CRC Press, Boca Raton, FL, pp. 16-1 to 16-14.
152. Goulias K. G. (2002) Forecasting the inputs to dynamic model systems. Chapter 23 in *In Perpetual Motion. Travel Behavior Research Opportunities and Application Challenges* (editor H. S. Mahmassani), Pergamon, Amsterdam, NL. pp. 480-503.
153. Goulias K. G. (2002) Forecasting: Workshop report. Chapter 25 in *In Perpetual Motion. Travel Behavior Research Opportunities and Application Challenges* (editor H. S. Mahmassani), Pergamon, Amsterdam, NL.

154. Kuhnau J. L. and K. G. Goulias (2002) Centre SIM: Hour-by-hour travel demand forecasting for mobile source emission estimation. In Development and Application of Computer Techniques to Environmental Studies IX (eds. C.A. Brebbia and P. Zannetti), WIT Press, Southampton, UK. Pp. 257-266.
155. Goulias K.G., W. Broeg, B. James, and C. Graham (2002) Travel behavior analysis of the South Perth individualized marketing intervention. *Transportation Research Record*, **1807**, pp. 77-86.
156. Goulias K. G. (2002) Multilevel analysis of daily time use and time allocation to activity types accounting for complex covariance structures using correlated random effects. *Transportation*, Volume 29(1), pp. 31-48.
157. Pendyala R. M. and K.G. Goulias (2002) Time use and activity perspectives in travel behavior research. *Transportation*, Volume 29(1), pp. 31-48.
158. Kharoufeh J. P. and K. G. Goulias (2002) Nonparametric identification of daily activity durations using Kernel density estimators. *Transportation Research*, Part B Methodological, Volume 36, pp. 59-82.
159. Goulias K. G., J. Smedley, J. Fenush, G. Dauber, K. Viswanathan, T. Kim (2002). Pennsylvania's statewide long range transportation plan: Reporting of achievements 2000. Paper accepted for presentation at the 81st Transportation Research Board Meeting, Washington D.C..
160. Goulias K. G. and T. Kim (2001) Multilevel analysis of activity and travel patterns accounting for person- and household-specific observed and unobserved effects simultaneously. *Transportation Research Record*, 1752, pp. 23-31.
161. Viswanathan K. and K. G. Goulias (2001) Travel behavior implications of information and communications technology (ICT) in Puget Sound region. *Transportation Research Record*, 1752, pp. 157-165.
162. Kim T., Koza S.A., and K. G. Goulias (2001) Analysis of the resident component in PennPlan's public involvement survey. Survey overview and item nonresponse selectivity issues. *Transportation Research Record*, 1780, pp. 145-154.
163. Goulias K. G., J. Smedley, R. Heaney, P. Everett, G. Dauber, T. Kim, and K. Viswanathan (2001) Pennsylvania's statewide long-range transportation plan (PennPlan): An overview and summary. Paper Preprint 01-2799. Paper presented at the 80th Annual Transportation Research Board Meeting, January 2001, and Published in the Transportation Research Board Conference CD proceedings.
164. Goulias K. G., K. Viswanathan, and T. Kim (2001). Pennsylvania's statewide long range transportation plan (PennPlan): Performance based planning in the US. In *Urban Transport VII, Urban Transport and the Environment for the 21st Century* (Ed. L.J. Sacharov and C.A. Brebbia), WIT Press, Southampton, UK, pp. 43-52.
165. Viswanathan K., K. G. Goulias, and T. Kim (2001). On the relationship between travel behavior

- and information and communications technology (ICT): What do the travel diaries show? In *Urban Transport VII, Urban Transport and the Environment for the 21st Century* (Ed. L.J. Sacharov and C.A. Brebbia), WIT Press, Southampton, UK, pp.213-222.
166. Goulias K. G. (2001) A Longitudinal integrated forecasting environment (LIFE) for activity and travel forecasting (2001). In *Ecosystems and Sustainable Development III* (Ed. Y. Villacampa, C.A. Brebbia, and J-L. Uso), WIT Press, Southampton, UK, pp.811-820.
 167. Goulias K.G. and J. L. Kuhnau (2001) Computer simulation for regional transport systems: Overview and an example. In *International Scientific Conference. The transport of the 21st century. Section 4: Metody i Narzedzia Badawcze w Transporcie*. Warsaw Polytechnic and Polish Academy, Warsaw, Poland, pp.59-66.
 168. Goulias K. G., L. Elefteriadou, and J. L. Kuhnau (2001). Classroom consulting experience as entrepreneurship training: Lessons learned from a case study in transportation. Paper accepted by American Society of Engineering Education for inclusion in the *Proceedings of the 2001 ASEE/SEFI/TUB Colloquium (Submitted June 2001 - conference canceled in September 2001 - conference scheduled for October 2002)*
 169. Goulias D. G. and K. G. Goulias (2000) GIS in pavement and transportation management. In *Management Information Systems 2000: GIS and Remote Sensing*. Editors: C.A. BREBBIA, Wessex Institute of Technology, UK and P. PASCOLO, Università degli Studi di Udine, Italy, WIT Press, Southampton, U.K., pp. 165-176.
 170. Goulias K. G. (2000) Travel behavior and values research in human-centered transportation systems. In *Transportation in the New Millennium. State of the Art and Future Directions. Perspectives from Transportation Research Board Standing Committees*. Transportation Research Board. National Research Council. The National Academies, Washington, D.C. Pages 6 (2000). (Also in <http://onlinepubs.trb.org/onlinepubs/millennium/00136.pdf>).
 171. Marker J. T. and Goulias K.G. (2000) Framework for the analysis of grocery teleshopping. *Transportation Research Record*, 1725, pp.1-8.
 172. Viswanathan K., K.G. Goulias, and P.P. Jovanis (2000) Use of traveler information in the Puget Sound region: Preliminary multivariate analysis. *Transportation Research Record*, 1719, pp. 94-102.
 173. Alam B. S. and K. G. Goulias (1999) Dynamic emergency evacuation management system using GIS and spatiotemporal models of behavior. *Transportation Research Record*, 1660, pp. 92-99.
 174. Goulias K.G. (1999) Longitudinal analysis of activity and travel pattern dynamics using generalized mixed Markov latent class models. *Transportation Research*, Part B, 33(8), pp. 535-557.
 175. Chandrasekharan B. and K.G. Goulias (1999) Exploratory longitudinal analysis of solo and joint trip making in the Puget Sound transportation panel. *Transportation Research Record*, 1676, pp. 77-85.

176. Ma J. and K.G. Goulias (1999) Application of Poisson regression models to activity frequency analysis and prediction. *Transportation Research Record*, 1676, pp. 86-94.
177. Goulias, K. G. (1999) Multilevel random effects analysis of modal use constraints and perceptions on public transportation using data from Germany. In *Urban Transport V, Urban Transport and the Environment for the 21st Century* (Ed. L.J. Sacharov), WIT Press, Southampton, UK, pp. 181-190.
178. Goulias, K.G. (1999) A dynamic analysis of activity and travel patterns. European Transport Conference Proceedings of Seminar F, Transportation Planning Methods, Volume p 434, Cambridge, UK, pp. 135-147.
179. Goulias K. G. and K. Viswanathan (1999) A dynamic analysis of activity and travel using mixed Markov latent class (MMLC) models. Paper presented at the 14th International Symposium on Transportation and Traffic Theory, 1999, Jerusalem, Israel and published in *Transportation and Traffic Theory*, Paper included in the proceedings Abbreviated Presentation Sessions. Avishai Ceder Editor, pp. 367-390.
180. Ma J. and K.G. Goulias (1998) Continuous time models for travel demand forecasting: Estimation and longitudinal validation using panel data. Paper Submitted to *Transportation Research*.
181. Ma J. and K.G. Goulias (1998) A hybrid daily activity scheduling system. Paper Submitted to *Transportation Research*.
182. Zineddin A. Z. and K. G. Goulias (1998) A Demand Based Rural ITS Plan for Passenger Travel. CD-ROM Proceedings of the Rural Advanced Technology and Transportation Systems 1998 International Conference, August 30-September 2, 1998, ITS America, University Park, PA.
183. Goulias K.G., W. Brög , and E. Erl (1998) Perceptions in mode choice using the situational approach: a trip-by-trip multivariate analysis for public transportation. *Transportation Research Record*, 1645, pp. 82-93.
184. Ma J. And K.G. Goulias (1998) Forecasting home departure time, daily time budget, activity duration, and travel time using panel data. Preprint 981312. Paper presented at the 77th Annual Transportation Research Board Meeting, Washington D.C., January 1998.
185. Chung J., K.Viswanathan, and K.G. Goulias (1998) Design of an automatic comprehensive traffic data management system for Pennsylvania. *Transportation Research Record*, 1625, pp. 1-11.
186. Marker J.T, Jr, and K.G. Goulias (1998) Truck traffic prediction using the quick-response freight model under different degrees of geographic resolution: GIS application in Pennsylvania. *Transportation Research Record*, 1625, pp. 118-123.
187. Ma J. and K.G. Goulias (1997) Analysis and prediction of activity/travel patterns using multiperiod multinomial probit models. Paper presented at the Eighth Meeting of the

International Association of Travel Behaviour Research, Challenges and Opportunities in Travel Behaviour Research and Applications, Austin, Texas, September 1997.

188. Goulias K. G. (1997) Multi-method and multi-instrument surveys (surveys using multiple approaches) Resource Paper Prepared for Workshop 1: Multi-instrument and multi-method surveys. International Conference on Transport Survey Quality and Innovation - Transport Surveys: Raising the Standard, May, 1997, Grainau, Germany.
189. Ma J. And K. G. Goulias (1997) An analysis of activity and travel patterns in the Puget Sound transportation panel. Chapter 10 In *Activity-Based Approaches to Travel Analysis* (Editors D.F. Ettema and H. J.P. Timmermans). Pergamon Elsevier Science LTD, The Netherlands. pp. 189-207.
190. Ma, J. and K. G. Goulias (1997) Systematic self-selection and sample weight creation in panel surveys: The Puget Sound transportation panel case. *Transportation Research*, 31A (5), pp. 365-375 (1997).
191. Chung, J. and K.G. Goulias (1997) Travel demand forecasting using microsimulation: Initial results from a case study in Pennsylvania. *Transportation Research Record* 1607, pp. 24-30.
192. Lee, M. and K.G. Goulias (1997) Accessibility indicators for transportation planning using GIS. Preprint 970160. Paper presented at 76th Annual Transportation Research Board Meeting.
193. Goulias, K. G., and R. Kitamura. Regional travel demand forecasting with dynamic microsimulation models (1997) In *Panels for Transportation Planning: Methods and Applications* (eds Golob, Kitamura, Long). Kluwer. Chapter 13, pp. 321-348.
194. Ma, J. and K. G. Goulias (1997) A dynamic analysis of activity and travel patterns using data from the Puget Sound transportation panel. *Transportation*, 24(1) , pp.1-23.
195. Chung, J. and K.G. Goulias (1996) Access management using GIS and traffic management tools in Pennsylvania. *Transportation Research Record*, 1551, pp. 114-122.
196. Ma, J. and K. G. Goulias (1996) Multivariate marginal frequency analysis of activity and travel patterns in the first four waves of the Puget Sound transportation panel. *Transportation Research Record*, 1556, pp. 67-76.
197. Ma, J. and K.G. Goulias (1996) Sample weights for the PSTP using stratification anchors in the PUMS and probabilistic models for self selection. *Transportation Research Record*, 1551, pp. 36-44.
198. Tarris J.P., C. M. Poe, J. M. Mason, and K.G. Goulias (1996) Predicting operating speeds on low-speed urban streets: Regression and panel analysis approaches. *Transportation Research Record*, 1523, pp. 46-54.
199. Goulias, K.G. and J. Ma (1996) Transitions of time use emerging from transportation panel data. Paper presented at the XVIIIth International Association for Time Use Research Conference and

- International Scientific Conference on Methodological Issues of Time Use Surveys: Designs and Analysis, Warsaw, Poland (May-June 1996).
200. Goulias, K.G. (1996) Issues, research needs, and potential solutions on the estimation of highway travel as it relates to highway cost allocation and revenue assignment. Preprint 960592. 75th Transportation Research Board Annual Meeting (January 1996).
 201. Khattak, Aemal J., K.G. Goulias, and Assad J. Khattak (1996) A comparison of traveler perceptions regarding traffic congestion and route selection behavior across Chicago, San Francisco, and Centre County. TRB preprint 960563. 75th Transportation Research Board Annual Meeting.
 202. Khattak, Aemal J., K.G. Goulias, and Assad J. Khattak (1995) A comparison of Chicago, San Francisco, and Centre County commuter travel patterns and willingness-to-pay for ATIS in Centre County. In *Proceedings of the Second World Congress on Intelligent Transport Systems 1995 Yokohama*, VERTIS, Tokyo, Japan, Vol. 5, pp. 2391-2396.
 203. Chung, J. and K. G. Goulias (1995) Sample selection bias with multiple selection rules: An application with residential relocation, attrition, and activity participation in the Puget Sound transportation panel. *Transportation Research Record*, 1493, pp. 128-135.
 204. Goulias, K.G., J. Chung, and J. Ma (1995) Access management/ impact simulation using GIS and traffic simulation. *A Compendium of Papers Based on a Conference Held in Seattle Washington in April 1995* (editor L.J. Engelke), Fifth International Conference on Transportation Planning Methods Applications. Session 20. pp. 23-32. Distributed by J.M. Farris, Tallahassee, FL.
 205. Goulias, K.G., J. Chung, M. T. Pietrucha, J. Ma, and A. J. Khattak (1995) A Method for congestion management, access control, and impact simulation using GIS. *Resource Papers for the 1995 Institute of Transportation Engineers International Conference, Technology Tools for Transportation Professionals-Moving into the 21st Century*, April 9-12, 1995, Ft. Lauderdale, FL, pp. 235-239.
 206. Khattak, A. J., K.G. Goulias, and J. M. Mason (1995) Selecting strategies to mitigate Intelligent Transportation Systems (ITS) institutional issues. *Resource Papers for the 1995 Institute of Transportation Engineers International Conference, Technology Tools for Transportation Professionals-Moving into the 21st Century*, April 9-12, 1995, Ft. Lauderdale, FL., pp. 87-91.
 207. Elefteriadou, L. and K. G. Goulias. (1995) Stochastic simulation for integration of traffic assignment and traffic signal operations. *Proceedings of the Second World Congress on Intelligent Transport Systems 1995 Yokohama*. Edited by VERTIS. Volume IV, pp. 1983-1988.
 208. Pendyala, R., Kostyniuk L., and K. G. Goulias (1994) Repeated cross-sectional evaluation of car ownership. *Transportation*, 22(2), pp. 165-184.
 209. Ma, J. and K. G. Goulias (1994) Dynamic analysis of activity and travel patterns using data from the Puget Sound transportation panel. TRB preprint 950331. 74th Annual Transportation Research Board Meeting (January 1994).

210. Nuss, R., M. T. Pietrucha, and K. G. Goulias (1994) Comparison of measured and estimated intersection delay. TRB preprint 950933. 74th Annual Transportation Research Board Meeting (January 1994).
211. Goulias, K. G. and R. Kitamura (1993) Analysis of binary choice frequencies with limit cases: Comparison of alternative estimation methods and application to weekly household mode choice. *Transportation Research Part B: Methodological*, 27(1), pp. 65-78.
212. Kitamura, R., R.M. Pendyala, and K.G. Goulias (1993) Weighting methods for choice-based panels with correlated attrition and initial choice. In *Transportation and Traffic Theory* (editor C. F. Daganzo). Elsevier Science Publishers. pp.275-294.
213. Pendyala, R. M., K. G. Goulias, R. Kitamura, and E. Murakami (1993) Development of weights for a choice-based panel survey sample with attrition. *Transportation Research A*, 27A(6), pp.477-492.
214. Goulias, K. G. and J. M. Mason (1993) Planning the resolution of IVHS issues via a staged development approach. *Institute of Transportation Engineers Journal, Special Issue: IVHS*, pp. 33-40.
215. Goulias, K. G. and R. Kitamura.(1992) Travel demand analysis with dynamic microsimulation. *Transportation Research Record*, 1357, Transportation Research Board, National Research Council, pp. 8-18.
216. Goulias, K. G., R. Pendyala, and R. Kitamura (1992) Updating a panel survey questionnaire. In *selected readings in Transport Survey Methodology* (eds. E.S. Ampt, A. J. Richardson, and A. H. Meyburg), Eucalyptus Press, Melbourne, Australia, pp. 209-235.
217. Goulias, K. G. (1992) A Dynamic microsimulator for travel demand forecasting. In *Modelling and Simulation Conference Proceedings, Modeling and Simulation, Volume 23*, University of Pittsburgh, pp. 837-843.
218. Goulias, K. G. and R. Kitamura. (1992) An application of dynamic microscopic simulation for travel demand forecasting. *Proceedings of the 1992 International Simulation Technology Conference and 1992 Workshop on Neural Networks*, November 4-6, Clear Lake, Texas. pp. 133-138.
219. Goulias, K. G. (1992) Forecasting travel demand with dynamic microsimulation: The microanalytic demographic accounting system (MIDAS) for personal computers. *Fourth International Conference on Microcomputers in Transportation Proceedings*, Baltimore, MD. (Editors J. Chow, D. M. Litvin, and K. S. Opiela) pp. 190-201.
220. Goulias, K. G. and R. Kitamura (1992) The Capital's Beltway. Expressways and Automobiles, a Monthly Publication of Express Highway Research Foundation of Japan, pp. 27-33 (in Japanese).
221. Goulias, K. G. (1992) Forecasting the Impact of Socio-demographic Changes on Travel Demand:

- Experiments with a Dynamic Microsimulation Model System." Paper accepted for presentation at the 6th World Conference on Transport Research, Lyon, France, (June 29-July 3, 1992).
222. Goulias, K. G. and J. M. Mason (1992) Institutional and Funding Issues Related to the Staged Development of IV/HS. In the Compendium of Papers of the ITE International Conference Transportation Engineering in a New Era, Monterey, CA, pp. 37-41 (March 22-25, 1992)
 223. Pendyala, R., K. G. Goulias, and R. Kitamura.(1991) Impact of Telecommuting on Spatial and Temporal Patterns of Household Travel. *Transportation*, 18(4), pp. 383-409.
 224. Kitamura, R., P. L. Mokhtarian, R. M. Pendyala, and K. G. Goulias (1991). An Evaluation of Telecommuting as a Trip Reduction Measure. Working Paper No. 5, The University of California Transportation Center, University of California, Berkeley,UCTC reprint 5, 12 pages .
 225. Goulias, K. G., R. Pendyala, and R. Kitamura (1990). A Practical Method for the Estimation of Trip Generation and Trip Chaining. *Transportation Research Record*, 1285, pp. 47-56.
 226. Goulias, K. G. and R. Pendyala (1990) Innovations in Transportation: The case of Telecommuting. In the *Proceedings of the Transportation Research Forum*, Volume 5, pp. 74-84.
 227. Kitamura, R., K. Nishii, and K. G. Goulias (1990) Trip Chaining Behavior by Central City Commuters: A Causal Analysis of Time-Space Constraints. In P. M. Jones (ed.), *New Developments in Dynamic and Activity-Based Approaches*, Gower Publishing, Aldershot, England, pp. 145-170.
 228. Goulias, K. G., R. Pendyala, and R. Kitamura (1990) Telecommuting and Travel Demand: An Impact Assessment for State of California Telecommute Pilot Program Participants. Prepared for the California Department of Transportation, University of California, Davis, TC reprint, 68 pages.
 229. Goulias, K. G. and R. Kitamura (1989) Recursive Model System for Trip Generation and Trip Chaining. *Transportation Research Record*, 1236, pp. 59-66.
 230. Monzon, J., K. G. Goulias, and R. Kitamura (1989) Trip Generation Models for Infrequent Trips. *Transportation Research Record*, 1220, pp. 40-46.
 231. Kostyniuk, L. P., R. Kitamura, and K. G. Goulias (1989) Mobility of single parents: What do the trip records show? *Specialized Transportation Planning and Practice*, Vol. 3, No. 3, pp. 203-217.
 232. Goulias, K. G. (1988) Quasi-Simulation of Auto-type Choice: Minimum Requirements of Alternately Fueled Vehicles. *Paper Award of the Institute of Transportation Engineers*, District 6, 15 pages.

Research Reports to Sponsors

1. Goulias K.G., A.W.Davis, E. C. McBride, K. Janowicz, and R. Zhu (2017) Long Distance Travel in CHTS and Social Media Augmentation. Final Report. University of California Santa Barbara. Department of Geography, GeoTrans and STKO Laboratories, Contract Number: 65A0529, Task Order 047. Submitted to the California Department of Transportation, May 2017.
2. Lee J.H., A.W. Davis E. McBride, and K. G. Goulias (2016) A Self-validating Statewide Origin-destination Travel Prediction Method Using the Combination of California Household Travel Survey Data with Harvested Social Media Information. Final Report. University of California Santa Barbara. Department of Geography, GeoTrans Laboratory, Contract Number: 65A0529. Submitted to the California Department of Transportation, May 2016.
3. McBride E., Davis A.W., J. H. Lee, and K. G. Goulias (2016) Spatial Transferability Using Synthetic Population Generation Methods. Final Report. University of California Santa Barbara. Department of Geography, GeoTrans Laboratory, Contract Number: 65A0528. Submitted to the California Department of Transportation, May 2016.
4. Davis A.W., J. H. Lee, E. McBride, S. Ravulaparthi, and K. G. Goulias (2016) Business Establishment Survival and Transportation Level of Service. Final Report. University of California Santa Barbara. Department of Geography, GeoTrans Laboratory, Contract Number: 65A0528. Submitted to the California Department of Transportation, May 2016.
5. Goulias, K.G., C. R. Bhat, R. M. Pendyala, Y. Chen, R. Paleti, K. Konduri, S. Y. Yoon, and D. Tang (2012). Simulator of Activities, Greenhouse Emissions, Networks, and Travel (SimAGENT) in Southern California. SimAGENT Overview. Phase 2 Final Report 1 Submitted to SCAG, March 31, 2012, Santa Barbara, CA.
6. Goulias, K.G., C. R. Bhat, R.M. Pendyala, Y. Chen, T. Lei, S. Ravulaparthi, K. Deutsch, P. Dalal, and S. Y. Yoon (2012). Opportunity-Based Dynamic Accessibility Indicators in SimAGENT Phase 2 Final Report 2 Submitted to SCAG, March 31, 2012, Santa Barbara, CA.
7. Pendyala, R.M. , C. R. Bhat, K. G. Goulias, R. Paleti, K. Konduri, R. Sidharthan , and K. P. Christian. (2012) SimAGENT Population Synthesis. Phase 2 Final Report 3 Submitted to SCAG, March 31, 2012, Santa Barbara, CA.
8. Bhat, C. R., R. Paleti, R. M. Pendyala, and K. G. Goulias.(2012) SimAGENT Activity-Based Travel Demand Analysis: Framework, Behavioral Models, and Application Results. SimAGENT Core Models. Phase 2 Final Report 4 Submitted to SCAG, March 31, 2012, Santa Barbara, CA.
9. Goulias, K. G., N. A. Isbell, D. Tang, M. Balmer, Y. Chen, C. R. Bhat, and R. M. Pendyala (2012) TRANSIMS and MATSIM Experiments in SimAGENT. Phase 2 Final Report 5 Submitted to SCAG, March 31, 2012, Santa Barbara, CA.
10. Santos N. and K.G. Goulias (2011) 2010 Santa Barbara County Transit Survey, Data Analysis, and Mapping. A Geotrans Report Submitted to the Santa Barbara Association of Governments,

Santa Barbara, CA.

