

# **BEKIR OĞUZ BARTIN**

E-MAIL: [bbartin@gmail.com](mailto:bbartin@gmail.com)

ORCID: 0000-0001-6941-228X

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## **EDUCATION**

- Ph.D., Civil & Environmental Engineering, Rutgers University  
Received in October 2006  
*Thesis Title:* Assessment of Benefit and Accuracy of Traveler Information in Traffic Networks  
Advisor: Dr. Kaan Ozbay
- M.Sc., Civil & Environmental Engineering, Rutgers University  
Received in October 2000  
*Thesis Title:* Cost of Transporting People in New Jersey  
Advisor: Dr. Kaan Ozbay
- B.S., Civil & Environmental Engineering, Middle East Technical University, Turkey  
Received in July 1997.

## **APPOINTMENTS**

- Associate Professor and Department Chair, Civil Engineering Department, Altinbas University (formerly Istanbul Kemerburgaz University), 2018- 2020
- Assistant Professor and Chair, Civil Engineering Department, Altinbas University (formerly Istanbul Kemerburgaz University), 2012- 2018
- Research Scientist (Part-Time), in Civil and Urban Engineering Department, New York University, 2014-2016
- Research Associate in Civil & Environmental Engineering Department, Rutgers University, September 2003 – 2012
- Research Assistant in Civil & Environmental Engineering Department, Rutgers University, January 1998- September 2003

## **TEACHING**

- Spring 2016, 2017, 2018 Intelligent Transportation Systems
- Spring 2016, 2017, 2018, 2019 Transportation Systems Engineering
- Fall 2016, 2017, 2018, 2019 Transportation Economy
- Fall 2015, 2016, 2017, 2018 Fluid Mechanics
- Fall 2015, 2016, 2017, 2018, 2019 Engineering Materials
- Spring 2015, 2016, 2017, 2018, 2019 Engineering Mechanics II
- Spring 2014, Mathematics for Architecture II
- Fall 2012, 2013, 2014, Spring 2013, 2015, 2016 Computer Programming I
- Spring 2013, Fall 2013 Computer Programming II
- Fall 2011, Advanced Transportation Economics, co-instructor with Dr. Kaan Ozbay

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- Spring 2009-2011, Transportation Engineering II, co-instructor with Dr. Kaan Ozbay
- Spring 2008, Transportation Engineering II
- Fall 2007, Advanced Transportation Economics
- Fall 2005, Transportation Planning, with Dr. Kaan Ozbay
- Spring 2005, Intelligent Transportation Systems, with Dr. Kaan Ozbay
- Spring 2005, Transportation Engineering II, with Dr. Kaan Ozbay
- Spring 2003, Transportation Engineering II, with Dr. Kaan Ozbay

## **RESEARCH INTERESTS**

- Simulation Modeling and Analysis
- Transportation Economics
- Machine Learning
- Traffic Safety Modelling
- Incident Management
- Traveler Information Systems
- Traffic Data Analysis

## **RESEARCH PROJECTS**

- **Research Scientist** “Calibration / Development of Safety Performance Functions for New Jersey” by New Jersey Department of Transportation (2017-2019).
- **Research Scientist** “Coordinated ITS Deployment in New York City (CIDNY) – Task 2” funded by New York Department of Transportation (2014-2017)
- **Research Scientist** “Newark Bay-Hudson County Extension, Milepost N6.00 to N8.20 Bridge Deck Reconstruction Eastbound and Seismic Retrofit – Traffic Impact Study” funded by New Jersey Turnpike Authority (2015 - 2016)
- **Research Scientist** “Work Zone Consolidation Feasibility (2012-08)” funded by New Jersey Department of Transportation for the Period of 04/12-04/14 (Co-principal Investigator)
- **Research Associate** “Snow Application Software” funded by the New Jersey Turnpike Authority for the period of 04/11-12/13.
- **Research Associate** “MyTix: NJ Transit’s Mobile Ticketing Application (2011-05)” funded by New Jersey Department of Transportation for the Period of 09/11-12/12 (Co-Principal Investigator)
- **Research Associate** - "Benefit Cost Analysis of Hybrid Bus Deployment on Transit Routes" funded by the Federal Transit Administration for the period of October 2009 - September 2011 (Principal Investigator)
- **Research Associate** – “Traffic Simulation Modeling and Analysis of Interchange 14A and Proposed Concept 11D” funded by the New Jersey Turnpike Authority for the period 2012-2013.

