EDUCATIONAL BACKGROUND

Doctor of Philosophy in Civil Engineering
The University of Texas at El Paso — **Anticipated:** Spring 2020
2018 Top Ranked DDETFP Graduate Fellow — GPA: 3.90/4.00

Academic Adviser: Dr. Soheil Nazarian
Dissertation Title: *"New Generation of Performance-Engineered Asphalt Mixtures Based on Balanced Mix Design Concept"*

Master of Science in Civil Engineering
The University of Texas at El Paso — **Awarded:** Summer 2016
GPA: 4.00/4.00

Academic Advisor: Dr. Soheil Nazarian
Thesis Title: *"A Cracking Methodology to Assess Fracture and Fatigue Properties of Asphalt Concrete Mixtures using Overlay Tester"* (Best Graduate Student and Master Thesis Awards from College of Engineering)

Bachelor of Science in Civil Engineering
University of Texas at El Paso — **Awarded:** Fall 2014
Andrew D. Jones Award, Outstanding Academic Achievement — Major GPA: 3.92/4.00
Institutional Honors: Cum Laude — Overall GPA: 3.55/4.00

ACADEMIC EXPERIENCE

Part-time Engineering Instructor El Paso Community College	ENGR 2301 "Engineering Mechanics: Statics" Fall 2020
Doctoral Student Mentor The University of Texas at El Paso	UNIV 1301 "Critical Inquiry" Fall 2020
Invited Lecturer The University of Texas at El Paso	CE 2335 "Mechanics of Materials" Summer 2020
Assistant Engineering Instructor El Paso Community College	ENGR 2335 "Mechanics of Materials" Spring 2020

RESEARCH INTERESTS

Geotechnical, pavement and materials engineering; pavement design and evaluation; sustainability applications for flexible pavements; advanced characterization of civil engineering materials; development of innovative testing protocols for mix design components; and implementation of design, production and quality control specifications

RESEARCH GRANTS

Total funded amount: $2,571,949

- ***National David Dwight Eisenhower Transportation Fellowship "New Generation of Performance-Engineered Asphalt Mixtures Based on Balanced Mix Design Concept"*** $71,000
  with Victor M Garcia (PI)
- ***TxDOT 0-7061 "Optimizing Laboratory Curing Conditions for Hot Mix Asphalt to Better Simulate Field Behavior"*** $900,499
  with Soheil Nazarian (PI), Amit Bhasin, Imad Abdallah, Darren Hazlett and Victor M Garcia
- ***TxDOT-TxAPA "Asphalt Pavement Quality Initiative Implementation of Balanced Mix Design with RAP"*** $485,200
  with Soheil Nazarian (PI), Victor M Garcia and Imad Abdallah

- ***TxDOT 5-6815-1 "Implementation of Improved Overlay Tester for Fatigue Cracking Resistance of Asphalt Mixtures."*** $591,500
  with Imad Abdallah (PI), Victor M Garcia, Soheil Nazarian
- ***TxDOT 0-6923 "Develop Guidelines and Design Program for HMA Containing RAP, RAS, and Additives through a Balanced Mix-Design Process."*** $523,750
  with Soheil Nazarian (PI), Imad Abdallah and Victor M Garcia

RESEARCH EXPERIENCE

Research Associate Jan 2016 – Present
Center for Transportation Infrastructure Systems El Paso, TX

