

# Mayra Chavez, M.S., E.I.T.

Email: mcchavez4@utep.edu

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<b>Education</b>	<b>The University of Texas at El Paso (UTEP)</b> B.S. Civil Engineering Major GPA: 3.0	Graduation Date: May 2014 <b>Texas Registered E.I.T. in Civil Engineering</b>
	<b>The University of Texas at El Paso (UTEP)</b> M.S. Environmental Engineering GPA: 4.0	Graduation Date: May 2016
	<b>Thesis: Estimating Air Pollution Concentrations Using MOVES-Generated and Site-Specific Traffic Emissions</b> <b>The University of Texas at El Paso (UTEP)</b> PhD Civil Engineering GPA: 4.0	Graduation Date: December 2019
	<b>Dissertation: Assessing Spatiotemporal Exposures to Transportation Pollutants in Near-road Communities Using AERMOD</b>	

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<b>Work Experience</b>	<b>University of Texas at El Paso</b> Research Assistant (Supervisor: Dr. Wen-Whai Li)	August 2012 - Present
	<ul style="list-style-type: none"><li>AERMOD and MOVES analysis for various vehicle emissions studies in Houston, Dallas, and El Paso.</li><li>Collected and analyzed data on ozone levels in Fort Bliss.</li><li>Aided in the publishing of 2 years of research in conjunction with El Paso MPO for particulate matter reduction strategies in the Paso Del Norte Area.</li><li>Evaluated pollution effects on asthmatic school children in near-highway schools in El Paso.</li><li>Performed pollutant monitoring of ozone, nitrogen dioxide and particulate matter in near-road communities.</li><li>Conducted Air Quality Awareness programs for El Paso High Schools, and tours on UTEP campus.</li></ul>	
	<b>Texas Commission on Environmental Quality</b> Intern El Paso, Texas (Supervisor: Kent Waggoner)	May 2012-August 2012
	<ul style="list-style-type: none"><li>Investigated entities to ensure compliance with EPA regulations; (air quality, groundwater division)</li><li>Compiled research on Rio Grande surface water quality, for EPA funded study.</li><li>Investigated hydraulic fracturing sites in the West Texas region.</li></ul>	

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<b>Leadership</b>	<b>Center for Transportation, Environment, and Community Health (CTECH) Student Council</b> UTEP Student Council Representative	August 2017-Present
<b>Awards</b>	<b>The University of Texas at El Paso (UTEP)</b> College of Engineering's Dean's List.	May 2014
	<b>The University of Texas at El Paso (UTEP)</b> Murchison Graduate Engineering Scholarship	May 2016
	<b>The University of Texas at El Paso (UTEP)</b> Dwight David Eisenhower Transportation Fellowship Program	Dec. 2017 and Dec. 2018
	<b>Center for Transportation, Environment, and Community Health (CTECH)</b> 2019 Dissertation Award	August 2018
	<b>Council of University Transportation Centers</b> CTECH CUTC Outstanding Student of the Year	January 2019

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## Technical Skills

- Bilingual, fluent in Spanish.
  - Proficient in ArcMap, ArcGIS, EPA Models: MOVES2014, AERMOD, CALINE dispersion models.
  - Familiar with AutoCAD, MATLAB, VISSIM, Synchro/SimTraffic
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## Selected Publications

- Chavez, M., I. Ramirez, and W-W Li. 2019. "Comparison of Modeled-to-Monitored PM<sub>2.5</sub> Exposure Concentrations Resulting from Transportation Emissions in a Near-Road." 99th Annual Meeting of the Transportation Research Board, Washington DC, 2019.
- Li, W-W, M. Chavez, S. Jeon, A. Rangel, I. Ramirez, A. Urbina, S. Vallamsundar, and R. Farzaneh. "Contribution of Traffic Emissions to Near-Road PM<sub>2.5</sub> Air Concentrations as implied by Urban-Scale Background Monitoring." 98th Annual Meeting of the Transportation Research Board, Washington DC, 2019. DC: Transportation Research Board, 19-01459.
- Li, W-W, S. Jeon, M. Chavez, I. Ramirez, A. Rangel, A. Urbina, S. Vallamsundar, and R. Farzaneh. "Determination of Background PM<sub>2.5</sub> Concentrations for A Potential Transportation Project Site." 98th Annual Meeting of the Transportation Research Board, Washington DC, 2019. DC: Transportation Research Board, 19-02174.