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- **Research Associate** – “Regional Traffic impact Study for Newark Bay-Hudson County Extension Milepost N6.00 TO N8.20 Bridge Deck Reconstruction and Miscellaneous Improvements”, funded by the New Jersey Turnpike Authority for the period 2009-2011.
- **Research Associate** – “Traffic Control and Work Zone Safety for High Volume Roads” funded by New Jersey Department of Transportation for the Period 1/09 – 7/10. (Co-Principal Investigator)
- **Research Associate** - “Automated Pedestrian Counter (Project 2010-001)” funded by the New Jersey Department of Transportation for the period of 02/08- 02/10. (Co-Principal Investigator)
- **Research Associate** – “Transportation: Impact on Economy (Project 2009-15)” funded by the New Jersey Department of Transportation for the period of 02/07- 02/09. (Co-Principal Investigator)
- **Research Associate** - “Development of Uniform Standards for Allowable Lane Closure (Project 2007-06)” funded by the New Jersey Department of Transportation for the period of 01/2007- 08/2008. (Co-principal investigator)
- **Research Associate** - "Jersey City/Newark Urban Area Security Initiative Regional Evacuation Plan" funded by the US Department of Homeland Security for the period of 01/2008 - 01/2010.
- **Research Associate** - “Microscopic Simulation of Garden State Parkway / New Jersey Turnpike –Phase 1 & 2” funded by New Jersey Turnpike Authority for the period of 09/2005- 04/2010. (Co-principal investigator)
- **Research Associate** - “Simulation and Analysis of Clark Circle - Exit 135 of Garden State Parkway” funded by New Jersey Turnpike Authority for the period of 09/05- 01/06.
- **Research Associate** - “Cost of Transporting People in New Jersey – Phase 2.” funded by New Jersey Department of Transportation for the Period of 1/05-8/06.
- **Research Associate** “Operational Improvements at Traffic Circles” funded by New Jersey Department of Transportation for the Period of 1/03-8/05
- **Research Associate** - “Evaluation Study of New Jersey Turnpike’s Value Pricing Initiative” funded by FHWA for the Period of 1/02-5/05.
- **Research Assistant** - “Evaluation of Incident Management Strategies.” funded by New Jersey Department of Transportation and USDOT (CAIT) for the period 6/1/00-6/1/02.
- **Research Assistant** - “South Jersey Motorist Information System.” funded by New Jersey Department of Transportation for the period 5/1/00- 1/30/02
- **Research Assistant** - “Simulation of an Intelligent Transportation Systems Priority Corridor in New Jersey.” funded by New Jersey Department of Transportation and USDOT (CAIT) for the period 6/1/00-5/31/02.
- **Research Assistant** “Cost of Transporting People in New Jersey-Phase 1.” funded by USDOT University Transportation Research Center (UTRC) and New Jersey Department of Transportation for the period 10/1/99-9/1/00.