- ***TxDOT 0-7061 "Optimizing Laboratory Curing Conditions for Hot Mix Asphalt to Better Simulate Field Behavior"*** Active
  - Investigate laboratory curing protocols for asphalt mixtures produced in the laboratory and/or asphalt plant to better simulate the cracking and rutting potentials of mix designs
  - Develop optimized laboratory curing protocols to produce asphalt specimens for short- and long-term performance assessment during the design and production processes
- ***TxDOT-TxAPA "Asphalt Pavement Quality Initiative Implementation of Balanced Mix Design with RAP"*** Active
  - Develop an implementation plan and pilot study to evaluate the effectiveness of the balanced mix design concept and specifications developed under TxDOT 0-6923 project
  - Formulate potential mix designs with varying mix design variables relevant for the better understanding and routine implementation of the balanced mix design
- ***TxDOT 5-6815-1 "Implementation of Improved Overlay Tester for Fatigue Cracking Resistance of Asphalt Mixtures."*** Completed
  - Implement a newly proposed analysis methodology for the overlay test (OT) that can assess the cracking susceptibility of asphalt concrete (AC) mixes in a consistent and repeatable manner.
  - Generate guidelines and specification for performing the OT test as a routine design tool during the mix design process of AC mixes
- ***TxDOT 0-6923 "Develop Guidelines and Design Program for HMA Containing RAP, RAS, and Additives through a Balanced Mix-Design Process"*** Completed
  - Develop specifications, guidelines, testing protocols and a mix-design program to satisfactorily design asphalt mixtures containing recycled materials and additives with balanced resistance against rutting and cracking through a balanced asphalt mix-design process.
  - Evaluate a representative number of asphalt mixtures and field pavement sections to assess the influence of recycled materials, additives, and mix-design parameters for validating the proposed balanced asphalt mix-design program and associated specifications, guidelines and testing protocols.

Graduate Research Assistant Jan 2015 – Jan 2016
Center for Transportation Infrastructure Systems El Paso, TX

- ***TxDOT 0-6815 "Improved Overlay Tester for Fatigue Cracking Resistance of Asphalt Mixtures"*** Completed
  - Improved the existing overlay tester (OT) test procedure as well as the testing specifications to reliably rank and screen the cracking potential of asphalt mixtures with less uncertainties on the OT results.
  - Evaluated the performance of promising crack tests such as the disk-shaped compact tension (DCT), semi-circular bend (SCB), indirect tensile (IDT), and OT tests.

Undergraduate Research Assistant Sept 2013 – Dec 2014
Center for Transportation Infrastructure Systems El Paso, TX

- ***TxDOT IAC-NTP1"Assessing Variability of Current Overlay Test Procedure."*** Completed
  - Investigated the sources of variability in the performance measures from overlay tester (OT) such as the specimen preparation and testing processes.
- ***TxDOT 0-6658 "Collection of Materials and Performance Data for Texas Flexible Pavements and Overlays."*** Completed
  - Collected and analyzed test data and results from performance tests such as dynamic modulus, OT, permanent deformation, resilient modulus, triaxial tests on asphaltic and soil materials using the Material Testing System (MTS) and Asphalt Mixture Performance Tester (AMPT) equipment.

INTERDISCIPLINARY RESEARCH PROGRAMS

STEMGrow Fall 2020 – Present
- Develop training material for workshops on STEM oriented discussion topics for UTEP and EPCC

Yes, She Can Fall 2020 – Present
- Collect data to develop learning engagement models for virtual educational programs while mentoring underrepresented Hispanic female high-school and undergraduate students at UTEP

NSF IRES Summer 2020
- Formulate approaches to develop a smart flooding alert system for smart cities using real time data from sensor network and crowdsourcing

NSF H-AGEP Fall 2019 – Present
- Participate in engineering courses at EPCC as a part-time instructor and attended professional development workshops to prepare for a career in academia

U.S. Brazil Universities of the Future Research Program Summer 2013
- Pioneered low-cost and sustainable construction for Iracambii research center utilizing materials such as bamboo, clay, silt, manure, eucalyptus wood, and glass located in the Sierra do Brigadeiro region.

PUBLICATIONS

Project Reports

Garcia, V., Vieira, D., Barros, L., Abdallah, I., and Nazarian, S. (2020) "Develop Guidelines and Design Program for HMA Containing RAP, RAS, and Additives through a Balanced Mix-Design Process," Project Report No. FHWA/TX-20/0-6923-1. Center for Transportation Infrastructure Systems, The University of Texas at El Paso, El Paso, TX. Submitted in August 2020.

Garcia, V., Castillo, E., Garibay, J., Rocha, S., Abdallah, I., and Nazarian, S. (2020) "Implementation of Improved Overlay Tester for Fatigue Cracking Resistance of Asphalt Mixtures," Project Report No. FHWA/TX-20/5-6815-01. Center for Transportation Infrastructure Systems, The University of Texas at El Paso, El Paso, TX. Submitted in August 2020.

