

Eric J. Gonzales

ASSISTANT PROFESSOR

Dept. Civil and Environmental Engineering
University of Massachusetts Amherst
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EDUCATION

- MAY 2011 **University of California, Berkeley**
Ph.D. Civil and Environmental Engineering
Thesis: 'Allocation of Space and the Costs of Multimodal Transport in Cities'
Minors: City Planning, Industrial Engineering and Operations Research
Committee: Prof. Daganzo (Advisor), Prof. Cervero, Prof. Kanafani
- MAY 2007 **University of California, Berkeley**
M.S. Civil and Environmental Engineering
Program: Transportation Engineering
- MAY 2006 **Carnegie Mellon University** Pittsburgh, PA
B.S. Civil Engineering (with College and University Honors)
Minor: Economics

WORK AND RESEARCH EXPERIENCE

- 2014–PRESENT **University of Massachusetts** Amherst, MA
Assistant Professor (Tenure-Track)
Department of Civil and Environmental Engineering, Transportation Group
- 2011–2013 **Rutgers, The State University of New Jersey** Piscataway, NJ
Assistant Professor
Department of Civil and Environmental Engineering, Transportation Group
- 2011 **University of California, Berkeley**
Research Engineer 1
California Partners for Advanced Transportation and Technology (PATH)
- 2006–2011 **University of California, Berkeley**
Graduate Student Researcher
Berkeley Center for Future Urban Transport, A Volvo Center of Excellence
- 2005–2006 **Carnegie Mellon University** Pittsburgh, PA
Undergraduate Student Researcher
Advanced Infrastructure Systems, Department of Civil and Environmental Engineering
- SUMMER 2003, 2004 **Centennial Engineering, Inc.** Golden, CO
Engineering Intern

RESEARCH INTERESTS

Public Transportation Systems
Demand Responsive Transportation (e.g., Paratransit, Taxis, TNCs)
Freight and Logistics Systems
Multimodal Network Modeling and Control
Urban Traffic Flow and Safety
Sustainability and Environmental Impacts of Transportation
Pricing and Transportation Economics

HONORS AND AWARDS

- 2015 Open Education Initiative Grant Award
- 2014 Travel Scholarship to attend Workshop on Integrating Bicycle & Pedestrian Topics in Transportation Curriculum
- 2010–2011 Outstanding Student of the Year, University of California Transportation Center
- 2010 Gordon F. Newell Award for Excellence in Transp. Science, UC Berkeley Transp. Group
- 2010 Outstanding Graduate Student Instructor, UC Berkeley Dept. of CEE
- 2010 Eno Transportation Foundation Fellow
- 2009 University of California Transportation Center (UCTC) Dissertation Grant
- 2009 Gordon F. Newell Memorial Fellowship
- 2006–2008 UC Berkeley Fellowship for Graduate Study
- 2006 Andrew Carnegie Society Presidential Scholars Award
- 2006 H.A. Thomas Sr. Award, Carnegie Mellon Dept. of CEE
- 2006 Outstanding Civil Engineering Student, ASCE Pittsburgh Section
- 2006 Arthur T. Livingood Scholarship Award, ACI Pittsburgh Section
- 2003–2006 IBM Thomas J. Watson Memorial Scholarship
- 2002–2006 Carnegie Mellon Scholarship

RESEARCH GRANTS

Externally Funded Projects

1. **Gonzales, E.J.** (co-PI), Christofa, E., Knodler, M.J., Ni, D., Gao, S. Technical support services for FHWA Office of Operations, Indefinite Delivery Indefinite Quantity (IDIQ). 9/2016 – 8/2021. \$0. (Agreement allows us to seek funding for task orders as needed by FHWA).
2. **Gonzales, E.J.** (PI). Route choice in congested grid networks. United States Department of Transportation through the New England Region 1 University Transportation Center. 5/2014 – 5/2017. \$164,608.
3. **Gonzales, E.J.** (co-PI), Knodler, M., Fischer, D., Christofa, C. Safety research using simulation (SAFER-Sim) University Transportation Center. United States Department of Transportation. 10/2015 – 9/2016. \$282,944.
4. **Gonzales, E.J.** (PI). Modeling sustainable regional freight movement. United States Department of Transportation through the New England Region 1 University Transportation Center. 10/2014 – 1/2016. \$64,195.
5. **Gonzales, E.J.** (PI 10/2013 – 12/2013), Deka, D. ADA paratransit facility alternatives. New Jersey Department of Transportation. 10/2013 – 12/2014. \$238,006.
6. **Gonzales, E.J.** (PI 8/2013 – 12/2013, formerly Co-PI), Ozbay, K., Liu, R. Handheld devices on rail or fare collection and communication. New Jersey Department of Transportation. 6/2011 – 2/2014. \$310,195.
7. **Gonzales, E.J.** (PI). The effects of network characteristics on traffic flows and emissions. United States Department of Transportation through Center for Advanced Infrastructure and Transportation. 2/2013 – 12/2013. \$99,031.
8. **Gonzales, E.J.** (co-PI), Nassif, H., Ozbay, K. Using GPS data to understand public transit demand. United States Department of Transportation through Mineta National Transit Research Center. 10/2012 – 12/2013. \$57,407 (share for Gonzales).
9. **Gonzales, E.J.** (PI), Deka, D. ADA paratransit geographic service area realignment. New Jersey Department of Transportation. 7/2012 – 9/2013. \$126,989.
10. **Gonzales, E.J.** Allocation of space and the costs of multimodal transport in cities. Dissertation Grant from United States Department of Transportation through University of California Transportation Center. 1/2009 – 12/2009. \$20,000.