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## PEER REVIEWED JOURNAL PUBLICATIONS & BOOK CHAPTERS

1. Ozbay, K., **Bartin, B.**, Allen, W. B., Iyer, S., Robins, M., Weiner, M. and Nassif, H. (2019). "Review and Assessment of New Jersey Rail Freight Assistance Program" *Research in Transportation Economics*. Vol. 77. Article 100742. <https://doi.org/10.1016/j.retrec.2019.100742>
2. **Bartin, B.**, Ozbay, K. and Xu, C. (2019). "Extracting Horizontal Curvature Data from GIS Maps: Clustering Method" *Transportation Research Record: Journal of the Transportation Research Board*. <https://doi.org/10.1177/0361198119850789>
3. **Bartin, B.** (2019). "Use of Learning Classifier Systems in Microscopic Toll Plaza Simulation Models" *IET Intelligent Transport Systems*. Vol. 13. Issue 5. pp. 860-869.
4. **Bartin, B.**, Ozbay, K. and Yang, H. (2018). "Evaluation framework for mobile ticketing applications in public transit: a case study." *IET Intelligent Transport Systems*. Vol. 12. Issue 9. pp. 1166-1173.
5. **Bartin, B.**, Ozbay, K., Gao, J. and Kurkcu, A. (2018). "Calibration and validation of large-scale traffic simulation networks: a case study." *Procedia Computer Science*. Vol. 130. pp. 844-849.
6. Mudigonda, S., Ozbay, K. and **Bartin, B.** (2018). "Evaluating the Resilience and Recovery of Public Transit System using Big Data: Case Study from New Jersey" *Journal of Transportation Safety and Security*. DOI: 10.1080/19439962.2018.1436105.
7. **Bartin, B.** (2017). "Simulation of Vehicles' Gap Acceptance Decision Using Reinforcement Learning." *Uludag University Journal of the Faculty of Engineering*. Vol. 22, No. 2. DOI: 10.17482/uumfd.338803
8. **Bartin, B.**, Ozbay, K., Maggio, M. and Wang, H. (2017). "Work Zone Coordination Tool." *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 2617, pp. 60-70.
9. Li, J., Ozbay, K. and **Bartin, B.** (2015). "Effects of Hurricanes Irene and Sandy in New Jersey: traffic patterns and highway disruptions during evacuations." *Natural Hazards*. Vol. 78. Issue 3. pp. 2081-2107.
10. Yang, H., Ozbay, K. and **Bartin, B.** (2015). "Effectiveness of Temporary Rumble Strips in Alerting Motorists in Short-Term Surveying Work Zones." *Journal of Transportation Engineering*. Vol. 141. Issue. 10.
11. Yang, H., Ozbay, K., **Bartin, B.** and Ozturk, O. (2014). "Assessing the Safety Effects of Removing Highway Mainline Barrier Toll Plazas." *Journal of Transportation Engineering*. Vol. 140, No. 8.
12. Yang, H., Ozbay, K., Morgul, E. F., **Bartin, B.** and Xie, K. (2014). "Development of Online Scalable Approach for Identifying Secondary Crashes." *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 2470. pp. 24-33.
13. Yang, H., **Bartin, B.**, Ozbay, K. and Chien, S. (2014). "Investigating Motorists' Behaviors in Response to Supplementary Traffic Control Devices at Land Surveying Work Sites." *Traffic Injury Prevention*. Vol 15. Issue 4. pp. 424-430.
14. Yang, H., **Bartin, B.**, Ozbay, K. (2014). "Mining the Characteristics of Secondary Crashes on Highways." *Journal of Transportation Engineering*. Vol. 140. Issue 4.

