
EDUCATION	<p>Ph.D., Civil Engineering University of Illinois at Urbana Champaign June, 2015</p> <ul style="list-style-type: none"> • Thesis Title: <i>Effectiveness of Adaptive Flight Planning in the Occurrence of Total Loss of Thrust due to Bird Strike</i> <p>M.S., Statistics University of Illinois at Urbana Champaign May, 2011</p> <p>M.S., Civil Engineering Boğaziçi University June, 2006</p> <ul style="list-style-type: none"> • Thesis Title: <i>Arterial Signal Coordination and Optimization – A Case Study in Istanbul</i> <p>B.S., Civil Engineering Boğaziçi University (ABET-accredited program) July, 2004</p> <ul style="list-style-type: none"> • High Honors Degree
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EXTRAMURAL FUNDED RESEARCH	<p>Doctoral Thesis Research 2011 - 2015</p> <ul style="list-style-type: none"> • Industrial Sponsors: <i>European Pilot Selection and Training (Utrecht, Netherlands)</i> <i>International Flight Training Center, Aero (Istanbul, Turkey)</i> • Published in the topic of statistical modelling of the growing threat of bird strikes for commercial jets and their effects on contemporary twin-engine aircraft with reduced engine redundancy • Designed an adaptive flight planner for powerless emergency landings due to the increasing bird strike hazard <p>Statistical Analysis of Flagger Effects in Work Zone Safety 2010 - 2012</p> <ul style="list-style-type: none"> • Funded by: <i>Illinois Department of Transportation (IDOT)</i> • Conducted field data collection and statistical analysis of the effects of flaggers on work zone safety and the likelihood of rear-end collisions <p>WorkZoneQ 2010 - 2012</p> <ul style="list-style-type: none"> • Funded by: <i>Illinois Department of Transportation (IDOT)</i> • Programmed a software application to empirically estimate vehicle queue length, vehicle delays and users' costs in Interstate work zones one real-time basis <p>Empirical Modelling of Queue and Users' Costs in Interstate Work Zones 2009 - 2010</p> <ul style="list-style-type: none"> • Funded by: <i>Illinois Department of Transportation (IDOT)</i> • Developed an empirical methodology for accurate estimation of vehicle queue length, vehicle delays and users' costs in Interstate work zones <p>Statistical Analysis of Traffic Flow Characteristics in Intelligent Work Zones 2008 – 2009</p> <ul style="list-style-type: none"> • Funded by: <i>U.S. Department of Transportation (USDOT), Nexttrans Center</i> • Statistical analysis of the effects of Intelligent Transportation Systems on the traffic flow characteristics and safety of Interstate work zones <p>Empirical Estimation of Work Zone Capacity 2008 - 2010</p> <ul style="list-style-type: none"> • Funded by: <i>U.S. Department of Transportation (USDOT), Nexttrans Center</i> • Proposed alternative empirical methods for estimating work zone capacity and computing queue length and delay in Interstate work zones
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RESEARCH AWARDS	Dissertation Completion Grant	2014
	<ul style="list-style-type: none"> Granted by: <i>Department of Civil Engineering at the University of Illinois at Urbana Champaign</i> \$6,000 grant awarded for dissertation research 	
	Daniel B. Fambro Research Paper Award	2014
	<ul style="list-style-type: none"> Granted by: <i>Institute of Transportation Engineers, Midwestern Section</i> \$600 awarded to the best graduate research paper in the 11-State Midwest Area 	
	Dissertation Travel Grant	2014
	<ul style="list-style-type: none"> Granted by: <i>Graduate College at the University of Illinois at Urbana Champaign</i> \$5,000 awarded to 12 Ph.D. students with outstanding thesis work in the Graduate College 	
	Best Research Paper Award	2014
<ul style="list-style-type: none"> Granted by: <i>Institute of Transportation Engineers, Illinois Section</i> \$1,000 awarded to the best graduate research paper in the state of Illinois 		
Medearis Fellowship	2014	
<ul style="list-style-type: none"> Granted by: <i>Department of Civil Engineering at the University of Illinois at Urbana Champaign</i> \$7,000 awarded to one first-year grad student in Civil Engineering 		
Best M.S. Thesis in Transportation	2014	
<ul style="list-style-type: none"> Granted by: <i>Turkish Ministry of Transportation</i> \$1,500 awarded to the best M.S. Thesis in Transportation in the country 		
TÜBİTAK Fellowship	2014	
<ul style="list-style-type: none"> Granted by: <i>The Scientific and Technologic Research Council of Turkey</i> \$3,000 awarded to outstanding M.S. students in the country 		
TEACHING AWARDS	Civil and Environmental Engineering Alumni Award for Teaching Excellence	2014
	<ul style="list-style-type: none"> Granted by: <i>Department of Civil Engineering at the University of Illinois at Urbana Champaign</i> \$10,000 monetary award granted to one outstanding Ph.D. student in Civil Engineering 	
	“OUTSTANDING” Rating in the List of Teachers Ranked as Excellent by Students	Fall 2012 through Spring 2015
<ul style="list-style-type: none"> Granted by: <i>Center for Innovation in Learning and Teaching</i> Rated as “OUTSTANDING” <u>seven</u> times in a row based on official course evaluations 		
Deanery Special Award for Teaching Excellence	2006	
<ul style="list-style-type: none"> Granted by: <i>Faculty of Engineering at Boğaziçi University</i> Awarded to one outstanding teaching assistant in the Faculty of Engineering 		
EXTRA- CURRICULAR AWARDS	First Place Award, “Illinois International” Photo Contest	2014
	<ul style="list-style-type: none"> Awarded by: <i>Study Abroad Office at the University of Illinois, Urbana Champaign</i> 	
	First Place Award, “European Citizens” Photo Contest	2014
<ul style="list-style-type: none"> Awarded by: <i>European Union Center at the University of Illinois, Urbana Champaign</i> 		
Second Place Award, Collegiate Traffic Bowl Competition	2009 & 2010	
<ul style="list-style-type: none"> Awarded by: <i>Institute of Transportation Engineers, Midwestern Section</i> 		

