

## TEXAS STATE VITA

### I. Academic/Professional Background

A. Name: Anthony S. Torres

Title: Associate Professor & Presidential Distinction Awardee

#### B. Educational Background

<i>Degree</i>	<i>Year</i>	<i>University</i>	<i>Major</i>	<i>Thesis/Dissertation</i>
Ph.D.	2013	University of New Mexico	Civil Engineering	Understanding the Role of Gravity in the Crystallization Suppression of ZBLAN Glass
M.S.	2010	University of New Mexico	Civil Engineering	Development of a Modified Bi-Axial Composite Test Specimen
B.S.	2008	New Mexico State University	Civil Engineering	N/A

#### C. University Experience

<i>Position</i>	<i>University</i>	<i>Dates</i>
<b>Presidential Distinction Awardee</b>	<b>Texas State University</b>	<b>09/01/22 - Present</b>
Associate Professor	Texas State University	09/01/19 – Present
Assistant Professor	Texas State University	09/01/13 – 08/31/19
Research Assistant/Instructor	University of New Mexico	08/01/12 – 05/31/13
Research Assistant	University of New Mexico	01/01/11 – 06/30/11

#### D. Relevant Professional Experience

<i>Position</i>	<i>Entity</i>	<i>Dates</i>
Visiting Researcher (Sabbatical Position)	LafargeHolcim Research Center	09/01/20 – 05/28/21
Materials Engineer	A-Tech Corporation (Applied Technology Associates)	09/01/11 – 05/31/13
Space Scholar	Air Force Research Laboratory	06/01/11 – 08/31/11
Research Assistant	University of New Mexico	08/01/08 – 05/31/11
Design Intern	Chavez-Grieves Consulting Engineers Inc.	05/01/08 – 08/01/08
Engineering Intern	Office of the State Engineer	05/01/07 – 04/30/08

Design Intern/Laborer	Torres Welding Inc.	05/01/03 – 04/30/07
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## E. Other Professional Credentials (licensure, certification, etc.)

<i>Certificate</i>	<i>Entity</i>	<i>Date Granted</i>
Engineer in Training (EIT) Certificate	New Mexico Board of Examiners for Engineers and Surveyors	2007

**II. TEACHING**

A. Teaching Honors and Awards:  
None

B. Courses Taught:

Texas State University

TECH 2351 – Statics and Strength of Materials

TECH 5365 – Industrial Project Management and Scheduling

CIM 3340 – Understanding the Concrete Construction System

CIM 3330 – Concrete Construction Methods

CSM 4364 – Construction Project Management and Scheduling

Course	Semester	Students	Instructor Rating (5.0 Scale)		
			Learning	Enthusiasm	Organization
TECH 2351	SP 22	36	4.47	4.83	4.92
	SP 20	45	4.62 (average rating; new system used)		
	SP 19	35	4.58	4.87	4.86
	SP 18	38	4.74	4.96	4.95
TECH 5365	SP 22	2	n/a	n/a	n/a (due to class size)
	SP 20	20	4.55 (average rating; new system used)		
	SP 19	19	4.44	4.65	4.62
	SP 18	10	4.63	4.85	4.83
	SP 17	10	3.72	4.22	4.22
	SP 16	21	4.38	4.47	4.54
	SU 15	16	4.16	4.50	4.44
	SP 14	2	4.67	4.33	4.42
CIM 3340	FA 21	9	4.75	4.86	4.68
	FA 19	20	4.83	4.92	4.88
	FA 18	17	4.68	4.90	4.93
	FA 17	10	4.78	4.78	4.78
	FA 16	12	4.95	4.95	4.98
	FA 15	7	4.68	4.71	4.79
	FA 14	9	4.50	4.06	4.53
	FA 13	15	3.92	3.88	3.77

CIM 3330	FA 21	9	4.70	4.93	4.75
	FA 19	20	4.79	4.92	4.88
	FA 18	17	4.63	4.90	4.92
	FA 17	10	4.78	4.78	4.78
	FA 16	12	4.90	4.86	4.95
	FA 15	7	4.71	4.71	4.71
	FA 14	9	4.75	4.81	4.81
CSM 4364	SP 17	43	4.28	4.33	4.47
	SP 15	30	4.22	4.35	4.26
	SP 14	29	3.75	3.48	3.92

University of New Mexico

UNIV 124 – Experiential Learning

CE 202 – Engineering Statics

Course	Semester	Students	Average Instructor Rating (5.0 Scale)
UNIV 174	SP 13	8	4.6
	FA 12	6	4.5
CE 202	SU 11	21	4.8
	SP 11	38	4.8

C. Graduate Theses/Dissertations, Honors Theses, or Exit Committees (if supervisor, please indicate): *(Currently supervising 1 Post-doc, 5 PhD, and 2 MS)*

Graduate Research Advisor/Committee Member

† Designates those students who have completed their degree.

Date	Name/Degree	Title
<i>Research Supervisor</i>		
09/01/22 – Present	Sai, Nitesh/ <b>Post-Doc</b>	N/A (Assisting with current projects)
09/01/22 – Present	Pasham, Pavan/MSCM	Long-term Durability Performance of Rapid Setting Hydraulic Cements (RSHCs)
09/01/22 – Present	Subedi, Auyush/ <b>PhD</b>	Understanding the Effects of Vibration on Space Based Construction Materials
05/01/21 – Present	Okechi, Ikechukwu/ <b>PhD</b>	Short-term Durability Performance of Rapid Setting Hydraulic Cements (RSHC)
01/01/22 – Present	Villarreal, Ruben/ <b>PhD</b>	Mechanical and Durability Performance of Concrete Pavement made with Waste Garnet and Foundry Sand
08/01/21 – Present	Mohammed, Tijani/ <b>PhD</b>	Assessing Setting Time and Hydraulic Reactivity of Rapid Setting Hydraulic Cements (RSHCs)
05/01/21 – Present	Lokhande, Krushi/ <b>PhD</b>	Developing Low Carbon Footprint Concrete Mixtures
08/01/21 – Present	Argha, Debo/MS-CE	Assessing Admixture Compatibility with Rapid Setting Hydraulic Cements (RSHCs)