11. Pendyala R.M., K.C. Konduri, C.R. Bhat, K.G. Goulias, M. Outwater, X. Ye, and J. Dunbar (2011) The Design of an Activity Based Model System for Baltimore Metropolitan Council. Technical Memorandum Submitted to Baltimore Metropolitan Council, June 2011.
12. Ravulaparthi S. and K.G. Goulias (2011) Forecasting with Dynamic Microsimulation: Design, Implementation, and Demonstration. Final Report on Review, Model Guidelines, and a Pilot Test for a Santa Barbara County Application. University of California Transportation Center (UCTC) Research Project. Geotrans Research Report 0511-01, May, Santa Barbara, CA.
13. Goulias K.G. and E. L. Morrison (2010) Pre-Survey Design Consultant for the Year 2010 Post-Census Regional Travel Survey. Final Summary Report Project Number 10-046-C1(April 2010 to July 2010). Submitted to Southern California Association of Governments and Caltrans. June, Solvang, CA.
14. Goulias K.G., T. Golob, and S. Yoon (2008) A Statewide Optimal Resource Allocation Tool Using Geographic Information Systems, Spatial Analysis, and Regression Methods. Final Report, California PATH Research Report, UCB-ITS-PRR-2008-27, ISSN 1055-1425, Santa Barbara and Berkeley, CA.
15. Goulias K.G. (2008) Audit of Brisbane North Communities Project. Final Report Submitted to Queensland Transport, June, Santa Barbara, CA.
16. Goulias K.G. (2007) Activity Based Travel Demand Model Feasibility Study. Final Report Submitted to the Southern California Association of Governments. Contract Number 07-046-C1. Work Element Number 07-070.SCGC08. June, Solvang, CA
17. Goulias K. G. (2007) An Optimal Resource Allocation Tool for Urban Development Using GIS-based Accessibility Measures and Stochastic Frontier Analysis. California PATH Research Report UCB-ITS-PRRR-2007-7, ISSN 1055-1425, University of California, Berkeley, CA.
18. Goulias K. G. and D. Janelle (2006) GPS Tracking and Time-Geography Applications for Activity Modeling and Microsimulation - Final Report, FHWA-sponsored Peer Exchange and CSISS Specialist Meeting, *October 10-11, 2005*, <http://www.csiss.org/events/meetings/time-geography/>, Center for Spatially Integrated Social Science, University of California, Santa Barbara, CA. Pages 30.
19. Goulias K. G. (2006) Prospects of the Baby Boomers Travel Behavior: A qualitative and quantitative analysis, Final Report. Submitted to The Federal Highway Administration and The Puget Sound Regional Council. Santa Barbara, CA. Pages 38.
20. Goulias K. G., M. Zekkos, and J. Eom (2004) CentreSIM3 Scenarios for the South Central Centre County Transportation Study. CentreSIM3 Report submitted to McCormick Taylor Associates and the Mid-Atlantic Universities Transportation Center, April 2004, University Park, PA. Pages 44.
21. Pribyl O., Micaelli J.R., K. G. Goulias, and M.L. Patten (2004) CHIRAC: A Comprehensive

- Household Integrated Rectifier for ACTivity diaries. CentreSIM3 Report submitted to McCormick Taylor Associates and the Mid-Atlantic Universities Transportation Center, April 2004, University Park, PA. Pages 38.
22. Goulias, K.G., T. Kim, and M.L. Patten (2004) On Activity Type Classification and Issues Related to the *with whom* and *for whom* Questions of an Activity Diary: Preliminary Findings and Pattern Classification. CentreSIM3 Report submitted to McCormick Taylor Associates and the Mid-Atlantic Universities Transportation Center, April 2004, University Park, PA. Pages 35.
 23. Patten M.L. and K. G. Goulias (2004) Integrated survey design for a household activity-travel survey in Centre County, Pennsylvania. CentreSIM3 Report submitted to McCormick Taylor Associates and the Mid-Atlantic Universities Transportation Center, April 2004, University Park, PA. Pages 20.
 24. Patten, M.L., O. Pribyl, and K. G. Goulias (2003) Evaluation of the Pennsylvania Turnpike's Advanced Traveler Information System (ATIS) project: Phase III. Final Report submitted to Pennsylvania Turnpike Commission and the Mid-Atlantic Universities Transportation Center, PTI 2004-01, University Park, PA. Pages 157.
 25. Patten M.L., M. P. Hallinan, O. Pribyl, and K. G. Goulias (2003) Evaluation of the Smartraveler Advanced Traveler Information System in the Philadelphia Metropolitan Area. Technical Memorandum. March 18, 2003. University-Based Research, Education and Technology Transfer Program AGREEMENT NO. 359704, WORK ORDER 102. Partially Sponsored by the Mid-Atlantic University Transportation Center. PTI-2003-33. The Pennsylvania Transportation Institute. University Park, PA. Pages 49.
 26. Patten M.L. and K. G. Goulias Test Plan: Motorist Survey - Evaluation of the Pennsylvania Turnpike Advanced Travelers Information System (ATIS) project, Phase III. PTI-2001-23-I. April 2001. University Park, PA. Pages 36.
 27. Patten M.L. and K. G. Goulias Test Plan: Truck Driver Survey - Evaluation of the Pennsylvania Turnpike Advanced Travelers Information System (ATIS) project, Phase III.. PTI-2001-23-I. April 2001. University Park, PA. Pages 25.
 28. Patten M.L. and K. G. Goulias Test Plan: Motor Carrier Focus Groups - Evaluation of the Pennsylvania Turnpike Advanced Travelers Information System (ATIS) project, Phase III.. PTI-2001-23-I. April 2001. University Park, PA. Pages 14.
 29. Patten M.L. and K. G. Goulias Test Plan: Survey of Transportation System Operators - Evaluation of the Pennsylvania Turnpike Advanced Travelers Information System (ATIS) project, Phase III. PTI-2001-23-I. April 2001. University Park, PA. Pages 26.
 30. Kuhnau J. L. and K. G. Goulias (2001) Best Practices in Statewide Planning and Recommendations for PennPlan's Future Activities. University-Based Research, Education and Technology Transfer Program. Agreement No. 359704, Work Order 75. Summary Report, Prepared for Commonwealth of Pennsylvania Department of Transportation PTI 2001-22, The Pennsylvania Transportation Institute, University Park, PA.

31. Goulias K. G. Intelligent Transportation Systems Research and Development Fellowship Program at the Pennsylvania State University. Transportation Operations and Systems Research and Development Partnership. Final Report, August 2000, PTI 2001-05, University Park, PA. Pages 8.
32. Goulias K.G., J. Smedley, R. Heaney, P. Everett, G. Dauber, T. Kim, and K.Viswanathan. "An Overview of Pennsylvania's Statewide Long Range Plan. " Final Report, Work Order 5. The Pennsylvania Transportation Institute. The Pennsylvania State University, University Park, PA. Pages 26.
33. Goulias K. G. Intelligent Transportation Systems Research and Development Fellowship Program at the Pennsylvania State University. Transportation Operations and Systems Research and Development Partnership. Agreement N0. 359528, Work Order 23. Final Report, August 2000, PTI 2000-05, University Park, PA.
34. Donnell E.T., M.L. Patten, A. Zinnedin and K. G. Goulias. Making ITS/CVO Happen: Pennsylvania's ITS/CVO Business Plan. Final Report submitted to PennDOT. PTI 9923. December 1998, University Park, PA.
35. Goulias K.G and J.T. Marker, Jr. A Procedure for Using the Access Management Impact Simulation (AMIS) Model Within the Context of Act 209 and Act 47" Final Report submitted to PennDOT, PTI 9819. University Park, PA, (February 1998).
36. Goulias K.G. and S.B. Alam Transit Xpress: Hazardous Material Fleet Management and Monitoring System. Evaluation Report. Research Project 94-30, PTI 9802, University Park, PA (July 1997)
37. JHK & Associates, Clough, Harbour & Associates, Pennsylvania Transportation Institute, and Bogart Engineering. Scranton/Wilkes-Barre Area Strategic Deployment Plan. Final Report. Prepared for Pennsylvania Department of Transportation District 4-0. August 1996, Berlin, CT. pages 143.
38. Goulias K.G., J.H. Chung, and K. Viswanathan. Project Task 39: Automatic Traffic Data Collection System Modernization. Final Report. Submitted to PennDOT. PTI 9725, University Park, PA. (June 1997).
39. Goulias K. G., K. Viswanathan, and J.T. Marker, Jr Scranton/Wilkes-Barre Area Strategic Deployment Plan: Subtasks 3.1 & 3.2: Quantify Potential B/C and Report on Qualitative Benefits. Final Report submitted to JHK & Associates and the Pennsylvania Department of Transportation (January 1997). 27 pages.
40. JHK & Associates, Clough, Harbour & Associates, Pennsylvania Transportation Institute, and Bogart Engineering. Scranton/Wilkes-Barre Area Strategic Deployment Plan. Task 1 – Technical Memorandum Existing Conditions. Prepared for Pennsylvania Department of Transportation District 4-0. August 1996, Berlin, CT.

41. Shiffer G. J., A. J. Khattak, and K.G. Goulias. An Assessment of APTS Related Information Needs in College Towns. A CITRANS occasional report. August 1996. University Park, PA.
42. Goulias K. G. and S. Alam. Motor Carrier and Incident Responder Test Plan - Final Report. Submitted to the U.S. DOT-Federal Highway Administration and The Pennsylvania Department of Transportation. Document #9620.XPRS.0a. (August 1996). 37 pages.
43. Goulias K. G. and S. Alam. Transit Xpress Evaluation Plan - Final Report. Submitted to the U.S. DOT-Federal Highway Administration and The Pennsylvania Department of Transportation. Document #9610.XPRS.00. (July 1996). 34 pages.
44. Goulias K.G. and J. Ma Analysis of Longitudinal Data from the Puget Sound Transportation Panel - Presentation of Executive Summary. Final Report. Submitted to Federal Highway Administration and Battelle Memorial Institute Work Order BAT 94-016, PTI, University Park, PA,(July 1996). 25 pages.
45. Goulias K.G. and J. Ma. Analysis of Longitudinal Data from the Puget Sound Transportation Panel - Task B: Integration of PSTP Databases and PSTP Codebook. Final Report. Submitted to Federal Highway Administration and Battelle Memorial Institute Work Order BAT 94-016, PTI 9619, University Park, PA. (July 1996). 124 pages.
46. Goulias K.G. and J. Ma. Analysis of Longitudinal Data from the Puget Sound Transportation Panel - Task C: Past Uses of PSTP Databases - Final Report. Submitted to Federal Highway Administration and Battelle Memorial Institute Work Order BAT 94-016, PTI 9621, University Park, PA. (July 1996). 38 pages.
47. Goulias K.G. and J. Ma. Analysis of Longitudinal Data from the Puget Sound Transportation Panel - Task D: Development and Performance of Sample Weights for PSTP - Final Report. Submitted to Federal Highway Administration and Battelle Memorial Institute Work Order BAT 94-016, PTI 9622, University Park, PA. (July 1996). 49 pages.
48. Goulias K.G. and J. Ma. Analysis of Longitudinal Data from the Puget Sound Transportation Panel - Task F: Cross-section and Dynamic Analysis of PSTP - Final Report. Submitted to Federal Highway Administration and Battelle Memorial Institute Work Order BAT 94-016, PTI 9622, University Park, PA. (July 1996). 34 pages.
49. Raynar K.A. and K. G. Goulias Project Task 23: Automatic Traffic Recorder Data Collection System Modernization-CAVC and WIM Technologies and Related Software Review. Final Report, University Park, PA, PTI 9530,(August 1995). 55 pages.
50. Raynar K.A. and K. G. Goulias Supplement E: Automatic Traffic Recorder Data Collection System Modernization. Final Report, PennDOT/MAUTC Partnership. University Park, PA, PTI 9530,(April 1995). 30 pages.
51. Goulias, K.G. and Jin-hyuk Chung. Access Management/Impact Simulation Using GIS and Traffic Simulation Course Handbook. Participants Notebook - Session II, prepared for the Pennsylvania Department for Transportation, PTI 9602, (August 1995). 110 pages.

52. Goulias, K.G. and Jin-hyuk Chung. Access Management/Impact Simulation Using GIS. Final Report prepared for the Pennsylvania Department for Transportation, PTI 9602, (August 1995). 129 pages.
53. Raynar K.A. and K. G. Goulias Supplement E: Automatic Traffic Recorder Data Collection System Modernization. Final Report, University Park, PA, PTI 9527,(April 1995).50 pages .
54. Goulias, K. G. and D. Szekeres. Centre Region Transportation Demand Management Plan. Final Draft Report. Prepared for the Centre Regional Planning Commission. University Park, PA,(May 1994). 84 pages.
55. Goulias, K. G. and Jin-hyuk Chung. Actuated Signal Time Training Handbook: Notions of Signal Timing and EVIPAS/EZVIPAS Instructions. Safety and Congestion Mitigation Research. Research Project 92-08, Work Order 3: EVIPAS Training, PTI 9440, University Park, PA,(May 1994). 134 pages.
56. Goulias K. G. Analysis of the First Two Waves of the Puget Sound Transportation Panel: Panel Attrition, Residential Location, Mode Switching, and Panel-Based Forecasting. Task D: Latent Demand Estimation Using Panel Observations." Final Report Submitted to the Puget Sound Regional Council and the Mid-Atlantic Universities Transportation Center, March 1994, The Pennsylvania Transportation Institute, PTI 9436, (1994). 41 pages.
57. Griffiths, C. and K.G. Goulias. Right of Way Preservation Program. Right of Way Course Handbook. Final Report submitted to Pennsylvania Department of Transportation, PTI 9432, (1994). 416 pages.
58. Griffiths, C. and K.G. Goulias. Right of Way Preservation Program. Right of Way Course Participant's Handbook. Final Report submitted to Pennsylvania Department of Transportation, PTI 9511, (1994). 110 pages.
59. Chalamgari, V., J. Chung, D. Szekeres, K.G. Goulias, and M.D. Casper. Transportation Analysis of Travel Routes from the Centre County Solid Waste Authority to Six Different Sites in Pennsylvania. Final Report submitted to Attwoods Environmental of Pennsylvania Inc., PTI 9420, (February 1994). 24 pages.
60. Goulias K. G. and D. Szekeres Regional Transportation Demand Management Plan: Survey Results Summary. Draft Interim Report 3 submitted to the Centre Region Planning Commission, (May 1993). 17 pages.
61. Goulias K. G., T. Litzinger, J. Nelson, and V. Chalamgari A Study of Emission Control Strategies for Pennsylvania: Emission Reductions From Mobile Sources, Cost Effectiveness, and Economic Impacts." Final Report submitted to the Pennsylvania Low Emissions Vehicle (LEV) Commission for the Mid-Atlantic Universities Transportation Center, PTI report 9403, University Park, PA, (August 1993). 248 pages.
62. Kitamura, R. and K. G. Goulias. MIDAS: A Travel Demand Forecasting Tool Based on

- Dynamic Model System of Household Car Ownership and Mobility. Final report prepared for Project Bureau Integrale Verkeer-en Vervoestudies, Ministerie van Verkeer-en Waterstaat, The Hague, The Netherlands, (1992). 162 pages.
63. Goulias, K. G. and D. Hurley. Institutional and Policy Issues for IVHS Deployment Strategies. Interim Report submitted to the Pennsylvania Department of Transportation, (1992). 20 pages.
 64. Goulias K. G., J. Burnett, and D. Szekeres Regional Transportation Demand Management Plan, TDM Strategy Review. Draft Interim Report submitted to the Centre Region Planning Commission, (December 1992). 15 pages.
 65. Goulias, K. G. and R. Kitamura (1991) Analysis of Binary Choice Frequencies with Limit Cases: Comparison of Alternative Estimation Methods and Application to Weekly Household Mode Choice. Research Report No. UCD-TRG-RR-90-15, Institute of Transportation Studies, University of California, Davis, (1991). 29 pages.
 66. Pendyala, R. M., K. G. Goulias and R. Kitamura (1991). Development of Weights for a Choice-Based Panel Survey Sample with Attrition, research report submitted to the Puget Sound Regional Council. UCD-ITS-RR-91-18, Institute of Transportation Studies, University of California, Davis, (1991). 32 pages.
 67. Pendyala, R. M., K. G. Goulias and R. Kitamura (1991) Impact of Telecommuting on Spatial and Temporal patterns of Household Travel: An Assessment for the State of California Pilot Project Participants. Research Report UCD-ITS-RR-91-7, Institute of Transportation Studies, University of California at Davis, 39 pages.
 68. Kitamura, R., K. Goulias, and R. M. Pendyala (1990) Telecommuting and Travel Demand: An Impact Assessment for State of California Telecommute Pilot Project Participants. Research Report UCD-TRG-RR-90-8, Transportation Research Group, University of California at Davis, 68 pages.
 69. Kitamura, R. and K. G. Goulias (1989) MIDAS: A Travel Demand Forecasting Tool based on Dynamic Model System of Household Car Ownership and Mobility. Final Report. Prepared for Projectbureau Integrale Verkeer-en Vervoerstudies, Ministerie van Verkeer en Waterstaat, The Netherlands, University of California, Davis, 80 pages.

CURRENT RESEARCH PROJECTS

Principal Investigator (January 2018 – December 2018) **Vertical Equity Statewide Pilot, Data Inventory, and Guidelines for Performance Based Planning.** *Sponsor: Pacific Southwest Region 9 University Transportation Center, US Department of Transportation, and UCSB. \$123,072.* In this project, we develop a method for vertical equity analysis. Vertical equity is the analysis of the disadvantages groups of different incomes and other sociodemographic characteristics experience from the land use-transportation system. We first create a data inventory for the indicators needed to satisfy performance based planning in California. This inventory is comprehensive and covers many goals in

CTP 2040. In parallel, using detailed in space and time database in the GeoTrans laboratory we create a first pilot geo-computation of equity indicators covering the entire State at fine spatial detail. We compare data available and this pilot to the literature on gentrification, equity analysis, and access to opportunities. We also develop a crowdsourcing method to collect input for the expert community in three different stages. First on the first pilot geo-computation online and at TRB 2018 and then after an improved method is developed we check with a wider spectrum of experts at an international conference in Santa Barbara. Input from the different expert sources that is used to create a second pilot geo-computation of equity is particularly important and for this reason requires special attention in a dedicated task. The project ends with the creation of guidelines for data collection, computational examples, and guidelines for research and practice.

Principal Investigator (May 2017 – August 2017) **Qatar Activity-based Model Preparation and Initial Design.** *Sponsor: ItalConsult & Ministry of Transport and Communication Qatar. \$50,000.* In this project, in collaboration with Professor Chandra Bhat from UT Austin and Professor Ram Pendyala from Arizona State University, we conducted a series of meetings with all the local agencies involved in the project. We examined data and plans for data collection and developed a temporal sequence of model development and testing. Moreover, in this task will provided a series of seminars on data needs for policy analysis, modeling and simulation in activity-based approaches, synthetic population generation, household travel surveys, and the design of choice experiments.

Principal Investigator (August 2017 – August 2018) **Activity Based Model for Qatar.** *Sponsor: ItalConsult & Ministry of Transport and Communication Qatar. \$610,000.* In this project in collaboration with Chandra Bhat from UT Austin and Ram Pendyala from Arizona State University, a new version of an activity-based travel demand forecasting model is created for the State of Qatar. This simulator includes population synthesis that recreates the entire resident population of this region, provides locations for residences, workplaces, and schools for each person, estimates car ownership and type as well as main driver for each vehicle, and provides other key personal and household characteristics. Then, a synthetic schedule generator recreates for each resident person in the simulated region a schedule of activities and travel that reflects intra-household activity coordination for a day. These synthetic schedules are then converted to multiple Origin Destination (OD) matrices at different times in a day and used in other modeling tasks developed by ItalConsult.

Investigator - Visiting External Scientific Collaborator at University of the Aegean. *(February 2016 to December 2017)* **OPTIMUM (Multisource Big Data Fusion Driven Proactivity for Intelligent Mobility).** *Sponsor: European Union's Horizon 2020 research and innovation programme under grant agreement No 636160-2. EUR 5,966,186.* The aim of this project is to develop and distribute state-of-the-art information technology solutions to improve transit, freight transportation and traffic connectivity throughout Europe. Through the management and processing of multisource big data and the creation of tailor-made applications, OPTIMUM will strive to make transport systems more interoperable, adaptable and dynamic. The project includes 18 partner organizations and eight European countries with a duration of approximately 3 years (<http://www.optimumproject.eu>).

RECENTLY COMPLETED RESEARCH PROJECTS

Principal Investigator (Co-PI Krzysztof Janowicz). *(July 2016 - June 2017)* **Long Distance Travel in the California Household Travel Survey (CHTS) and Social Media Augmentation.** *Sponsor: University of California Center /CALTRANS. \$173,409.* The objectives of this project are to: a) provide

empirical evidence for long distance travel behavior analysis using synthetic population methods; and b) identify the determinants of long-distance travel behavior. The method provides CALTRANS with a powerful baseline inventory of travel demand statewide and creates the foundation for future updates. The archived data and their analysis also enable the study of vulnerable segments of the population as well as developing an estimate of long distance travel contribution to the statewide VMT. Our initial workshop in Sacramento illustrated the potential of these methods and the technical problems we solve in the project, and the final report explains and demonstrates the findings from CHTS, the potential of harvesting social media, the regression and structural equations models and latent class clusters developed here, their substantive findings, and a variety of ideas for using similar methods for other purposes.

Principal Investigator. *(April 2015 to March 2016) Combining California Household Travel Survey data with harvested social media information to form a self-validating statewide origin-destination travel prediction method.* *Sponsor: University of California Center /CALTRANS. \$128,050.* In this project we use data from multiple sources to produce statewide travel patterns and large scale estimates of induced travel demand. In this way we can develop a baseline short- and long- distance travel inventory that includes statewide vehicle miles traveled (VMT). A procedure is created to monitor the evolution of travel in California using data from social media adjusted by region and correlated with land uses at fine geographic areas. We use data from the California Household Travel Survey, Origin-Destination data from the Statewide Travel Demand Model, and social media harvested data. A conversion procedure is created to transform harvested data from the web into origin-destination travel and perform comparisons with other sources of OD matrices.

Principal Investigator. *(March 2015 to April 2016) Spatial Transferability Using Synthetic Population Generation Methods.* *Sponsor: University of California Transportation Center/CALTRANS. \$84,094.* In this project we develop a new method to transfer daily travel behavior data from one place to another. The basic ingredients of this new method are: a) the California Household Travel Survey (CHTS) data that includes household and person characteristics and an one day place-based diary that spans an entire 12 month period in 2012 and 2013; b) a database of all the business establishments in California that enables computation of land use indicators at many geographical scales; and c) highway and public transportation network information. In the project we develop a classification system of the different determinants of household travel behavior and then use variables at the person, household, and spatial organization levels to perform experiments and find the best transferability method.