TEACHING EXPERIENCE	Syracuse University	
	<ul style="list-style-type: none"> • Introductory Statistics for Management (MAS 261) 	Fall 2015
	University of Illinois at Urbana Champaign	
	<ul style="list-style-type: none"> • Asphalt Materials (CEE 405) 	Fall 2014
	<ul style="list-style-type: none"> • Applied Statistical Methods (ABE 440) 	Fall 2012 - Spring 2015
	<ul style="list-style-type: none"> • Traffic Capacity Analysis (CEE 416) 	Fall 2011
	<ul style="list-style-type: none"> • Geometric Design of Roads (CEE 415) 	Fall 2008
	Boğaziçi University (ABET-accredited program)	
	<ul style="list-style-type: none"> • Transportation Systems Engineering (CE 461) 	Fall 2004 - Summer 2006

PROFESSIONAL DEVELOPMENT IN TEACHING	Center for Innovation in Learning and Teaching (University of Illinois at Urbana Champaign)	
	Completed Teaching Certificates:	
	<ul style="list-style-type: none"> • <i>Technology-Enhanced Teaching</i> 	2014
	<ul style="list-style-type: none"> • <i>Teaching Scholar</i> 	2014
	<ul style="list-style-type: none"> • <i>Graduate Teacher</i> 	2013
	<ul style="list-style-type: none"> • <i>Foundations in Teaching</i> 	2012
	Completed 34 hours of workshops on effective teaching strategies	2011 - 2014

SERVICE	Champaign County Humane Society	
	Voluntary dog-walker for shelter animals	2014 - Present
	University of Illinois at Urbana Champaign	
	Treasurer at the Cosmopolitan Club	2011 - 2013
	Officer at the Institute of Transportation Engineers (ITE) Student Chapter	2010 - 2011
	President of the Institute of Transportation Engineers (ITE) Student Chapter	2009 - 2010
	Vice President of the Turkish Student Association	2009 - 2010
	President of the Turkish Student Association	2008 - 2009
	Boğaziçi University	
	Officer at the Real Adventure Playing Club	2003 - 2006
	AutoCAD Lecturer at the Construction Club	2003 - 2004
	Athlete at the Tae Kwon Do Team	2000 - 2003

REFEREED
JOURNAL
PAPERS

- [1] **Avrenli, K. A.** and B. J. Dempsey. (2015). Is “Green Dot” Always the Optimum Engines-out Glide Speed on the Airbus A320? *Journal of Aviation/Aerospace Education and Research*, vol. 24, 3, 33–63.
- [2] **Avrenli, K. A.**, and B. J. Dempsey. (2014). Statistical Analysis of Aircraft-Bird Strikes Resulting in Engine Failure. *Journal of the Transportation Research Board*, No. 2449, 14–23.
- [3] **Avrenli, K. A.**, R. Benekohal, and H. Ramezani. (2013). Flagger Effects in Reducing the Likelihood of Rear-End Collisions for in-Platoon Vehicles in Work Zones. *Journal of the Transportation Research Board*, No. 2337, 9–16.
- [4] Medina, J, **K. A. Avrenli**, and R. Benekohal. (2013). Field and Software Evaluation of Illuminance from LED Luminaires for Roadway Applications. *Journal of the Transportation Research Board*, No. 2384, 55–64.
- [5] **Avrenli, K. A.**, R. Benekohal, and H. Ramezani. (2012). Four Regime Speed-Flow Relationships for Work Zones with Police Patrol and Automated Speed Enforcement. *Journal of the Transportation Research Board*, No. 2272, 34–43.
- [6] **Avrenli, K. A.**, R. Benekohal, and H. Ramezani. (2011). Traffic Flow Characteristics and Capacity in Police-Enforced and Intelligent Work Zones. *Procedia – Social and Behavioral Sciences*, No: 16, 430–439.
- [7] **Avrenli, K. A.**, and B. J. Dempsey. (2015). A Kinematic Methodology to Optimize the Landing Trajectory of a Commercial Jet Undergoing Total Loss of Thrust. *Journal of Transportation Safety & Security*, accepted for publication.
- [8] **Avrenli, K. A.**, and B. J. Dempsey. (2014). Assessment of the Engines-out Flight Performance of a Commercial Jet. *International Journal of Aviation Systems, Operations and Training*, in press.