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15. Morgul, E. F., Yang, H., Kurkcu, A., Ozbay, K., **Bartın, B.**, Kamga, C. and Salloum, R. (2014). "Virtual Sensors: Web-Based Real-Time Data Collection Methodology for Transportation Operation Performance Analysis." *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 2442, pp. 106-116.
16. Ozbay, K., **Bartın, B.** Mudigonda, S., Iyer, S. (2013). "ASSIST-ME Post-processing Tool for Transportation Planning Model Output." *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 2399. pp. 63-73.
17. Li, J., Ozbay, K., **Bartın, B.**, Iyer, S. and Carnegie, J. (2013). "Empirical Evacuation Response Curve During Hurricane Irene in Cape May, New Jersey." *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 2376. pp. 1-10.
18. Yang, H., **Bartın, B.** and Ozbay, K. (2013). "Use of Sensor Data to Identify Secondary Crashes on Freeways." *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 2396. pp. 82-92.
19. **Bartın, B.**, Ozbay, K. and Mudigonda, S. (2012). "Interactive Lane Closure and Traffic Information Tool Based on a Geographic Information System." *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 2272. pp. 44-55.
20. Yang, H., Ozbay, K. and **Bartın, B.** (2012). "Effect of Open Road Tolling on Safety Performance of Freeway Mainline Toll Plazas." *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 2324. pp. 101-109.
21. Berechman, J., **Bartın, B.**, Yanmaz-Tuzel, O. and Ozbay, K. (2011). "The Full Marginal Costs of Highway Travel: Methods and Empirical Estimation for North America." Handbook in Transport Economics - Chapter 12. Editors: Andre de Palma, Robin Lindsey, Emile Quinet and Roger Vickerman.
22. Yang, H., Ozbay, K. and **Bartın, B.** (2011). "Enhancing the Data Quality of Infrared-based Automatic Pedestrian Sensors Using a Nonparametric Statistical Method." *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 2264, pp. 11-17.
23. Iyer, S., Ozbay, K. and **Bartın, B.** (2010). "Ex Post Evaluation of Calibrated Simulation Models of Significantly Different Future Systems." *Transportation Research Record: Journal of the Transportation Research Board*. No. 2161, pp. 49-56.
24. **Bartın, B.** and Ozbay, K. (2010). "Determining the Optimal Configuration of Highway Routes for Real-Time Traffic Information - a Case Study." *IEEE Transactions on Intelligent Transportation Systems*. Vol. 11, No. 1.
25. Ozbay, K., Xiao, W, Jaiswal, G., **Bartın, B.**, Kachroo, P. and Baykal-Gursoy, M. (2009). "Evaluation of Incident Management Strategies Using an Integrated Traffic/Incident Management Simulation." *World Review of Intermodal Transportation Research*. Vol 2. No: 2/3, pp. 155-186.
26. Ozbay, K., Yang, H., **Bartın, B.** and Mudigonda, S. (2008). "Derivation and Simulation Based Validation of a New Surrogate Safety Measure." *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 2083. pp. 105-113.
27. Ozbay, K., Yanmaz-Tuzel, O., Mudigonda, S., **Bartın, B.** (2008). "Evaluating Highway Capacity Investments using a GIS-based tool - Trip-based Full Marginal Cost Approach." *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 2024, pp. 44-53.

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28. **Bartın, B.**, Ozbay, K. and Iyigun, C. (2007). "Clustering-based Methodology for Determining Optimal Roadway Configuration of Detectors for Travel Time Estimation." *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 2000, pp. 98-105.
29. **Bartın, B.**, Mudigonda, S. and Ozbay, K. (2007). "Impact of Electronic Toll Collection on Air Pollution Levels: Estimation Using Microscopic Simulation Model of Large-Scale Transportation Network." *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 2011. pp. 68-77.
30. Ozbay, K., **Bartın, B.**, Yanmaz-Tuzel, O., Berechman, J. (2007). "Alternative Methods for Estimating Full Marginal Costs of Highway Transportation." *Transportation Research Part A*, Vol. 41, pp. 768-786. **TOP 25 hottest articles of Transportation Research Part A for April-June 2007.**
31. **Bartın, B.**, Ozbay, K., Yanmaz-Tuzel, O. and List, G. (2006). "Modeling and Simulation of Unconventional Traffic Circles." *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 1965, pp. 201-209.
32. Ozbay, K. and **Bartın, B.** (2004). "Estimation of Economic Impact of V.M.S. Route Guidance using Micro Simulation". *Research in Transportation Economics*. Vol. 8, pp. 211-238.
33. Ozbay, K., **Bartın, B.** and Chien, S. (2004). "South Jersey Real-Time Motorist Information Systems: Theory and Practice." *Transportation Research Record: Journal of the Transportation Research Board*. Vol. 1886, pp. 68-75.
34. Ozbay, K. and **Bartın, B.** (2003). "Incident Management Simulation." *SCS Simulation Journal*, Vol. 79, No. 2, pp. 69-82.
35. Ozbay, K., **Bartın, B.** and Berechman, J. (2001). "Estimation and Evaluation of Full Marginal Costs of Highway Transportation in New Jersey." *Journal of Transportation and Statistics*, Vol. 4, No.1.