Garcia, V., Miramontes, A., Garibay, J., Abdallah, I., and Nazarian, S. (2017) "Improved Overlay Tester for Fatigue Cracking Resistance of Asphalt Mixtures," Project Report No. FHWA/TX-16/0-6815-1. Center for Transportation Infrastructure Systems, The University of Texas at El Paso, El Paso, TX. January 2017.

Journal Manuscripts

Vieira, D., M., Garcia, V., Jichkar, P., Abdallah, I., and Nazarian, S. (2021) "Influence of Asphalt Binder Source on Engineering Performance of Balanced Mix Design," Journal of the Transportation Research Record. Transportation Research Board: Washington, D.C. **Under Review.**

Garcia, V., Granados, R., Medina, M., Ochoa, L., Mondragon, O., Cheu, R. L., Villanueva-Rosales, N., and Larios, V. M. (2021). "Management of Real-Time Data for a Smart Flooding Alert System." 2020 IEEE International Conference on Smart Cities (ISC2). **In Press.**

Vieira, D., M., Garcia, V., Abdallah, I., and Nazarian, S. (2020) "Role of Aggregate Gradation in Balancing Performance of Asphalt Concrete Mixtures," Journal of the Transportation Research Record. Transportation Research Board: Washington, D.C.

Reyna, M., Garcia, V., Garibay, J., Abdallah, I., and Nazarian, S. (2020) "Evaluation of Aggregate Crushing Tests And their Correlation with Volumetric and Mechanical Properties of a Typical Superpave Mix Design," ASCE Journal of Materials in Civil Engineering

Garcia, V., Barros, L., Garibay, J., Abdallah, I., and Nazarian, S. (2020) "Effect of Aggregate Gradation on Performance of Asphalt Concrete Mixtures," ASCE Journal of Materials in Civil Engineering,

Barros, L., Garcia, V., Garibay, J., Abdallah, I., and Nazarian, S. (2019) "Implications of Including Reclaimed Asphalt Pavement Materials to Performance of Balanced Asphalt Concrete Mixes" *Journal of the Transportation Research Record*. Transportation Research Board: Washington, D.C.

Garcia, V., Miramontes, A., Garibay, J., Abdallah, I., and Nazarian, S., (2017) "Assessing Cracking Susceptibility of Asphalt Concrete Mixtures using Overlay Tester," American Society of Testing and Materials: *Journal of Testing and Evaluation*.

Garcia, V., Miramontes, A., Garibay, J., Carrasco, G., Lee, R., Abdallah, I., and Nazarian, S., (2017) "Alternative Methodology for Assessing Cracking Resistance of Hot Mix Asphalt Mixtures with Overlay Tester," *Journal of Association of Asphalt Pavement Technologists*.

Garcia, V., Garibay, J., Abdallah, I., and Nazarian, S., (2017) "Performance of Overlay Tester Results from Dense-Graded Asphalt Concrete Mixtures," 96th Annual Meeting of the Transportation Research Board: *Journal of the Transportation Research Record*. Washington, D.C.

Stewart, C.M., Reyes, J.G., and Garcia, V.M., (2016) "Comparison of Fracture Test Standards for a Super Pave Dense-Graded Hot Mix Asphalt," *Journal of Engineering Fracture Mechanics*, http://dx.doi.org/10.1016/j.engfracmech.10.016.

Garcia, V. and Miramontes, A., (2015) "Understanding Sources of Variability of Overlay Test Procedure," Journal of the Transportation Research Board, No. 2507, 2015, pp. 10-18, Transportation Research Board of the National Academies, Washington D.C.

Conference Papers

Garcia, V., Abdallah, I., and Nazarian, S. (2021) "Evaluation of Cracking Performance of Asphalt Mixtures from Asphalt Concrete Pavement with Overlay Tester Test" ASCE T&DI International Conference on Highway Pavements and Airfield Technology, Austin, TX. **Submitted.**

Garcia, V., Abdallah, I., and Nazarian, S. (2021) "Overview of Performance-Engineered Mix Design Specifications to Produce Balanced Mix Designs," ASCE T&DI International Conference on Highway Pavements and Airfield Technology, Austin, TX. **Submitted.**

Garcia, V., Valenzuela, M., Torres, A., Abdallah, I., and Nazarian, S. (2019) "Performance Characterization of Asphalt Concrete Mixtures Modified with a Latex Additive," Proceedings of ASCE T&DI International Conference on Highway Pavements and Airfield Technology, Chicago, IL.