REFEREED
CONFERENCE
PRESENTATIONS

- [9] **Avrenli, K. A.**, and B. J. Dempsey. (2015). *From Yesterday’s Three- and Four-Engine Airliners to Twin-Engine Airlines: Are Bird Strikes More Hazardous for Today’s Twin-Engine Aircraft?* TRB 94th Annual Meeting, Washington, DC.
- [10] **Avrenli, K. A.**, R. Benekohal, and H. Ramezani. (2012, January). *Time Gaps in Work Zones Based on Follower-Leader and Under Various Temporary Traffic Control Methods*. TRB 91st Annual Meeting, Washington, DC.
- [11] H. Ramezani, R. Benekohal, and **K. A. Avrenli**. (2011, June). *Analysis of Queue Formation and Dissipation in Work Zones*. International Meeting in Symposium on Highway Safety and Capacity, Stockholm, Sweden.
- [12] **Avrenli, K. A.**, R. Benekohal, and H. Ramezani. (2011, January). *Determining Speed-Flow Relationship and Capacity for Freeway Work Zone with no Lane Closure*. TRB 90th Annual Meeting, Washington, DC.
- [13] **Avrenli, K. A.**, R. Benekohal, and H. Ramezani. (2011, January). *Investigating Risky Driving Behavior of Vehicles with Short Time Gaps in Single-Lane Work Zones*. TRB 90th Annual Meeting, Washington, DC.
- [14] H. Ramezani, R. Benekohal, and **K. A. Avrenli**. (2011, January). *Methodology to Measure Work Zone Capacity Using Field Data*. TRB 90th Annual Meeting, Washington, DC.
- [15] H. Ramezani, R. Benekohal, **K. A. Avrenli**. (January, 2011). *Methodology to Analyze Queue Length and Delay in Work Zones*. TRB 90th Annual Meeting, Washington, DC.

- [16] H. Ramezani, R. Benekohal, **K. A. Avrenli**. (2010, July). *Statistical Distribution for Inter-Platoon Gaps, Intra-Platoon Headways and Platoon Size Using Field Data from Highway Bottlenecks*. TRB Traffic Flow Theory and Characteristics Conference Annecy, Lyon, France.
- [17] H. Ramezani, R. Benekohal, **K. A. Avrenli**. (2010, July). *Methodology to Estimate Moving Queue Length and Delay in Highway Bottlenecks*. TRB Traffic Flow Theory and Characteristics Conference Annecy, Lyon, France.

RESEARCH
REPORTS

- [18] Benekohal, R., H. Ramezani, and **K. A. Avrenli**. (2013, June). “WorkZoneQ User Guide for Two-Lane Freeway Work Zones”, Illinois Center for Transportation, Research Report FHWA-ICT-13-019.
- [19] **Avrenli, K. A.**, R. Benekohal, and J. Medina. (2012, October). “LED Roadway Lighting, Volume 2: Field Evaluations and Software Comparisons”, Illinois Center for Transportation, Research Report FHWA-ICT-12-013.
- [20] **Avrenli, K. A.**, R. Benekohal, and J. Medina. (2012, October). “LED Roadway Lighting, Volume 1: Background Information”, Illinois Center for Transportation, Research Report FHWA-ICT-12-012.
- [21] H. Ramezani, R. Benekohal, **K. A. Avrenli**. (2011, March). “Determining Queue and Congestion in Highway Work Zone Bottlenecks”, USDOT Region V Regional University Transportation Center Final Report, Nexttrans Project No 046IY02.
- [22] H. Ramezani, R. Benekohal, **K. A. Avrenli**. (2010, September). “Queue and User’s Costs in Highway Work Zones”, Illinois Center for Transportation, Research Report FHWA-ICT-10-075.
- [23] R. Benekohal, **K. A. Avrenli**, and H. Ramezani. (2009, October). “Traffic Flow Characteristics and Capacity in Intelligent Work Zones”, USDOT Region V Regional University Transportation Center Final Report, Nexttrans Project No 009IY01.

LANGUAGES

Turkish (Native)

English (Fluent)

German (Upper Intermediate)