09/01/20 – 12/31/21	Villarreal, Ruben/MS-CM <sup>†</sup>	Developing an Alternative Hardened Air Void Characterization Method for Durable Concrete
05/01/21 – 12/31/21	Kotadiya, Deep/MS-CM <sup>†</sup>	Mechanical Properties and Early-Age Volume Change of Rapid Setting Hydraulic Cements (RSHCs)
10/01/18 – 8/31/20 (Co-Supervisor)	Prabhakar, Sushmitha Mercy/MST <sup>†</sup>	An Accelerated Test Method To Evaluate Cementitious Mixtures Subjected To Chemical Sulfate Attack
01/01/17 – 05/31/18	Pattipatti, Jaswanth/MST <sup>†</sup>	Flexural, Splitting Tensile, Modulus and Poisson's Ratio of High Strength Concrete with Foundry Sand
09/01/16 – 05/31/18	Ellis, Michael/MST <sup>†</sup>	Comparative Analysis of Various Superplasticizers on High Strength Concrete
01/01/17 – 12/31/17	Lugo, Ben/MST <sup>†</sup>	Effect of Communication Channels on Contractor Collaboration
09/01/16 – 12/31/17	Kristin, Kibling/MST <sup>†</sup>	Peer-Teaching in Construction Project Management
01/01/17 – 12/31/17	Onimole, Rilwan/MST <sup>†</sup>	LCI of Foundry Waste Concrete
01/01/17 – 05/31/17	Stovall, Jace/MST	Market and Projection Analysis for a Buda, TX State of the Art Building Project* *Student decided to not complete their degree.
09/01/16 – 05/31/17 (Co-Supervisor)	Rahman, Raizur/MST <sup>†</sup>	High Temperature Refractory-Steel Interface Reactions During Melting And Casting Of High Manganese And Aluminum Steels And Elimination Of Phosphorus Pick-Up
09/01/16 – 05/31/17	Modebelu, Chizitelu/MST <sup>†</sup>	Ultra High Strength Concrete with Foundry Sand
09/01/16 – 05/31/17	McMasters, Sarah/MST <sup>†</sup>	Comparing Predicted Void Content vs. Actual Void Content of Pervious Concrete – Impact of the w/c
09/01/15 – 05/31/17	Kingston, Josh/MST <sup>†</sup>	Real Time Observation of ZBLAN Crystallization
09/01/15 – 12/31/16	Bejugam, Rupesh/MST <sup>†</sup>	Predicting the Void Content of Pervious Concrete Through Experimental Analysis
09/01/15 – 12/31/16	Chatterjee, Aritra/MST	Developing an LCA on the use of Foundry Waste in Concrete Production* *Student decided to not complete their degree.

09/01/15 – 05/31/16	Sharma, Harnish/MST <sup>†</sup>	Modeling the LCI of Concrete through Comparative LCA
09/01/14 – 05/31/15	Barr, Rueben/MST	Real Time Observation of ZBLAN Crystallization* *Did not complete due to academic probation.
<i>Committee Member</i>		
08/01/21 – Present	Ivey, John/MS-EM <sup>†</sup>	Measuring the efficacy of a tailored makerspace management software
01/01/21 – Present	Tao, Jueqiang/ <b>PhD-</b> MSEC <sup>†</sup>	Air-void System Analysis on Hardened Concrete Surfaces
01/01/21 – Present	Kotadiya, Deep/MST <sup>†</sup>	Mechanical Properties and Early-age Volume Change of Rapid Setting Hydraulic Cements
01/01/21 – 08/15/21	Velendia, Laura/MST <sup>†</sup>	Alkali-Silica Reaction and Delayed Ettringite Formation In Rapid Setting And Hardening Cements
01/01/20 – 05/01/20	Madgulkar, Tejasvi/MST <sup>†</sup>	Market Research Analysis Of Existing Xr Construction Safety Training Methods For Future Design
01/01/20 – 05/01/20	Davis, Stephanie/MST <sup>†</sup>	Lean Construction Processes in Waste Management
08/01/19 – 12/01/19	Sullivan, Brian/MST <sup>†</sup>	Evaluating User Experience And Understanding Of A 3d Walkthrough Compared To A Mixed Reality Building Model Visualization
09/01/18 – 08/01/19	Ikechukwu, Okechi/MST <sup>†</sup>	Alkali Silica Reactivity Of Blended Class C And Class F Fly Ash Systems
09/01/18 – 08/01/19	Thombare, Omkar/MST <sup>†</sup>	Accelerated Carbonation Assessment Of Fly Ash Concrete At 57% Relative Humidity
09/01/18 – 05/01/19	Lokhandi, Krushi/MST <sup>†</sup>	Impact Of Class Making Projects On Students' Engineering Design Self-Efficacy
09/01/18 – 05/01/19	Ghanbari, Ali/MST <sup>†</sup>	Construction Demand Forecasting for a Manufacturer Construction Equipment Based on Traditional and Supervised Machine Learning Methods
01/01/17 – 12/31/17	Sarnot, Anup/MST <sup>†</sup>	Natural Carbonation of Concrete
01/01/17 – 12/31/17	Wilson-Boyer, Dax/MST <sup>†</sup>	An Alternative to Fiberglass and Spray Foam Insulation
01/01/16 – 12/31/16	Buchanan, David/MST <sup>†</sup>	Surface Mount Technology Setup Time Reduction
01/01/16 – 12/31/16	Kim, Hyunhwan/PhD <sup>†</sup>	Characterization of Rubberized Binders with Wax Additives
09/01/15 – 06/01/16	Mazumder, Mithil/MST <sup>†</sup>	Performance Properties Of Polymer Modified Asphalt Binders

## Containing Wax Additive

02/01/15 – 05/31/15	Humphries, Evan/MST <sup>†</sup>	General Aviation Airport Pavement Maintenance in the FAA Southwest Region: Planning, Funding, and Practice
09/01/13 – 06/01/14	Orsak, Benjamin/MST <sup>†</sup>	Impact of Bridge Design and Land Cover Characteristics on Cliff Swallow Nesting
<i>Independent Studies Supervisor</i>		
01/01/20 – 05/01/20	Rojas, Cindy	Carbonation of UHSC made with Foundry Sand
01/01/20 – 05/01/20	Davis, Stephanie <sup>†</sup>	Lean Construction Processes in Waste Management
01/01/19 – 05/01/19	Stevens, Lowell <sup>†</sup>	Industrial Project Management and Scheduling
09/01/18 – 12/31/18	Melguizo, Jorge <sup>†</sup>	Developing High Strength Pervious Concrete Mixtures
09/01/17 – 12/31/17	Makhija, Goldi <sup>†</sup>	Assessing Project Schedules through Primavera P6
09/01/17 – 12/31/17	Brewer, Keith <sup>†</sup>	Developing Schedules and Managing via SAP
09/01/17 – 12/31/17	Pattipatti, Jaswanth <sup>†</sup>	Review of the Manufacturing Industry Project Management
01/01/17 – 05/31/17	McMasters, Sarah <sup>†</sup>	Design of Pervious Concrete Literature Review
06/01/16 – 08/31/16	Modebelu, Chizitelu <sup>†</sup>	Ultra High Strength Concrete Literature Review
06/01/16 – 08/31/16	Hurtado, Francisco <sup>†</sup>	Characterizing the Surface Roughness of Rubberized Binders with Wax Additives using an Optical Microscope

*Personal*

06/01/10 – 05/31/13	Torres, Anthony/PhD (w/ Distinction) <sup>†</sup>	Understanding the Role of Gravity in the Crystallization Suppression of ZBLAN Glass
08/01/08 – 05/31/10	Torres, Anthony/MS <sup>†</sup>	The Development of a Modified Bi-Axial Composite Test Specimen

Undergraduate Student Research Supervisor: *(Currently supervising 6 BS undergraduate students)*

<sup>†</sup> Designates those students who have completed their degree.