#### REFEREED CONFERENCE PROCEEDINGS

1. **Bartın, B.** (2018). "The Use of Learning Classifier Systems in Microscopic Toll Plaza Simulation Models" Proceedings of the Transportation Research Board 97<sup>th</sup> Annual Meeting.
2. **Bartın, B.**, Ozbay, K., Yang, H. (2017) "Evaluation of Mobile Ticketing Technologies for Public Transit." Proceedings of the Transportation Research Board 96<sup>th</sup> Annual Meeting.
3. **Bartın, B.**, Ozbay, K., Maggio, M. and Wang, H. (2017). "Work Zone Coordination Tool." Proceedings of the Transportation Research Board 96<sup>th</sup> Annual Meeting.
4. Demirogluk, S., Ozbay, K., **Bartın, B.**, Maggio, M., Nassif, H. and Hesslein, D. L. (2017). "WeatherEVANT: Real-time Weather related Event Visualization and Analytics Tool" Proceedings of the Transportation Research Board 96<sup>th</sup> Annual Meeting.
5. Mudigonda, S., Ozbay, K. and **Bartın, B.** (2017). "Evaluating Resilience and Recovery of Public Transit System Using Big Data: Case Study from New Jersey" Proceedings of the Transportation Research Board 96<sup>th</sup> Annual Meeting.