Internally Funded Projects

1. **Gonzales, E.J.** MSP Research Support Fund. 10/2016 – 3/2017. \$1,000.
2. **Gonzales, E.J.** MSP Research Support Fund. 4/2015 – 6/2015. \$1,000.
3. Noland, R.B., Patterson, G., **Gonzales, E.J.** The City of New Brunswick sustainable safe streets initiative. Rutgers University-Community Research Partnership Grant. 7/2012 – 6/2013. \$25,000.
4. **Gonzales, E.J.** (PI), Patterson, G., Kaplan, A. Congestion and safety near New Brunswick Station. Rutgers University-Community Research Partnership Grant. 2/2012 – 1/2013. \$14,921.
5. **Gonzales, E.J.** (PI). Estimating network-wide emissions with macroscopic traffic models. Rutgers University Faculty Grant. 1/2012 - 8/2012. \$24,000.

PUBLICATIONS

* indicates student co-author

Peer-Reviewed Journal Publications

1. *Amirgholy, M., **Gonzales, E.J.** (2017). Analytical equilibrium of bicriterion choices with heterogeneous user preferences: Application to the morning commute problem. *Transportmetrica B*, doi:10.1080/21680566.2017.1279087 [In Press]. (Impact Factor 2.56)
2. *Amirgholy, M., **Gonzales, E.J.** (2016). Demand responsive transit systems with time dependent demand: User equilibrium, system optimum, and management strategy. *Transportation Research Part B*, 92:234–252. (Impact Factor 3.769)
3. Noland, R.B., *Gao, D., **Gonzales, E.J.**, Brown, C. (2015). Costs and benefits of a road diet conversion. *Case Studies in Transport Policy*, 3(4):449–458. (Cite Score 0.92, Impact Factor Not Yet Available)
4. **Gonzales, E.J.** (2015). Coordinated pricing for cars and transit in cities with hypercongestion. *Economics of Transportation*, 4(1–2):64–81. (Cite Score 1.57, Impact Factor Not Yet Available)
5. Deka, D., **Gonzales, E.J.** (2014). The Generators of Paratransit trips by persons with disability. *Transportation Research Part A*, 70:181–193. (Impact Factor 1.994)
6. *Yang, C., **Gonzales, E.J.** (2014). Modeling taxi trip demand by time of day in New York City. *Transportation Research Record*, 2429:110–120. (Impact Factor 0.544)
7. *Yang, C., *Morgul, E.F., **Gonzales, E.J.**, Ozbay, K. (2014). Comparison of mode cost by time of day for non-driving airport trips to and from New York City Pennsylvania Station. *Transportation Research Record*, 2449:34–44. (Impact Factor 0.544)
8. **Gonzales, E.J.**, Christofa, E. (2014). Bottleneck congestion with a constant and peak toll: San Francisco–Oakland Bay Bridge. *EURO Journal on Transportation and Logistics*, 3(3–4):267–288.
9. **Gonzales, E.J.**, Daganzo, C.F. (2013). The evening commute with cars and transit: Duality results and user equilibrium for the combined morning and evening peaks. *Transportation Research Part B*, 57:286–299. (Impact Factor 3.769)
10. **Gonzales, E.J.**, Daganzo, C.F. (2012). Morning commute with competing modes and distributed demand: User equilibrium, system optimum, and pricing. *Transportation Research Part B*, 46(10):1519–1534. (Impact Factor 3.769)
11. Daganzo, C.F., Gayah, V.V., **Gonzales, E.J.** (2012). The potential of parsimonious models for understanding large scale systems and answering big picture questions. *EURO Journal on Transportation and Logistics*, 1(1–2):47–65.
12. Daganzo, C.F., Gayah, V.V., **Gonzales, E.J.** (2011). Macroscopic relations of urban traffic variables: Bifurcations, multivaluedness, and instability. *Transportation Research Part B*, 45(1):278–288. (Impact Factor 3.769)

13. **Gonzales, E.J.**, Geroliminis, N., Cassidy, M.J., Daganzo, C.F. (2010). On the allocation of space to multiple transport modes. *Transportation Planning and Technology*, 33(8):643–656.

Peer-Reviewed Journal Publications Under Review

1. *Rahimi, M., *Amirgholy, M., **Gonzales, E.J.** System modeling of demand responsive transit services: Evaluating cost efficiency of policy implementations and taxi usage.
2. *Amirgholy, M., **Gonzales, E.J.** Efficient frontier of route choice for modeling the equilibrium under travel time variability with heterogeneous traveler preferences. *Economics of Transportation*.
3. *Shabihkhani, R., **Gonzales, E.J.** Macroscopic relationship between network-wide traffic emissions and fundamental properties of the network. *Transportmetrica Part B*.

Peer-Reviewed Book Chapter

1. *Yang, C., **Gonzales, E.J.** (2017). Modeling taxi demand and supply in New York City Using Large-Scale Taxi GPS Data. In V. Thakuriah, N. Tilahun, M. Zellner (Eds.), *Seeing Cities Through Big Data – Research, Methods and Applications in Urban Informatics*, Springer.