Date	Name	Project Title
02/01/22 – Present	McCawley, Joni	Low Carbon Footprint Concrete
02/01/22 – Present	Cope, Drew	High Early Strength High Strength Concrete
11/20/21 – Present	Hargues, Gavin	High Early Strength High Strength Concrete
09/01/21 – Present	Cantu, Luke	High Early Strength High Strength Concrete
09/01/21 – Present	Gopal, Damini	Assisting with RSHC Project
09/01/21 – Present	Huynh, Paola	Assisting with RSHC Project
09/01/20 – 05/1/21	Maria Torres <sup>†</sup>	Low-Carbon Footprint Concrete

01/01/20 – 05/1/20	Dale Ellis <sup>†</sup>	Ultra High Strength Concrete with Foundry Sand
05/01/19 – 08/31/20	Mario Cavazos <sup>†</sup>	High Strength Pervious Concrete
05/01/19 – 12/31/20	Collin Nerby <sup>†</sup>	High Strength Pervious Concrete
09/01/18 – 12/01/19	Parker Nerby <sup>†</sup>	High Strength Pervious Concrete
01/01/18 – 05/01/19	Jeremiah Crespo <sup>†</sup>	Ultra High Strength Concrete with Foundry Sand
01/01/18 – 05/01/18	Savanna Sitz <sup>†</sup>	Ultra High Strength Concrete with Foundry Sand
01/01/17 – 01/31/18	Michael Graves <sup>†</sup>	Ultra High Strength Concrete with Foundry Sand
01/01/17 – 12/01/17	Benjamin Wallace <sup>†</sup>	Comparing Predicted Void Content vs. Actual Void Content of Pervious Concrete – Impact of the w/c
08/01/16 – 12/01/17	Tate Talamini <sup>†</sup>	Ultra High Strength Concrete with Foundry Sand
08/01/16 – 05/01/19	Kevin Whaley <sup>†</sup>	Ultra High Strength Concrete with Foundry Sand
03/01/16 – 06/30/16	Mason Davis <sup>†</sup>	Analysis of Surface of Voids on in Place Concrete Structures
08/01/15 – 05/01/17	Cole Pilgrim <sup>†</sup>	Effect of Foundry Waste on the Impact of Concrete
01/01/15 – 05/01/16	Alex Burkhardt <sup>†</sup>	Effect of Foundry Waste on the Impact of Concrete
01/01/15 – 05/01/16	Amy Ramos <sup>†</sup>	The Effect of the Paste Thickness on the Performance of Pervious Concrete
08/01/15 – 05/01/16	Andres Sanchez <sup>†</sup>	Predicting the Void Content of Pervious Concrete Through Experimental Analysis
05/01/15 – 07/01/15	Vybav Hirasave <sup>†</sup>	The Effect of the Paste Thickness on the Performance of Pervious Concrete
01/01/16 – 05/01/16	Kevin Robbins <sup>†</sup>	Effect of Foundry Waste on the Impact of Concrete
01/01/15 – 05/01/15	Blake Meuth <sup>†</sup>	The Effect of the Paste Thickness on the Performance of Pervious Concrete

#### D. Courses Prepared and Curriculum Development:

##### Courses Prepared

##### TECH 2351 – Statics and Strength of Materials

- Updated lectures to include additional examples
- Added active learning methods
- Improved homework assignments and exams
- Included “real world” examples so the students can relate to the material

##### CIM 3330 – Concrete Construction Methods

- Updated lectures to include most recent construction practices.
- Developed in-class group exercises.
- Included actual/“real-world” construction documents.
- Developed critical thinking and “real-world” homework assignments

#### CIM 3340 – Understanding the Concrete Construction System

- Produced lectures that include updated construction practices to include modern technology.
- Developed in-class critical thinking exercises.
- Produced “real-world” construction project, which include actual construction documents and schematics.
- Developed more interactive and informative lecture slides.

#### CSM 4364 – Construction Project Management and Scheduling

- Updated lecture slides to include relevant modern examples
- Added active learning in class assignments
- Increased student involvement with in class discussions
- Developed modern homework assignments

#### TECH 5365 – Industrial Project Management and Scheduling

- Altered textbook examples to be more realistic to actual construction practices.
- Improved lecture notes to be more readable and understandable.
- Developed in-class tutorials to follow in-class lecture demonstrations.
- Developed peer-led scheduling project.

#### UNIV 124 – Experiential Learning (University of New Mexico)

- Produced initial curriculum to be used by future instructors for the class.
- Developed “Introductions to Engineering”, “Why Become an Engineer?” and “Why do I need to know this?” lectures based on up-to date employment statistics and pre-calculus topics.
- Developed in-class group worksheets for continued use in this class and similar classes.

#### CE 202 – Engineering Statics (University of New Mexico)

- Developed completely new lecture notes and example problems.
- Produced entirely new examinations.
- Developed unique homework problems.

#### New Course Development

##### CSM 5355: Research Methods for Construction

- Developed new Syllabus
- Developed course description and outcomes
- Produced new curriculum and assignments

##### CSM 5368: Advanced Sustainable Construction

- Developed new Syllabus
- Developed course description and outcomes
- Produced new curriculum and assignments

E. Funded External Teaching Grants and Contracts:  
None



F. Submitted, but not Funded, External Teaching Grants and Contracts:

G. Funded Internal Teaching Grants and Contracts: ***(\$78,500 received in total)***

1. **Torres, A (PI)**, “Challenge Based Learning for the Future of Construction: An International Learning & Research Opportunity for Concrete Industry Management Students” Texas State University International Research Accelerator (IRA) Funded amount: \$15,000
2. Shi, X., **Torres, A. (Co-PI)**, “Fostering technology-enhanced infrastructure research with Panamanian collaborators” Texas State University International Research Accelerator (IRA) Funded amount: \$15,000
3. Shi, X., **Torres, A. (Co-PI)**, “Undergraduate and Graduate Student International Collaboration Program with Panama and Texas State University” Office of Research and Sponsored Programs Discretionary Funds; Director Support] \$15,000
4. **Torres, A. (PI)**, Ortiz, A., Membrillo, J., Sriraman, V. “Developing an Active Teaching and Learning Monograph for Engineering Classes” LBJ Institute for STEM Education and Research, September 2021- July 2023, Funded amount: \$9,500
5. **Torres, A. (PI)**, Ortiz, A. (Co-PI), Membrillo, J. (Co-PI), " Enhancing Student Understanding of Statics and Strength of Materials Using Challenge-Based Learning in a Cooperative Global Exchange Setting” LBJ Institute for STEM Education and Research, September 2020- July 2023, Funded amount: \$24,000