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6. **Bartın, B.** (2016). “Karayolu Ulaşım Ağlarında Marjinal Maliyet Hesaplama Metotları ve Trafik Yoğunluğu Ücretlendirmesindeki Etkileri.” Proceedings of the TRANSIST International Istanbul Transport Congress and Exhibition. November 2016 (In Turkish).
7. **Bartın, B.** (2016). “Büyük Verinin Mikroskobik Trafik Simülasyon Modellerinin Validasyonu ve Kalibrasyonunda Kullanımı.” Proceedings of the TRANSIST International Istanbul Transport Congress and Exhibition. November 2016 (In Turkish).
8. **Bartın, B.** (2016). “Toplu Taşımada hibrit Otobüs Kullanımının Ömür Devir Maliyet Analizi.” Proceedings of the TRANSIST International Istanbul Transport Congress and Exhibition. November 2016 (In Turkish).
9. Ozbay, K., **Bartın, B.**, Allen, W. B., Iyer, S., Robbins, M., Weiner, M. and Nassif, H. (2016). “The Review and Evaluation of Rail Grants Program: A Case Study” Proceedings of the Transportation Research Board 95<sup>th</sup> Annual Meeting.
10. Ozbay, K., Yang, H., Morgul, E., Mudigonda, S. and **Bartın, B.** (2015). “Big Data and the Calibration and Validation of Traffic Simulation Models” Presented at the Transportation Research Board 93<sup>rd</sup> Annual Meeting. Published in Transportation Research E-Circular (E-C195). ISSN 0097-8515 Traffic and Transportation Simulation – Looking Back and Looking Ahead: Celebrating 50 Years of Traffic Flow Theory, a Workshop.
11. Yang, H., Ozbay, K., Xie, K. and **Bartın, B.** (2015). “Modeling Crash Risk of Highway Work Zones with Relatively Short Durations” Proceedings of the Transportation Research Board 94<sup>th</sup> Annual Meeting.
12. **Bartın, B.** (2014). “Mobil Telefonların Toplu Taşıma Bilet Ücretlendirilmesinde Kullanımı.” Proceedings of the TRANSIST International Istanbul Transport Congress and Exhibition. December 2014 (In Turkish).
13. Yang, H., Ozbay, K., Morgul, E. F., **Bartın, B.** and Xie, K. (2014). “Development of Online Scalable Approach for Identifying Secondary Crashes” Proceedings of the Transportation Research Board 93<sup>rd</sup> Annual Meeting.
14. Li, J., Ozbay, K. and **Bartın, B.** (2014). “Effects of Hurricane Irene and Sandy in New Jersey: Evacuation Traffic Patterns.” Proceedings of the Transportation Research Board 93<sup>rd</sup> Annual Meeting.
15. Morgul, E. F., Yang, H., Kurkcu, A., Ozbay, K., **Bartın, B.**, Kamga, C. and Salloum, R. (2014). “Virtual Sensors: Web-Based Real-Time Data Collection Methodology for Transportation Operation Performance Analysis.” Proceedings of the Transportation Research Board 93<sup>rd</sup> Annual Meeting.
16. Li, J., Ozbay, K., **Bartın, B.**, Iyer, S. and Carnegie, J. (2013). “Empirical Evacuation Response Curve during Hurricane Irene in Cape May, New Jersey.” Proceedings of the Transportation Research Board 92<sup>nd</sup> Annual Meeting.
17. Ozbay, K., **Bartın, B.** Mudigonda, S., Iyer, S. (2013). “ASSIST-ME Post-processing Tool for Transportation Planning Model Output.” Proceedings of the Transportation Research Board 92<sup>nd</sup> Annual Meeting.
18. Yang, H., Ozbay, K., **Bartın, B.** and Ozturk, O. (2013). “Effect of Removing Freeway Mainline Barrier Toll Plazas on Safety.” Proceedings of the Transportation Research Board 92<sup>nd</sup> Annual Meeting.