Peer-Reviewed Conference Proceedings

1. **Gonzales, E.J.** (2017). Evaluation of a pedestrian safety outreach campaign in New Jersey using surrogate safety measures. Paper Number 17-03647. *Transportation Research Board 96th Annual Meeting*, 8–12 January, Washington, D.C.
2. *Amirgholy, M., *Golshani, N., *Schneider, C., **Gonzales, E.J.** (2017). An advanced traveler navigation system adapted to route choice preferences of individual users. Paper Number 17-05826. *Transportation Research Board 96th Annual Meeting*, 8–12 January, Washington, D.C.
3. *Amirgholy, M., **Gonzales, E.J.** (2017). Efficient frontier of the trip schedules in morning commute problem: User equilibrium, system optimum, and dynamic pricing. Paper Number 17-05891. *Transportation Research Board 96th Annual Meeting*, 8–12 January, Washington, D.C.
4. *Amirgholy, M., **Gonzales, E.J.** (2016). Operation and management strategies for demand-responsive transit systems with time-dependent demand. Paper Number 16-4579. *Transportation Research Board 95th Annual Meeting*, 10–14 January, Washington, D.C.
5. *Amirgholy, M., **Gonzales, E.J.** (2016). Efficient frontier of route choices under travel time variability. Paper Number 16-5800. *Transportation Research Board 95th Annual Meeting*, 10–14 January, Washington, D.C.
6. *Amirgholy, M., **Gonzales, E.J.** (2016). An analytical solution to the morning commute problem for a single bottleneck with heterogeneous commuter preferences: User equilibrium, system optimum, and pricing. Paper Number 16-5834. *Transportation Research Board 95th Annual Meeting*, 10–14 January, Washington, D.C.
7. *Yang, C., **Gonzales, E.J.** (2016). Modeling the spatial variation of taxi trip demand and supply in New York City. Paper Number 16-5244. *Transportation Research Board 95th Annual Meeting*, 10–14 January, Washington, D.C.
8. *Yang, C., **Gonzales, E.J.** (2016). Modeling vacant yellow taxi customer search behavior in a holiday week in New York City. Paper Number 16-6850. *Transportation Research Board 95th Annual Meeting*, 10–14 January, Washington, D.C.
9. Noland, R.B., *Gao, D., **Gonzales, E.J.**, Brown, C. (2015). Costs and benefits of a road diet conversion. Paper Number 15-2346. *Transportation Research Board 94th Annual Meeting*, 11–15 January, Washington, D.C.
10. *Rahimi, M., **Gonzales, E.J.** (2015). Systematic evaluation of zoning strategies for demand responsive transit. Paper Number 15-4023. *Transportation Research Board 94th Annual Meeting*, 11–15 January, Washington, D.C.
11. Deka, D., **Gonzales, E.J.** (2014). The generators of paratransit trips by persons with disability.

- Paper Number 14-2190. *Transportation Research Board 93rd Annual Meeting*, 12–16 January, Washington, D.C.
12. *Rahimi, M., *Amirgholy, M., **Gonzales, E.J.** (2014). Continuum approximation modeling of ADA paratransit operations in New Jersey. Paper Number 14-4864. *Transportation Research Board 93rd Annual Meeting*, 12–16 January, Washington, D.C.
 13. *Yang, C., **Gonzales, E.J.** (2014). Modeling taxi trip demand by time of day in New York City. Paper Number 14-4217. *Transportation Research Board 93rd Annual Meeting*, 12–16 January, Washington, D.C.
 14. *Yang, C., *Morgul, E.F., **Gonzales, E.J.**, Ozbay, K. (2014). Comparison of mode cost by time of day for non-driving airport trips to and from New York City Penn Station. Paper Number 14-4399. *Transportation Research Board 93rd Annual Meeting*, 12–16 January, Washington, D.C.
 15. **Gonzales, E.J.**, Daganzo, C.F. (2013). The evening commute with cars and transit: Duality results and user equilibrium for the combined morning and evening peaks. *20th International Symposium on Transportation and Traffic Theory*, 17–19 July, Noordwijk, The Netherlands.
 16. *Shabihkhani, R., **Gonzales, E.J.** (2013). Analytical model for vehicle emissions at a signalized intersection: Integrating traffic and microscopic emissions models. Paper Number 13-5208. *Transportation Research Board 92nd Annual Meeting*, 13–17 January, Washington, D.C.
 17. **Gonzales, E.J.** (2012). Efficiency and equity of pricing strategies for cars and transit. Paper Number 12-4465. *Transportation Research Board 91st Annual Meeting*, 22–26 January, Washington, D.C.
 18. **Gonzales, E.J.**, Chavis, C., Li, Y., Daganzo, C.F. (2011). Multimodal transport in Nairobi, Kenya: Insights and recommendations with a macroscopic evidence-based model. Paper Number 11-3045. *Transportation Research Board 90th Annual Meeting*, 23–27 January, Washington, D.C.
 19. **Gonzales, E.J.**, Geroliminis, N., Cassidy, M.J., Daganzo, C.F. (2011). On the allocation of space to multiple transport modes. Paper Number 11-3062. *Transportation Research Board 90th Annual Meeting*, 23–27 January, Washington, D.C.
 20. **Gonzales, E.J.**, Miller, L.M., Cohn, A. (2010). A logistics model for the production and distribution of sugarcane ethanol in Brazil. Paper ID 02937. *Selected Proceedings of the 12th World Conference on Transportation Research Society*, 11–15 July, Lisbon, Portugal.