H. Submitted, but not Funded, Internal Teaching Grants and Contracts:

Submitted Under Review:

*none*

I. Other:

1. NASA Technology Challenge Study Abroad: In 2020 and again in 2021, I have submitted an Education Abroad opportunity for Engineering Technology students. This would be the first education abroad opportunity for Engineering Technology and it would be beyond a conventional education abroad class. This opportunity will take students enrolled in TECH 2351 to Mexico City, MX, Austin, TX, and Houston, TX in collaboration with NASA. It will be mirrored with students in Tec De Monterrey in Mexico City, in which the two cohorts will start the first week in their respective institutions, then will meet and the classes blended in Mexico City for two weeks. The Tec De Monterrey students will then return with the TxState students for a week of classes at TxState, followed by tours in Austin, TX, and Houston, TX. While in Houston, both sets of students will work with NASA scientist to complete and present their final project.
  - a. I plan to submit for summer 2023

2. National Effective Teaching Institute (NETI), American Society for Engineering Education (ASEE), San Diego, CA, January 3 – 5, 2018
3. Faculty Development Institute (FDI) attendee, Society of Hispanic Professional Engineers (SHPE), Kansas City, MO, November 1 – 5, 2017
4. Portland Cement Association (PCA) Faculty Workshop, Skokie, IL, July 21 – 25, 2014
5. Program for Excellence in Teaching and Learning, Texas State University, San Marcos, TX, 2013-2014

### III. SCHOLARLY/CREATIVE

#### A. Works in Print (including works accepted, forthcoming, in press)

##### 1. Books (if not refereed, please indicate)

###### a. Scholarly Monographs:

None

###### b. Textbooks:

None

###### c. Edited Books:

None

###### d. Chapters in Books: **(1 Published)**

1. **Torres, A\***, Aguayo, F., Allena, S., Ellis, M<sup>G</sup>, “Recommendations on the Use of Various Chemical Water Reducing Agents with Ultra High Strength Concretes” Current Perspectives on Chemical Sciences Vol. 3, (2020), Chapter 1, Print ISBN: 978-93-90431-73-1, eBook ISBN: 978-93-90431-81-6

##### 2. Articles

###### a. Refereed Journal Articles: **(38 Published, 2 Submitted, 4 in Preparation)**

###### Published (with Texas State Affiliation)

Note: \*indicates corresponding author, <sup>G</sup> indicates a graduate student, <sup>U</sup> indicates an undergraduate student

1. **Torres, A\***, (2022) "Using Large Peer-Teaching Groups to Learn Construction Management Software Packages" *Journal of Construction Education*, <https://doi.org/10.1080/15578771.2022.2145394>
2. Hasan, T., Gilbert, L., Allena, S.\* , Danquah, J., **Torres, A.**, (2022) "Development of Cost-Effective and Workable Ultra-High Performance Concrete Mixtures Using Local Materials" *Buildings*, 12, 1865. <https://doi.org/10.3390/buildings12111865>

3. Villareal, R.<sup>G</sup>, **Torres, A.\***, Aguayo, F., Moro, C., (2022) "An Alternative Test Method for Determining Hardened Air Void Parameters for Durable Concrete Pavement" *Journal of Civil Engineering and Construction*, August 2022, (currently in-press)
4. Villareal, R.<sup>G</sup>, **Torres, A.\***, Aguayo, F., Moro, C., (2022) "Assessing the Degree of Polish on Hardened Concrete Air Void Parameters" *Journal of Civil Engineering and Construction*, 2022, 11(4): 177-188
5. **Torres, A.\***, Sriraman, V., Martinez-Ortiz, M., (2022) "Using Embedded Quality Managers in Peer Teaching Groups in a Construction Management Classroom" *International Journal of Instruction*, Accepted July 2022, (currently in-press)
6. Vazquez-Villegas, P, Ruiz-Cantisini, M., **Torres, A.**, Sriraman, V., Martinez-Ortiz, M., Mebrillo-Hernandez, J. (2022) "Preserving World Cultural Heritage: Social Justice and Sustainability Competencies via Socially-Oriented Interdisciplinary Education" *Journal of Teacher Education for Sustainability* (Vol. 24, Issue 1, June 2022)
7. Gopal, D.,<sup>U</sup> Fernandez, R.<sup>U</sup>, Nodehi, M.<sup>G</sup>, Debbarma, S., **Torres, A.**, Shi, X\*., (2022) "Use of Lunar Regolith Simulants to Synthesize Geopolymer for Lunar Construction" NASA Technical Brief, NASA Technical Library Depository, 2022
8. **Torres, A.\***, Hu, J., Sriraman, V., Ortiz, A., Membrillo, J., (2022) "Assessing the Effectiveness of Problem-Based Learning Across Two Concrete Construction Courses" *International Journal of Instruction*, Vol 15, No 4, pp. 473-496
9. Ikechukwu, O<sup>G</sup>., Aguayo, F., **Torres, A.\***, (2022) "Coefficient of Thermal Expansion of Concrete Produced with Recycled Concrete Aggregates" *Journal of Civil Engineering and Construction*, 11(2), p. 65-74 <https://doi.org/10.32732/jcec.2022.11.2.65>
10. **Torres, A.\***, Aguayo, F., Alena, S., (2021) "The Effect of Various Polynaphthalene Sulfonate Based Superplasticizers on the Workability of Reactive Powder Concrete" *Journal of Building Material Science*, 2(1)
11. **Torres, A.\***, Sriraman, V., & Ortiz, A. (2021). "Comprehensive assessment of a project based learning application in a project management course" *International Journal of Instruction*, 14(3), 463-480
12. **Torres, A.\***, (2020) "Using Foundry Waste Materials in Concrete for a More Sustainable Future" *Cur Trends Civil & Struct Eng.* 6(2): CTCSE.MS.ID.000638. DOI: 10.33552/CTCSE.2020.06.000638.
13. **Torres, A.\***, Aguayo, F., Gaedicke, C., Nerby, P.<sup>U</sup>, Cavazos, M.<sup>U</sup>, Nerby, C.<sup>U</sup>, (2020) "Developing High Strength Pervious Concrete Mixtures with Local Materials" *Journal of Material Science and Chemical Engineering*, V8, pg. 20-24,
14. Aguayo, F\*., **Torres, A.**, Kim, Y.J., Thombare, O.<sup>G</sup> (2020), "Accelerated Carbonation Assessment of High-Volume Fly Ash Concrete" *Journal of Material Science and Chemical Engineering*