Principal Investigator. *(March 2015 to April 2016) Business Establishment Survival and Transportation System Level of Service.* *Sponsor: University of California Transportation Center/CALTRANS. \$115,205.* In this research we empirically link the survival and economic success of business establishments to the performance of the transportation system that serves these establishments. We explore this relationship for the entire State of California while controlling in a statistically robust way for a variety of factors influencing business life cycle events, such as closures, formation/birth, and relocation. We use data from: a) longitudinal business establishment population event data that span two decades; b) highway and transit accessibility and level of service indicators at multiple time points; and c) geographical market size and mix from available US Census data. We draw lessons learned and develop suggested policies that increase economic development and business establishment performance.

Principal Investigator *(September 2013 to September 2015) UCCONNECT Transportation Student Fellowships for UCSB. US Department of Transportation. \$100,000.* This funding is provided for

graduate students in the Transportation Emphasis at UCSB and allocated based on merit, study orientation in transportation, and intention to follow a transportation career.

Investigator - Visiting External Scientific Collaborator (*January 2012 to October 2015*). *Green Transport in the Islands Area (GRETIA)*. Sponsor: European Union (European Social Fund - ESF) and Greek National Strategic Reference Framework (NSRF) called THALES Programme. EUR 596,700. This program is about “Reinforcement of the interdisciplinary and/or inter-institutional research and innovation with the possibility of attracting high standard researchers from abroad through the implementation of basic and applied excellence research”. The GRETIA project creates a comprehensive green transport policy, research and development action plan for Aegean island areas, accounting for the unique characteristics and growth prospects of the area in its multiple dimensions. The project identifies the factors that affect the study area development by defining the requirements of decision makers, investigating individual activity and travel patterns; and exploring island destination choice for tourists. The final product is a policy platform. It includes environmental analysis, travel simulation, and economic analysis.

Principal Investigator. (*April 2012 to September 2014*) *Business Establishment Spatial Evolution Microsimulation (BESEM)*. Sponsor: University of California Transportation Center/CALTRANS. \$44,000. The ultimate objective of this initiative is to create software that is able to replicate the change in location of each business establishment in California as a function of its relationship with other business establishments and the transportation infrastructure connecting all businesses. This is a much needed method to: a) show the spatial correlation between business location (and implicitly jobs) and infrastructure by each business type at a microlevel; and b) compute activity opportunity based accessibility indicators that capture observed changes due to businesses moving into the state, moving out of the state, and relocating from one region to another. Schemata for each business type (medical, retail, legal) will be first developed and tested with real world data using point process statistical models and measures of centrality and clustering. In addition, economic efficiency and relocation behavior is also analyzed to discern patterns of regularity/stability and change. Eventually, models of location/relocation will be developed and used in simulating urban environments. The tasks include data assembly and assessment of quality, testing of spatial statistics models, creation of the simulator framework, and testing.

Principal Investigator (*August 2006 to September 2014*) *UCTC Transportation Student Fellowships for UCSB*. US Department of Transportation - University of California Transportation Center. \$673,000. This funding is provided for graduate students in the Transportation Emphasis at UCSB and allocated based on merit, study orientation in transportation, and intention to follow a transportation career.

Principal Investigator. (*April 2009 to June 2013*) *SCAG Activity-based Travel Demand Model Development: Development of Simulator of Activities, Greenhouse (gas) Emissions, Networks, and Travel (SimAGENT)*. Sponsor: Southern California Association of Governments. Approximately \$1,400,000. In this project in collaboration with Chandra Bhat from UT Austin and Ram Pendyala from Arizona State University, the requirements of California Senate Bill 375 and the regional transportation modeling guidelines are addressed by developing an activity scheduling model system and insert it into the overall model system of SCAG. The simulator includes population synthesis that recreates the entire resident population of this region, provides locations for residences, workplaces, and schools for each person, estimates car ownership and type as well as main driver for each vehicle, and provides other key personal and household characteristics. Then, a synthetic schedule generator recreates for each resident person in

the simulated region a schedule of activities and travel that reflects intra-household activity coordination for a day. These synthetic activity and travel daily schedules are then converted to multiple Origin Destination (OD) matrices at different times in a day. These are in turn combined with other OD matrices (representing truck travel, travel from and to ports and airports, and travel generated outside the region) and assigned to the network in multiple periods in a day. The assignment output is then used in the software EMFAC to produce estimates of fuel consumed and pollutants emitted (including CO₂) by different classes of vehicles. The overall model system also includes provision for finer spatial and temporal resolutions that is pilot tested using TRANSIMS and MATSIM. In addition, spatial allocation (geolocation) techniques are used to assign household to residential parcels and activities to all land parcels in a region. Moreover, testing of second by second vehicle emission estimation using the output of TRANSIMS and CMEM was also successful.

Principal Investigator. *(January 2009 to December 2012) Development of Next Generation Agent-based Simulation. Sponsor: UC Lab Fees Program. UC Office of the President. \$870,000.* In this project, realistic agents are created using observed and reported data from persons and their households including a variety of time use, activity participation, and travel surveys combined with large databases available from public agencies and private companies. Also key is the inclusion of weekly rhythms in the life of people, their interactions with other people within their strongest and most influential social network (i.e., the household), life cycle stages, and people's complex interactions with the built environment. In this project, different modeling techniques are developed, tested, evaluated, and implemented to demonstrate them in applications. This project generated a base suite of tested models, provided core information for many new research proposals, strengthened the GeoTrans laboratory at UCSB, and offered unique opportunities for our graduate students in developing modeling and simulation careers.

Principal Investigator. *(April 2010 to June 2013) California Household Travel Survey Pre-test Design and Management Consultant. Sponsor: Southern California Association of Governments. \$90,000.* In this project Goulias with Dr. Morrison designed a pre-test for the California Household Travel Survey (an approximately 65,000 household survey) and developed a list of data items required for the modeling needs of California to address SB 375 policy questions today and to also prepare for new modeling needs in the future for large, medium, and small MPOs as well as CALTRANS. Goulias also supervised data collection efforts and analyzed outcomes using quality assurance and control techniques.

Principal Investigator. *(August 2009 to December 2010) Forecasting with Dynamic Microsimulation: Design, Implementation, and Demonstration (Year 22). Sponsor: University of California Transportation Center, \$102,000.* In this project we develop a new travel demand forecasting system that integrates demographic microsimulation with urban simulation and travel demand model systems. The basic ingredients of this new model system are: a) a dynamic demographic simulator designed and tested with repeated observations of the same individuals in another context that will be transferred to a case study in Santa Barbara, CA; b) a modified version of the recently finalized Urbansim model that will also be calibrated with data from Santa Barbara, CA; and c) travel demand models that account for intra-household interactions and path based accessibility that were estimated with data from California. The model system is unique because it combines within a day and across years human behavior dynamics and it will push the frontier of modeling and simulation one step further. A pilot test of land use models was tested in Santa Barbara, CA, and a strategy for next steps was developed.

OTHER COMPLETED RESEARCH PROJECTS

Principal Investigator (May 2008 to October 2009) Doctoral Dissertation Research for Kriste Henson: Travel Determinants and multi-scale transferability of national activity patterns to create synthetic populations. National Science Foundation. NSF/BCS-0752378. \$6,000.

Principal Investigator (September 2008 to July 2009) Group Behavioral Process Identification in the Interaction Between Location Choice and Travel Behavior. US Department of Transportation - University of California Transportation Center. \$39,936.

Principal Investigator (August 2008 to July 2009) UCTC Transportation Student Fellowships for UCSB. US Department of Transportation - University of California Transportation Center. \$100,000.

Principal Investigator (September 2007 to December 2008) Travel Behavior Dynamics in Spatial and Social Dimensions. US Department of Transportation - University of California Transportation Center. \$56,843.

Principal Investigator (September 2007 to July 2008) UCTC Annual Student Conference 2008. US Department of Transportation - University of California Transportation Center. \$24,908.

Principal Investigator (August 2007 to July 2008) UCTC Transportation Student Fellowships for UCSB. US Department of Transportation - University of California Transportation Center. \$80,000.

Principal Investigator (September 2007 to August 2008) Travel Funds for UCSB. US Department of Transportation - University of California Transportation Center. \$5,000.

Principal Investigator (September 2006 to August 2008) Travel Funds for UCSB. US Department of Transportation - University of California Transportation Center. \$5,000.

Principal Investigator (August 2005 to July 2008) A Spatial Analysis of Self-serving and Altruistic Travel Behavior. US Department of Transportation - University of California Transportation Center. \$64,000.

Principal Investigator (May 2007 to June 2008) Determining the Impacts of Active Infrastructure Development on Travel behavior and Physical Activity. Grant for Burbidge Fellowship. \$25,108.

Principal Investigator (August 2006 to July 2007) Eisenhower Fellowship for Shaunna Burbidge. National Highway Institute. US DOT. \$11,500.

Principal Investigator (August 2006 to July 2007) UCTC Transportation Student Fellowships for UCSB. US Department of Transportation - University of California Transportation Center. \$65,000.

Principal Investigator (September 2004 to June 2008). A GIS-based Tool for Forecasting the Travel Demands of Demographic Groups within California - An Optimal Resource Allocation Tool. California Department of Transportation via UC Berkeley California Partners for Advanced Transit and Highways (PATH). \$284,829.

Principal Investigator (July 2005 to January 2006) Space and Time Prisms for Activity Modeling and Microsimulation Peer Exchange. Federal Highway Administration – US Department of Transportation. \$20,000.

Principal Investigator (September 2002 to June 2004) . Mid-Atlantic Universities Transportation Center”, US DOT - RSPA, \$916,300 in 2002-2003 and \$906,000 in 2003-2004 fiscal years. This is a project that started in June 22, 1999 and will end in September 30, 2005. The contract is renewable every year at different amounts depending on yearly budget appropriations that fluctuate between \$800,000 and \$1,000,000 per year.

Principal Investigator (May 2002 to April 2004). CENTRE SIM: A Dynamic and Activity-Based Microsimulation Model for Travel Demand Forecasting and a Centre Country Resident Survey to Support Model Development. MTA and PennDOT, \$284,000 (*equal match from MAUTC in 2002-2003 and in 2003-2004*).

Principal Investigator. ITS Steering Committee Support and ITS Evaluation. Pennsylvania Department of Transportation. \$150,000.

Principal Investigator. Research Cooperation with Socialdata, GmbH, Munich, Germany. Socialdata; \$30,000;

Principal Investigator. Pennsylvania Turnpike Commission Advanced Traveler’s Information System (ATIS) Phase III, Independent Evaluation.” Subcontract with Frederick Harris, Inc. \$160,000.

Principal Investigator. Phase IV-Pennplan. Pennsylvania Department of Transportation. \$100,000.

Principal Investigator. “Intelligent Transportation Systems Evaluation Fellowship Matching”; \$100,000; Mid-Atlantic Universities Transportation Center.

Principal Investigator. Transportation Engineering and Management”; \$100,000; Mid-Atlantic Universities Transportation Center.

Principal Investigator. I-95 Corridor Coalition Field Operation Test #10 Coordinated Safety Management. The I-95 Corridor Coalition, U.S. DOT, and the Pennsylvania Department of Transportation. \$300,000.

Principal Investigator. Statewide Transportation Planning Public Involvement Program (Penn Plan). Pennsylvania Department of Transportation. \$649,604.

Principal Investigator. Transportation Operations Partnership Work Order 5: Developing Pennsylvania’s Intelligent Transportation Systems/Commercial Vehicle Operations Business Plan. Pennsylvania Department of Transportation and the Mid-Atlantic Universities Transportation Center. \$95,500.

Conference Director/Principal Investigator. Rural Advanced Technology and Transportation Systems 1998 International Conference. ITS America, U.S. DOT, and the Pennsylvania Department of Transportation. \$40,000.

Principal Investigator. Transportation Operations Partnership Work Order No. 16: Winter Maintenance

Survey. Pennsylvania Department of Transportation and the Mid-Atlantic Universities Transportation Center. \$50,000.

Principal Investigator. Transportation Operations Partnership Work Order 17: Statewide Transportation Planning Public Involvement Program Preparation Study (PennPlan Prepare). Pennsylvania Department of Transportation. \$105,078.

Principal Investigator. The Pennsylvania Department of Transportation-Federal Highway Administration-National Institute for Environmental Renewal. Evaluation of Fleet Management System for Hazardous Materials (Tranzit Xpress). \$47,500.

Principal Investigator. James H. Kell & Associates and the Pennsylvania Department of Transportation. Development of Intelligent Transportation Systems for the Scranton/Wilkes-Barre Metropolitan Area. \$43,000.

Principal Investigator. PennDOT/MAUTC Partnership Project Task 34: Access Management Impact Simulation, Phases II and III. \$75,000.

Principal Investigator. PennDOT/MAUTC Partnership Project Task 39: WIM-CAVC Algorithm and Software Development for Data Analysis and Quality Control. \$45,000.

Principal Investigator. Battelle Memorial Institute/FHWA. Weigh-In-Motion Data Collection in PA. \$25,000.

Faculty Associate. Texas A&M University System & Federal Highway Administration. Design Consistency Evaluation Module for the Interactive Highway Safety Design Model. \$177,192.

Faculty Associate. PennDOT/MAUTC Partnership Supplement H: Traffic Engineering Education Program. \$166,751.

Principal Investigator. FHWA- Battelle Memorial Institute. BAT94-016. Analysis of Longitudinal Data from the Puget Sound Transportation Panel (PSTP). \$150,000.

Co-Principal Investigator. FHWA- Battelle Memorial Institute. BAT94-024. Highway Cost Allocation Study. \$200,000.

Principal Investigator. PennDOT/MAUTC Partnership Project Task 21: Geographic Information Systems Training and Technical Support, \$40,000.

Principal Investigator. PennDOT/MAUTC Partnership Supplement E: Automatic Traffic Data Collection System Modernization. \$39,955.

Principal Investigator. PennDOT/MAUTC Partnership Project Task 15: Access Management/Impact Simulation (AMIS). \$121,593.

Principal Investigator. Puget Sound Regional Council and Mid-Atlantic University Transportation Center. "Analysis of the First Two Waves of the Puget Sound Transportation Panel: Panel Attrition,

Residential Location, Mode Switching, and Panel-Based Forecasting" \$38,281.

Principal Investigator. Centre Region Planning Commission. Centre Regional Transportation Demand Management Plan. \$71,367.

Principal Investigator. Pennsylvania Department of Transportation, Local Right-Of-Way Preservation Program - Project Task 7. \$103,076.

Principal Investigator. Pennsylvania Low Emissions Vehicle Commission. LEV Program Technical Support. \$40,000.

Principal Investigator. Pennsylvania Department of Transportation, EVIPAS Training Program - PennDOT Safety and Congestion Work Order No. 3. \$31,135.

Faculty Associate. Pennsylvania Department of Transportation. Developing an AVCS Research Program to Improve Safety on Rural Roadways. \$74,473.

Faculty Associate. Pennsylvania Department of Transportation, Access Management Guidelines - PennDOT Safety and Congestion Work Order No. 7. \$41,315.

Faculty Associate. Pennsylvania Department of Transportation, Congestion Management Summit - PennDOT Safety and Congestion Work Order No. 4. \$15,000 .

Principal Investigator. Transportation Analysis of Travel Routes from the Centre County Solid Waste Authority to Six Different Sites in Pennsylvania. \$5,583.

Principal Investigator. Transportation and Air Quality Modelling (TAQM). MAUTC internal project. \$8,500.

Presentations

1. Lee J. H. and K. G. Goulias (2017) A Decade of Dynamics of Residential Location, Car Ownership, Activity, Travel and Land Use in the Seattle Metropolitan Region. Paper Presentation at the 22nd International Symposium on Transportation and Traffic Theory, Evanston, Illinois, July 25. (Presenter: Goulias)
2. Goulias K. G., Adam W. Davis, and E. C. McBride (2017) Experiments with Semantic and Sentiment Analysis of Generation Z Reports About Smart Cities and Automation. Invited Presentation at the Czech Technical University (CVUT) Smart Cities Symposium Prague 2017, Prague, May 25. (Presenter: Goulias)
3. Goulias K.G. (2017) Design & Implementation of a Simulator of Activities, Greenhouse Gas Emissions, Networks, & Travel. Invited Presentation at the Qatar Ministry of Transport and Communication and ItalConsult, Doha, Qatar, May 15.
4. Lee J. H. and K. G. Goulias (2017) A Decade of Dynamics of Residential Location, Car

Ownership, Activity, Travel and Land Use in the Seattle Metropolitan Region. Invited presentation at the Mobility Chair (Colloque Annuel de la Chaire Mobilité). May 2, École Polytechnique de Montréal, Montreal, Canada. (Presenter: Goulias)

5. Lee J.H. A.W. Davis, E. McBride, and K.G. Goulias (2017) Exploring Social Media Data for Travel Demand Analysis: A comparison of Twitter, household travel survey and synthetic population data in California. Paper presented at the 96th Annual Meeting of the Transportation Research Board, Washington, D.C., January 8-12, 2017. (Presenter: Lee)
6. Lee J.H. A.W. Davis, S.Y. Yoon, and K.G. Goulias (2017) Exploring Daily Rhythms of Interpersonal Contacts: Time of day dynamics of human interactions using latent class cluster analysis. Paper presented at the 96th Annual Meeting of the Transportation Research Board, Washington, D.C., January 8-12, 2017. (Presenter: Lee)
7. McBride E., A.W. Davis, J.H. Lee, and K.G. Goulias (2017) Incorporating Land Use in Synthetic Population Generation Methods and Transfer of Behavioral Data. Paper presented at the 96th Annual Meeting of the Transportation Research Board, Washington, D.C., January 8-12, 2017. (Presenter: McBride)
8. Ravulaparthi S. , K.C. Konduri, and K.G. Goulias (2017) Exploring the role of activity time-use frontiers on emotional well-being: an evidence from disability and use of time survey. Paper presented at the 96th Annual Meeting of the Transportation Research Board, Washington, D.C., January 8-12, 2017. (Presenter: Ravulaparthi)
9. Lee J. H., A.W. Davis, S. Y. Yoon, and K.G. Goulias (2016) Exploring the Relationship Between Urban Spatial Structure and Individual Activity Spaces. Invited presentation at the *International Symposium on ICT, Activities, Time Use and Travel*, July 15-18, 2016, Nanjing University, China. (Presenter: Goulias)
10. Goulias K. G., E. McBride, J.H Lee, and A W. Davis (2016) Longitudinal Analysis of the Dynamics of Car Ownership and Travel in the Seattle Metropolitan Region. Paper presented at the 14th World Conference on Transport Research 10-15 July 2016, Shanghai, China. (Presenter: Goulias)
11. Goulias K. G. (2016) Design & Implementation of a Simulator of Activities, Greenhouse Gas Emissions, Networks, & Travel. Invited Presentation at the *Executive Course Activity-Based Modeling of Spatial and Temporal Patterns of Human Travel Behaviour* organized by Center for Transportation Research, The University of Texas Austin and Tongji University, July 9-10, Shanghai, China.
12. Goulias K. G. (2016) Measures of Opportunity-based Spatio-temporal Accessibility. Invited Presentation at the *Executive Course Activity-Based Modeling of Spatial and Temporal Patterns of Human Travel Behaviour* organized by Center for Transportation Research, The University of Texas Austin and Tongji University, Shanghai, July 9-10.
13. Goulias K. G. (2016) Data and Analytics for Activity Modeling of Place Perception, Attractiveness, Meaning & Relationship to Activity & Travel. Invited Presentation at the

Executive Course Activity-Based Modeling of Spatial and Temporal Patterns of Human Travel Behaviour organized by Center for Transportation Research, The University of Texas Austin and Tongji University, Shanghai, July 9-10.

14. Goulias, K. G., J. H. Lee, A. W. Davis, E. McBride (2016) Building a Statewide Origin-Destination Matrix in California Using Social Media Data: Lessons Learned. Invited Presentation at the *University of Cyprus - Summer school 2016 - Big data, mobility patterns and transport analytics*. June 3, Nicosia, Cyprus. (Presenter: Goulias)
15. Goulias, K. G., J. H. Lee, A. W. Davis, E. McBride (2016) Activity Space Estimation with Longitudinal Observations of Social Media Data. Invited Presentation at the *University of Cyprus - Summer school 2016 - Big data, mobility patterns and transport analytics*. June 3, Nicosia, Cyprus. (Presenter: Goulias).
16. Goulias, K.G. (2016) Design & Implementation of a Simulator of Activities, Greenhouse Gas Emissions, Networks, & Travel. Invited Presentation at *the Course on Sustainable Green Infrastructure for the Urban Environment* organized by the Polytechnic University of Turin (*Politecnico di Torino*) and the University of Maryland, June 31st, 2016. Turin, Italy.
17. Goulias K. G. (2016) Life Styles, Life Cycle Stages, Time Use and Travel. Invited Presentation at the Czech Technical University (CVUT) & University of Maryland *International Project Oriented Workshop on SMART Cities 2016*, Prague May 25.
18. Goulias K. G., A. W. Davis, and J. H. Lee (2016) Potential Data Sources for Tourism Research in California. Keynote Presentation at US and Japan Joint Seminar on Long Distance Travel and Tourism Related Activity Patterns. Santa Barbara, CA, March 15. (presenters: Goulias & Davis).
19. Lee J. H., A. W. Davis, S. Y. Yoon, and K. G. Goulias (2016) Activity Space Estimation with Longitudinal Observations of Social Media Data. Paper 16-0070 presented at the Transportation Research Board TRB 95th Annual Meeting, Washington D.C., January 10-14. (presenter: Lee).
20. Tsouros I., K. G. Goulias, A. Polydoropoulou, and A. Tsirimpa (2016) Rhythms in Urban and Island Areas: Does Lifestyle Affect Daily Dynamics? Paper 16-2667 presented at the Transportation Research Board TRB 95th Annual Meeting, Washington D.C., January 10-14. (presenter: Polydoropoulou).
21. McBride E., J.H. Lee, A. Lundberg, A. W. Davis, and K.G.Goulias (2016) Behavioral Microdynamics of Car Ownership and Travel in the Seattle Metropolitan Region from 1989 to 2002. Paper 16-0068 presented at the Transportation Research Board TRB 95th Annual Meeting, Washington D.C., January 10-14. (presenter: McBride).
22. Davis A. W., J.H. Lee, and K.G. Goulias (2016) Taking Place Perception into Travel Behavior Research. Paper 16-0065 presented at the Transportation Research Board TRB 95th Annual Meeting, Washington D.C., January 10-14. (presenter: Davis).
23. Ravulaparthi S. K. and K.G. Goulias (2016) Exploring the Role of Location in Dynamics of Birth and Death of Business Establishments: Case Study Analysis of Santa Barbara County,

California. Paper 16-2322 presented at the Transportation Research Board TRB 95th Annual Meeting, Washington D.C., January 10-14. (presenter: Ravulaparthi).