Other Conference Papers

1. *Louis, M.P., **Gonzales, E.J.** (2017). At what level of demand and value of time is a dedicated bus lane warranted? A sustainable analytical approach. *Young Researchers Seminar 2017*, 16–18 May, Berlin, Germany.
2. *Amirgholy, M., Gao, H.O., **Gonzales, E.J.** (2017). Using tradable credits for dynamic pricing of a bottleneck with heterogeneous user preferences and value of time. *56th Annual Transportation Research Forum*, 20–21 April, Chicago, Illinois.
3. *Keegan, A., **Gonzales, E.J.** (2016). Evaluating capacity and delay for signalized arterials with freight deliveries. *International Symposium on Enhancing Highway Performance (ISEHP)*, 14–16 June, Berlin, Germany.
4. **Gonzales, E.J.**, Sestito, C. (2015). Evaluating the effectiveness of a pedestrian safety campaign with surrogate safety measures. *Road Safety & Simulation International Conference*, 6–8 October, Orlando, Florida.
5. *Amirgholy, M., **Gonzales, E.J.** (2015). Efficient frontier of route choice for modeling the equilibrium under travel time variability with heterogeneous preferences. *56th Annual Transportation Research Forum*, 12–14 March, Atlanta, Georgia.
6. **Gonzales, E.J.**, *Shabihkhani, R. (2015). Modeling traffic emissions in networks with macroscopic traffic models. *Advancing Metropolitan Modeling and Analysis of Urban Sustainability Policies*,

- 16–17 January, Riverside, California.
7. *Shabihkhani, R., **Gonzales, E.J.** (2014). Macroscopic relationship between network-wide traffic emissions and fundamental properties of the network. *Symposium Celebrating 50 Years of Traffic Flow Theory*, 11–13 August, Portland, Oregon.
 8. *Yang, C., **Gonzales, E.J.** (2014). Modeling taxi demand and supply in New York City using large-scale taxi GPS data. *Workshops on Big Data and Urban Informatics*, 11–12 August, Chicago, Illinois.
 9. **Gonzales, E.J.**, Christofa, E. (2012). Bottleneck congestion with a constant and peak toll: San Francisco–Oakland Bay Bridge. *LATSIS 1st European Symposium on Quantitative Methods in Transportation Systems*, 4–7 September, Lausanne, Switzerland.
 10. **Gonzales, E.J.** (2012). Allocating space to cars and transit: A systematic comparison of city structures. *Kuhmo Nectar Conference on Transportation Economics*, 21–22 June, Berlin, Germany.
 11. Daganzo, C.F., **Gonzales, E.J.**, Gayah, V.V. (2011). Traffic congestion in networks, and alleviating it with public transportation and pricing. *International Workshop on Urban Transport*, 27 October, Beijing, China.
 12. **Gonzales, E.J.**, Daganzo, C.F. (2011). Morning commute with Competing Modes and Distributed Demand: User Equilibrium, System Optimum, and Pricing. *Kuhmo Nectar Conference on Transportation Economics*, 27 June – 1 July, Stockholm, Sweden. (**Best Paper by Junior Author**)

Other Publications and Reports

1. **Gonzales, E.J.** (2016). North Jersey Transportation Planning Authority Observational Pedestrian Safety Study: Phase 2. Final Report. North Jersey Transportation Planning Authority.
2. Ozbay, K., Nassif, H., Liu, R., Ozturk, O., Bartin, B., Yang, H., Demiroglu, S., **Gonzales, E.J.** (2015). MyTix: NJ TRANSIT's Mobile Ticketing Application. Final Report FHWA-NJ-2015-003. Rutgers University ICS Center, Piscataway, New Jersey.
3. Sestito, C., **Gonzales, E.J.** (2014). Observational Evaluation of November 2013 Street Smart NJ Pedestrian Safety Campaign. Final Report. Rutgers' Center for Advanced Infrastructure and Transportation.
4. **Gonzales, E.J.**, *Yang, C., *Morgul, E.F., Ozbay, K. (2014). Modeling Taxis Demand with GPS Data from Taxis and Transit. Technical Report CA-MNTRC-14-1141. MNTRC Report 12-16. Mineta National Transit Research Consortium, San José, California.
5. Noland, R.B., *Gao, D., **Gonzales, E.J.**, Brown, C., Patterson, G. (2014). Costs and Benefits of a Road Diet for Livingston Avenue in New Brunswick, New Jersey. Project Report: Rutgers University-Community Grant. Voorhees Transportation Center, New Brunswick, New Jersey.
6. Daganzo, C.F., **Gonzales, E.J.**, Gayah, V.V. (2011). Traffic congestion in networks, and alleviating it with public transportation and pricing. Working Paper UCB-ITS-VWP-2011-7. Institute of Transportation Studies, Berkeley, California.
7. **Gonzales, E.J.**, Daganzo, C.F. (2011). Morning commute with competing modes and distributed demand: User-equilibrium, system optimum, and pricing. Working Paper UCB-ITS-VWP-2011-2. Institute of Transportation Studies, Berkeley, California.
8. **Gonzales, E.J.** (2011). Allocation of space and the costs of multimodal transport in cities. Ph.D. Thesis. University of California, Berkeley.
9. **Gonzales, E.J.**, Pilachowski, J., Gayah, V.V., Cassidy, M.J., Daganzo, C.F. (2010). Public transportation systems: Mini-projects and homework exercises. Course Notes UCB-ITS-CN-2010-2. Institute of Transportation Studies, Berkeley, California.
10. Daganzo, C.F., Gayah, V.V., **Gonzales, E.J.** (2010). Macroscopic relations of urban traffic variables: An analysis of instability. Working Paper UCB-ITS-VWP-2010-4. Institute of Trans-