15. **Torres, A.\***, Aguayo, F., Allena, S., Ellis, M<sup>G</sup>, (2019) “Investigating the Rheological Properties of Ultra High Strength Concrete Made with Various Superplasticizers” *Journal of Advances in Science and Engineering*; 11(2)
16. **Torres, A.\***, Aguayo, F., Allena, S., Ellis, M<sup>G</sup>, (2019) “Mechanical Properties of Ultra High Performance Fiber Reinforced Concrete Made with Foundry Sand” *Journal of Civil Engineering and Construction*; 8(4):157-167
17. **Torres, A.\***, Aguayo, F., Allena, S., (2019) “Developing Sustainable Ultra High Strength Concrete Mixtures Using Spent Foundry Sand” *Journal of Civil Engineering and Architecture*, 13, 343-352
18. **Torres, A.\***, Gaedicke C., Hu, J., Bejugam, R.<sup>G</sup>, and McMasters, S.<sup>G</sup>, (2018) “Comparing Design Void Content with Actual Void Content of Laboratory Prepared Pervious Concrete”, *Materials Sciences and Applications*, 9, 596-613.
19. Yoo Jae Kim\*, Ryno van Leeuwen<sup>G</sup>, Bum-Yean Cho, Vedaraman Sriraman, **Anthony Torres**, (2018) “Evaluation of the Efficiency of Limestone Powder in Concrete and the Effects on the Environment” *Journal of Sustainability*, 10, 550
20. Sharma, H.<sup>G</sup>, **Torres, A.\***, Kim, Y.J., Hu, J., Sriraman, V., Ellis, J.<sup>G</sup>, (2018) “Building a User-Friendly LCI Prediction Model for Concrete Mixtures” *Journal of Sustainable Construction Materials and Technology* 3(1) pp. 138-155
21. Sriraman, V.\* , Ortiz, A., **Torres, A.**, (2017) “Teaching Sustainable Engineering and Industrial Ecology using a Hybrid Problem-Project Based Learning Approach” *Journal of Engineering Technology*, Vol 4, Issue 2, pp. 8-15
22. **Torres, A.\***, Sriraman, V., and Ortiz, A., (2017) “Implementing Project Based Learning in a Concrete Industry Management Course” *International Journal of Construction Education and Research*, Vol 2, pp 19-31
23. Kim, H. H.<sup>G</sup>, Mazumder, M.<sup>G</sup>, **Torres, A.**, Lee, S.-J.\* , and Lee, M.-S., (2017) “Characterization of CRM Binders with Wax Additives Using an Atomic Force Microscopy (AFM) and an Optical Microscopy,” *Advances in Civil Engineering Materials*, Vol. 6, No. 1, pp. 504–525, ISSN 2379-1357
24. Aguayo, F.\* , **Torres, A.**, Talamini, T.<sup>U</sup>, and Whaley, K.<sup>U</sup>, (2017) “Investigation into the Heat of Hydration and Alkali Silica Reactivity of Sustainable Ultrahigh Strength Concrete with Foundry Sand,” *Advances in Materials Science and Engineering*, vol. 2017, Article ID 2096808, 11 pages. doi:10.1155/2017/2096808
25. Bartlett, L.N.\* , Rahman, R.<sup>G</sup> & **Torres, A.**, (2017) “Minimizing Phosphorus Pickup During Melting and Casting of Lightweight Fe–Mn–Al–C Steels” *Inter Metalcast*. doi:10.1007/s40962-017-0152-9
26. **Torres, A.\***, Bartlett, L., Pilgrim, C.<sup>U</sup>, (2017) “Effect of foundry waste on the mechanical properties of Portland Cement Concrete”, *Construction and Building Materials*, Volume 135, Pages 674-681, ISSN 0950-0618

27. Gaedicke, C\*, **Torres, A**, Huynh, K<sup>G</sup>, Marines A,<sup>G</sup> (2016) “A method to correlate splitting tensile strength and compressive strength of pervious concrete cylinders and cores”, *Construction and Building Materials*, Volume 125, Pages 271-278, ISSN 0950-0618
28. Talley, K.\* and **Torres, A.**, (2016) “Measuring the Impact of Rapid Feedback Daily Objective Pedagogy” *International Journal of Construction Education and Research*, pg 1-23, doi: 10.1080/15578771.2016.1200697
29. **Torres, A.\*** and Hu, J., (2016) “An Alternate Test Method for the Void Content of Pervious Concrete,” *Advances in Civil Engineering Materials*, Vol. 5, No. 1, pp. 24–45, doi:10.1520/ACEM20150022. ISSN 2165-3984
30. **Torres, A.\*** and Burkhart, A.<sup>U</sup> (2016) Developing Sustainable High Strength Concrete Mixtures Using Local Materials and Recycled Concrete. *Materials Sciences and Applications*, 7, 128-137. <http://dx.doi.org/10.4236/msa.2016.72013>
31. **Torres, A.\*** Barr, R.<sup>G</sup>, (2016) “The Development of a Heated-Stage Optical Microscope for ZBLAN Microgravity Crystallization” *Microgravity and Science and Technology*, Volume 15 (64), Pages 1-14, DOI: 10.1007/s12217-016-9488-7
32. **Torres, A.\*** Barr, R.<sup>G</sup>, (2015) “A Quantitative Characterization Of Micro-Gravity And Unit-Gravity Processed ZBLAN Glass”, *Materials Characterization*, Volume 107, Pages 386-397, ISSN 1044-5803
33. **Torres, A.\*** Hu, J., Ramos, A.<sup>U</sup>, (2015) “The Effect of the Cementitious Paste Thickness on the Performance of Pervious Concrete”, *Construction and Building Materials*, Volume 95, Pages 850-859, ISSN 0950-0618
34. **Torres, A.\*** Ganley, J., Maji, A, (2014) “The Effect of Microcrystals on ZrF4-BaF2-LaF3-AlF3-NaF Glass Fiber Fracture” *Journal of Experimental Techniques*; doi:10.1111/ext.12118;
35. **Torres, A.\*** Maji, A., Ganley, J., (2014) “Experimental and Analytical Techniques for Studying ZBLAN Crystallization in Microgravity” *Journal of Experimental Techniques*; doi: 10.1111/ext.12099;
36. **Torres, A.\*** Maji, A., Ganley, J., (2014) “Understanding the Role of Gravity in the Crystallization Suppression of ZBLAN Glass” *Journal of Material Science*, Volume 49(22), pp7770-7781
37. **Torres, A.\*** Maji, A., Ganley, J., Tucker, D., Starodubov, D. (2014) “Increasing the Working Temperature Range of ZBLAN Glass Through Microgravity Processing” *Optical Engineering*, 53(3) 036103
38. **Torres, A.\*** and Maji, A., (2013) “The Development of a Modified Bi-Axial Composite Test Specimen” *Journal of Composite Materials*, V47 (19), pp 2385 – 2398