24. Ravulaparthi S. K., K. Konduri, and K.G. Goulias (2016) Fundamental Linkages Between Activity Time-Use and Subjective Well-Being for Elderly Population: A Joint Exploratory Analysis Framework for In-Home and Out-Of-Home Activities. Paper 16-4236 presented at the Transportation Research Board TRB 95th Annual Meeting, Washington D.C., January 10-14. (presenter: Ravulaparthi).
25. Lee J. H., S. Gao, and K. G. Goulias (2016) Can Twitter Data be Used to Validate Travel Demand Models? Paper 16-0069 presented at the Transportation Research Board TRB 95th Annual Meeting, Washington D.C., January 10-14. (presenter: Lee).
26. Goulias K. G. (2015) The Southern California Simulator of Activities, Greenhouse Gas Emissions, Networks, and Travel (SimAGENT). Invited Lecture at the Postgraduate Course on ΔΕΔΟΜΕΝΑ, ΜΟΝΤΕΛΑ ΚΑΙ ΛΗΨΗ ΑΠΟΦΑΣΕΩΝ (Data, Models, and Decision Making). University of the Aegean, Chios, Greece, December 17. (presentation in Greek)
27. Goulias K.G. (2015) Measurement of Sense of Place. Invited Lecture and round table panel discussion at the University of Piraeus Public Consultation GreTIA event of November 30, Piraeus, Greece, November 30. (presentation in Greek).
28. Goulias K.G. (2015) Part 1: Large Scale Simulation; Part 2: Business Establishment Dynamics; Part 3: Place Perception. Invited Lectures at the Mediterranean Institute for Risk, Environment and Sustainable Development (IMREDD a center of University of Nice Sophia Antipolis and Centre National De La Recherche Scientifique), Nice, France, November 27.
29. Ravulaparthi S. K., I. Tsouros, and Goulias K.G. (2015) Locational Determinants of Birth and Death of Business Establishments and their Relationship to Highway Networks. Paper presented at the 7th International Congress on Transportation Research, Athens, Greece, November 5-6. (Presenter: Goulias).
30. Tsouros, I., A. Polydoropoulou, K. G. Goulias, A. Tsirimpa (2015). Rhythms in Urban and Island Areas. Paper presented at the 7th International Congress on Transportation Research, Athens, Greece, November 5-6. (Presenter: Tsouros).
31. Tsouros, I., A. Polydoropoulou, K. G. Goulias (2015). GPS Data Collection for Active Transport Modes and Design of Real Life Experiments. Paper presented at the 7th International Congress on Transportation Research, Athens, Greece, November 5-6. (Presenter: Tsouros).
32. Goulias K.G. (2015) Business Formation, Survival and Success as a Function of Urban Network Location and Transportation Infrastructure Provision. Invited Keynote Talk at the 4th International Conference on Civil Engineering and Urban Planning, Beijing, China, October 20-23.
33. Goulias K.G., A. W. Davis, and J.H. Lee (2015) Developing Mental Maps Using Sense of Place and Place Perception Survey Data, Social Media Place Happiness Information, and Objectively Measurable Attributes of Places. 1st International Conference on Experiential Tourism, Santorini,

Greece, October 8-11, 2015 (presenter: Goulias).

34. Goulias K.G., A. Polydoropoulou, I. Tsouros, and J.H. Lee (2015) Green Transport in the Island Areas: Measurement of Sense of Place and Comparison with Social Media Data in a Greek Island (poster). 1st International Conference on Experiential Tourism, Santorini, Greece, October 8-11, 2015 (presenter: Goulias).
35. Goulias K. G. (2015) Lifestyle, Lifecycle, Time Use, and Travel: A Framework and Empirical Evidence of Roles in Social Fields. Invited Lecture at the European Transport Conference 2015, Frankfurt, Germany, September 28-30.
36. McBride E., J. H. Lee, A. W. Davis, and K.G. Goulias (2015) Behavioral micro-dynamics of car ownership, activity and travel in the Seattle metropolitan region from 1989 to 2002. 4th symposium of the European Association for Research in Transportation (hEART 2015), Lingby (Denmark), September 9-11, 2015 (presenter: McBride).
37. Goulias K.G., J.H. Lee, E. McBride, A. W. Davis, A. Lundberg (2015) Household Behavioral Dynamics and Behavioral Triggers. XIX European Colloquium on Theoretical and Quantitative Geography (ECTQG2015), Bari (Italy), 3-7 September 2015 (presenter: Goulias)
38. Goulias K. G. and S. K. Ravulaparthi (2015) Business Establishment Survival Dependence on Transportation Network Structure, Firm Characteristics, Market Size, Agglomeration, and Accessibility. XIX European Colloquium on Theoretical and Quantitative Geography (ECTQG2015), Bari (Italy), 3-7 September 2015 (presenter: Goulias)
39. Lee J.H. and K.G. Goulias (2015) Examining differences and commonalities of life cycle stages in daily contacts, activity participation, and travel time allocation. 37th IATUR Conference on Time Use Research, Ankara (Turkey), August 5-7, 2015. (presenter: Goulias)
40. Goulias K. G. (2015) An Overview of GeoSimulation for Smart City Planning, Design, and Operations. Invited Lecture and round table discussion at the Smart Cities - Smart Islands Workshop, University of the Aegean, Chios, Greece, July 29.
41. Goulias K. G. (2015) Choice Context in Travel Behavior Models. Invited presentation for Workshop B: Life-oriented Approach for Transportation Studies. 14th International Conference on Travel Behaviour Research, Windsor 19-23, July.
42. Lee J. H. and K. G. Goulias (2015) Companionship and Time Investment in Social Fields at Different Life Cycle Stages: Implications for Activity and Travel Modeling and Simulation. Paper presented in Frontiers in Transportation 2015 workshop, Beaumont Estate, Windsor, July 24, 2015 (presenter: Lee).
43. Lee J., Davis A. W., and K. G. Goulias (2015) Triggers of Behavioral Change. Paper presented the 14th International Conference on Travel Behaviour Research, Windsor 19-23, July (presenter: Goulias).
44. Lee J., S. Gao, and K. G. Goulias (2015) Can Twitter data be used to validate travel demand

models? Paper presented the 14th International Conference on Travel Behaviour Research, Windsor 19-23, July. (presenter: Lee)

45. Davis A. W., J. H. Lee, K. Deutsch-Burgner, E. McBride, K.G. Goulias (2015) Perception and Reality: Linking Metrics of Place Perception to Measurable Attributes of Place Using Cross-Classified SEM Analysis. Paper presented the 14th International Conference on Travel Behaviour Research, Windsor 19-23, July. (presenter: Davis)
46. Goulias K.G., J. H. Lee, and A. W. Davis (2016) Triggers of Behavioral Change: Conceptual Framework and Empirical Analysis. Invited presentation at the Workshop on Activity-Travel Behavior Dynamics. A new era in activity-travel behaviour dynamics: innovations in theory, methods and data. July 10, Delft University of Technology (TU Delft), Delft, The Netherlands. (presenter: Goulias)
47. Goulias K.G. (2015) An Overview of GeoSimulation for Smart City Planning, Design, and Operations. Invited Lecture at the Smart Cities Symposium Prague 2015. Faculty of Transportation Sciences, June 24 - 25, 2015, Prague, Czech Republic.
48. Goulias K.G. (2015) Design and Implementation of a Simulator of Activities, Greenhouse Gas Emissions, Networks, and Travel (SimAGENT) in Southern California. *International Conference on Foresight*. June 22-24, Athens, Greece.
49. Goulias K. G. (2015) Internal and External Triggers of Household Travel Behavior Change. Invited presentation at the Chaire Mobilite - 5e colloque annuel. May 26, 2015, École Polytechnique de Montréal, Montreal, Canada.
50. Goulias K.G. (2015) Place Perception, Attractiveness, Meaning and Relationship to Activity and Travel: Three case studies of different scales from Santa Barbara, California. *Invited seminar at the Northwestern University Transportation Center*. April 23, 2015, Evanston, Illinois.
51. Lee J. H., A.W. Davis, and K.G. Goulias (2015) Investigating the Relationship between Sense of Place, Subjective Well-Being, and Travel Behavior. *Presentation at the Association of American Geographers Annual Meeting, April 21-25, 2015. Chicago, Illinois. (presenter: Lee)*
52. Goulias K. G. (2015) Longitudinal Analysis of the Dynamics of Car Ownership and Travel in the Seattle Metropolitan Region. *Invited seminar at the Department of Civil and Materials Engineering, University of Illinois at Chicago*. April 20, 2015.
53. Davis A.W., and J.H. Lee, and K.G. Goulias (2015) Analyzing Bay Area Bikeshare Usage in Space and Time. Paper presentation at the *94th Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 11-15, 2015. (Presenter: Davis).
54. Lee J. H., A.W. Davis, and K.G. Goulias (2015) Exploratory Analysis of Relationships Among Long-Distance Travel, Sense of Place, and Subjective Well-being of College Students. Paper presentation at the *94th Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 11-15, 2015. (Presenter: Lee).

55. Goulias K.G., J.H.Lee, and A.W. Davis (2015) Longitudinal Mixed Markov Latent Class Analysis of the 1989 to 2002 Puget Sound Transportation Panel. Paper presentation at the *94th Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 11-15, 2015. (Presenter: Goulias).
56. Ravulaparthi S. and K. G. Goulias (2015) Exploring Locational Influences on Technical Efficiency of Business Establishments in Santa Barbara County Using Stochastic Frontier Modeling Framework. Paper presentation at the *94th Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 11-15, 2015. (Presenter: Ravulaparthi).
57. Lee J.H. and K.G. Goulias (2015) Examining Differences and Commonalities of Life Cycle Stages in Daily Contacts and Activity-Travel Time Allocation. Paper presentation at the *94th Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 11-15, 2015. (Presenter: Lee).
58. Deutsch-Burgner K.E. and K.G. Goulias (2015) Measuring Heterogeneity in Spatial Perception for Activity and Travel Behavior Modeling. Paper presentation at the *94th Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 11-15, 2015. (Presenter: Deutsch-Burgner).
59. Ravulaparthi S. and K. G. Goulias (2015) A Note on Experimentation and Evaluation of Online Real Estate Databases of Residential Prices in Land-use Models. Presentation at the Workshop Emerging Data Technology and Analytic Frontiers in Integrated Land-Use and Transport Modeling presentation at the *94th Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 11-15, 2015. (Presenter: Ravulaparthi)
60. Goulias, K. G. (2014) Large-Scale Travel Demand Forecasting and Inclusion of Spatial and Placial Determinants. Invited Keynote Speech. 3rd International Conference on Civil Engineering and Urban Planning (CEUP 2014), June 20-22, Wuhan, China.
61. Goulias K. G. (2014) Built Environment Representation in Activity-based Travel Demand Forecasting Models. Invited presentation at the Chaire Mobilité - 4e colloque annuel. May 13, 2014, École Polytechnique de Montréal. Montreal, Canada.
62. Goulias, K. G. (2014) Representing the Objective and Subjective Dynamics of Opportunities in Urban and Regional Simulations. Invited Lecture the School of Sustainable Engineering and the Built Environment, Ira A. Fulton Schools of Engineering, Arizona State University. Tempe, February 26, 2014.
63. Deutsch, K.E., Ravulaparthi, S. K., and K.G. Goulias (2014) Place Happiness: It's Constituents and the Influence of Emotions and Subjective Importance on Activity Type and Destination Choice. Paper accepted for presentation at the *93rd Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 12-16, 2014, and publication in *Transportation*. (Presenter: Deutsch).
64. Ravulaparthi, S.K., and K.G. Goulias (2014) Characterizing the Composition of Economic Activities in Central Locations: A Graph-Theoretic Approach to Urban Network Analysis. Paper

- accepted for presentation at the *93rd Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 12-16, 2014, and considered for publication in the *Transportation Research Record: Journal of the Transportation Research Board*. (Presenter: Ravulaparthi).
65. Isbell, N. A., and K.G. Goulias (2014) Modeling Second-by-Second Traffic Emissions in a Mega-Region. Paper accepted for presentation at the *93rd Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 12-16, 2014. (Presenter: N. Isbell).
 66. Chen, Y. Goulias K. G., C. R., Bhat, and R.M. Pendyala (2014) Residential Geolocation of Households in a Large-Scale Activity-based Microsimulation Model and Development of a High Definition Spatial Distribution of Vehicle Miles Traveled. Paper accepted for presentation at the *93rd Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 12-16, 2014. (Presenter: Goulias)
 67. Goulias K. G., S. Ravulaparthi, K. Konduri, and R.M. Pendyala (2014) Using Synthetic Population Generation to Replace Sample and Expansion Weights in Household Surveys for Small Area Estimation of Population Parameters. Paper also accepted for presentation at the *93rd Annual Meeting of the Transportation Research Board, Washington, D.C.*, January 12-16, 2014. (Presenter: Goulias).
 68. Goulias K.G. (2013) New Generation Large Scale Activity Microsimulation Models (SimAGENT) & Data Needs. Invited Keynote Lecture at the University of Tokyo Summer School, September 21, 2013, Tokyo, Japan.
 69. Goulias K.G. (2013) GIS Analytics and New Service Possibilities. Invited Lecture at Nissan Research Center, September 20, 2013, Atsugi, Japan.
 70. Goulias K.G. (2013) Activity-Travel Happiness and Related Ideas. Invited Presentation at Infrastructure Division of the Korea Research Institute for Human Settlements (KRIHS). August 7, 2013. Anyang-si, Gyeonggi-do, Korea.
 71. Goulias K.G. (2013) New Generation Large Scale Activity Microsimulation Models (SimAGENT) and Data Needs. Invited international seminar on activity-based simulation models for promotion of transportation policy effectiveness: present roles and future directions. August 6, 2013. Korea Research Institute for Human Settlements (KRIHS), Anyang-si, Gyeonggi-do, Korea.
 72. Polydoropoulou, A., J.A. Paravantis, E. Sambracos, K. G. Goulias, A. Tzavali, A. Papatheodorou, A. Kotrikla, S. Kapros, N. Litinas, A. Tsirimpa, and K. Glyptou (2013) Expert Opinions for Promoting Green Transport in the Islands. Presentation at the 13th World Conference on Transport Research. July 15-18, 2013. Rio de Janeiro, Brazil. (Presenter: Polydoropoulou).
 73. Kamargianni M., A. Polydoropoulou, K.G. Goulias and K. Kamargiannis (2013) To Walk or not to Walk? Teenagers' Travel Behavior and Perceptions Towards Walkability Constraints. Presentation at the 13th World Conference on Transport Research. July 15-18, 2013. Rio de Janeiro, Brazil. (Presenter: Polydoropoulou).

74. Goulias K.G. (2013) Quality of Life, Subjective Well-Being, Activity-Travel, and Urban Design. Invited presentation at the STT CAMP 2013: Shipping & Transport Markets and Business Perspectives. June 10-15, 2013. University of the Aegean, Chios, Greece.
75. Goulias K.G. (2013) New Generation Large Scale Activity Microsimulation Models (SimAGENT) and Data Needs. Invited presentation at the STT CAMP 2013: Shipping & Transport Markets and Business Perspectives. June 10-15, 2013, University of the Aegean, Chios, Greece.
76. Goulias K.G. (2013) Quality of Life and Activity-Travel Behavior: Conceptual Framework, Empirical Findings, and Possible Experimental Designs. Invited presentation at the 3rd Colloque Annuel de la Chaire Mobilite. Ecole Polytechnique de Montreal, May 13, 2013. Montreal, Canada.
77. Deutsch K.E. and K.G. Goulias (2013) Modeling Travel Decisions: Including the Impact of Place Attitudes on Destination Choice. Association of American Geographers Annual Meeting, April 9-13, 2013. Los Angeles, CA. (Presenter: Deutsch)
78. Lee, J. and K.G. Goulias (2013) Exploring the Relationship between Activity Types and the Types of Business Establishments. Association of American Geographers Annual Meeting Los Angeles, CA. April 9-13, 2013. (Presenter: Lee)
79. Goulias K. G., S. K. Ravulaparthi, and A. Polydoropoulou (2013) An Exploratory Analysis on the Time-of-Day Dynamics of Episodic Hedonic Value of Activities and Travel. Paper 13-0521 presented at the 92nd Annual Meeting of the Transportation Research Board, Washington, D.C., January 13-17, 2013. (Presenter: Goulias)
80. Ravulaparthi S.K., S.Y. Yoon, and K.G. Goulias (2013) Linking Elderly Transport Mobility and Subjective Well-being: Multivariate Latent Modeling Approach. Paper 13-1242 presented at the 92nd Annual Meeting of the Transportation Research Board, Washington, D.C., January 13-17, 2013. (Presenter: Ravulaparthi)
81. Paleti R., C.R. Bhat, R.M. Pendyala, and K. G. Goulias (2013) The Modeling of Household Vehicle Type Choice Accommodating Spatial Dependence Effects. Paper 13-3920 presented at the 92nd Annual Meeting of the Transportation Research Board, Washington, D.C., January 13-17, 2013. (Presenter: Paleti).
82. Deutsch K. and K. G. Goulias (2013) Decision Makers and Socializers, Social Networks, and the Role of Individuals as Participants. Paper 13-4387 presented at the 92nd Annual Meeting of the Transportation Research Board, Washington, D.C., January 13-17, 2013. (Presenter: Deutsch)
83. Tang D., S.K. Ravulaparthi, and K. G. Goulias (2013) Geolocating Activities to Business Establishment Locations Using Time-Dependent Activity Assignment for Travel Demand Modeling. Paper 13-4455 presented at the 92nd Annual Meeting of the Transportation Research Board, Washington, D.C., January 13-17, 2013. (Presenter: Goulias)
84. Goulias K.G. (2012) New Generation Large Scale Activity Microsimulation Models (SimAGENT) and Data Needs. Invited presentation at the Aegean Summer Training in

- Transport. Competitiveness, Assessment, and Management Policies. University of the Aegean, Chios, Greece, August 24 - September 2, 2012.
85. Polydoropoulou A., K.G. Goulias, and A. Rahman (2012) Green Policies and Examples. Aegean Summer Training in Transport. Competitiveness, Assessment, and Management Policies. University of the Aegean, Chios, Greece, August 24 - September 2, 2012. (Presenter: Polydoropoulou)
 86. K.G. Goulias, S.K. Ravulaparthi, A. Polydoropoulou, and S. Yoon (2012) An Exploratory Analysis on the Time-of-Day Dynamics of Episodic Hedonic Value of Activities and Travel. 13th International Conference on Travel Behavior Research organized by International Association for Travel Behavior Research (IATBR), Toronto, CA. July 15-20, 2012. (Presenter: Goulias).
 87. Yoon S., S.K. Ravulaparthi, and K.G. Goulias (2012) Dynamic Diurnal Social Taxonomy of Urban Environments. 13th International Conference on Travel Behavior Research organized by International Association for Travel Behavior Research (IATBR), Toronto, CA. July 15-20, 2012. (Presenter: Yoon).
 88. Deutsch, K.E. G. McKenzie, and K.G. Goulias (2012) Examining The Use Of Smartphones For Travel Behavior Data Collection. 13th International Conference on Travel Behavior Research organized by International Association for Travel Behavior Research (IATBR), Toronto, CA. July 15-20, 2012. (Presenter: Deutsch)
 89. Ravulaparthi, S.K., S. Yoon, and K.G. Goulias (2012) Linking Elderly Transport Mobility and Subjective Well-Being: A Multivariate Latent Modeling Approach. 13th International Conference on Travel Behavior Research organized by International Association for Travel Behavior Research (IATBR), Toronto, CA. July 15-20, 2012. (Presenter: Ravulaparthi)
 90. Goulias K. G. Curriculum for Transportation Profession (2012) Presentation at the Curriculum Workshop. 13th International Conference on Travel Behavior Research organized by International Association for Travel Behavior Research (IATBR), Toronto, CA. July 15-20, 2012.
 91. Goulias K. G. Activity-Based Approaches to Travel Demand Modeling and Forecasting (Part 1: General Ideas). Lecture-Presentation at Transportation Systems Course at the University of the Aegean, Chios Greece. June 11-12, 2012.
 92. Goulias K. G. Activity-Based Approaches to Travel Demand Modeling & Forecasting (Part B: SimAGENT Simulator of Activities, Greenhouse Emissions, Networks, and Travel). Lecture-Presentation at Transportation Systems Course at the University of the Aegean, Chios Greece. June 11-12, 2012.
 93. Goulias K.G. Survey Design: General Principles, California Household Travel Survey, CentreSIM, and GreTIA Data Collection Plans. Lecture-Presentation at Transportation Systems Course at the University of the Aegean, Chios Greece. June 11-12, 2012.
 94. Goulias K.G. New Generation Large Scale Activity Microsimulation Models & Data Needs: Critical Perspectives on the City. International Seminar for 20th Anniversary of Department of Urban Planning and Engineering, College of Engineering, Yonsei University, Seoul, Korea. May 24, 2012.
 95. Goulias K.G. New Generation Large Scale Activity Microsimulation Models & Data Needs. Invited presentation at the Korea Transportation Institute (KOTI), Seoul, Korea. May 23, 2012.