Garcia, V., Garibay, J., Abdallah, I., and Nazarian, S. (2019) "Evaluation of Interchangeability of Commercially Available Overlay Tester Devices," Proceedings of ASCE T&DI International Conference on Highway Pavements and Airfield Technology, Chicago, IL.

Garcia, V., Barros, L., Abdallah, I., and Nazarian, S., (2019) "Performance-based Selection of Load Associated Cracking Resistance of Asphalt Concrete Mixtures from Overlay Test," Proceedings 98th Annual Meeting of the Transportation Research Board, Washington, D.C.

Garcia, V., Garibay, J., Abdallah, I., and Nazarian, S. (2017) "Establishing Design Limits for Cracking Properties of Asphalt Mixtures using Overlay Tester," Proceedings of ASCE T&DI International Conference on Highway Pavements and Airfield Technology, Philadelphia, PA.

Garcia, V., Garibay, J., Abdallah, I., and Nazarian, S. (2017) "Performance of Overlay Tester in Cyclic Loading Mode," Proceedings of ASCE Geotechnical Frontiers Conference.

Garcia, V., Garibay, J., Abdallah, I., and Nazarian, S. (2016) "Performance of Overlay Tester in Monotonic and Cyclic Loading Modes," Proceedings of ASCE International Conference of Transportation and Development. Paper No. 243. Houston, TX.

Garcia, V., Miramontes, A., Garibay, J., Abdallah, I., and Nazarian, S., (2016) "Evaluation of Operational Variables that Can Improve Overlay Tester Results," Proceedings 95th Annual Meeting of the Transportation Research Board, Washington, D.C.

CONFERENCE PRESENTATIONS

Oral Presentations

Garcia V., Garibay, J., Abdallah, I., and Nazarian, S. (2019) "Evaluation of Interchangeability of Commercially Available Overlay Tester Devices," ASCE T&DI International Conference on Highway Pavements and Airfield Technology, Chicago, IL.

Garcia V., Valenzuela, M., Torres, A., Abdallah, I., and Nazarian, S. (2019) "Performance Characterization of Asphalt Concrete Mixtures Modified with a Latex Additive," ASCE T&DI International Conference on Highway Pavements and Airfield Technology, Chicago, IL.

Garcia, V., (2019) "Developing Guidelines for Designing Balanced Asphalt Concrete Mixtures," 98th Annual Meeting of the TRB, DDETFP Innovative Doctoral Research Showcase, Washington, D.C.

Garcia, V., Barros, L., Abdallah, I., and Nazarian, S., (2019) "Performance-based Selection of Load Associated Cracking Resistance of Asphalt Concrete Mixtures from Overlay Test," 98th Annual Meeting of the TRB, Washington, D.C.

Garcia, V., Garibay, J., Abdallah, I., and Nazarian, S. (2017) "Establishing Design Limits for Cracking Properties of Asphalt Mixtures using Overlay Tester," ASCE T&DI International Conference on Highway Pavements and Airfield Technology, Philadelphia, PA.

Garcia, V. (2017) "A Cracking Methodology to Assess Fracture and Fatigue Properties of Asphalt Concrete Mixtures using Overlay Tester" SPTC Dissertation and Thesis Award, Webinar Presentation

Garcia, V., Garibay, J., Abdallah, I., and Nazarian, S. (2017) "Performance of Overlay Tester in Cyclic Loading Mode," ASCE Geotechnical Frontiers Conference, Orlando, FL.

Garcia V. (2016) "Understanding Sources of Variability of Overlay Test Procedure," SPTC Student Paper and Poster Awards Ceremony, Webinar Presentation

Poster Presentations

Garcia, V., Abdallah, I., and Nazarian, S., (2018) "Verification of Cracking Properties from Asphalt Concrete Pavements with Overlay Tester," 97th Annual Meeting of the TRB, Washington, D.C.