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19. Yang, H., Ozbay, K., **Bartın, B.** and Chien, S. (2013). "Evaluation of Supplementary Traffic Control Devices for Surveyor Safety Enhancement." Proceedings of the Transportation Research Board 92<sup>nd</sup> Annual Meeting.
20. **Bartın, B.** (2013). "Life Cycle Cost Analysis of Hybrid Bus Deployment on Transit Lines." Proceedings of the Transportation Research Board 92<sup>nd</sup> Annual Meeting.
21. Ozturk, O., Ozbay, K., Yang, H. and **Bartın, B.** (2013). "Crash Frequency Modeling for Highway Construction Zones." Proceedings of the Transportation Research Board 92<sup>nd</sup> Annual Meeting.
22. **Bartın, B.**, Ozbay, K. and Mudigonda, S. (2012). "A GIS-Based Interactive Lane Closure and Traffic Information Tool." Proceedings of the Transportation Research Board 91<sup>st</sup> Annual Meeting.
23. Yang, H., Ozbay, K. and **Bartın, B.** (2012) "Effects of the Open Road Tolling on Safety Performance of Freeway Mainline Toll Plazas" Proceedings of the Transportation Research Board 91<sup>st</sup> Meeting.
24. **Bartın, B.**, Cavus, O. and Ozbay, K. (2011). "Validation of Traffic Simulation Models Using Reinforcement Learning." Proceedings of the Transportation Research Board 90<sup>th</sup> Annual Meeting.
25. Yang, H., Ozbay, K. and **Bartın, B.** (2011). "Enhancing the Data Quality of Infrared-based Automatic Pedestrian Sensors Using a Nonparametric Statistical Method" Proceedings of the Transportation Research Board 90<sup>th</sup> Annual Meeting.
26. **Bartın, B.**, Ozbay, K. and Jahan, N. (2011). "Benefit Cost Analysis of Highway Investment Projects Using Regional Transportation Planning Models." Proceedings of the Transportation Research Board 90<sup>th</sup> Annual Meeting.
27. Yang, H., Ozbay, K. and **Bartın, B.** (2010). "Investigating the Performance of Automatic Counting Sensors for Pedestrian Traffic Data Collection." In Selected Proceedings of the 12th World Conference on Transport Research Society, ISBN 978-989-96986-1-1 (Editors: J. Viegas and R. Macário). Lisbon, Portugal, July 11-15.
28. Yang, H., Ozbay, K. and **Bartın, B.** (2010). "Application of Simulation-Based Traffic Conflict Analysis for Highway Safety Evaluation." In Selected Proceedings of the 12th World Conference on Transport Research Society. Lisbon, Portugal, July 11-15.
29. Yang, H., Ozbay, K. and **Bartın, B.** (2010). "Calibration of Automatic Pedestrian Counter Data Using a Nonparametric Statistical Method." Proceedings of 7<sup>th</sup> Triennial Symposium on Transportation Analysis (TRISTAN VII), Tromsø, Norway, June 20-25.
30. Ozbay, K., Yang, H., and **Bartın, B.**, (2010) "Calibration Of An Infrared-based Automatic Counting System for Pedestrian Traffic Flow Data Collection". Proceedings of the Transportation Research Board 89<sup>th</sup> Annual Meeting.
31. Iyer, S., Ozbay, K. and **Bartın, B.** (2010). "Post-Assessment of Calibrated Simulation Models of Significantly Different Future Systems." Proceedings of the Transportation Research Board 89<sup>th</sup> Annual Meeting.
32. Mudigonda, S., **Bartın, B.** and Ozbay, K (2009). "Microscopic Modeling of Lane Selection and Lane Changing at Toll Plazas." Proceedings of the Transportation Research Board 88<sup>th</sup> Annual Meeting.
33. **Bartın, B.** and Ozbay, K. (2008). "Comparison of Tolls with Estimated Full Marginal Costs: Theory meets Reality." Proceedings of the Transportation Research Board 87<sup>th</sup> Annual Meeting.