96. Kamargianni M., A. Polydoropoulou, and K.G. Goulias (2012) Teenagers' Travel patterns for School and After-School Activities. Paper presentation at the Conference Transport Research Arena Europe, April 23-26, Athens 2012. (presenter: Kamargianni).
97. Goulias K.G. (2012) Accessibility, Time-Space Prisms, Choice Sets, and Related Issues. Presentation at the Workshop on Integrated Models and Data Needs for Large-Scale Simulations. Transportation Research Board, Tampa Florida April 30, 2012.
98. Goulias K.G., C. R.Bhat, R.M. Pendyala, Y. Chen, R. Paleti, K. Konduri, G. Huang, and H. Hu (2012) Simulator of Activities, Greenhouse Emissions, Networks, and Travel (SimAGENT) in Southern California. Paper 12-0845 presented at the January 2012 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012. (Presenter: Goulias)
99. Lei T., K. G. Goulias, and Y. Chen (2012) Opportunity-Based Dynamic Transit Accessibility in Southern California: Measurement, Findings, and Comparison with Automobile Accessibility. Paper 12-3813 presented at the January 2012 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012. (Presenter: Goulias)
100. Bhat C. R., K.G. Goulias, R.M. Pendyala, R. Paleti, R. Sidhartan, L. Schmitt, and H. Hu. A Household-Level Activity Pattern Generation Model: Simulator of Activities, Greenhouse Emissions, Networks, and Travel (SimAGENT) System in Southern California. Paper 12-4226 presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012. (Presenter: Bhat)
101. Vyas G., R. Paleti, C.R. Bhat, K.G. Goulias, R. M. Pendyala, H. Hu, T. J. Adler, A. Bahreinian. A Joint Vehicle Holdings (Type and Vintage) and Primary Driver Assignment Model with an Application for California. Paper 12-3701 presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012. (Presenter: Paleti).
102. Seraj S., R. Sidhartan, C.R. Bhat, R.M. Pendyala, and K.G. Goulias. Parental Attitudes Toward Children Walking and Bicycling to School: Multivariate Ordered Response Analysis. Paper 12-3675 presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012. (Presenter: Sidhartan).
103. de Abreu e Silva J., K.G. Goulias, and P. Dalal. A Structural Equations Model of Land Use Patterns, Location Choice, and Travel Behavior in Southern California. Paper 12-3422 presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012. (Presenter de Abreu)
104. Deutsch K. and K.G. Goulias. Understanding Place Using a Mixed Method Approach. Paper 12-2984 presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012. (Presenter: Deutsch).
105. Yoon SY, K. Deutsch, and K.G. Goulias. Feasibility of using time-space prism to represent available opportunities and choice sets for destination choice models in the context of dynamic urban environments. Paper 12-2707 presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012. (Presenter: Yoon)
106. Yoon S.Y. and K.G. Goulias. Exploratory Analysis of Differences Between Men and Women in

- Time and Travel Task Allocation Patterns and Time-Space Prism Accessibility in Dual-Income Households With and Without Children. Paper 12-2668 presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012. (Presenter: Yoon)
107. Pendyala R.M., C.R. Bhat, K.G. Goulias, R. Paleti, K.C. Konduri, E. Sidhartan, H. Hu, G. Huang, and K. P. Christian. Application of Socioeconomic Model System for Activity-Based Modeling: Experience from Southern California Paper 12-2186 presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012. (Presenter: Pendyala).
 108. Ravulaparthi S., P. Dalal, Y. Chen, and K. G. Goulias. An Exploratory Analysis of Spatial Hierarchical Clustering Using Opportunity-based Accessibility and Reported Land Values and its Relationship with Residents Characteristics in Los Angeles County. Paper 12-1297 presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012. (Presenter: Ravulaparthi)
 109. Deutsch K. E., S.Y. Yoon, and K.G. Goulias. Using Sense of Place to Model Behavioral Choices. Paper 12-0144 presented at the 91st Annual Meeting of the Transportation Research Board, Washington, D.C., January 22-26, 2012. (Presenter: Deutsch)
 110. Kamargianni M., A. Polydoropoulou, and K.G. Goulias Teenagers' Travel patterns for School and After-School Activities. Paper presented at the 4th European Conference Transport Research Arena, Athens, Greece, April 23-26, 2012. (Presenter: Kamargianni)
 111. Goulias K.G. and S.Y. Yoon. On the Relationship Among Travel Behavior, Time Use Investment and Expenditures in Social Networks. Paper presented at the 16th HKSTS International Conference, Hong Kong, China, December 17-20, 2011, and published in the conference proceedings. (Presenter: Goulias)
 112. Yoon S. Y. and K.G. Goulias. Life cycle dynamics of the impact of land use on time use and intra-household interaction. Paper presented at the 16th HKSTS International Conference, Hong Kong, China, December 17-20, 2011, and published in the conference proceedings. (Presenter: Yoon)
 113. Goulias K.G., R.M. Pendyala, and C.R. Bhat (2011) Total Design Data Needs for the New Generation Large Scale Activity Microsimulation Models. Keynote paper presented at the plenary of the 9th International Conference on Travel Survey Methods, Chile, Nov. 14-18, 2011. (Presenter: Goulias)
 114. Goulias K.G. SimAGENT - Simulator of Activities, Greenhouse gas Emissions, Networks, and Travel. Presentation at T h i n k S p a t i a l- The UCSB brown-bag forum on spatial thinking organized by spatial@UCSB, Santa Barbara, CA. October 25, 2011.
 115. Goulias K.G. Panel on Travel Behavior and Land Use. Presentation at the 20th Anniversary of the Institute of Transportation Studies at UCDavis, September 24, 2011, Davis, CA.
 116. Yoon S. Y., Y. Chen, and K. G. Goulias. Development of Dynamic Opportunity-based Time-Space Prism Constrained Accessibility Indicators. Presentation at the 17th European Colloquium on Quantitative and Theoretical Geography Hosted by Harokopio University, Department of Geography 2-5 September 2011, Athens – Greece (presenter: Goulias).

117. Goulias K.G., C.R. Bhat, R.M. Pendyala, Y. Chen , R. Paleti, K. C. Konduri, G. Huang, H. Hu. Simulator of Activities, Greenhouse gas Emissions, Networks, and Travel (SimAGENT) in Southern California. Presentation at the 17th European Colloquium on Quantitative and Theoretical Geography Hosted by Harokopio University, Department of Geography 2-5 September 2011, Athens – Greece (presenter: Goulias).
118. Deutsch K., S.Y. Yoon, and K. G. Goulias. Unpacking the theory of sense of place. Is it useful to choice modeling? Paper prepared for presentation at the International Choice Modelling Conference 2011, Oulton Hall, UK, July 4-6, 2011 (presenter: Deutsch).
119. Yoon S.Y., K. Deutsch, Y. Chen, and K.G. Goulias. Feasibility of using time-space prism to build choice sets for destination choice models. Paper prepared for presentation at the International Choice Modelling Conference 2011, Oulton Hall, UK, July 4-6, 2011 (presenter: Yoon).
120. Goulias K.G., C. R. Bhat, R. M. Pendyala, Y. Chen, R. Paleti, K. C. Konduri, G. Huang, and H. Hu. Simulator of Activities, Greenhouse Emissions, Networks, and Travel (SimAGENT) in Southern California: Design, Implementation, Preliminary Findings, and Integration Plans. Paper presented at the IEEE Forum on Integrated and Sustainable Transportation System, Vienna, Austria, June 29 to July 1, 2011 (presenter: Goulias).
121. Isbell A. N. and K.G. Goulias. A Method for Computing Flight Emissions and Identifying Potential Point-to-Point Aviation Market Identifying Potential Point-to-Point Aviation Market. Paper prepared for presentation at the IEEE Forum on Integrated and Sustainable Transportation System, Vienna, Austria, June 29 to July 1, 2011 (presenter: Isbell).
122. Goulias K. G. et al. (June 2011). A series of presentations as a Chios workshop hosted by the Department of Shipping, Trade, and Transport on Geographic Information Science and Transportation Modeling and Simulation that included “Activity-based Travel Demand Model SimAGENT and Next Generation Agent-based Modeling” (Presenter: Goulias); “Dynamic Opportunity-based Accessibility and Spatial Clustering” (Presenter: **Dalal**); “Integrated Land Use and Travel Demand Forecasting Models” (Presenter: **Ravulaparthi**); “The Impact of Time-space Prism Accessibility on Time Use Behavior and its Propagation through Intra-household Interaction” (Presenter: **Yoon**); “The Evolution of Travel in the Urban Landscape: Extrapolating Spatio-Temporal Behavioral Trends with Longitudinal Data” (Presenter: **Royal**); “Data Collection Using GPS and Using Sense of Place in Destination Choice” (Presenter: **Deutsch**); and “A Method for Computing Flight Emissions and Identifying Potential Point-to-Point Aviation Markets” (Presenter: **Isbell**).
123. Dalal, P., Y. Chen, S. Ravulaparthi, and K G. Goulias. Dynamic Opportunity-Based Multipurpose Accessibility Indicators In California. Paper presented at the Annual Meeting of the European Association of Geographers, June 2-5, 2011. Athens, Greece. (Presenter: Dalal)
124. Dalal, P., N. Royal, and K. G. Goulias. The Evolution of Travel in the Urban Landscape: Extrapolating Spatio-Temporal Behavioral Trends With Longitudinal Data. Paper presented at the 2011 Annual Meeting of the European Association of Geographers, June 2-5, 2011. Athens, Greece. (Presenter: Royal).
125. Deutsch, K. , D. Dara-Abrams, and K. G. Goulias. Integrating GPS And Smart Phone Technology For Behavioral Data Collection. Paper presented at the Annual Meeting of the European Association of Geographers, June 2-5, 2011. Athens, Greece. (Presenter: Deutsch).

126. Ravulaparthi, S.K., N.Isbell, and K.G. Goulias. Hedonic Price Model: Neighborhood Spatio-Temporal Effects On Home Prices. Paper presented at the 2011 Annual Meeting of the European Association of Geographers, June 2-5, 2011. Athens, Greece. (Presenter: Ravulaparthi).
127. Yoon, S., K.Deutsch, Y.Chen, K.G. Goulias. Using Time-Space Prism To Build Choice Sets For Destination Choice Models In The Context Of Dynamic Urban Environment. Paper presented at the Annual Meeting of the European Association of Geographers, June 2-5, 2011. Athens, Greece. (Presenter: Yoon).
128. Goulias K.G., C.R. Bhat, R.M. Pendyala, Y. Chen, R. Paleti, and L.C. Konduri, S.Y. Yoon, S. Ravulaparthi, K. Deutsch, P. Dalal, T. Lei, N. Isbell, G. Huang, H. Hu. Geography Aspects of a Simulator of Activities, Greenhouse gas Emissions, Networks, and Travel (SimAGENT) in Southern California. Paper presented at the Annual Meeting of the European Association of Geographers, June 2-5, 2011. Athens, Greece.
129. Goulias K.G. Life Cycle Stages and Activity-Travel Behavior. 1er Colloque Annuel de la Chaire Mobilite. Ecole Polytechnique de Montreal, May, 2011. Montreal, Canada.
130. Goulias K.G. Urban Simulation for Mega Regions: the Southern California Activity-Based Model System. Quantitative Methods in the Social Sciences Seminar, April, 2011. University of California Santa Barbara, CA.
131. Dalal P. and K.G. Goulias. Geovisualization of the spatial distribution access of opportunities: an exploration of accessibility in Southern California using geographic information systems for equity analysis. Association of American Geographers Annual Meeting Seattle, WA. April 12-16, 2011. (Presenter: Dalal)
132. Deutsch K.E., S. Yoon, and K.G. Goulias. Modeling Sense of Place Using a Structural Equation Model. Association of American Geographers Annual Meeting Seattle, WA. April 12-16, 2011. (Presenter: Deutsch)
133. Goulias K.G., C.R. Bhat, R.M. Pendyala, Y. Chen, R. Paleti, and L.C. Konduri. Activity-Based Travel Demand Model Development Simagent: Progress report to the Modeling Task Force. Southern California Association of Governments, March, 2011. Los Angeles, CA.
134. Henson K. and K. G. Goulias. Travel Determinants and Multi-scale Transferability of National Activity Patterns to Local Populations. GEOTRANS Technical paper, Department of Geography, University of California-Santa Barbara. Presentation at the 90th Annual Transportation Research Board Meeting, Washington D.C., January 23-27, 2011.
135. Deutsch K. E, S.Y. Yoon, and K.G. Goulias. Modeling Sense of Place Using A Structural Equation Model, GEOTRANS Technical paper, Department of Geography, University of California-Santa Barbara. Presentation at the 90th Annual Transportation Research Board Meeting, Washington D.C., January 23-27, 2011.
136. Dalal P. and K.G. Goulias. Geovisualization of Opportunity Accessibility in Southern California: an exploration of spatial distribution patterns using geographic information systems for equity analysis, GEOTRANS Technical paper, Department of Geography, University of California-Santa Barbara. Presentation at the 90th Annual Transportation Research Board Meeting, Washington D.C., January 23-27, 2011.
137. Yoon S.Y., M. Doudnikoff, and K.G. Goulias. Spatial Analysis of the Propensity to Escort

- Children to School in Southern California. GEOTRANS Technical paper, Department of Geography, University of California-Santa Barbara. Presentation at the 90th Annual Transportation Research Board Meeting, Washington D.C., January 23-27, 2011.
138. Chen, Y., S. Ravulaparthi, K. Deutsch, P. Dalal, S.Y. Yoon, T. Lei, K.G. Goulias, R.M. Pendyala, C.R. Bhat, and H-H. Hu. Development of Opportunity-based Accessibility Indicators, GEOTRANS Technical paper, Department of Geography, University of California-Santa Barbara. Accepted for presentation at the 90th Annual Transportation Research Board Meeting, Washington D.C., January 23-27, 2011.
 139. Goulias K. G. Geosimulation, Activity Microsimulation, and Safety Analysis: Commonalities and the Potential Gain in Merging Analytical Methods. Presentation at the Road Safety -European Reality and Perspectives: A New Interdisciplinary Approach, 24th -25th September 2010, Homerium Cultural Centre of Chios Municipality, Chios, Greece.
 140. de Abreu e Silva J., C. Morency, A. Daurien, and K.G. Goulias. Using Structural Equations Modeling to unravel the influence of land use patterns on travel behavior of workers in Montreal. Presentation at the World Conference on Transport Research, July 11-15, Lisbon Portugal. (Presenter: de Abreu).
 141. Goulias K.G., Y. Chen, C.R. Bhat, N. Eluru, R.M. Pendyala, and L.C. Konduri. Greenhouse Gas Emission Scenarios of Land Use Change Using a Large Scale Continuous-Time Activity-Based Microsimulation Model System in Southern California: Design, Implementation, Preliminary Findings, and Future Plans. Presentation at the World Conference on Transport Research, July 11-15, 2010. Lisbon Portugal. (Presenter: Goulias).
 142. Yoon S.Y. and K.G. Goulias. An Intra-Household Assessment of Land Use and Activity-Travel Behavior Patterns in California. Presentation at the World Conference on Transport Research, July 11-15, Lisbon Portugal. (Presenter: Goulias).
 143. Goulias K.G. Companionship and Altruism in Daily Activity Time Allocation and Travel by Men and Women in the Same Households. Presentation at 32nd Time Use Conference, 7-10 July, 2010. Paris, France. (Presenter: Goulias).
 144. Yoon S.Y. and K.G. Goulias. A Comparison of Daily Time Allocation by Men and Women in the Same Household Accounting for the Presence of Children in the Household and Space-time Accessibility. Presentation at 32nd Time Use Conference, 7-10 July, 2010. Paris, France. (Presenter: Goulias).
 145. Morrison E. and K.G. Goulias. Pre-TEST California Household Travel Survey: Overview and Design Elements. Presentation to the SCAG Modeling Task Force and the California Interagency Modeling Forum, May 26, 2010. Los Angeles, CA. (Presenter: Goulias).
 146. Goulias K. G., Y. Chen, C.R. Bhat, N. Eluru, H. Hu, R.M. Pendyala, and K.C. Konduri. Activity-Based Microsimulation Model System in Southern California: Design, Implementation, Preliminary Findings, and Future Plans. Development of SimAGENT. Presentation to the SCAG Modeling Task Force and the California Interagency Modeling Forum. May 26, 2010. Los Angeles, CA (Presenter: Goulias).
 147. Yoon S.Y. and K.G. Goulias. The Impact of Time-Space Prism Accessibility on Time Allocation and its Propagation Through Intra-Household Interaction. Presentation at the 3rd Conference on Innovations in Travel Modeling, May 10-12, 2010. Tempe, Arizona. (Presenter: Yoon).

148. Goulias K. G., Y. Chen, C.R. Bhat, N. Eluru, H. Hu, R.M. Pendyala, and K.C. Konduri. Activity-Based Microsimulation Model System in Southern California: Design, Implementation, Preliminary Findings, and Future Plans. Presentation at the 3rd Conference on Innovations in Travel Modeling, May 10-12, 2010. Tempe, Arizona. (Presenter: Goulias).
149. Goulias K.G. Part 1: Travel Behavior Dynamics from a Lifespan Development Perspective. Part 2: SCAG activity-based model and California Household Travel Survey. UCI ITS Seminar, May 8, 2010. (Presenter: Goulias).
150. Goulias K.G. Spatio-temporal Microsimulation of the Human Lifecourse for Land Use and Travel Policy Analysis. Presentation at the 3rd International Conference - Transport Science and Technology Congress 2010, April 4th to 7th, New Delhi, India. (Presenter: Goulias).
151. Goulias K.G. Regional Microsimulation Activity Models for GHG Estimation (2010). Presentation at the “Measuring Progress Towards Transportation GHG Goals” Symposium UCLA Lewis & Luskin Centers. UCLA Program on Local Government Climate Action Policies, March 5, 2010. (Presenter: Goulias).
152. Yoon S.Y and K.G. Goulias. Constraint-Based Assessment of Intra-household Bargaining on Time Allocation to Activities and Travel Using Individual Accessibility Measures (10-1820). Paper accepted for presentation at the 89th Annual Transportation Research Board Meeting, January 10-14, 2010, Washington D.C. (Presenter: Yoon).
153. Deutsch, K. E. and K.G. Goulias. Exploring Sense-of-Place Attitudes as Indicators of Travel Behavior (10-0070). Paper accepted for presentation at the 89th Annual Transportation Research Board Meeting, January 10-14, 2010, Washington D.C. (Presenter: Deutsch).
154. Yoon S.Y. And K.G. Goulias. The Impact of Individual Accessibility on Travel Behavior and its Propagation Through Intra-household Interaction. Paper presented at the 12th International Conference on Travel Behavior Research, December 13-18, 2009. Jaipur, India (Presenter: Yoon).
155. Goulias K. G. Travel Behavior Dynamics from a Lifespan Development Perspective. Paper presented at the 12th International Conference on Travel Behavior Research, December 13-18, 2009. Jaipur, India. (Presenter: Goulias).
156. Burbidge S. K. and K. G. Goulias. Evaluating the Impact of Neighborhood Trail Development on Active Travel Behavior and Overall Physical Activity Among Suburban Residents. Paper presented at the 12th International Conference on Travel Behavior Research, December 13-18, 2009. Jaipur, India. (Presenter: Goulias).
157. Goulias K.G. Activities, Time Use and Travel Behavior in Multiple Space-Time Dimensions. Presentation at the The Joy of the Journey: Celebrating the Life and Work of Ryuichi Kitamura, June 28-30, 2009, UCDavis, Davis, CA.
158. Dalal P. and K. G. Goulias. Changing Travel Demand in an Emerging City: Sylhet, Bangladesh. Presented at the Association of American Geographers Annual Meeting, March 22-27, 2009. Las Vegas, NV. (Presenter: Dalal).
159. Deutsch K. and K. G. Goulias. Why should sense of place matter to travel behavior modeling and simulation? Presented at the 2009 Association of American Geographers Annual Meeting, March 22-27, Las Vegas, NV. (Presenter: Deutsch).

160. Yoon S.Y, T. Golob, and K. Goulias. A California Statewide Exploratory Analysis Correlating Land Use Density, Infrastructure Supply and Travel Behavior. Paper accepted for presentation at the 88th Annual Transportation Research Board Meeting, January 11-15, 2009, Washington D.C. (Presenter: Yoon).
161. Deutsch K.E. and K.G. Goulias. Measuring Sense of Place: Innovation in Intercept Survey Methodology. Paper accepted for presentation at the 88th Annual Transportation Research Board Meeting, January 11-15, 2009, Washington D.C. (Presenter: Deutsch).
162. Burbidge S. K. and K. G. Goulias. Active Travel Behavior. Paper accepted for presentation at the 88th Annual Transportation Research Board Meeting, January 11-15, 2009, Washington D.C, and publication in Transportation Letters. (Presenter: Burbidge).
163. Burbidge S. K. and K. G. Goulias. Evaluating the Impact of Neighborhood Trail development on Active Travel behavior and Overall Physical Activity Among Suburban Residents. Paper accepted for presentation at the 88th Annual Transportation Research Board Meeting, January 11-15, 2009, Washington D.C. (Presenter: Burbidge).
164. de Abreu e Silva J. and K.G. Goulias. Using Structural Equations Modelling to Unravel the Influence of Land Use Patterns on Travel Behavior of Urban Adult Workers of Puget Sound Region. Paper accepted for presentation at the 88th Annual Transportation Research Board Meeting, January 11-15, 2009, Washington D.C. (Presenter: Abreu).
165. Goulias K.G. Transportation Modeling and Simulation Requirements for Policy Analysis. Invited Presentation at the XV Convegno Nazionale Societa Italiana dei Docenti di Trasporti (15th National Congress Italian Society of Transport Faculty), 9-10 June, 2008. University of Calabria, Arcavacata di Rende, Italy.
166. Henson K. and K. G. Goulias. The Relationship between Population and Land Use for Application in Homeland Security Modeling. Presented at the 2008 Association of American Geographers Annual Meeting, April 18-22, Boston, MA. (Presenter: Henson).
167. Goulias K. G. Transportation Policy Analysis and Planning in the US with Emphasis on California. Invited presentation at the Smart Travel Center, Transport Queensland, March 20, 2008. Brisbane, Queensland, Australia.
168. Goulias K. G. Space, Time, and Money in Activity Modeling and Simulation. Invited presentation at the First Indo-US Symposium on Advances in mass Transit and Travel behavior Research (MTTBR-08), February 12-15, 2008. Guwahati, India.
169. Goulias K.G. Quo Vadis Activity-Based Travel Demand Model? Presentation at the 14th Annual University Transportation Center Research Conference, February 1, 2008. University of California Santa Barbara.
170. Alam Md. J. B., J. W. Polak, and K.G. Goulias. Regional Efficiency and Accessibility Demand Assessment Using Stochastic Data Envelopment Analysis. Paper presented at the 87th Transportation Research Board Annual Meeting, January 13-17, 2008, and included in the CD ROM proceedings (Presenter: Polak).
171. Goulias K. G. Companionship and Altruism in Daily Activity Time Allocation and Travel by Men and Women in the Same Households. Paper presented at the 87th Transportation Research Board Annual Meeting, January 13-17, 2008, and included in the CD ROM proceedings.

172. Beckman J.D. and K.G. Goulias. Immigration, Residential Location, Car Ownership, and Commuting Behavior: Multivariate Latent Class Analysis from California. Paper presented at the 87th Transportation Research Board Annual Meeting, January 13-17, 2008, and included in the CD ROM proceedings (Presenter Beckman).
173. Kemel E., S.Y. Yoon, and K.G. Goulias. Inequality Assessment Tool for Urban Development Using GIS-Based Accessibility Measures and Fractal Version of Theil's Index. Paper presented at the 87th Transportation Research Board Annual Meeting, January 13-17, 2008, and included in the CD ROM proceedings (Presenter: Yoon).
174. Goulias K.G. Supply Chain & Transportation: A Smorgasbord of Issues. Invited Presentation at the 2nd Conference on Agro-Industrial Logistics in the Mediterranean Area. November 30 – December 1, 2007. University of Reggio Calabria, Reggio Calabria, Italy.
175. Goulias K. G. The Current and Future State of Activity-based Models, Invited Presentation at the 11th World Conference on Transport Research, June 24-28, 2007, University of California Transportation Center, University of California, Berkeley, CA.
176. Goulias K. G. Activity-Based Approaches to Travel Demand Forecasting: Research and Practice. Invited Seminar at the Complex Systems Center, April 27, 2007. University of Vermont, Burlington, VT.
177. Goulias K. G. Science, Technology, and Education in Transportation. Dan and Carole Burack President's Distinguished Lecture Series, April 26, 2007. University of Vermont, Burlington, VT.
178. Goulias K. G. On Altruism and Companionship in Activity Participation and Travel. Spring 2007 ITS-Davis Seminar Series. April 20, 2007. University of California-Davis, Davis, CA.
179. Goulias K. G. Progress in the Evolving Paradigm of Travel Demand Forecasting. Paper presentation at the Association of American Geographers Annual Meeting, April 17-21, 2007. San Francisco, California.
180. Yoon S. Y. and K. G. Goulias. Measuring Activity Spaces as Determinants of Travel Behavior. Paper presentation at the Association of American Geographers Annual Meeting, April 17-21, 2007. San Francisco, California. (presenter: Seo Youn Yoon)
181. Beckman J. D., K. G. Goulias, C. Irazabal, and M. Gomez-Barris. Does Culture Fade in Immigrants' Travel Behavior? Paper presentation at the Association of American Geographers Annual Meeting, April 17-21, 2007. San Francisco, California. (presenter: Jarad Beckman)
182. Deutsch K. and K. G. Goulias. Integrated Activity-Travel Behavior Surveys. Paper presentation at the Association of American Geographers Annual Meeting, April 17-21, 2007. San Francisco, California. (presenter Kate Deutsch).
183. Goulias K. G. Development of Activity-Based Travel Demand Model. Presentation at the Modeling Task Force Meeting, March 27, 2007, Southern California Association of Governments, Los Angeles, CA.
184. Goulias K. G. Activity-Based Modeling – Challenges and Solutions. Presentation at the Southern California Association of Governments, February 28, 2007. Los Angeles, CA
185. Goulias K. G. An Optimal Resource Allocation Tool for Urban Development Using GIS-based Accessibility Measures and Stochastic Frontier Analysis. Paper presented at the 86th Transportation Research Board Annual Meeting, January 21-25, 2007, Washington, D.C.