Garcia, V., Garibay, J., Abdallah, I., and Nazarian, S., (2017) "Performance of Overlay Tester Results from Dense-Graded Asphalt Concrete Mixtures," 96th Annual Meeting of the TRB, Washington, D.C.

Garcia, V., Garibay, J., Abdallah, I., and Nazarian, S. (2016) "Performance of Overlay Tester in Monotonic and Cyclic Loading Modes," ASCE International Conference of Transportation and Development. Houston, TX.

Garcia, V., Miramontes, A., Garibay, J., Abdallah, I., and Nazarian, S., (2016) "Evaluation of Operational Variables that Can Improve Overlay Tester Results," 95th Annual Meeting of the TRB, Washington, D.C.

Garcia, V. (2015) "Evaluation of Operational Variables that Can Improve Overlay Tester Results," UTEP Graduate Student Research Expo, El Paso, TX.

Garcia, V. and Miramontes, A., (2015) "Understanding Sources of Variability of Overlay Test Procedure," 94th Annual Meeting of the TRB, Washington, DC.

Garcia, V. (2014) "Understanding Sources of Variability of Overlay Test Procedure," UTEP Graduate Student Research Expo, El Paso, TX.

Garcia V., (2014) "Understanding Sources of Variability of Overlay Test Procedure," Oklahoma Transportation Research Day, University of Oklahoma, Oklahoma City, OK.

PROFESSIONAL MEMBERSHIPS

- Association of Asphalt Paving Technologist (AAPT) Student Member, 2017-Present
- American Society of Testing and Materials (ASTM) Student Member Committee D04 on Road and Paving Materials, 2017 -Present
- Transportation Leadership Council, Vice President (2016-2017)
- Chi Epsilon, National Civil Engineering Honor Society 2013-Present (Active Member)
- American Society of Civil Engineering: Concrete Canoe team and Construction Institute Students Days
- Tau Beta PI, Engineering Honor Society 2013-Present (Member)
- Transportation Research Board AFK standing committee on asphalt mixtures:
    - AFK50 Structural Requirements of Asphalt Mixtures, Member
    - AFK10 Critical Issues and Emerging Technologies in Asphalt, Friend

AWARDS AND HONORS

Top Ranked Dwight D. Eisenhower Transportation Fellowship (DDETF) Graduate Fellow 2018
DDETFP Graduate Fellowship 2018, 2019
2017
- National Research Fellowship

UTEP National Science Foundation/S-STEM Graduate Bridge Program 2014 - 2016
- Two three-year merit scholarship awarded that year from College of Engineering

SPTC Student Best Thesis Award 2016
- Thesis selected for recognition by the Southern Plains Transportation Center

UTEP Outstanding Graduate Thesis Award 2016
- Thesis selected for recognition by the UTEP College of Engineering

SPTC Best Student Paper Award 2016
- Graduate Student Paper Competition from Southern Plains Transportation Center

UTEP Student General Property Graduate Scholarship 2015
- One-year merit scholarship from Graduate School

UTEP First Place Poster Presentation 2015
- 2015 UTEP Graduate Student Research Expo

DDETFP HSI Transportation Fellowship 2014 and 2015
- Undergraduate and Graduate Research Fellowship Opportunity

Transportation Research Board Minority Student Scholarship 2014
- Undergraduate Research Opportunity

Oklahoma Transportation Research Day 2014
- Conference Travel Grant

ASCE Construction Institute Student Days Competition 2014
- Conference Travel Grant

MENTORING SERVICE

UNIV 1301 "Critical Inquiry" Fall 2020 - Present
- Mentor three undergraduate students through EduGuide software

"Yes, She Can" Mentoring Program Fall 2020 – Present
- Mentor two undergraduate students through Air Table and Microsoft Teams

CRH Americas Materials – National Asphalt Mix Design Competition Fall 2019
- Advised MINERS team consisting of two graduate and three undergraduate students to represent UTEP
- Won second place from a national competition of ten universities

TxAPA-TxDOT Asphalt Road-eo Competition 2019-2020 Fall 2019
- Advised two groups (Orange and Blue teams) of students to represent UTEP
- Won second place with Orange team and forth place with Blue team