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34. Ozbay, K., Yang, H., **Bartın, B.** and Mudigonda, S. (2008). "Derivation and Simulation Based Validation of a New Surrogate Safety Measure." Proceedings of the Transportation Research Board 87<sup>th</sup> Annual Meeting.
35. Yanmaz-Tuzel, O., Ozbay, K., Mudigonda, S., **Bartın, B.** (2008). "Quantification of Possible Impacts of Capacity Expansion Projects on Transportation Costs via Trip-based Full Marginal Cost Estimation Methodology." Proceedings of the Transportation Research Board 87<sup>th</sup> Annual Meeting.
36. **Bartın, B.**, Ozbay, K. and Iyigun, C. (2007). "A Clustering Based Methodology for Determining the Optimal Roadway Configuration of Detectors for Travel Time Estimation." Proceedings of the IEEE Conference on Intelligent Vehicles Symposium. Istanbul, Turkey, June 13-15.
37. Ozbay, K. and **Bartın, B.** (2007). "Simulation Model Development and Analysis of an Unconventional Traffic Circle." Proceedings of the World Conference of Transport Research Conference, Berkeley, USA.
38. Ozbay, K., Yanmaz-Tuzel, O., **Bartın, B.** and Mudigonda, S. (2007). "Evaluating Highway Capacity Investments using a GIS-based tool – A Network-wide Full Marginal Cost Approach." Proceedings of the World Conference of Transport Research Conference, Berkeley, USA.
39. **Bartın, B.**, Mudigonda, S. and Ozbay, K. (2007). "Estimation of the Impact of Electronic Toll Collection on Air Pollution Levels using Microscopic Simulation Model of a Large-Scale Transportation Network." Proceedings of the Transportation Research Board 86<sup>th</sup> Annual Meeting.
40. **Bartın, B.**, Ozbay, K. and Iyigun, C. (2006). "A Clustering Based Methodology for Determining the Optimal Roadway Configuration of Detectors for Travel Time Estimation." Proceedings of the 9<sup>th</sup> International IEEE Conference on Intelligent Transportation Systems, pp. 659-664. Toronto, Canada, September 17 - 20.
41. **Bartın, B.** and Ozbay, K. (2006). "Evaluation of Travel Time Variability in New Jersey Turnpike – a Case Study." Proceedings of the 9<sup>th</sup> International IEEE Conference on Intelligent Transportation Systems, pp. 665-670. Toronto, Canada, September 17 - 20.
42. Yanmaz-Tuzel, O., Ozbay, K., Mudigonda, S., **Bartın, B.** (2006). "A GIS-Based Tool for the Estimation of Network-wide Full Marginal Cost of Highway Transportation." INFORMS, November 5-8, Pittsburgh, USA.
43. Ozbay K., Yanmaz-Tuzel O., **Bartın, B.** and Mudigonda S. (2006). "A GIS-Based Tool for the Estimation of Network-wide Full Marginal Cost of Highway Transportation." Proceedings of the Joint International Conference on Computing and Decision Making in Civil and Building Engineering. Montreal Canada. June 14-16.
44. Ozbay. K, Mudigonda, S. and **Bartın, B.** (2006). "Microscopic Simulation and Calibration of an Integrated Freeway and Toll Plaza Model." Proceedings of the Transportation Research Board 86<sup>th</sup> Annual Meeting.
45. Ozbay, K., **Bartın, B.**, Rathi, N. and Yanmaz-Tuzel, O. (2005). "Modeling and Simulation of an Unconventional Traffic Circle." Proceedings of the 8<sup>th</sup> International IEEE Conference on Intelligent Transportation Systems. Vienna, Austria.
46. Ozbay. K, Mudigonda, S. and **Bartın, B.** (2005). "Development and Calibration of an Integrated Freeway and Toll Plaza Model for New Jersey Turnpike using Paramics

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- Microscopic Simulation Tool.” Proceedings of the 8<sup>th</sup> International IEEE Conference on Intelligent Transportation Systems. Vienna, Austria.
47. Ozbay, K., **Bartin, B.**, and Berechman, J. (2004). “Estimation and Evaluation of Full Marginal Costs of Highway Transportation in New Jersey.” Proceedings of the 10<sup>th</sup> World Conference on Transportation Research, Istanbul, Turkey.
  48. Ozbay, K. and **Bartin, B.** (2004). “Incident Management Simulation.” Proceedings of the 10<sup>th</sup> World Conference on Transportation Research, Istanbul, Turkey.
  49. Ozbay, K. and **Bartin, B.** (2004). “Real-time Motorist Information Systems: Theory vs. Practice.” Proceedings of the 10<sup>th</sup> World Conference on Transportation Research, Istanbul, Turkey.
  50. Ozbay, K. and **Bartin, B.** (2003). “Effective and Timely Evacuation of People Using the Highway Infrastructure.” Proceedings of the IEEE Spring 2003 Conference on Technologies for Homeland Security, May 7-8.
  51. Ozbay, K. and **Bartin, B.** (1999) "Evaluation of Incident Management Strategies with a Simulation Program Developed using ARENA" SPIE Conference on Mobile Robots XIV, Boston Massachusetts, September 1999.

## COMPUTER SKILLS

- PARAMICS microscopic traffic simulation software
- C, R, Python, FORTRAN, MATLAB, Visual Basic, AVENUE programming languages
- ArcView geographic information systems software
- TRANSCAD, CUBE planning software
- SYNCHRO, HCS 2010 traffic analysis tools, Stata Statistics Software
- ARENA simulation software and SIMAN computer simulation language