- portation Studies, Berkeley, California.
11. **Gonzales, E.J.**, Chavis, C., Li, Y., Daganzo, C.F. (2009). Multimodal Transport Modeling for Nairobi, Kenya: Insights and Recommendations with an Evidence-Based Model. Working Paper UCB-ITS-VWP-2009-5. Institute of Transportation Studies, Berkeley, California.
 12. **Gonzales, E.J.**, Geroliminis, N., Cassidy, M.J., Daganzo, C.F. (2008). Allocating City Space to Multiple Transportation Modes: A New Modeling Approach Consistent with the Physics of Transport. Working Paper UCB-ITS-VWP-2008-1. Institute of Transportation Studies, Berkeley, California.
 13. Daganzo, C.F., Li, Y., **Gonzales, E.J.**, Geroliminis, N. (2007). City-Scale Transport Modeling: An Approach for Nairobi, Kenya. Working Paper UCB-ITS-VWP-2007-4. Institute of Transportation Studies, Berkeley, California.

PRESENTATIONS

* indicates student co-author

Conference and Workshop Presentations

1. Christofa, E., **Gonzales, E.J.** (2016). Reliability of transit vehicle arrival prediction using connected vehicle data. *Symposium of Management of Future Motorway and Urban Traffic Systems*, 2–3 June, Chania, Greece.
2. *Keegan, A., **Gonzales, E.J.** (2016). Evaluating the capacity and delay of signalized arterials with freight deliveries. *Institute of Transportation Engineers Northeastern District Annual Meeting*, 11–13 May, Portsmouth, New Hampshire. (**Best Poster Award – 3rd Place**)
3. *Louis, M.P., **Gonzales, E.J.** (2016). Accounting for sustainability in the design of a local bus route in a corridor. *12th Annual New England Institute of Transportation Engineers Student Research Symposium*, 3 March, Boston, Massachusetts.
4. *Yang, C., **Gonzales, E.J.** (2016). Preparing multiple data sets for taxi demand modeling in New York City. Special Session: Uses of Multiple Data Sets for Transportation Planning. *Transportation Research Board 95th Annual Meeting*, 10–14 January, Washington, D.C.
5. *Rahimi, M., **Gonzales, E.J.** (2015). Continuum approximation modeling of freight distribution systems. *INFORMS Annual Meeting*, 1–4 November, Philadelphia, Pennsylvania.
6. *Rahimi, M., **Gonzales, E.J.** (2015). Evaluating zoning strategies for demand responsive transit systems. *INFORMS Annual Meeting*, 1–4 November, Philadelphia, Pennsylvania.
7. *Amirgholy, M., **Gonzales, E.J.** (2015). Demand responsive transit: System optimization and dynamic pricing. *Institute of Transportation Engineers Northeastern District Annual Meeting*, 13–15 May, Albany, New York. (**Best Presentation Award**)
8. *Keegan, A., **Gonzales, E.J.** (2015). Evaluating the capacity of signalized arterials with freight deliveries using simulation. *Institute of Transportation Engineers Northeastern District Annual Meeting*, 13–15 May, Albany, New York.
9. **Gonzales, E.J.**, *Rahimi, M., Christofa, E., Knodler, M., Reissman, R., Gazillo, J. (2015). Uses of data for transportation system analysis. *Data Science Symposium*, 9 April, Amherst, Massachusetts.
10. *Amirgholy, M., **Gonzales, E.J.** (2015). Bi-objective traffic assignment using the efficient frontier of route choice: Accounting for travel time variability and heterogeneous traveler preferences. *UMass Institute of Transportation Engineers Tech Day*, 26 March, Amherst, Massachusetts. (**Best Poster Award – 1st Place**)
11. *Amirgholy, M., **Gonzales, E.J.** (2015). Optimizing operations and pricing of demand responsive transit systems for time-dependent demand. *UMass Institute of Transportation Engineers Tech Day*, 26 March, Amherst, Massachusetts.
12. *Keegan, A., **Gonzales, E.J.** (2015). Traffic impacts of urban freight deliveries on a signal-