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**a. Professional Preparation**

Institution	Major	Degree	Year
University of Texas, El Paso	Civil Engineering	B.Science	2014
University of Texas, El Paso	Environmental Engineering	M.Science	2016
University of Texas, El Paso	Civil Engineering	Ph.D.	2019

**b. Appointments**

Position	Institution	Period
Post Doctoral Research Fellow	University of Texas, El Paso	Jan 2020 to Present
Research Assistant	University of Texas, El Paso	May 2016 to Dec 2019
Undergraduate Research Assistant	University of Texas, El Paso	Sept 2012 to May 2016
Intern	Texas Commission on Environmental Quality, El Paso Texas	May to Sept 2012

**c. Publications and Presentations**

1. Chavez, M., I. Ramirez, and W-W Li. 2019. "Comparison of Modeled-to-Monitored PM<sub>2.5</sub> Exposure Concentrations Resulting from Transportation Emissions in a Near-Road." 99th Annual Meeting of the Transportation Research Board, Washington DC, 2019.
2. Chavez, M. 2018. "Assessing spatiotemporal exposures to transportation pollutants in near-road communities using AERMOD." Presented at Center for Transportation, Environment and Community Health 1st Annual Meeting, Davis, California.
3. Li, W-W, M. Chavez, S. Jeon, A. Rangel, I. Ramirez, A. Urbina, S. Vallamsundar, and R. Farzaneh. "Contribution of Traffic Emissions to Near-Road PM<sub>2.5</sub> Air Concentrations as implied by Urban-Scale Background Monitoring." 98th Annual Meeting of the Transportation Research Board, Washington DC, 2019. DC: Transportation Research Board, 19-01459.
4. Li, W-W, S. Jeon, M. Chavez, I. Ramirez, A. Rangel, A. Urbina, S. Vallamsundar, and R. Farzaneh. "Determination of Background PM<sub>2.5</sub> Concentrations for A Potential Transportation Project Site." 98th Annual Meeting of the Transportation Research Board, Washington DC, 2019. DC: Transportation Research Board, 19-02174.
5. Raysoni, A. U., T. Stock, J.A. Sarnat, M. Chavez, S.E. Sarnat, T. Montoya, F. Holguin, W-W Li. 2017. Evaluation of VOC concentrations in indoor and outdoor microenvironments at near-road schools. Environmental Pollution, 231, 681-693. doi:10.1016/j.envpol.2017.08.065
6. Li, W.W., A. Rangel, M. Chavez. 2017. Evaluation of Ozone Control Strategies for El Paso. PGA 582-16-6429701, Task 2 Subtask 2.2. Prepared for: The El Paso Metropolitan Organization (MPO)

**d. Synergistic Activities**

Student Representative for CTECH Student Leadership Council, 2017-2018

**e. Collaborators & Other Affiliations**

**i) Collaborators:** Wen-Whai Li, Amit U. Raysoni, Adan Rangel, Teresa Montoya, Adrian Sandoval (University of Texas at El Paso), Victor Valenzuela (Texas Commission on Environmental Quality), Reza Farzaneh, Suriya Vallamsundar, Mohammad Hashem Askariyeh (Texas A&M Transportation Institute), Salvador Gonzalez-Ayala, Claudia Valles (El Paso Metropolitan Organization), Arturo Woocay, Jose Mares (The Autonomous University of Ciudad Juarez)

**ii) Graduate and Ph.D. Dissertation Advisor:** Dr. Wen-Whai Li, University of Texas at El Paso