186. Goulias K. G., L. Blain, N. Kilgren, T. Michalowski, and E. Murakami. Catching the Next Big Wave: Are the Observed Behavioral Dynamics of the Baby Boomers Forcing us to Rethink Regional Travel Demand Models? Paper presented at the 86th Transportation Research Board Annual Meeting, January 21-25, 2007, Washington, D.C. and included in the CD ROM proceedings.
187. Goulias K. G. Issues of Scale, Time and Approach to Transportation Modeling and Simulation. Invited METRANS Seminar, November, 2006, University of Southern California, Los Angeles, CA.
188. Goulias K. G. An Evolving Paradigm of Transportation Modeling and Simulation. Bruce Podwal Seminar Series, Department of Civil Engineering, City College of New York, October 2006, New York, NY.
189. Goulias K. G. Altruism in Activity-based Approaches to Travel Demand Analysis. Invited Presentation at Hasselt University, October 14, 2006, Hasselt, Belgium. (presenter: Goulias)
190. Goulias K. G. Transportation Policy Analysis and Planning. Invited Resource Paper. Paper to be presented at the IATBR Conference, August 16-20, 2006, Kyoto, Japan. (presenter: Goulias)
191. Henson K. and K.G. Goulias. An Assessment of Activity-based Modeling and Simulation for Applications in Operational Studies, Disaster Preparedness, and Homeland Security. Paper to be presented at the IATBR Conference, August 16-20, 2006, Kyoto, Japan. (presenter: Henson)
192. Goulias K. G. and T. Kim Behavioral Dynamics in Activity Participation, Travel, and Information and Communications Technology. The 16th International Symposium on Transportation and Traffic Theory, July 19-21, 2006, University of Maryland, College Park, MD. (presenter: Goulias).
193. Burbidge S. K., K. G. Goulias, T. Kim. Travel Behavior Comparisons of Active-Living and Inactive Living Lifestyles. Paper presented at the 85th Transportation Research Board Annual Meeting, January 23-26, 2006, Washington, D.C. (presenter: Burbidge)
194. Henson K. and K.G. Goulias. A Preliminary Assessment of Activity and Modeling for Homeland Security Applications. Paper presented at the 85th Transportation Research Board Annual Meeting, January 23-26, 2006, Washington, D.C. (presenter: Henson)
195. Goulias K.G. and K. Henson. On Altruists and Egoists in Activity Participation and Travel: Who are they and do they live together? Paper presented at the 85th Transportation Research Board Annual Meeting, January 23-26, 2006, Washington, D.C. (presenter: Henson)
196. Abreu J. Da Silva, T. Golob, and K.G. Goulias. The Effects of Land Use Characteristics on Residence Location and Travel Behavior of Urban Adult Workers. Paper presented at the 85th Transportation Research Board Annual Meeting, January 23-26, 2006, Washington, D.C. (presenter: Abreu).
197. Goulias K. G. Integrated Regional Simulation. Invited Seminar at the Los Alamos National Laboratory, December 13, 2005, Los Alamos, NM. (presenter: Goulias).
198. Alam J. B., S. H. Sikder and K. G. Goulias. Assessing Time Lag between Transportation Investment and Economic Development using Data Envelopment Approach. Paper presented at the 84th Transportation Research Board Annual Meeting, January 9-13, 2005, Washington, D.C. (presenter: Goulias)

199. Goulias K.G., M. Bradley, V. Noronha., R. Golledge, and P.S. Vovsha. Data needs for Innovative Modeling Resource Paper. National Household Travel Survey Conference: Understanding Our Nation's Travel. November 1-3, 2004. Washington, D.C., Transportation Research Board. (presenter: Goulias).
200. Goulias K.G. Issues in moving activity-based approaches to practice. Invited presentation at the Conference on Progress in Activity-Based Analysis, May 28 - 31, 2004, Vaeshastel Castle, Maastricht, the Netherlands.
201. Goulias, K.G. and T. Kim, and M.L. Patten. On activity type classification and issues related to the with whom and for whom questions of an activity diary: Preliminary findings and pattern classification. Paper presented at the Conference on Progress in Activity-Based Analysis, May 28 - 31, 2004, Vaeshastel Castle, Maastricht, the Netherlands. (Presenter: Goulias).
202. Kim and K.G. Goulias. A Multivariate Multilevel Analysis of Information Technology Choice. Paper presented at the Transport Science and Technology Congress (TRANSTEC), September 1-5, 2004, Athens, Greece. (Presenter: Kim).
203. Kim T. and K.G. Goulias. Dynamic analysis of time use and frequency of activity and travel using Latent Class Clustering and Structural Equation Modeling. Paper presented at the Conference on Progress in Activity-Based Analysis, May 28 - 31, 2004, Vaeshastel Castle, Maastricht, the Netherlands. Also presented at the Transport Science and Technology Congress (TRANSTEC), September 1-5, Athens, Greece. (Presenter: Kim)
204. Pribyl O. and K.G. Goulias. Simulation of daily activity patterns. Paper presented at the Conference on Progress in Activity-Based Analysis, May 28 - 31, 2004, Vaeshastel Castle, Maastricht, the Netherlands. Also presented at the Transport Science and Technology Congress (TRANSTEC), September 1-5, Athens, Greece. (Presenter: Pribyl)
205. Alam J. B., S. H. Sikder and K. G. Goulias. Role of transportation in regional economic efficiency in Bangladesh: Data Envelopment Analysis. Paper presented at the 83rd Annual Transportation Research Board Meeting and accepted for publication in the Transportation Research Record, Washington, D.C., January 11-15, 2004. (Presenter: Goulias).
206. Goulias K.G. and T. Kim. A longitudinal analysis of the relationship between environmentally friendly modes, weather conditions, and information-telecommunications technology market penetration. Paper presented at the ECOSUD 2003 International Conference, June 4-6, 2003, Siena, Italy. (Presenter: Goulias).
207. Goulias K.G., T. Kim, and O. Pribyl. A longitudinal analysis of awareness and use for advanced traveler information systems. Paper presented at the European Commission Workshop on Behavioural Responses to ITS – April 1-3, 2003, Eindhoven, the Netherlands. (Presenters: Pribyl and Goulias).
208. Kim T. and K.G. Goulias. Travel behavior changes: Evidence from a longitudinal travel survey. Paper presented at the Urban Transport 2003 International Conference, March 10-12, 2003, Crete, Greece. (Presenters: Kim and Goulias).
209. Pribyl O. and K. G. Goulias. On the application of Adaptive Neuro-fuzzy Inference System (ANFIS) to analyze travel behavior. Paper presentation at the 82nd Transportation Research Board Meeting, Washington D.C., January 2003. (Presenter: Pribyl).
210. Patten M. L., K.G. Goulias, and O. Pribyl. Patterns of information and telecommunication use

- and attitudes in the Pennsylvania turnpike traveler information system. Paper presented at the 82nd Transportation Research Board Meeting and included in the CD ROM proceedings, Washington D.C., January 2003 (Presenter: Patten).
211. Goulias K.G. (2003) CUTC profiles survey. Preliminary data analysis. Presentation at the CUTC Winter meeting. January 12, 2003, Washington D.C.
 212. Patten M., K.G. Goulias, and O. Pribyl. User perceptions of advanced traveler information systems on the Pennsylvania Turnpike. Paper presented at the 9th World Congress on Intelligent Transportation Systems, October 14-18, 2002, Chicago, IL (Presenter: Pribyl)
 213. Goulias K. G., L. Elefteriadou, and J. L. Kuhnau. Classroom consulting experience as entrepreneurship training: Lessons learned from a case study in transportation. Paper presented as a poster and a multimedia presentation at the 2002 ASEE/SEFI/TUB Colloquium in Berlin, Germany, October 2002. (Presenter: Goulias)
 214. Kuhnau J. L. and K. G. Goulias. Centre SIM: Hour-by-hour travel demand forecasting for mobile source emission estimation. Paper presentation at the ENVIROSOFT 2002 – the 9th International Conference on the Modeling Monitoring, and Management of Environmental Problems, Bergen, Norway, May 2002. (Presenter: Goulias)
 215. Goulias K.G., W. Broeg, B. James, and C. Graham. Travel behavior analysis of the South Perth individualized marketing intervention. Paper presentation at the 81st Transportation Research Board Meeting, Washington D.C., January 2002. (Presenter: Goulias).
 216. Goulias K. G., J. Smedley, J. Fenush, G. Dauber, K. Viswanathan, T. Kim (2002). Pennsylvania's statewide long range transportation plan: Reporting of achievements 2000. Paper presented at the 81st Transportation Research Board Meeting, Washington D.C., January 2002. (Presenter: Fenush).
 217. Viswanathan K. and K. G. Goulias. Travel Behavior Implications of Information and Communications Technology (ICT) in the Puget Sound Region. Paper Preprint 01-2767. Paper Presented at the 80th Annual Transportation Research Board Meeting, January 2001, Washington, D.C.. (Presenter: Viswanathan).
 218. Goulias K. G. and Tae-Gyu Kim. A Multilevel Analysis of Activity and Travel Patterns Accounting for Person-specific and Household-specific Observed and Unobserved Effects Simultaneously. Paper Preprint 01-2803. Paper Presented at the 80th Annual Transportation Research Board Meeting, January 2001, Washington, D.C.. (Presenter: Kim)
 219. Goulias K. G., J. Smedley, R. Heaney, P. Everett, G. Dauber, T. Kim, and K.Viswanathan. Pennsylvania's Statewide Long-Range Transportation Plan (PennPlan): An Overview and Summary. Paper Preprint 01-2799. Paper Presented at the 80th Annual Transportation Research Board Meeting, January 2001, Washington, D.C. (Presenter: Goulias)
 220. T. Kim, Koza S.A., and K. G. Goulias. Analysis of the Resident Component in PennPlan's Public Involvement Survey. Survey Overview and Item Nonresponse Selectivity Issues. Paper Preprint 01-2772. Paper Presented at the 80th Annual Transportation Research Board Meeting, January 2001, Washington, D.C.. (Presenter: Kim)
 221. Goulias K. G., K. Viswanathan, and T. Kim. Pennsylvania's Statewide Long Range Transportation Plan (PennPlan): Performance Based Planning in the US. In Urban Transport VII, Urban Transport and the Environment for the 21st Century, May 2001, Lemnos, Greece.

(Presenter: Goulias)

222. Viswanathan K., K. G. Goulias, and T. Kim. On the Relationship Between Travel Behavior and Information and Communications Technology (ICT): What do the Travel Diaries Show? In Urban Transport VII, Urban Transport and the Environment for the 21st Century, May 2001, Lemnos, Greece. (Presenter: Viswanathan)
223. Goulias K. G. A Longitudinal Integrated Forecasting Environment (LIFE) for Activity and Travel Forecasting. In Ecosystems and Sustainable Development III conference, June 2001, Alicante, Spain.
224. Sundararajan and K.G. Goulias. Demographic Microsimulation for Transportation Analysis (DEMOS 2000). Presentation at the Fourth Annual PTI Transportation Conference, July 19, 2001, University Park, PA. (Presenter: Sundararajan).
225. T. Kim and K.G. Goulias. An Analysis of the Resident Component in PennPlan's Public Involvement Survey: Survey Overview and Item Non-Response Selectivity Issues. Presentation at the Fourth Annual PTI Transportation Conference, July 19, 2001, University Park, PA. (Presenter: Kim).
226. J. Kuhnau and K.G. Goulias The PennState and Centre County Dynamic Simulation Regional GIS Model: Development Steps and Predictions for 2010. Presentation at the Fourth Annual PTI Transportation Conference, July 19, 2001, University Park, PA. (Presenter: Kuhnau).
227. Goulias K.G. and J. L. Kuhnau. Computer Simulation for Regional Transport Systems: Overview and an Example. Paper presented at the International Scientific Conference. The transport of the 21st century. Organized by the Warsaw Polytechnic and Polish Academy, September 2001 Warsaw, Poland . (Presenter: Goulias)
228. Kulakowski B.T. and D. J. Klinikowski. The Bus Testing Program: Delivering Tangible Benefits to the Riding Public and Transit Industry. Paper presented by Goulias on behalf of the authors at the International Scientific Conference. The transport of the 21st century. Organized by the Warsaw Polytechnic and Polish Academy, September 2001 Warsaw, Poland.
229. Viswanathan K., K.G. Goulias, and P. P. Jovanis. Use of Traveler Information in the Puget Sound Region: Preliminary Multivariate Analysis. Preprint #001368. Paper presented at the 2000, 79th Annual TRB Meeting, January 2000 (Presenter K. Viswanathan).
230. Marker J.T.,and K.G. Goulias. Review and Framework for the Analysis of Household Replenishment and its Impacts on Travel Behavior and Goods Movement. Preprint #000566. Paper presented at the 2000, 79th Annual TRB Meeting, January 2000 (Presenter J. Marker).
231. Goulias K. G. Multilevel analysis of daily time use and time allocation to activity types accounting for complex covariance structures using correlated random effects. Paper presented at the IATBR 2000, 9th International Association for Travel Behaviour Research Conference (July 2-7, 2000), Sheraton Mirage Gold Coast, Queensland, Australia.(Presenter K. Goulias).
232. Kim T, and K. G. Goulias. Pennplan-Planning with Extensive Public Involvement. The Third Annual PTI Transportation Conference. July 20, 2000, University Park, PA. (Presenter: T. Kim).
233. Viswanathan K, and K.G. Goulias. Activity and Travel Simulation using Intelligent Agent Technology. The Third Annual PTI Transportation Conference. July 20, 2000, University Park, PA. (Presenter: K. Viswanathan).

234. Goulias, K.G. and T. Kim. Repeated Measures Multivariate Multilevel Models and Applications in Activity and Travel Behavior. The Third Annual PTI Transportation Conference. July 20, 2000, University Park, PA. (Presenter: K. Goulias).
235. Chandrasekharan B. and K.G. Goulias. Exploratory Longitudinal Analysis of Solo and Joint Trip Making in the Puget Sound Transportation Panel. Preprint # 990093. Paper presented at the 1999 Annual TRB Meeting, January 1999 (Presenter B. Chandrasekharan).
236. Ma J. and K.G. Goulias. Application of Poisson Regression Models to Activity Frequency Analysis and Prediction. Preprint # 990813. Paper presented at the 1999 Annual TRB Meeting, January 1999 (Presenter J. Ma).
237. Alam B. S. and K. G. Goulias. Dynamic Emergency Evacuation Management System Using GIS and Spatio-Temporal Models Of Behavior. Preprint #990814. Paper presented at the 1999 Annual TRB Meeting, January 1999 (Presenter B. S. Alam).
238. Goulias K. G. and K. Viswanathan. A Dynamic Analysis of Activity and Travel Using Mixed Markov Latent Class (MMLC) Models. Paper presented at the 14th International Symposium on Transportation and Traffic Theory, July 1999, Jerusalem, Israel (Presenter: Goulias)
239. Goulias, K. G. Multilevel Random Effects Analysis of Modal Use Constraints and Perceptions on Public Transportation Using Data from Germany. In Urban Transport V, Urban Transport and the Environment for the 21st Century conference, Rhodes, Greece, September 1999. (Presenter: Goulias).
240. Goulias, K.G. A Dynamic Analysis of Activity and Travel Patterns. Paper accepted for presentation at the European Transport Conference 1999, and publication in the proceedings, September 1999, Cambridge, UK. (Presenter: Goulias).
241. Zineddin A. Z. and K. G. Goulias. A Demand Based Rural ITS Plan for Passenger Travel.@ Paper presented at the Rural Advanced Technology and Transportation Systems 1998 International Conference, August 30-September 2, 1998, ITS America, University Park, PA. (Presenter A. Z. Zineddin).
242. Kharoufeh J. P. and K. G. Goulias. Longitudinal and Cross-Sectional Kernel Density-Based Nonparametric Identification of Daily Activity and Travel Patterns. Invited Seminar Lecture at the University of Toronto, Toronto, August 1998. (Presenter K. G. Goulias).
243. Ma J. And K.G. Goulias. Forecasting Home Departure Time, Daily Time Budget, Activity Duration, and Travel Time Using Panel Data. Preprint 981312. Paper presented at the 77th Transportation Research Board Annual Meeting, January 1998. (Presenter J. Ma).
244. Chung J., K.Viswanathan, and K.G. Goulias Design of an Automatic Comprehensive Traffic Data Management System for Pennsylvania. Preprint 981354. Paper presented at the 77th Transportation Research Board Annual Meeting, January 1998. (Presenter K. Viswanathan).
245. Marker J.T, Jr, and K.G. Goulias Truck Traffic Prediction Using the Quick-Response Freight Model Under Different Degrees of Geographic Resolution: GIS Application in Pennsylvania. Preprint 980161. Paper presented at the 77th Transportation Research Board Annual Meeting, January 1998. (Presenter J. Marker).
246. Goulias K.G. Forecasting the inputs to dynamic model systems. Workshop Resource Paper presented at the Eighth Meeting of the International Association of Travel Behaviour Research,

- Challenges and Opportunities in Travel Behaviour Research and Applications, Austin, Texas, September 1997. (Presenter K. Goulias).
247. Ma J. And K.G. Goulias Analysis and prediction of activity/travel patterns using multiperiod multinomial probit models. Paper presented at the Eighth Meeting of the International Association of Travel Behaviour Research, Challenges and Opportunities in Travel Behaviour Research and Applications, Austin, Texas, September 1997. (Presenter J. Ma).
 248. Goulias K. G. Multi-method and multi-instrument surveys (surveys using multiple approaches). Resource Paper Prepared for Workshop 1: Multi-instrument and multi-method surveys. International Conference on Transport Survey Quality and Innovation - Transport Surveys: Raising the Standard, May, 1997, Grainau, Germany. (Presenter K. Goulias).
 249. Goulias K. G. ITS Activities at Penn State: Public Information Needs, Hazardous Material Transportation, and Benefit Cost Analysis for Scranton Wilkes Barre EDP. Invited presentation at the Mid-Atlantic Section ITE Meeting, March, 1997.
 250. Chung J and JK. G. Goulias. Travel Demand Forecasting Using Microsimulation: Initial Results from a Case Study in Pennsylvania. 76th Transportation Research Board Annual Meeting, January 12-16, 1997. (Presenter: Jin-hyuk Chung).
 251. Accessibility Indicators for Transportation Planning Using GIS. (by Lee, M. and K.G. Goulias). 76th Transportation Research Board Annual Meeting, January 12-16, 1997. (Presenter: M. Lee).
 252. Activity-Based Travel Forecasting: What Are Some Issues? (By K.G. Goulias). Invited keynote paper presentation at the Travel Model Improvement Program Conference on Activity-based Travel Forecasting in New Orleans, June 1996. (Presenter: K.G. Goulias).
 253. Transitions of Time Use Emerging from Transportation Panel Data (By K.G. Goulias and J. Ma). Paper prepared for the XVIIIth International Association for Time Use Research Conference and International Scientific Conference on Methodological Issues of Time Use Surveys: Designs and Analysis, Warsaw, Poland, May 29-June 2, 1996. (Presenter: K.G. Goulias).
 254. A Comparison of Traveler Perceptions Regarding Traffic Congestion and Route Selection Behavior Across Chicago, San Francisco, and Centre County (by Aemal J. Khattak, K.G. Goulias, and Assad J. Khattak). 75th Transportation Research Board Annual Meeting, January 7-11, 1996. (Presenter: Aemal J. Khattak).
 255. Predicting Operating Speeds on Low-Speed Urban Streets: Regression and Panel Analysis Approaches. (By J. P. Tarris, C. M. Poe, J. M. Mason, and K.G. Goulias). 75th Annual Transportation Research Board meeting, January 7-11, 1996. (Presenter: C.M. Poe).
 256. Access Management Using GIS and Traffic Management Tools in Pennsylvania.(by J. Chung and K.G. Goulias). 75th Annual Transportation Research Board meeting, January 7-11, 1996. (Presented by J. Chung).
 257. EVIPAS . Traffic Engineering and Safety Conference. University Park, PA, December 1995. (Presenter: K.G. Goulias).
 258. Access Management Impact Simulation. Traffic Engineering and Safety Conference. University Park, PA, December 1995. (Presenter: K.G. Goulias).