- ized street. *UMass Institute of Transportation Engineers Tech Day*, 26 March, Amherst, Massachusetts.
13. *Rahimi, M., *Amirgholy, M., **Gonzales, E.J.** (2015). Geographic alignment of service regions for paratransit in New Jersey. *UMass Institute of Transportation Engineers Tech Day*, 26 March, Amherst, Massachusetts.
 14. *Shabihkhani, R., **Gonzales, E.J.** (2014). Estimating network-wide traffic emissions with a mesoscopic integrated traffic emission model (ITEM). *Institute of Transportation Engineers Northeastern District Annual Meeting*, 14–16 May, Long Branch, New Jersey.
 15. *Amirgholy, M., **Gonzales, E.J.** (2014). Route choice modeling under travel time variability. *UMass Institute of Transportation Engineers Tech Day*, 27 March, Amherst, Massachusetts.
 16. *Amirgholy, M., *Rahimi, M., **Gonzales, E.J.** (2014). Dynamic optimal fare for ADA paratransit service. *UMass Institute of Transportation Engineers Tech Day*, 27 March, Amherst, Massachusetts.
 17. *Rahimi, M., *Amirgholy, M., **Gonzales, E.J.** (2014). ADA paratransit analytical modeling and evaluation: A case study of New Jersey. *UMass Institute of Transportation Engineers Tech Day*, 27 March, Amherst, Massachusetts.
 18. **Gonzales, E.J.** (2013). Modeling ADA Paratransit Operations in New Jersey. *15th Annual New Jersey Department of Transportation Research Showcase*, 23 October, West Windsor, New Jersey.
 19. *Rahimi, M., **Gonzales, E.J.**, *Amirgholy, M. (2013). Geographic alignment of service regions for paratransit in New Jersey. *INFORMS Annual Meeting 2013*, 6–9 October, Minneapolis, Minnesota.
 20. **Gonzales, E.J.** (2013). Pricing of cars and public transit with capacity constraints. *Kuhmo Nectar Conference on Transportation Economics*, 10–12 July, Evanston, Illinois.
 21. *Yang, C., **Gonzales, E.J.** (2013). Analysis of taxi demand versus subway accessibility in New York City. *Institute of Transportation Engineers Northeastern District Annual Meeting*, 22–24 May, Northampton, Massachusetts. (**Best Poster Award – 1st Place**)
 22. **Gonzales, E.J.** (2013). Development of a tool for conducting systemic safety analysis. Session 60: Risk Based Safety – A Systemic Analysis. *New Jersey Transaction*, 17–19 April, Atlantic City, New Jersey.
 23. **Gonzales, E.J.** (2011). Allocation of space for multimodal transport in cities. *Institute of Transportation Studies, Friday Seminar Series*, 1 April, Berkeley, California.
 24. **Gonzales, E.J.** Morning commute with multiple modes: Time-dependent user equilibrium, system optimum, and pricing strategies. *17th UCTC Student Conference*, 24–25 February, Berkeley, California.
 25. **Gonzales, E.J.** Allocation of space to multimodal transport in cities. Workshop for Doctoral Student Research in Transportation Operations and Traffic Control. *Transportation Research Board 90th Annual Meeting*, 23–27 January, Washington, D.C.
 26. **Gonzales, E.J.** Allocation of space and the costs of multimodal transport in cities. *16th UCTC Student Conference*, 1–2 April, Irvine, California. (**Best Poster Award – 1st Place**)
 27. **Gonzales, E.J.**, Chavis, C., Li, Y., Daganzo, C.F. (2009). Multimodal transport modeling for Nairobi: Insights and recommendations with an evidence-based model. *August Transportation Workshop*, Nairobi, Kenya.
 28. Daganzo, C.F., Cassidy, M.J., Geroliminis, N., **Gonzales, E.J.** (2007). Allocating city space to multiple transport modes. *11th World Conference on Transportation Research*, 25–28 June, Berkeley, California.
 29. Daganzo, C.F., Li, Y., Geroliminis, N., **Gonzales, E.J.** (2007). How urban mobility can be assessed and improved. *June Transportation Workshop*, Nairobi, Kenya.

30. Daganzo, C.F., Cassidy, M.J., Geroliminis, N., **Gonzales, E.J.** (2007). Allocating city space to multiple transport modes: A new modelling approach consistent with the physics of urban transport. *International Workshop on Urban Transport: Today and Tomorrow*, 22–24 March, Agra, India.

Invited Talks

1. **Gonzales, E.J.** (2016). Accounting for vehicular emissions in network models of traffic and transit. Institute of Transportation Studies Seminar Series, University of California, Berkeley. 7 October, Berkeley, California.
2. **Gonzales, E.J.** (2016). Models of taxis and paratransit: Identifying ways to serve users efficiently and equitably. Department of Civil and Environmental Engineering, University of Cyprus. 6 June, Nicosia, Cyprus.
3. **Gonzales, E.J.** (2016). Modeling Demand-Responsive Transportation from Taxis to Paratransit. Department of Transportation Planning and Engineering, School of Civil Engineering, National Technical University of Athens. 30 May, Athens, Greece.
4. **Gonzales, E.J.** (2014). Coordinating cars and transit to relieve congestion in cities. Zube Lecture, Department of Landscape Architecture and Regional Planning, University of Massachusetts. 2 October, Amherst, Massachusetts.
5. **Gonzales, E.J.** (2014). Coordinating traffic and transit systems: Linking transportation science and economics. UMass INFORMS, University of Massachusetts. 28 March, Amherst, Massachusetts.
6. **Gonzales, E.J.** (2013). Traffic and transit in cities. NexGen Transportation Workshop Series (outreach to under-represented students), Rutgers University. 30 July, Piscataway, New Jersey.
7. **Gonzales, E.J.** (2013). Vickrey's bottleneck model: User equilibrium and system optimum. Pennsylvania State University. 4 April, State College, Pennsylvania.
8. **Gonzales, E.J.** (2013). Demand Responsive Transportation: Paratransit in New Jersey, Taxis in New York. UMTC Transportation Seminar Series. 28 March, Amherst, Massachusetts.
9. **Gonzales, E.J.** (2013). Managing Multimodal Traffic in Cities: Linking Transportation Science and Economics. École Nationale des Travaux Publics de l'État (ENTPE). 6 March, Lyon, France.
10. **Gonzales, E.J.** (2013). Understanding and Coordinating Multimodal Transportation Systems. IFSTTAR, École Nationale des Travaux Publics de l'État (ENTPE). 7 March, Lyon, France.
11. **Gonzales, E.J.** (2013). Transportation engineering: Careers, research, and opportunities. ASCE Rutgers Student Chapter Meeting. 12 February, Piscataway, New Jersey.
12. **Gonzales, E.J.**, Kaplan, A. (2013). Systemic approach to roadway safety management in Salem County, New Jersey. Workshop 113. *Transportation Research Board 92nd Annual Meeting*, 13–17 January, Washington, D.C.
13. **Gonzales, E.J.** (2012). Coordinated transit fares and car pricing at congested bottleneck. ITS-NY Nineteenth Annual Meeting & Technology Exhibition. 7–8 June, Saratoga Springs, New York.
14. **Gonzales, E.J.** (2012). Understanding and alleviating traffic congestion in networks with cars and transit. SOE Control/Robotics Colloquium Series, Rutgers University. 3 February, Piscataway, New Jersey.
15. **Gonzales, E.J.** (2011). Understanding and alleviating traffic congestion in networks with public transit and pricing. Intelligent Cyberphysical Systems, Rutgers University. 25 October, Piscataway, New Jersey.
16. **Gonzales, E.J.** (2011). Traffic congestion in cities: Macroscopic models and managing multiple modes. Rutgers Intelligent Transportation Systems Lab, Rutgers University. 9 May, Piscataway, New Jersey.