TxAPA-TxDOT Asphalt Road-eo Competition 2018-2019 Fall 2018
- Advised two groups (Miner Girls and Orange Picks teams) of students to represent UTEP
- Won first place with Miner Girls team and second place with Orange Picks team

GRADUATE STUDENTS SUPERVISED

Denis Vieira, MSCE Advisor: Soheil Nazarian
Thesis title: Balancing Engineering Properties of Asphalt Concrete Mixtures

Elias Castillo, MSCE Advisor: Soheil Nazarian
Thesis title: A Performance Based Analysis Methodology to Meet Structural Requirements for Balanced Mix Designs

Luiza Barros, MSCE Advisor: Soheil Nazarian
Thesis title: Influence of Mix Design Parameters on Performance of Balanced Asphalt Concrete Mixtures

Eduardo Garcia, MSME Advisor: Calvin Stewart

Thesis title: Test Methods for Fracture and Fatigue Crack Growth Behavior of Hot Mix Asphalts

Mauricio Valenzuela, MECE — Advisor: Soheil Nazarian

Project title: Performance Characterization of Asphalt Concrete Mixtures Modified with a Latex Additive

UNDERGRADUATE STUDENTS SUPERVISED

Helena Mascorro (Senior)

- Mentored 2020 TRB Minority Fellowship – Paper titled *"Assessment of Moisture Damage of Asphalt Concrete Mixtures using Performance Tests"*
- Supervised TxDOT interagency contract for project titled *"Assessment of Mechanical Performance of Asphalt mixtures with Synthetic Fibers"*

Gabriela Montes (Sophomore)

- Mentored 2020 ASCE Paper titled *"Evaluation of Porous Frictions Course Mixtures with Different Aggregate Quality Replacement Percentages"*
- Supervised TxDOT interagency contract for project titled *"Evaluation of Coarse Aggregate Blends with Different Aggregate Quality Replacement Percentages for PFC Mixtures"*

Monica Santillana (Senior)

- Mentored application for 2020 Hispanic Serving Institutions (HSI) David Dwight Eisenhower Transportation Fellowship Program (DDETFP) scholarship
- Co-authored 2021 ASCE Paper titled *"Influence of Aging Protocols on Engineering Performance of Thin Overlay Mixtures"*
- Supervised TxDOT interagency contract for project titled *"Full Characterization of Short- and Long-term Performance of Thin Overlay Mixtures"*

Weston Chenausky (Sophomore)

- Mentored application for 2020 HSI DDETFP scholarship
- Supervised TxDOT 0-6923 project for task *"Assessing Consistency of Engineering Properties of Balanced Mix Design using Plant-Mixed Lab-Compacted Specimens"*

Sarah de la O (Sophomore)

- Mentored application for 2020 HSI DDETFP scholarship
- Supervised TxDOT 0-6923 project for task *"Developing Balanced Mix Designs using Locally Available Pavement Materials for TxDOT Districts"*

Ramses Leon (Junior)

- Mentored application for TxDOT Conditional Grant Program
- Mentored application for 2020 HSI DDETFP scholarship
- Supervised TxDOT interagency contract for project titled *"Use of Rejuvenator Products for Balanced Mix Designs"*

Luis Cordoba (Senior)

- Supported application for 2019 National Action Council for Minorities in Engineering (NACME) scholarship
- NACME scholarship
- Supervised TxDOT 5-6815-01 project for task *"Implementation of Improved OT Test for Cracking Characterization of Asphalt Mixtures"*

Juan Galvan (Graduated)

- Mentored application for 2020 HSI DDETFP scholarship
- Co-authored 2021 ASCE Paper titled *"Influence of Aging Protocols on Engineering Performance of Thin Overlay Mixtures"*
- Supervised TxDOT interagency contract for project titled *"Full Characterization of Short- and Long-term Performance of Thin Overlay Mixtures"*

Angelica Torres (Graduated)

- Mentored 2019 TRB Minority Fellowship – Paper titled *"Influence of Asphalt Binder Type and Recycled Asphalt Shingle Content on Engineering Performance of Stone Asphalt Mixtures"*
- Mentored application for 2020 HSI DDETFP scholarship