## b. Non-refereed Articles:

None

## 3. Conference Proceedings

a. Refereed Conference Proceedings: *(21 Published and 1 Under Review)*Published (with Texas State Affiliation)

Note: \* indicates corresponding author, <sup>G</sup> indicates a graduate student, <sup>U</sup> indicates an undergraduate student

1. Aguayo, F., **Torres, A.**, Ikechukwu, O.<sup>G</sup>, Nodehi, M.<sup>G</sup> “Carbonation and Chloride Induced Corrosion in Novel Rapid Hardening Cements” 2022 International Materials Research Congress, Cancun, Mexico
2. Aguayo, F.\* , Okechi, I<sup>G</sup>, **Torres, A.**, "Influence of Relative Humidity and CO2 Concentration on the Carbonation of Alternative Cementitious Binders" The Corvallis Workshop: Concrete Fit for Purpose and Planet, Oregon State University, May 2022
3. Trueba, L., **Torres, A.**, "Incorporated a Milestone-Based Project Based Learning Method in a Foundry Course" 2022 ASEE Annual Conference and Exposition
4. **Torres, A.\***, Aguayo, F., (2020) “Alkali-Silica Reactivity of Ultra-High Strength Foundry Sand Concrete” 2020 Transportation Consortium of South Central States Conference
5. Aguayo, F., **Torres, A.**, (2020) “Hydration and Strength Development in Blended Class F and Class C Fly Ash Systems” 2020 2020 Transportation Consortium of South Central States Conference
6. **Torres A.\***, Aguayo F., Allena S., Ellis M.<sup>G</sup> (2020) The Effect of Various Superplasticizers on Ultra High Strength Concrete. In: Martirena-Hernandez J., Alujas-Díaz A., Amador-Hernandez M. (eds) Proceedings of the International Conference of Sustainable Production and Use of Cement and Concrete. RILEM Bookseries, vol 22. Springer, Cham
7. Aguayo F., **Torres A.**, Thombare O.<sup>G</sup>, Drimalas T. (2020) Evaluating Carbonation-Induced Corrosion in High-Volume SCM Mixtures Through the Square Root Model. In: Martirena-Hernandez J., Alujas-Díaz A., Amador-Hernandez M. (eds) Proceedings of the International Conference of Sustainable Production and Use of Cement and Concrete. RILEM Bookseries, vol 22. Springer, Cham
8. **Torres A.**, Aguayo F., “The Effect of Foundry Waste on the Mechanical Properties of Self Consolidating Concrete” ACI Convention, October 2019, Cincinnati, OH
9. **Torres, A.\*** Kibling, K.<sup>G</sup>, Sriraman, V., Ortiz, A., “The Use of Peer Teaching Quality Managers to Improve Student Learning Retention in a Construction Project Management Course” ASEE’s 125<sup>th</sup> Annual Conference and Exhibition, June, 2018

10. Sriraman, V.,\* Ortiz, A., **Torres, A.**, “Teaching Sustainable Engineering and Industrial Ecology using a Hybrid Problem-Project Based Learning Approach” ASEE’s 124<sup>th</sup> Annual Conference and Exhibition, June, 2017 *Best Paper Award – Engineering Technology Division 2017*
11. Bartlett, L.,\* Rahman, R.<sup>G</sup>, **Torres, A.**, “Evaluation of Molten Steel-Refractory Interactions in High Manganese and Aluminum Steels during Transfer Operations” Accepted January 2017 to *Metal Casting Congress* by the American Foundry Society, April, 2017
12. **Torres, A.**,\* Sriraman, V., Ortiz, A., “Considering the Effectiveness of Comprehensive Assessment and the Impact of PrBL Implementation in a Concrete Industry Project Management Course” ASEE’s 123<sup>rd</sup> Annual Conference and Exhibition, June 26 – 29, 2016
13. **Torres, A.**,\* Barr, R.<sup>G</sup>, “An Alternative Crystallization Characterization Method For ZBLAN Glass” *Materials Science & Technology 2015*, October 4-8, 2015
14. **Torres, A.**,\* Vedaraman, S., Peer-Teaching in Construction Project Management Scheduling Software” ASEE’s 122<sup>nd</sup> Annual Conference and Exhibition, June 14 – 17, 2015
15. **Torres, A.**,\* Vedaraman, S., “Project Based Learning in Concrete Industry Project Management” ASEE’s 122<sup>nd</sup> Annual Conference and Exhibition, June 14 – 17, 2015
16. **Torres, A.**,\* Maji, A., Ganley, J., “Analyzing the Bending Ability of ZBLAN Glass Fibers” ASCE Earth and Space Conference, ASCE Earth and Space Conference; pp. 1 - 5
17. **Torres, A.**,\* Maji, A., Ganley, J., “Characterization of a Heating and Quenching Testing Apparatus for Microgravity Testing” *Experimental and Applied Mechanics*, Volume 6, Conference Proceedings of the Society for Experimental Mechanics Series, 10.1007/978-3-319-06989-0\_9, June 2-5, 2014; Greenville, SC, pp. 67-73
18. **Torres, A.**,\* Maji, A., Ganley, J, Tucker, D. and Starodobov, D., “Enhanced Processability of ZrF<sub>4</sub> – BaF<sub>2</sub> – LaF<sub>3</sub> – AlF<sub>3</sub> - NaF glass Microgravity” *Proc. SPIE 8704, Infrared Technology and Applications XXXIX*, 87042C (2013), doi:10.1117/12.2018308 pp. 1-13

Published (with University of New Mexico Affiliation)

1. **Torres, A.**,\* Maji, A., and Tarefder, R., (2012) “Effect of Holes on the Bi-Axial Strength of Woven Composites” ASCE Earth and Space Conference 2012; pp. 641 – 646
2. **Torres, A.**,\* Maji, A., and Tarefder, R., (2010) “The Development of a Modified Bi-Axial Composite Test Specimen” ASCE Earth and Space Conference 2010: pp.1716-1721

b. Non-refereed:  
None

## 4. Abstracts:

1. **Torres, A.\***, Hu, J. “The Effect of the Cementitious Paste Thickness on the Performance of Pervious Concrete” EMI 2014, Hamilton, ON, Canada; August 5-8, 2014