17. **Gonzales, E.J.** (2011). Traffic flow principles for transportation planners. Urban and Regional Planning Department, San Jose State University. 15 March, San Jose, California.
18. **Gonzales, E.J.** (2011). To grad school or not to grad school? Civil and Environmental Engineering Class, CE192: The Art and Science of Civil and Environmental Engineering. 2 February, Berkeley, California.
19. **Gonzales, E.J.** (2008). Least possible costs of providing accessibility in cities. City and Regional Planning Class, CP298: Cities and Climate Change. 17 March, Berkeley, California.

TEACHING EXPERIENCE

University of Massachusetts, Amherst

- FALL 2016 **Transportation (CEE 310)**
Course Instructor
 Undergraduate course, required for CEE curriculum, introduces students to fundamentals of transportation demand modeling, traffic engineering and control, and geometric design.
- SPRING 2014 **Public Transportation Systems (CEE 410/510)**
 FALL 2015 *Course Instructor*
 Combined undergrad/grad course covers planning, operation, and evaluation of public transportation systems, including corridors, networks, fixed-route service, demand-responsive transit, and coordination of operation with other transit services and traffic.
- SPRING 2015 **Transportation Systems Analysis (CEE 509)**
Course Instructor
 Core graduate course covering travel demand modeling, network equilibrium, and principles of transportation economics.
- SPRING 2017 **Freight and Logistics Systems (CEE 697L)**
 FALL 2014 *Course Instructor*
 Graduate course covers planning and operations of freight and logistics systems from terminals to networks, including methods and algorithms for dispatch, routing, sorting, and trans-shipping; modes considered include truck, rail, and maritime.

Rutgers University

- FALL 2011–2013 **Introduction to Transportation Planning (180:430)**
Course Instructor
 Undergraduate course provides students with quantitative tools for planning, managing, and analyzing transportation systems.
- SPRING 2013 **Public Transportation Systems (180:528)**
Course Instructor
 Graduate course covers planning, operation, and evaluation of public transportation systems, including corridors, networks, fixed-route service, demand-responsive transit, and coordination of operation with other transit services and traffic.
- SPRING 2012 **Traffic Operations (180:533)**
Course Instructor
 Graduate course covers fundamentals of traffic flow theory and queuing, addressing traffic on freeways, signalized arterials, and urban networks.
- FALL 2013 **Freight and Logistics Systems (180:538)**
Course Instructor
 Graduate course on freight and logistics systems from terminals to networks.

University of California, Berkeley

- 2010–2013 **Traffic Flow Principles for Practitioners (TE 27)**
Course Instructor, ITS Berkeley Technology Transfer Program
 Prepared lecture and examples; Taught 1-day course on tools, theory, and applications
- SPRING 2009, 2010 **Transportation Systems Engineering (CE 155)**
Graduate Student Instructor, Prof. Cassidy, Daganzo
 Taught lab section; Revised and developed assignments; Held office hours
 (2010 Outstanding GSI Award, Dept. of Civil and Environmental Engineering)
- SPRING 2008 **Public Transportation Systems (CE 259)**
Graduate Student Instructor, Prof. Daganzo
 Developed assignments, lecture notes; Taught discussion; Held office hours
- FALL 2009 **Analysis of Transportation Data (CE 262)**
Reader, Prof. Hansen
 Graded assignments and exams

Carnegie Mellon University

- 2003–2005 **Introduction to Civil and Environmental Engineering (12–100)**
Teaching Assistant, Prof. Oppenheim (2003, 2005), Prof. Dzombak (2004)
 Graded assignments; Supervised laboratory activities; Held office hours