259. Stochastic Simulation for Integration of Transportation Planning and Traffic Operations (by A. Elefteriadou and K. G. Goulias) The Second World Congress on Intelligent Transport Systems, Yokohama, Japan, November 9-11, 1995. (Presenter: A. Elefteriadou).
260. A Dynamic Analysis of Out-of-Home Activity Engagement (by J. Ma, R. Pendyala, and K.G. Goulias). Conference/Workshop on Activity Based Approaches: Activity Scheduling and the Analysis of Activity Patterns, Eindhoven, The Netherlands, May 25-28, 1995. (Presenter: R. M. Pendyala).
261. A Dynamic Analysis of Activity and Travel Patterns Using Data from the Puget Sound Transportation Panel (by J. Ma and K. G. Goulias). Institute for Operations Research and the Managements Sciences Spring National Meeting, April 23-26, 1995. (Presenter: J. Ma).
262. Access Management/ Impact Simulation Using GIS and Traffic Simulation (by Goulias, K.G., J. Chung, and J. Ma). Fifth International Conference on Transportation Planning Methods Applications, 1995, Seattle, WA, April 17-21. (Presenter: K. G. Goulias).
263. A Method for Congestion Management, Access Control, and Impact Simulation using GIS (by Goulias, K.G., J. Chung, M. T. Pietrucha, J. Ma, and A. J. Khattak). Institute of Transportation Engineers International Conference, Technology Tools for Transportation Professionals-Moving into the 21st Century, Ft. Lauderdale, FL, April 9-12, 1995. (Presenter: J. Chung).
264. Selecting Strategies to Mitigate Intelligent Transportation Systems (ITS) Institutional Issues (by Khattak A. J., K.G. Goulias, and J. M. Mason). Institute of Transportation Engineers International Conference, Technology Tools for Transportation Professionals-Moving into the 21st Century, Ft. Lauderdale, FL, April 9-12, 1995. (Presenter: A. J. Khattak).
265. Sample Selection Bias with Multiple Selection Rules: An Application with Residential Relocation, Attrition, and Activity Participation in the Puget Sound Transportation Panel (by J. Chung and K.G. Goulias)-Preprint #950330. Presentation at the 74th Annual Transportation Research Board Meeting and Publication in the Transportation Research Record, January 22-28, 1995 (Presenter: J. Chung)
266. A Dynamic Analysis of Activity and Travel Patterns Using Data from the Puget Sound Transportation Panel. (by Ma, J. and K. G. Goulias) - Preprint #950331. Presentation at the 74th Annual Transportation Research Board Meeting and Publication in the Transportation Research Record, January 22-28, 1995 (Presenter: J. Ma).
267. Comparison of Estimated and measured Signalized Intersection Delay (by R. C. Nuss, M.T. Pietrucha, and K. G. Goulias) Preprint #950933. Presentation at the 74th Annual Transportation Research Board Meeting, January 22-28, 1995 (Presenter: R. Nuss).
268. PennDOT Access Management Computer Model. Invited Presentation at the Mid-Atlantic Section of ITE Summer Meeting, Philadelphia, PA. (1995) (Presenter: K.G. Goulias).
269. Microsimulation Application in Transportation Planning, Overview and Examples (by K.G. Goulias). Presentation at the 74th Annual Transportation Research Board Meeting, January 22-28, 1995 (Presenter: K. G. Goulias).
270. Residential Relocation, Frequency of Activity Participation, Travel Time to Activity Locations, and Modal Split (by K.G. Goulias and R. Pendyala), presentation at the 73rd Annual Transportation Research Board meeting, January 9-13, 1994. (Presenter: K.G. Goulias)

271. Analysis of the Puget Sound Transportation Panel. Invited presentation by the Federal Highway Administration to the Travel Model Improvement Program Workshop at Fort-Worth-Dallas, TX, 1994. (Presenter K.G. Goulias).
272. Assessing Impacts of Telecommuting: Experiences from the California Pilot Project (by R. Pendyala, K.G. Goulias, and P.L. Mokhtarian), presentation at the 73rd Annual Transportation Research Board meeting, January 9-13, 1994. (Presenter: R. Pendyala).
273. The Clean Air Act Amendments of 1990 and Parking Supply. Presentation to the Pennsylvania Parking Association Meeting, University Park. PA, (1994). (Presenter: K.G. Goulias).
274. Formal Presentation to the PA Legislature's Low Emission Vehicle Commission on "A Study of Emission Control Strategies for Pennsylvania: Emission Reductions from Mobile Sources, Cost Effectiveness, and Economic Impacts," August 1993. (Presenters: K.G. Goulias, T. Litzinger, and J. Nelson).
275. Forecasting Travel Demand with Dynamic Microsimulation: The Microanalytic Demographic Accounting Systems (MIDAS) for Personal Computers. Fourth International Conference on Microcomputers in Transportation Proceedings, Baltimore, MD, July 22-24, 1992. (Presenter: K. G. Goulias).
276. A Dynamic Microsimulator for Travel Demand Forecasting. The Modelling and Simulation Conference, University of Pittsburgh, May 1992. (Presenter: K. G. Goulias).
277. Institutional and Funding Issues Related to the Staged Development of IV/HS. Paper presented at the ITE International Conference Transportation Engineering in a New Era, Monterey, CA, March 22-25, 1992. (Presenter: J. M. Mason).
278. Travel Demand Forecasting with Dynamic Microsimulation. Paper presented at the Transportation Research Board 71st Annual Meeting, January 1992. (Presenter: K. G. Goulias).
279. An Analysis of Choice-Based Panel Travel Survey Sample: Results from the Puget Sound Transportation Panel. Paper presented at the Transportation Research Board 71st Annual Meeting, January 1992. (Presenter: R. M. Pendyala).
280. Impacts of Telecommuting on Workers' Action Space: An Analysis of California's Telecommute Pilot Project, paper presented at the North American Regional Science Conference, New Orleans, LA, November 6-9, 1991. (Presenter: R. Kitamura).
281. Cross Sectional Evaluation in Trip Generation and Car Ownership by Population Segments. Prepared for the 1st International Conference on Travel Behavior, Quebec City, Quebec, Canada, May 22-24, 1991. (Presenter: L. Kostyniuk).
282. Long Term Forecasting with Dynamic Microsimulation. Seminar on Student Research in Transportation Modeling and Meeting of the Committee on Traveler Behavior and Values (A1C04). Transportation Research Board 70th Annual Meeting, January 13-17, 1991 (Presenter: K. G. Goulias).
283. Impact of Telecommuting on Spatial and Temporal Patterns of Household Travel. Presented at the 70th Transportation Research Board Annual Meeting, Washington, D. C., January 13-17, 1991. (Presenter: R. M. Pendyala).
284. Innovations in Transportation: The Case of Telecommuting. Transportation Research Forum Meeting, Long Beach, CA, October 1990. (Presenter: K. G. Goulias).

285. A Practical Method for the Estimation of Trip Generation and Trip Chaining. Transportation Research Board 69th Annual Meeting, January 1990. (Presenter: K. G. Goulias).
286. Dynamic Aspects of Trip Chaining Behavior Under Time-Space Constraints (Nishii K., K. G. Goulias and K. Kondo). Presented at the 5th World Conference on Transport Research, Yokohama, Japan, July 10-14, 1989. (Presenter: K. Nishii).
287. Managing Travel Demand through Telecommuting: Results from the State of California Telecommuting Pilot Project. Institute of Transportation Engineers District 6, November meeting, Davis, 1989. (Presenter: K. G. Goulias).
288. Recursive Model System for Trip Generation and Trip Chaining. Transportation Research Board 68th Annual Meeting, January 1989. (Presenter: K. G. Goulias).
289. Trip Chaining Behavior by Central City Commuters: A Causal Analysis of Time-Space Constraints. 2nd Oxford Conference on Developments in Dynamic Analysis and Activity-Based Approaches to Travel Analysis, Oxford, UK, July 1988. (Presenter: K. G. Goulias).

HONORS AND PROFESSIONAL ACTIVITIES

Executive Board Member - International Association for Travel Behaviour Research (Jan. 2010- Dec. 2011, Jan. 2012- Dec. 2013, July 2015-present).

Emeritus Member, Committee on Traveler Behavior and Values (2009-today). Transportation Research Board of the National Academies.

Member, Regional Travel Model Peer Review Panel, Maricopa Association of Governments, Arizona (2013).

Member, National Research Council - National Cooperative Highway Research Program, Project Panel B08-94 (2013-today).

Member, Scientific Committee of Chaire Mobilité sur la mise en oeuvre de la durabilité en transport, Département des génies civil, géologique et des mines École Polytechnique de Montréal, Canada, January 2011 - today.

Member, Review Committee of Metro Transport Models and Modeling Practices, Portland, OR, November 2009 – June 2011.

Member, Cadre for Strategic Plan for Advanced Travel Modeling at Chicago Metropolitan Agency for Planning (CMAP), Chicago, IL, October 2009 to June 2010.

Conference Chair and Co-organizer, Transport Science and Technology Conference (TRANSTEC) New Delhi, India, April 4-7, 2010 (<http://www.ewebevolution.com/transtec/>).

Chair, Strategic Highway Research Program 2 (SHRP 2) Capacity Expert Task Group (ETG) on Partnership to Develop an Integrated, Advanced Travel Demand Model and Fine-Grained, Time-Sensitive network, FD010 (C10). December 2008 to May 2009. Transportation Research Board of the National

Academies.

Member, Planning Committee. Fourth International Conference on Women's Issues in Transportation, ABE99D, April 2008 to April 2011. Transportation Research Board of the National Academies.

Member, Peer Review Committee. TRANSIMS Deployment Case Study in the Sacramento Council of Governments region, CA, December 2009.

Dan and Carole Burack President's Distinguished Lecture, University of Vermont, April 2007.

Conference Chair and Co-organizer, Transport Science and Technology Conference (TRANSTEC) Prague, Czech Republic, September 13-15, 2007.

Editor, Transport Science and Technology, ISBN-10 008044707-4, Elsevier, 2007.

Member, Local Organization Committee, The 11th World Conference on Transportation Research Berkeley, USA, 24-28 June 2007. <http://www.wctrs.org/conferences.htm#11th>

Member, Planning Committee, Transportation Research Board – National Research Council, ADB99A Innovations in Travel Demand Modeling: A Conference, May 2006, Austin TX – December 2005 – 2006.

Member, Travel Model Peer Review Panel, Metropolitan Transportation Commission, Oakland, CA, 2004-2007.

Member, Transportation Research Board – National Research Council, ABJ99B (A1T97) Committee for the Conference on Census Data for Transportation Planning: Preparing for the Future May 2005, Irvine, CA – December 2003 – 2005.

Member, Conference Planning Committee, National Household Travel Survey Conference: Understanding Our Nation's Travel. November 1-3 Washington, D.C., Transportation Research Board (2003-2004).

Conference Chair and Primary Organizer, Transport Science and Technology Conference (TRANSTEC) Athens, Greece, September 1-5, 2004.

Conference Chair and Primary Organizer, Transportation Engineering and Safety Conference, University Park, PA, December 10-12 2003.

Fellow of Wessex Institute of Great Britain. Recognition of Leadership in Computational Engineering, June 2003. Wessex Institute of Technology, Centre of Excellence in Engineering Research and Technology, Southampton, UK.

Founder and Chair, Transportation Research Board (TRB), National Research Council, National Academy of Sciences. Task Force on Moving Activity-based Approaches to Practice (A1C53) – December 2002 – March 2008.

Judge of MS Theses & Ph.D. Dissertation Awards, Council of Universities Transportation Centers,

2002-2003, 2003-2004, 2004-2005, 2005-2006, 2006-2007, 2007-2008, 2008-2009, 2009-2010, 2010-2011, 2011-2012.

Editor-in-Chief and book contributor, *Transportation Systems Planning: Methods and Applications*, ISBN 0849302730, CRC Press Inc, 2003.

Expert Panel Member, Portland Metro, May-June 2002.

Guest Editor (with Ram Pendyala) for journal *Transportation*. Special Issue on: *Time Use and Activity Perspectives in Travel Behavior Research*, 2002.

Member, International Scientific Advisory Committee, URBAN TRANSPORT 2004, Wessex Institute of Technology.

Member, International Scientific Advisory Committee, ECOSUD 2003, Wessex Institute of Technology.

Member, International Scientific Advisory Committee, URBAN TRANSPORT 2003, Wessex Institute of Technology.

Associate Editor, *Advances in Ecological Sciences Series*, Wessex Institute of Technology Press, 2001-present.

Member, International Scientific Advisory Committee, URBAN TRANSPORT 2002, Wessex Institute of Technology.

Fulbright-FLAD Chair, *Distinguished Lecturing Award in Knowledge Management and Policies*, Technical University of Lisbon, Portugal, 1999.

Member of Editorial Advisory Board, *Transportation Research Part B, Methodological*. 2004 - present.

Member of Editorial Advisory Board, *Transportation Research Part A, Policy and Practice*. 1997-2001.

Member of Editorial Advisory Board, *Intelligent Transportation Systems Journal: Computing, Communication and Transportation*, G&B Editorial Services Inc. and Taylor & Francis, 2000-present.

Member of International Editorial Advisory Board, *Transactions on Transport Sciences, CDV - Transport Research Center, Czech Republic*. 2008-present.

President, Intelligent Transportation Society of Pennsylvania (State Chapter of ITS America), December 1999-2002.

Vice-President and Board member, Intelligent Transportation Society of Pennsylvania (State Chapter of ITS America), 1998-1999.

Chair and Member, Transportation Research Board (TRB), National Research Council, National

Academy of Sciences. Member 1987-present

Committee of Travel Behavior and Values (A1C04), chair 1997-2003 & member 1992-present

Subcommittee on Activity Analysis and Travel Patterns, A1C04(1), chair 1995-1998

Committee on Telecommunications and Travel Behavior (A1C08), member 1994-1997

Committee on Urban Transportation Data (A1D08), 1995-1998

Control Group Member and Member, American Society of Civil Engineers (ASCE), member 1989-present

Environmental Quality Committee of the Highway Division, Secretary 1995-1997, Control Group Member, 1996-present.

Chair and Member, Institute of Transportation Engineers (ITE), member 1989-present.

Council on Intelligent Transportation Systems Executive Committee, member, 1993-1997

Institutional and Policy Issues Committee, chair 1993-1997.

Transportation Planners Council, 1994-1997.

Member, The International Association for Travel Behavior Research, 1993-present.

Member, The International Association for Time Use Research, 1995-present.

Member, The Econometric Society (ESA), 1989-93.

Member, American Society of Engineering Educators (ASEE), 1991-93.

Congratulatory letter by Secretary of Pennsylvania Department of Transportation H. Yerusolim to PSU President Joab Thomas for K.G. Goulias.

Paper Award Co-Recipient, first prize of the graduate student paper award of the Transportation Research Forum 1990.

Recipient, University of California, Transportation Center Dissertation Award. 1990-1991.

Paper Award Recipient, 1989, Title: Quasi-Simulation of Auto-type Choice: Minimum Requirements of Alternately Fueled Vehicles. *Paper Award of the Institute of Transportation Engineers*, District 6, California, 15 pages.

Recipient, Department of Civil Engineering Scholarships of Fall 1986 and Winter 1987, University of Michigan, Ann Arbor.

Research Proposal Reviewer,

- *National Science Foundation, 1991-present.*
- *University Transportation Centers, 1991-present.*
- *Social Science and Humanities Research Council of Canada, 1999.*
- *Natural Sciences and Engineering Research Council of Canada, 2000, 2002.*
- *Canada Foundation for Innovation, 2001.*

- *European Commission, 5th Framework Program Sustainable Mobility and Intermodality (Transport research program), 2000.*
- *Directorate for Science and Policy Programs, American Association for the Advancement of Science (AAAS), Kansas NSF EPSCoR First Awards Program, 2003*
- *United Arab Emirates University, Research Affairs, 2006*
- *The Israel Science Foundation, 2006*
- *Grant Agency Academy of Sciences of the Czech Republic, 2006*

Member, International Group of Experts, The Netherlands Organization for Scientific Research (NWO) for Priority Research Programme ‘Society and the Electronic Highway’, 2000.

Auditor, Department of Transport on the South Perth Individualized Marketing Evaluation Survey, Western Australia, 2000.

Paper Reviewer of the Following Journals

- *Applied Geography, 2009-present.*
- *Computers, Environment and Urban Systems, 2012-present.*
- *Energy Economics, 2011-present.*
- *Environment and Planning, 2003-present.*
- *Geography Annals, 2005-present.*
- *Geographiska Annaler, 2011-present.*
- *International Journal of Geographical Information Science, 2012-present.*
- *International Journal of Sustainable Transportation, 2010-present.*
- *Journal of Intelligent Transportation Systems, 2006-present.*
- *Journal of Choice Modelling, 2008-present.*
- *Journal of Transport Geography, 2012-present.*
- *Journal of Transport Policy 2008-present.*
- *Journal of Transportation Engineering, 2006 – present.*
- *Journal of Applied Geography, 2011-present.*
- *Journal of Advanced Transportation, 2011-present.*
- *Multivariate Behavioral Research, 2008-present.*
- *Transactions in GIS, 2012- present.*
- *Transportation Research Record, 1989-present.*
- *Transportation Journal of American Society of Civil Engineers, 1995-1998, 2003.*
- *Transportation, 1993-present.*
- *Transportation Science, 1995-1998, 2006-present.*
- *Transportation Research Parts A & B, 1994-present.*
- *Transportation Research Parts C & E, 2006-present*
- *Transportation Letters, 2008-present.*
- *Transport Policy, 2008-present.*
- *Transport Reviews, 2008-present.*
- *Transportmetrica, 2010-present.*

External Ph.D. Appraiser/Committee Member:

Ph.D. Dissertations University of Toronto, Department of Civil and Environmental Engineering

Marek Litwin – June-July 2005

Paul Salvini – March-April 2003

Sean Doherty – July-August 1998

Transportation Research Institute, University of Hasselt, Belgium. Davy Janssens Ph.D. Dissertation Jury (2005).

Instituto Superior Technico, Lisbon, Portugal. Joao de Abreu e Silva. Ph.D. Dissertation Jury (2006-2007).

School of Graduate Studies, Universiti Putra Malaysia. Landscape Studies. Ph.D. Dissertation external examiner (2013-1014).

Academic Performance Evaluator (Faculty promotion and tenure)

- *In Greece: University of the Aegean, Univerisy of Piraeus, Athens Economic School, National Technical University of Athens, TEI of Serres, Aristotle University of Thessaloniki.*

- *In Finland: Aalto University*

- *In the US: UC System and Other Institutions (confidential)*

University-wide Quality Assurance Evaluation Committees

- Member of External Evaluation Committee: University of Patras (December 2015)

- Member of External Evaluation Committee: University of Applied Sciences of Thessaly (April 2016)

ADVISOR/SUPERVISOR OF CANDIDATES.

| <i>Student Name</i> | <i>Degree</i> | <i>Month/ Year</i> | <i>Title of Thesis</i> |
|---------------------|---------------|------------------------|------------------------|
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At the Pennsylvania State University, University Park, PA

| | | | |
|-----------------|---------------------------------|-------|---|
| Joe Milazzo | Undergrad . Honors Thesis | 5/92 | Route 220 Traffic Engineering Study |
| Gregory Shiffer | Undergrad . Honors Thesis | 5/96 | An Analysis of User Demand for Advanced Public Transportation System Technologies in the Centre Region |
| Jessica Sickman | Undergrad . Honors Thesis | 5/97 | The Effects of the East College Heights Traffic Diverters, A Review of Transportation Analysis Approaches |
| Abdul Zinnedin | Undergrad . Honors Thesis | 12/98 | A Demand-Based Framework for Rural APTS |

| <i>Student Name</i> | <i>Degree</i> | <i>Month/ Year</i> | <i>Title of Thesis</i> |
|---------------------------------|----------------------|-------------------------------|--|
| Kent Selby | M.Eng. | 12/93 | Theoretical and Practical Issues Regarding U.S. Army Ammunition Freight Movement |
| James A. Burnett | M. Eng. | 12/94 | An Exploratory Analysis of Attitudinal and Behavioral Relationships for Use with Congestion Management Strategies |
| Chao-Yang Liao | M. Eng. | 12/94 | An Exploratory Analysis of Random Coefficient Regression Models for Transportation Demand |
| Yu-Tsai Chuang | M. Eng. | 5/95 | Nationwide Time Series Analysis of Intercity Freight Movement Using ARMAX Models |
| Steven Weller | M. Eng. | 12/96 | An Analysis of the Effect of Traffic Management On Emissions Using TRANSCAD and MOBILE 5.0A |
| Charles Plummer | M.Eng | 5/97 | A Social and Technical Review of the Electric Vehicle |
| Rachel Tait | M. Eng | 8/97 | Design of Multi-modal and Intermodal Facilities: The Harrisburg International Airport |
| Wei-Chien Chen | M. Eng | 12/97 | Portfolio |
| Yi-Ching Wu | M. Eng | 12/97 | Portfolio |
| Daniel Szekeres | M. Eng | 8/99 | Portfolio |
| Jahid Russel | M. Eng. | 8/02 | Portfolio |
| Aemal Khattak | M.S. | 12/95 | Identification of User Needs and Acceptance of Advanced Traveler Information Systems by Small Urban Area Commuters |
| Ming-Seng Lee | M.S. | 5/96 | Accessibility Indicators for Transportation Planning Using GIS |
| Rachel Dawn Tait | M.Eng | 8/97 | A Conceptual Analysis and Evaluation for the Harrisburg International Airport as an Intermodal and Multimodal Facility |
| John T. Marker | M.S. | 5/98 | Interaction of Truck and Passenger Vehicle Traffic In Traffic Assignment Using GIS-Based Software |
| Sajjad Alam | M.S. | 12/98 | Dynamic Emergency Evacuation Management System Using GIS and Spatio-Temporal Models of Behavior |
| Balasubramanian Chandrasekharan | M.S. | 5/99 | Cross-Sectional, Longitudinal And Spatial Characteristics of Joint and Solo Travel Patterns |

| <i>Student Name</i> | <i>Degree</i> | <i>Month/ Year</i> | <i>Title of Thesis</i> |
|----------------------------|----------------------|-------------------------------|---|
| Gopal Mandava | M.S. | 8/99 | DEMOS: A Demographic Microsimulator for Travel Demand Forecasting |
| Sandy Koza | M.S. | 5/00 | An Analysis and Assessment of the Resident Component in PennPlan's Public Involvement Survey |
| Xinge Yin | M.S. | 12/00 | An Activity-theory Approach in Intelligent Transportation Systems Design |
| Ashok Sundarajan | M.S. | 8/01 | Design and Validation of a Sociodemographic Microsimulator (DEMOS 2000) for Travel Forecasting |
| JoNette Kuhnau | M.S. | 12/01 | Activity-Based Travel Demand Modeling Using Spatial and Temporal Models in the Urban Transportation Planning System |
| Michael Zekkos | M.S. | 12/03 | Updating of Behavioral Equations & Implementation of Scenarios in CentreSIM |
| JinKi Eom | M.S. | 12/03 | Incorporating Truck Trip estimation in CentreSIM Using GIS Based Software |
| Jin-Hyuk Chung | Ph.D. | 5/97 | Traffic Impact Simulation of Access Management and Other Land-Use Policies Using Geographic Information Systems |
| June Ma | Ph.D. | 12/97 | An Activity-Based and Micro-Simulated Travel Forecasting System: A Pragmatic Synthetic Scheduling Approach |
| Ondrej Pribyl | Ph.D. | 5/04 | A Microsimulation Model of Activity Patterns and Within Household Interactions |
| Tae-Gyu Kim | Ph.D. | 8/04 | Transportation and Telecommunications Interaction |
| Saiyid Sikder | Ph.D. | 8/05 | Transportation and Economic Development: System and Service Considerations |

At the University of California Santa Barbara (Committee Chair and Advisor/Supervisor)

| | | | |
|------------------|-------|-------|---|
| Shaunna Burbidge | M.A. | 12/04 | Factors Effecting Active Mode Choice in Transportation: A case study of Centre County, Pennsylvania |
| Shaunna Burbidge | Ph.D. | 6/08 | Evaluating the Impact of Neighborhood Trail Development on Active Travel Behavior and Overall |

| <i>Student Name</i> | <i>Degree</i> | <i>Month/ Year</i> | <i>Title of Thesis</i> |
|----------------------------|----------------------|-------------------------------|--|
| Kathleen Deutsch | M.A. | 12/08 | Physical Activity What is So Special About This Place? An Examination of Sense of Place and It's Correlation to Travel Behavior |
| Pamela Dalal | M.A. | 08/09 | Education, Accessibility, and Mobility in Sylhet, Bangladesh |
| Nate Isbell | M.A. | 08/09 | Procedures to Identify "Low Hanging Fruit" Spoke-and-Hub Airline Routes Ripe for Conversion to Point-to-Point Operations |
| Kriste Henson | Ph.D. | 12/10 | Travel Determinants and Multi-scale Transferability of National Activity Patterns to Create Synthetic Populations |
| Seo Youn Yoon | Ph.D. | 12/10 | Multifaceted Analysis of Household Activity Based on Individual Accessibility |
| Kathleen Deutsch | Ph.D. | 9/13 | An Investigation in Decision Making and Destination Choice Incorporating Place Meaning and Social Network Influences |
| Pamela Dalal | Ph.D. | 9/13 | Stability and Change in Travel Behavior and the Built Environment |
| Srinath Ravulaparthi | Ph.D. | 12/13 | Spatial Perspectives in Firm Behavioral Modeling: A Case-Study Analysis in Santa Barbara County |
| Adam Wilkinson Davis | M.A. | 12/15 | Investigating Place Attitudes in Santa Barbara, CA |
| Jay Hyun Lee | Ph.D. | 9/16 | Travel Behavior Dynamics in Space and Time |
| Adam Wilkinson Davis | Ph.D. | Future | TBD |
| Elizabeth McBride | MA/Ph.D. | Future | TBD |

NARRATIVE STATEMENT

I was born in Athens, Greece, where I also completed my pre-university studies. I continued my studies at the University of Calabria in Italy graduating with a Laurea in Engineering degree (5 years with a thesis) with specialty in Civil Engineering and in Territorial Planning. My thesis, in Italian, supervised by Demetrio Festa, involved the creation, testing, and application of an algorithm for maximum likelihood estimation of Multinomial Logit models for mode choice. I then continued my research with a post-graduate scholarship named integrated study (corso integrativo) at the University of Calabria to develop a mode choice model for the City of Cosenza, Italy. Subsequently (August 1986 to August 1987) I received an MSCE from the University of Michigan, Department of Civil Engineering, concentrating on traffic engineering, highway design, and probabilistic models for civil infrastructure systems. Between

August 1987 and August 1991, I completed my Ph.D. at the University of California, Davis, with a brief visit to University of California, Irvine, and two brief visits in the Netherlands at the Bureau Goudapell Coffeng, Deventer in projects funded by the Rijkswaterstaat (Dutch Ministry of Infrastructure and the Environment). In my dissertation, supervised by Ryuichi Kitamura, I created a demographic and travel demand micro-simulator (MIDAS) for the Netherlands that was funded by the Rijkswaterstaat and the University of California Transportation Center in 1990 and 1991. During this period I also worked on a variety of projects including telecommuting studies, panel/longitudinal survey design and analysis, dynamic econometric modeling, and freight simulation models.