## 5. Reports:

None

## 6. Book Reviews:

None

## 7. Other Works in Print:

None

## B. Works not in Print

None

1. Papers Presented at Professional Meetings: *(17 Presented, 1 Accepted to be Presented)*Presented (with Texas State Affiliation)

Note: \* indicates corresponding author, <sup>G</sup> indicates a graduate student, <sup>U</sup> indicates an undergraduate student

1. Aguayo, F., **Torres, A**, Ikechukwu, O.<sup>G</sup>, Nodehi, M.<sup>G</sup> “Carbonation and Chloride Induced Corrosion in Novel Rapid Hardening Cements” 2022 International Materials Research Congress, Cancun, Mexico
2. Trueba, L., **Torres, A**, "Incorporated a Milestone-Based Project Based Learning Method in a Foundry Course" 2022 ASEE Annual Conference and Exposition
3. Okechi, I<sup>G</sup>, Aguayo, F. \*, **Torres, A**, “Influence of Relative Humidity and CO2 Concentration on the Carbonation of Alternative Cementitious Binders” The Corvallis Workshop: Concrete Fit for Purpose and Planet, Oregon State University, Presented May 2022
4. **Torres, A.\***, Aguayo, F., (2020) “Alkali-Silica Reactivity of Ultra-High Strength Foundry Sand Concrete” 2020 Transportation Consortium of South Central States Conference
5. Aguayo, F., **Torres, A.**, (2020) “Hydration and Strength Development in Blended Class F and Class C Fly Ash Systems” 2020 2020 Transportation Consortium of South Central States Conference
6. **Torres A.**, Aguayo F., “The Effect of Foundry Waste on the Mechanical Properties of Self Consolidating Concrete” ACI Convention, October 2019, Cincinnati, OH
7. **Torres, A.\*** Kibling, K.<sup>G</sup>, Sriraman, V., Ortiz, A., “The Use of Peer Teaching Quality Managers to Improve Student Learning Retention in a Construction Project Management Course” ASEE’s 125<sup>th</sup> Annual Conference and Exhibition, June, 2018



8. Sriraman, V.,\* Ortiz, A., **Torres, A.**, “Teaching Sustainable Engineering and Industrial Ecology using a Hybrid Problem-Project Based Learning Approach” ASEE’s 124<sup>th</sup> Annual Conference and Exhibition, June, 2017
9. **Torres, A.**,\* Vedaraman, S., Ortiz, A. “Considering the Effectiveness of Comprehensive Assessment and the Impact of PrBL Implementation in a Concrete Industry Project Management Course” Submitted to ASEE’s 123<sup>rd</sup> Annual Conference and Exhibition, June, 2016
10. **Torres, A.**,\* Barr, R., “An Alternative Crystallization Characterization Method For ZBLAN Glass” Materials Science & Technology 2015, October 4-8, 2015
11. **Torres, A.**,\* Vedaraman, S., Peer-Teaching in Construction Project Management Scheduling Software” ASEE’s 122<sup>nd</sup> Annual Conference and Exhibition, June 14 – 17, 2015
12. **Torres, A.**,\* Vedaraman, S., “Project Based Learning in Concrete Industry Project Management” ASEE’s 122<sup>nd</sup> Annual Conference and Exhibition, June 14 – 17, 2015
13. **Torres, A.**,\* Maji, A., Ganley, J., “Analyzing the Bending Ability of ZBLAN Glass Fibers” ASCE Earth and Space Conference, October 27–29, 2014; St. Louis, MO
14. **Torres, A.**,\* Maji, A., Ganley, J., “Characterization of a Heating and Quenching Testing Apparatus for Microgravity Testing” SEM Annual Conference and Exposition on Experimental and Applied Mechanics, June 2-5, 2014; Greenville, SC, USA

Presented (with University of New Mexico Affiliation)

1. **Torres, A.**,\* Maji, A., Ganley, J, Tucker, D. and Starodobov, D., (2013) “Enhanced Processability of  $ZrF_4 - BaF_2 - LaF_3 - AlF_3 - NaF$  glass Microgravity” Proc. SPIE 8704, Infrared Technology and Applications XXXIX, 87042C, June 18, 2013; Baltimore, MD, pp. 1-13
  2. **Torres, A.**,\* Maji, A., and Tarefder, R., (2012) “Effect of Holes on the Bi-Axial Strength of Woven Composites” ASCE Earth and Space Conference, April 13-18, 2012; pp. 641 – 646
  3. **Torres, A.**,\* Maji, A., and Tarefder, R., (2010) “The Development of a Modified Bi-Axial Composite Test Specimen” ASCE Earth and Space Conference, March 14-17, 2010: pp.1716-1721
2. Invited Talks, Lectures, and Presentations: *(5 Presented)*
1. **Torres, A.**, “Active Teaching and Learning Strategies”, LBJ Institute for STEM Education, San Marcos, TX, December 2, 2019
  2. Aguayo, F. (Author), Torres, A. S. (Co-Author), Joseph Prabhakar, S. M. (Co-Author), ACI Houston Chapter – Concrete Symposium, "An Alternative Approach to Evaluating Sulfate Resistance of Cement-Based Systems," ACI Houston Chapter, Houston, United States. (July 2019)

3. **Torres, A.**, Aguayo, F., “Hydration and Alkali Silica Reaction Performance of Ultra High Strength Concrete with Foundry Sand” *Keynote Lecture* – Society of Hispanic Professional Engineers (SHPE); Agricultural, Civil, Environmental & Biological Engineering Session, Kansas City, MO, November 1 – 5, 2017

4. **Torres, A.**, Hu, J. “The Effect of the Cementitious Paste Thickness on the Performance of Pervious Concrete,” 2014 Engineering Mechanics Institute (EMI) Conference, August 5-8, 2014

5. **Torres, A.** TxState Material Science Engineering and Commercialization (MSEC) Ph.D. Program Seminar, “How to be Successful in Your Career/Understanding the Role of Gravity in the Devitrification of ZBLAN Glass” November 15, 2013

6. **Torres, A.**, Maji, A., New Mexico Institute of Technology, Material Science Seminar: “Understanding the Role of Gravity in the Devitrification of ZBLAN Glass,” April 12, 2013

3. Consultancies:

1. Currently consulting for Flawless Photonics, a premier material manufacturer based in Luxemburg and the US.

4. Workshops:

1. Ortiz, A., **Torres, A.**, “Supporting ABET Engineering Learning Outcomes with 7 Active Teaching and Learning Strategies” Presented at 2019 EDUCON – The Global Engineering Education Conference in Dubai, UAE, April 9-11, 2019.