- Supervised TxDOT interagency contract for project titled "Incorporation of Recycled Asphalt Shingles into Stone Matrix Asphalt Mixtures"

Mayra Reyna (Graduated)

- Mentored 2018 TRB Minority Fellowship – Paper titled *"Role of Aggregate Type and Properties on Volumetric and Mechanical Properties of Asphalt Concrete Mixtures"*
- Supported application for 2019 NACME scholarship
- Co-authored 2020 ASCE Paper titled *"Evaluation of Aggregate Crushing Tests And their Correlation with Volumetric and Mechanical Properties of a Typical Superpave Mix Design"*
- Supervised TxDOT interagency contract for project titled "Evaluation of Aggregate Quality with Mechanical Crushing Test Methods"

Alexandra Torres (Graduated)

- Mentored 2018 TRB Minority Fellowship – Paper titled *"Engineering Properties of Asphalt Binders from Different Sources And their Influence on Stiffness of Asphalt Concrete Mixtures"*
- Supported application for 2018 NACME scholarship
- Supervised TxDOT 0-6923 project for task *"Influence of Binder Properties on Performance of Balanced Mix Designs"*

Esteban Fierro (Senior)

- Mentored application for 2020 HSI DDETFP scholarship
- Supported application for 2019 NACME scholarship
- Supervised TxDOT 5-6815-01 performance testing

Getsy Molinar (Graduated)

- Mentored application for 2019 HSI DDETFP scholarship
- Supervised TxDOT 0-6923 project for task *"Parametric Study on Aggregate Gradation for Balanced Mix Designs*"

Daniel Arguelles (Graduated)

- Mentored application for 2019 HSI DDETFP scholarship
- Supported application for 2018 NACME scholarship
- Supervised TxDOT 0-6815 project for task *"Investigation of Cracking Mechanism of Overlay Test"*

Carlos Anguiano (Graduate Student)

- Mentored application for 2017 and 2018 HSI DDETFP scholarship
- Supervised TxDOT 0-6923- project for task *"Comparison of Fracture Test Methods for Simple Cracking Characterization of Asphalt Mixtures"*

Cesar Ramirez (Graduated)

- Mentored application for 2017 and 2018 HSI DDETFP scholarship
- Supported application for 2018 NACME scholarship
- Supervised TxDOT 0-6658 project for task *"Collection of Performance Data from Asphalt Mixtures during Laboratory Characterization of Pavement Materials"*

Alejandro Gómez (Graduated)

- Mentored application for 2017 HSI DDETFP scholarship
- Supported application for 2018 NACME scholarship
- Supervised TxDOT interagency contract for study titled "Mechanical Performance of Superpave Asphalt Mixtures Containing Latex Additives"

COMMUNITY INVOLVEMENT

Math Instructor/General Educational Development (GED) Program Fall 2016 – Present
Sacred Heart Church El Paso, TX

- In charge of the general education development (GED) program sponsored by the Rotary Club and coordinated by the social ministry from Sacred Heart Church.
- Plan lessons, assignments and discussion sections, grade homework and exams. Prepare students to pass the official GED examination.

QUALIFICATIONS AND TECHNICAL SKILLS

Computer/Engineering Programs: Microsoft Word, Excel, and Power Point, MatLAB, STAADPro, AutoCAD, SolidWorks, Revit Architecture, WinJulia, KENLAYER, FPS21, AASHTOWare, and Bentley software.

Language Abilities: Spanish (Native), English (Fluent) and Portuguese (Intermediate)

PROFESSIONAL REFERENCES

Dr. Soheil Nazarian
Professor of Civil Engineering
The University of Texas at El Paso
Office: (915) 747 6911
nazarian@utep.edu

Dr. Musharraf Zaman
Professor of Civil Engineering
University of Oklahoma
Office: (405) 325 2626
zaman@ou.edu

Dr. Miguel Velez-Reyes
Chair of Electrical Engineering Department
The University of Texas at El Paso
Office: (915) 747 5470
mvelezreyes@utep.edu

Mr. Ryan Barborak
Director of Flexible Pavement Branch
Texas Department of Transportation
Office: (512) 506 5863
Ryan.Barborak@txdot.gov