ADVISING EXPERIENCE

Ph.D. Students Advised

- 2014–PRESENT Marie P. Louis
 Topic: *Modeling Sustainable Corridors for Cars and Transit*
 WTS Boston Chapter Helene M. Overly Memorial/Ann Hershfang Scholarship, 2017
 WTS Penn-Central Chapter Graduate Leadership Scholarship, 2017
 Selig Award, UMass Amherst Dept. CEE, 2016
 NEAGEP/IMSD Fellowship, 2015, 2016
 International Road Federation (IRF) Fellow, 2015
- 2013–PRESENT Mahour Rahimi
 Topic: *Modeling Operations and Costs of Demand Responsive Transit Systems*
 WTS Rhode Island Graduate Scholarship, 2016
 WTS Boston Chapter Claire Barrett Memorial Scholarship, 2014
 WTS Philadelphia Chapter Scholarship, 2013
- 2013–2016 Mahyar Amirgholy
 Topic: *Modeling Choice Problems with Heterogeneous User Preferences in the Transportation Network*
 Milton Pikarsky Award for Outstanding Dissertation in Science and Technology, 2017
 International Road Federation (IRF) Fellow, 2015
- 2012–2015 Ci Yang (Rutgers University degree)
 Topic: *Data-driven modeling of taxi trip demand and supply in New York City*
 ITS New Jersey Outstanding Student, 2014
 WTS Greater New York Chapter Leonard Braun Memorial Grad. Scholarship, 2013
- 2012–2015 Rooholamin Shabihkhani (Rutgers University degree)
 Topic: *Estimation of urban scale network-wide emissions based on fundamental properties of the network*
 Eisenhower Graduate Fellowship, 2013

M.S. Students

- 2014–PRESENT Aaron Keegan
 2012–2013 Mahyar Amirgholy
On modern financial theory and transportation network
 2012–2013 Mahour Rahimi
Modeling ADA paratransit geographical alignment of regions in New Jersey
 2012–2013 Shruti Shrivastava
Level of service analysis of two major intersections in New Brunswick, New Jersey
 2011 Yengchi Tsai
Effect of congestion pricing policy: Case study of San Francisco–Oakland Bay Bridge

Ph.D. Student Committee Member

- IN PROGRESS Shivani Shukla (Ph.D.)
 IN PROGRESS Farnoush Khalighi (Ph.D.)
 2016 Yue Tang (Ph.D.)
 2016 Cole Fitzpatrick (Ph.D.)
 2015 Enzo Jia (Ph.D.)
 2014 Sami Demiroglu (Ph.D.)
 2014 Sandeep Mudigonda (Ph.D.)
 2014 Ozgur Ozturk (Ph.D.)
 2013 Jian Li (Ph.D.)
 2013 Jessica Sagona (Ph.D.)
 2011 Hong Yang (Ph.D.)
 2011 Eren Erman Ozguven (Ph.D.)

M.S. Committee Member

- 2015 Curt Harrington (M.S.)
 2012 Saurav Barua (M.S.)
 2012 Abhinay Kunchakarra (M.S.)
 2012 Judith Stringer (M.S.)
 2012 Touraj Tayebi (M.S.)
 2011 Hong Yang (Ph.D.)
 2011 Eren Erman Ozguven (Ph.D.)

Undergraduate Students

- 2015 Jin Rui Yap (Praxis Scholar)
 2013 Timothy Gaughan (Slade Scholar)
 2013 Michael Hourani (Special Project)
 2013 Scott Malinoski (Special Project)
 2013 Jose Palao (Special Project)
 2012 Jennifer Cato (Special Project)
 2012 Navni Mehta (Co-op Internship)
 2011 Jeff DuVilla (Co-op Internship)

SERVICE

Professional Service

- 2016–PRESENT Member of TRB AP060 Committee on Paratransit
 2012–PRESENT Member of TRB AHB45 Committee on Traffic Flow Theory and Characteristics

University Service

2015–PRESENT Faculty Search Committee: Transportation Engineering Program (UMass)
 2015–PRESENT CEE Department History and Heritage Committee (UMass)
 2014–2015 Faculty Search Committee: Transportation Engineering Program (UMass)
 2013 School of Engineering Dean's Implementation Committee for Strategic Planning (Rutgers)
 2012–2013 CEE Department Faculty Meeting Secretary (Rutgers)
 2012–2013 Chi Epsilon Faculty Advisor (Rutgers)
 2012–2013 School of Engineering Planning Committee (Rutgers)
 2013 Marshall in University Commencement Ceremony (Rutgers)
 2012 Library Committee (Rutgers)
 2011–2012 Interim ASCE Faculty Advisor (Rutgers)

Review Work

EURO Journal on Transportation and Logistics
 European Symposium on Quantitative Methods in Transportation Systems
 International IEEE Annual Conference on Intelligent Transportation Systems
 International Journal of Transportation Economics (1 paper in the last 12 months)
 Journal of Advanced Transportation (1 paper in the last 12 months)
 ASCE Journal of Transportation Engineering (1 paper in the last 12 months)
 Transportation Research Board (7 papers in the last 12 months)
 ABE20 Transportation Economics
 ABE50 Transportation Demand Management
 ADC20 Transportation and Air Quality
 AHB45 Traffic Flow Theory and Characteristics
 AP060 Paratransit
 Transportation Research Part A: Policy and Practice
 Transportation Research Part B: Methodology (5 papers in the last 12 months)
 Transportation Research Part C: Emerging Technologies (1 paper in the last 12 months)
 World Conference on Transportation Research

QUALIFICATIONS AND MEMBERSHIPS

Engineer in Training (EIT)
 International Transportation Economics Association
 Institute of Transportation Engineers
 American Society of Civil Engineers
 Transportation Research Board, Affiliate
 Tau Beta Pi, Engineering Honor Society
 Chi Epsilon, Civil Engineering Honor Society
 Mortar Board, Community Service and Honor Society
 Lambda Sigma, Honor Society

SKILLS

Computer: MS Office (Word, Powerpoint, Excel with VBA), L^AT_EX, Adobe Illustrator, Matlab, Mathcad, AutoCAD, Microstation, ArcGIS, CORSIM, SYNCHRO
 Language: Native English; Basic Greek, Spanish, Swedish