My faculty member career started at Penn State University in the Fall of 1991 as an *assistant professor*, was promoted to *associate professor* in July 1997, became director of a research program at the Pennsylvania Transportation Institute in 1997 and director of a center for excellence in Intelligent Transportation Systems in 1997. I achieved the rank of *full professor* in July 2002 and became *director* of the Mid-Atlantic Universities Transportation Center in September 2002. In March 2004, I joined the faculty at the Department of Geography of the University of California at Santa Barbara (UCSB) where with professor Rick Church we developed the GeoTrans laboratory dedicated to transportation modeling and simulation. In my first few years, I developed estimation methods and computer code for data analysis and simulation systems for nationwide demographic and travel demand forecasting. These systems use dynamic econometric models of traveler behavior and microanalytic stochastic simulation methods. At Penn State and at UCSB, my primary research interests are in the area of quantitative transportation planning.

My research program aims at two objectives that are to understand the dynamics of human behavior and use this understanding to build behavioral models for policy analysis. The outcomes of my research are new conceptual frameworks, new data collection methods and new data analysis methods. With my students and collaborators we also create large scale microsimulation models for policy analysis and decision making. In the past 14 years we transformed these applications to become more behaviorally realistic. Their domain is mostly for transportation policy questions about land use changes and their impact on transportation and the environment, provision of accessibility and mobility and their relationship to equity and sustainability, and optimal resource allocation of public and private investments. Below is a summary of the different research areas that define my research.

In the dynamics of traveler behavior area I used the first U.S. general purpose transportation panel survey (i.e., repeated interviews of the same individuals over time) data set and designed new demand forecasting tools. I created a research stream called Longitudinal Integrated Forecasting Environment (LIFE) with a variety of projects funded by the Puget Sound Regional Council, Federal Highway Administration (U.S. Department of Transportation), the Mid-Atlantic Universities Transportation Center, the Center for Intelligent Transportation Systems, the Fulbright foundation, the University of California Transportation Center, and the UC Office of the President. In this effort, models of panel attrition, relocation, activity participation, and household time allocation are developed to explain and predict the dynamics of human behavior. A key product in this area is DEMOS (based on earlier work in my dissertation called MIDAS), which is a stochastic microsimulation model system for demographic forecasting linked to a set of dynamic econometric models for travel demand forecasting. This work continued in a 2009-2010 UCTC project with title *Forecasting with Dynamic Microsimulation: Design, Implementation, and Demonstration* in which a new version of DEMOS is linked to land use modeling in California and leads to a Ph.D. dissertation by Pamela Dalal on behavioral leads and lags and their correlation to accessibility (Dalal also received a UCTC dissertation fellowship for this work). Moreover,

ideas from this work are used in a SCAG sponsored project called *Household Evolution*.

Another product in this area is a research project that provided funding for Ondrej Pribyl's dissertation in which using soft computing applications for travel behavior and methods for data clustering, modeling within household interactions in time allocation, a software for forecasting by stochastic microsimulation was created. Ondrej's work demonstrated the need to consider intra-household interactions in developing model systems for forecasting. His work earned him professorship position at the Czech Technical University in Prague in the Department of Applied Mathematics. At UCSB this work continued with Seo Youn Yoon's dissertation work on *Spatio-temporal Dynamics of Travel Behavior* and the our more recent work on residential location, car ownership, and travel behavior that also accounts for attitudes with Jay Lee, Adam Davis, and Elizabeth McBride.

In the **computerized decision making tools** direction (supported by eight projects and funded by the Centre Regional Planning Commission, the Pennsylvania Department of Transportation, the Pennsylvania Legislature's Low Emissions Vehicle Commission, and the U.S. Department of Transportation) my colleagues and I created methods that simulate impacts on and from the transportation system. This work produced a variety of decision support methods and systems for transportation planning agencies at the local (regions), the state, national, and international levels. One early key product in 1995-97 is Access Management Impact Simulation (AMIS), which identifies local and regional impacts of new developments using Geographic Information Systems and a combination of regional with local traffic simulation tools. This work also supported Jin-Hyuk Chang's dissertation, which he continues as a Professor at Yonsei University in Seoul, South Korea.

My research in this area also motivated a significant component of a large project for PennDOT that is the performance-based statewide long range transportation plan in Pennsylvania (PennPlan) and its monitoring component to address a wide range of issues including technology market penetration, land use planning, safety, and economic development. I also designed and implemented a regional simulation model system for Centre County, PA, called CentreSIM, which included a new survey design and implementation as well as an activity-based model development. This work was also the foundation of a feasibility study of an activity-based travel demand forecasting system designed for the Southern California Association of Governments (SCAG). This effort motivated a collaboration with Professors Chandra Bhat (UT Austin) and Ram Pendyala (ASU) for the SCAG region to create SimAGENT, a large scale application of an activity-based microsimulation model for 2020 and 2035.

In a parallel track this research continued with the work of my former Ph.D. student Kriste Henson at Los Alamos National Laboratories for her dissertation using the entire US (48 continuous states) as a case study to build *Generic Cities for Homeland Security* using many layers of data that have never been pooled together. Kriste is already recognized for her pioneering work with two UCTC dissertation awards and a substantial Eisenhower fellowship award.

In a new research direction we started analyzing business establishment data with Srinath Ravulaparthi to identify the determinants of birth, death, and relocations of businesses as well as their efficiency in converting inputs to outputs and its relationship to significant life cycle events of firms including location. Based on this work we recently completed a study for Caltrans on business establishment survival and success for the entire State of California and showed the importance of public transportation for business establishments.

In the area of **sustainable and green transportation** I have been involved in non-motorized transportation research, design of hybrid-electric vehicles, and air pollution control program evaluation. Key products in this area include the evaluation of the California Low Emission Vehicle program for the Pennsylvania's LEV commission, assessment of the IndiMark program in Western Australia and in Queensland, and market analysis for the Portuguese government in developing a factory of hybrid-electric vehicles in Lisbon. Lessons learned from this area are used directly in the new SCAG activity model that will use the newly created MOVES and EMFAC2011 models to estimate emissions for air pollutants and Greenhouse Gases. Work and experience in this area also motivates the creation of the *TRANSTEC* series of conferences and a new research direction in aviation (see below).

In the period 2009-2012 we developed with Professor Amalia Polydoropoulou of the University of the Aegean a real-life experiment with data collection and modeling-simulation of travel behavior in the Islands of Chios and Lesbos in Greece. In this project, called GreTIA-Green Transportation in Island Areas and funded by the European Union, quantitative indicators of economic development, social impacts, and environmental impacts are estimated and a simulation system is produced to assess the market penetration of (electric) power assisted bicycles and electric cars used by residents and tourists. We continued this work with Adam Davis studying the spatio-temporal distribution of the bikeshare system in San Francisco, CA.

In the area of **human environment relations** I am developing with my colleagues at UCSB new approaches to relate space, place, and travel behavior from multiple viewpoints. Active transportation, traveling accompanied by physical activity to benefit personal health, is one key direction in this area. This research was developed predominantly with Shaunna Burbidge, my first MA and PhD graduate student at UCSB, that also completed her PhD project in Salt Lake City, UTAH, on assessing the impact of providing active transportation infrastructure improvements using a before-after setting. Shaunna's work was recognized during her studies at UCSB by UCTC dissertation awards, an Eisenhower fellowship, and after graduation by a variety of paper awards by other organizations.

With opportunity expertise in our department, this area of research is also evolving in a technology-aided area using geospatial technologies, visualization, and computation aided by data that contain rich spatial and temporal information. In this context, I co-organized with other colleagues at UCSB a workshop funded by the Federal Highway Administration to define research projects that will help us advance a new vision in this arena. Emerging from this with Kate Deutsch we designed a new data collection technique to measure sense of place and correlate it to travel behavior indicators such as destination choice, departure time, and mode choice. Kate in her MA thesis demonstrated the feasibility of these ideas and won a 2009 best transport geography thesis award by AAG. Kate also received a major Eisenhower fellowship for 2009-2010 and the Brython Davis Endowment Graduate Fellowship for 2009-2010 as well as the Presidents fellowship to continue this line of work in her dissertation research by collecting data based on spatial cognition theories merged with activity and travel behavior theories. This work continued recently by Adam Davis in his MA thesis using more sophisticated modeling techniques that account for spatial correlation and the cross-classified nature of the data.

From another viewpoint, with Dr. Abreu from the Technical University in Lisbon we created a multi-country comparative study on land use, residential location, job location, and travel behavior. This work continues with collaborations in Canada (building a model for Montreal with Catherine Morency of Ecole Polytechnique) and the US (in Seattle and Los Angeles). In addition, in a California statewide study with Seo Youn Yoon and Tom Golob (UC Irvine) we tested many hypotheses on the relationships among land

use, residential location, infrastructure provision, and activity/travel behavior. In this research area but in the developing world with Pam Dalal we also completed a study on transportation expenditures, education/literacy, and residential location in Sylhet, Bangladesh. Findings in this area inform many of the elements in the second year of the SCAG large scale simulation model mentioned above.

In the area of **human interactions** my colleagues and I collected data on activity participation and travel to identify the underlying motivation for the interacting behavior of humans in their every-day life. This helped us explore issues of altruistic and self-serving behavior as well as reciprocity in time allocation and travel. In parallel, using existing data we developed models of human interactions using multilevel multivariate dynamic models to decompose behavioral variance in its multiple hierarchical components. To support this, with Seo Youn Yoon we created explicit functions of this interactive behavior in households accounting for the environment experienced by people in their everyday life viewed as agents that engage in bargaining behavior. This is a major developing emphasis of model building at UCSB with funding from the UC Office of the President and we plan to use the new model systems in the new activity-based model for SCAG bringing together findings from all five research directions above in an applied research project setting. Seo Youn's progress in this area was also rewarded with an Eisenhower fellowship, a UCTC dissertation fellowship, and in the 2009-2010 academic year the UCSB Graduate Division Dissertation Fellowship. Using a sophisticated modeling technique we developed daily rhythms of activity participation based on data about with whom and for whom activities were completed discovering the importance of detail in human interactions to explain travel behavior.

In the area of **optimal allocation of resources** I co-developed with two colleagues from Bangladesh a Data Envelopment Analysis (DEA) tool to estimate the effect of transportation on economic development and the possible lagged effects of public investments. In this direction with my former Ph.D. student Saiyid Sikhder we developed a comprehensive and longitudinal approach for optimal allocation of resources. Saiyid continued in this area of research as the Chief of the Physical Infrastructure Division of the Planning Commission of Bangladesh. In this area we also completed a project in a joint partnership with UC Irvine that I directed and was funded by the California Department of Transportation through the PATH program extending the methodology to social welfare of transportation investments using stochastic frontiers and fractal-based methods of social equity. Key product in this area is a new method using GIS to assess efficiency and inequality in allocating resources and a series of methods to compute statewide accessibility measures using existing databases. In this area with Srinath Ravulaparthi we are developing a new method to assess firm technical efficiency and propensity to relocate and correlate these with network topology and geometry.

Recognizing the importance of **air travel and operations** in decreasing Greenhouse Gas (GHG) emissions with Nate Isbell (finished his MA and continues in the PhD program at UCSB) we developed an assessment tool of the hub-and-spoke aviation operations. The tool shows that strategically selected direct point to point flights decrease substantially GHG emissions and travel time. We are expanding this research with Nate to study the interaction between air and land operations in different contexts and to develop comprehensive impact assessment models that can be used in regional and statewide simulations. Nate is also recognized for this research with an Eisenhower fellowship and he continues with funding from the UC MRPI sustainable transportation grant developing a new concept of surface access to airports with a case study of LAX.

In the area of **information, telecommunications and transportation** and within a subfield known as **Intelligent Transportation Systems (ITS)** my colleagues and I studied the interaction between

information, telecommunications, technologies, and transportation systems. In this area I developed a new method for the design of ITS, which is based on contextual theories of human behavior and methods to evaluate the effectiveness of operational systems. Key products in this area include the independent evaluations for the Pennsylvania Turnpike commission of its Advanced Traveler Information System and a series of evaluations for the Pennsylvania Department of Transportation. With my collaborators we also developed a variety of models about awareness and use of information by different types of travelers. In addition, with graduate students we developed conceptual frameworks and models of the **Information and Communications Technologies (ICT)** impacts on transportation for passenger and freight travel. Key products in this area include a framework for studying grocery teleshopping with my former student John Marker and a series of papers analyzing the effects of mobile technologies on travel behavior of individuals and their households. Another important accomplishment in this area is the work we completed with Tae-Gyu Kim on telecommunications and travel behavior using the Puget Sound Transportation Panel. Tae-Gyu in his dissertation employed a variety of econometric methods and structural equations models to study different aspects of the dynamic relationship between ICT and travel. He is now the Model Research and Development Supervisor of the North Carolina Department of Transportation.

In a relatively new area of transportation research we use concepts from **subjective well-being** (SWB - people's emotional responses, domain satisfactions, and global judgments of life satisfaction) to understand travel behavior. SWB can be separated into an affective component (the presence of positive affect and the absence of negative affect in a specific action) and a cognitive component (information-based appraisal of a person's discrepancies between expectations and experience). In the context of time-use, activity participation, and travel with graduate students and collaborators we began analyzing time use data and started development of new data collection methods in the US (Kate Deutsch dissertation on cognitive and affective) and Greece (GreTIA project on affective). Some early findings using national time use data were presented with Ravulaparthi at the IATBR conference in Toronto in the Summer 2012 and later at January 2013 TRB Annual Meeting, in Montreal in May 2013, in a short course at the University of the Aegean in June 2013, and a seminar at KRIHS in Seoul, Korea, in August 2013. We continue this with Jay Lee studying the dynamics and relationships between SWB and SOP of UCSB students. All these ideas are used to assess Smart city initiatives for which we are developing new metrics. In parallel, in GeoTrans we are developing new techniques that can assess subjective well being by harvesting social media data. Jae Hyun Lee's work in this area is of fundamental importance demonstrating the full value of Tweeter data as a tool to complement traditional household surveys and large scale statewide travel demand forecasting models.

TEACHING & TRAINING

All my undergraduate and graduate courses are heavily based on the research directions above. During the past twelve years I focused on modifying the material of courses from a Civil Engineering curriculum to fit the UCSB Geography curriculum, developed new courses tailored to Geography, strengthened the graduate program in transportation at UCSB by creating a new Ph.D. emphasis in transportation, taught a lower level undergraduate course (Geography 5), and supported our mandatory quantitative Geography graduate curriculum (Geography 210B and 210C).

At the undergraduate level I also supervised many individual studies courses (199 & 199RA) designed by the students in the form of open ended projects on sustainable transportation, which was also expanded to include other areas such as sustainable tourism, GIS applications, and data collection techniques. My

role was to provide oversight, information about sources of information, and guidance in developing objectives, doing research, delivering final products, and grading. The overall scope of these courses is **actions for sustainable development**, which is a key activity housed in our department. In 2016 and 2017 I am also designing with Adam Davis and Elizabeth McBride two freshman seminars on wireless cars and sustainable transportation.

At the graduate level I also supervised a variety of individual studies courses in which students work on small research projects involving hands-on experience with data analysis, findings interpretation, and writing of project reports. These experiences are designed to give them the opportunity to write research proposals and papers and give professional presentations at national and international research meetings. In fact, many research awards they received (e.g., Eisenhower fellowships for Shaunna Burbidge, Kriste Henson, Seo Youn Yoon, Kate Deutsch, and Nate Isbell) are the direct result of this activity. I am also involved in international graduate education at the University of Calabria (Italy), the University of the Aegean (Greece), and here at GeoTrans hosting undergraduate and post-graduate students from ENTPE (France), Mediterranean University of Reggio Calabria (Italy), and University of Calabria (Italy). I also host researchers from Portugal (Instituto Superior Tecnico), Polytechnic of Madrid (Spain), Liaoning Normal University (China), and Shanghai Maritime University (China) as visiting scholars collaborating in joint research projects.

Courses Taught at UCSB and Frequency

| Course | Title | Frequency |
|-------------|---|-----------|
| Geog 5* | People, Place and Environment | Twice |
| Geog 111A** | Transportation Planning and Modeling | Yearly |
| Geog 111B** | Transportation Modeling and Simulation | Yearly |
| Geog 210B | Analytical Methods in Geography II – regression methods | Yearly |
| Geog 210C | Analytical Methods in Geography II – spatial statistics | Once |
| Geog 211A | Transportation Planning and Modeling | Yearly |
| Geog 211B | Transportation Modeling and Simulation | Yearly |
| Geog 211C | Activity and Travel Behavior Analysis | Biennial |
| Geog 288 | Behavioral Theories and Processes | Biennial |
| Geog 288 | Urban and Traffic Microsimulation | Biennial |

* Lower division undergraduate, ** Upper division undergraduate paired with first year graduate courses

SERVICE

My service spans a wide spectrum of activity that includes serving on editorial advisory boards of prestigious journals and establishing a new international journal, supporting and chairing international and national conferences and annual meetings, serving on peer review panels and chairing expert task groups and councils, reviewing and appraising research proposals and dissertations, and chairing and serving on a variety of UC systemwide, UCSB campus based, and departmental committees, councils, and boards. In addition, at PennState I also served on a variety of administrative functions directing programs and centers that continued at UCSB as co-director of Geotrans and associate director of UCTC as well as campus director for the MRPI on sustainable transportation. Below I am describing four

accomplishments in service that represent my contributions in this area.

I was fortunate and proud to have the opportunity to collaborate with many colleagues in the US and abroad co-organizing many conferences and workshops. The most time consuming but also rewarding involvement for me was an international conference of 80 presentations and 150 participants. I organized and managed all the activities leading to the *Transportation Science and Technology Congress (TRANSTEC)* to coincide with the Athens 2004 Olympics. The conference was sponsored by US and European organizations and companies and was tremendously successful bringing together specialists that are usually isolated from each other. I also edited a 30 chapter book for Elsevier published in 2006 that contains papers from this conference. Subsequently in collaboration with colleagues at the Technical University of Prague we organized **TRANSTEC 2007** (<http://filip.fd.cvut.cz/transtec/>) and with colleagues from the UK and India organized the **TRANSTEC 2010** in New Delhi. I also served as member of the Local Organization Committee and track leader for freight models of the 11th **World Conference on Transportation Research** Berkeley, USA, 24-28 June 2007 (<http://www.wctrs.org/>) and continue to contribute in a supporting role many other international and national transportation conferences and annual meetings (by the Transportation Research Board and International Association for Travel Behaviour Research).

A second area of heavy involvement and accomplishment is the committee work at the Transportation Research Board (TRB) and the National Research Council (NRC) of the National Academies in which I am active in the past 30 years. Most visible has been my chairmanship of **Committee on Traveler Behavior and Values** and one of its subcommittees on **Activity Analysis** and the subsequent creation and chairmanship of the **Task Force on Moving Activity-based Approaches to Practice**. In parallel, I also actively participated in all the TRB annual meetings since 1989 by organizing sessions, reviewing papers, and presenting papers of my own research. In 2008-2009, I also served as chair of the **SHRP2 Expert Task Group** to write a request for proposals of a new research program (C10) and served on many National Research Council committees reviewing research and organizing workshops including two conference organizing committees this year. All this activity earned me the unique honor to be elected by my peers as an **Emeritus Member of Committee on Traveler Behavior and Values in 2009**.

My third accomplishment in service is the creation of **Transportation Letters** in 2008 with Kouros Mohammadian from University of Illinois at Chicago. This is a quarterly peer reviewed **International Journal of Transportation Research** that publishes high-quality review and min-review papers as well as major contributions to the state of the art in transportation research. The focus of *Transportation Letters* is on analytical and empirical findings, methodological papers, and theoretical and conceptual insights across all areas of research in transportation. The first fourteen issues of the journal are available in both print and electronic versions. The main topics and subject areas covered in the journal include, but are not limited to, state-of-the-art research in transportation policy analysis and planning, system design, operations, management, maintenance and rehabilitation, as well as modeling and simulation, choice and other decision making models, behavioral and attitudinal analysis, and human factors and cognition. The journal was published by J.Ross Publishing until 2012, later moved to Maney Publishing – <http://maneypublishing.com/index.php/journals/trl>. In 2013 is indexed and received its first impact factor of 0.5. In 2016 the journal was moved to Taylor and Francis (<http://www.tandfonline.com/toc/ytrl20/current>)

My fourth accomplishment in service is in **shared governance** at UCSB. From 2005 to 2008 I served as

the **chair** of the Parking Ratepayers Board. In that period we navigated through a crisis and successfully attracted a new director and managed a budget of approximately \$5 million per year with success. For three years I also served as the **vice-chair** of the UCSB Senate Council of Faculty Issues and Awards, which also includes chairing the committee on teaching awards. I am also the UCSB **representative** to the UC systemwide committee called University of California Faculty Welfare committee. The task of the council and committee is to meet monthly and review many policies and to develop faculty positions about these policies (e.g., retirement programs, faculty salary, reforms of the office of the president, budget crisis, revisions to academic manuals) as well as provide communication between the systemwide activities and UCSB. Although these service commitments are time consuming, they gave me an opportunity to contribute to the very important approach to shared governance at UC. I also participated in the Graduate, Computers, Colloquium, and Diversity committees of the Department of Geography and as **representative** on the Senate Faculty legislature for two years. In 2013-14 and 2014-15 I served as **member** of the Committee on Academic Personnel that reviews and judges all recruitments, retentions, exceptions from open recruitment, and merit advancements and promotions (on average every 3-years every faculty member is reviewed in the UC-system) at UCSB and the committee reviews approximately 300 cases per year. In 2016-17 and 2017-18 I am a member of the Council of Planning and Budget. I also served on a variety of committees within the Department of Geography including the Graduate, Colloquium, and Computing and Information Systems.