5. Other Works not in Print: *(5 publications under review, 3 publications in progress)*

a. Works “submitted” or “under review”

1. Submitted Journal Publication: **Torres, A.**<sup>\*</sup>, "Using Project Based Learning to Improve Student Comprehension of Sustainability in Concrete Technology" International Journal of Instruction, Submitted July 2022
2. Submitted Conference Proceeding: **Torres, A.**<sup>\*</sup>, Aguayo, F., Moro, C., Shi, X., "Developing High Early Strength Sustainable Concrete Mixtures" VIII International Engineering Science and Technology Conference, Panama City, Panama; October 19 - 21, 2022
3. Submitted Conference Proceeding: **Torres, A.**<sup>\*</sup>, Aguayo, F., Moro, C., Shi, X., "Sustainable Ultra High Performance Concrete Through the Use of Rapid Setting and Hardening Cements" American Concrete Institute, 2023 National Convention

b. Works “in progress”

1. Journal Article: **Torres, A.**<sup>\*</sup> Aguayo, F., “Coefficient of Thermal Expansion of Ultra High Strength Concrete Made with Foundry Sand” To be Submitted to Advances in Civil Engineering

2. Journal Article: Aguayo, F., \* **Torres, A.**, “Expansion due to Alkali Silica Reaction of Ultra High Strength Concrete made with Foundry Sand, Recycled Concrete, and Reactive Aggregate” To be Submitted to Construction and Building Materials
3. Journal Article: Argha, D., Aguayo, F\*., **Torres, A.**, "The Effect of Chemical Composition of Commercially Available and Lab Blended Calcium Sulfoaluminate (CSA) Cements on fresh and Mechanical Properties" To be Submitted to Journal of Building Materials.
4. Talley, K., S., Torres, A, "Managing the Making: Developing Makerspace Management Software to Efficiently Improve Access and Safety" To be Submitted to the International Journal of Academic Makerspace and Making, To be Submitted in Fall 2022

c. Other works not in print

1. **Webinar Presentation:** The Panamanian government is interested in improving their infrastructure through research and testing. Ron Epperson from the University Advancement office set up a virtual webinar to showcase TxState’s capabilities. I represented Eng. Tech. and our concrete materials lab by providing a 1hr presentation. This took place on June 2021.
  - a. Over 100 other people from different governments attended the webinar.
  - b. This led to a separate virtual meeting with the Peruvian government in, July 2021.
  - c. In November 2021 a Panama ambassador visit TxState and our laboratories.
  - d. This has led to a MOU with personnel from both countries for future collaborations.

Student Poster Presentation

1. Okechi, I., Aguayo, F., Torres, A., "Evaluation of Carbonation in Concrete Produced using Rapid Hardening Binders" ACI Virtual Convention, Fall 2021
2. **Torres, A.,\*** Ramos, A., Meuth, B., “Correlation of Performance Properties to the Cementitious Paste Thickness of Pervious Concrete” April 25, 2014 TxState Student Undergraduate Research Conference
3. **Torres, A.,\*** Burkhardt, A., “Characterization of Recycled Concrete Aggregate in Ultra High Performance Concrete” April 25, 2014 TxState Student Undergraduate Research Conference
4. **Torres, A.,\*** Hu, J., Ramos, A., Meuth, B., “Correlation of Performance Properties to the Cementitious Paste Thickness of Pervious Concrete” November 22, 2013 TxState University Women in Science and Engineering (WISE) Conference Poster Presentation

C. Grants and Contracts

1. Funded External Grants and Contracts: ***(17 Funded, 13 Submitted and Under Review: \$1.64M Awarded, \$1.8 Under Review)***

1. Grant as Senior Personnel: Shi, X. (PI), Collins, K (Co-PI), **Torres, A. (Senior Personnel)**, "Planning grant: Lunar Concrete for Additive Manufacturing Using Locally Available Resources on the Moon" NASA M-STTR, October 1, 2022 - September 31, 2023, Awarded: \$50,000
2. Grant: Collins, K., **Torres, A. (Co-PI)**, "FAMA 3: High School IDEAS (Innovation, Discovery, and Exploration in Aerospace and Science)" NASA NSPIRES, November 2022 – October 2025, Awarded \$479,800
3. Grant: **Torres, A., (PI)**, "Short and Long-term Durability Performance of Rapid Setting Hydraulic Cements for Structural Applications" Texas Department of Transportation September 2022 – August 2023, Awarded: \$107,509
4. Grant: **Torres, A., (PI)**, "Understanding the Effect of Vibration on the Crystallization of Materials for Space Exploration" Universities Space Research Association/Space Force, June 2022 – February 2025; Awarded \$350,000
5. Competition Award/Grant: **Torres, A (PI)**, "Understanding the Effects of Vibration on Space Based Construction Materials" AFRL Hyperspace Challenge 3<sup>rd</sup> Place and Overall Crowd Favorite, December 2021 – August 2023; Awarded: \$10,000
6. Grant: **Torres, A. (PI)**, "Use of Rapid Setting Hydraulic Cements for Structural Applications" Texas Department of Transportation, September 2021 – August 2022, Awarded: \$101,796
7. Grant: **Torres, A. (PI)**, Aguayo, F. (Co-PI), "Enhanced Entrained Air Void System Characterization for Durable Highway Concrete" National Road Research Alliance (Executed through the Minnesota Department of Transportation). Jan 2021 – September 2022, Awarded: \$120,000
8. Sponsored Research Agreement: **Torres, A. (PI)**, Carbonation-Induced Corrosion: Laboratory and Field Evaluations, Lafarge Holcim, December 2021 – December 2025, Awarded: \$22,000
9. Student Endowment for Research: Student endowment from private investor for student support in CIM program. Refel Rushing. Ralph B. Rushing Engineering Technology Scholarship October 2021 – ongoing, Awarded: \$60,000
10. Grant: Shi, Xijun (PI), Torres, A., (Co-PI), "Geopolymer for Future Lunar 3D Construction" NASA University MINDS 2-semester Undergraduate Student Research Opportunity, October 2021 – October 2022, Awarded \$1,500
11. Sponsored Research Agreement: **Torres, A., (PI)**, "Mechanical Performance of Glass Fiber Reinforced Concrete" The Fountain People, San Marcos, TX: Awarded \$1,500 (May 2018 – August 2019)
12. Sponsored Research Agreement: **Torres, A. (PI)**, Aguayo, F., Kim, Y.J., Wilde, J., "Developing Sustainable High Strength Concrete Mixtures" Concrete Industry

Management (CIM) Patrons Board, San Marcos, TX: Awarded: \$50,000 (May 2018 – August 2019)

13. Sponsored Research Agreement: **Torres, A.** (PI), “Assessing Surface Void Ratio of In-Place Concrete Using Comparative Test Measures” American Society of Concrete Contractors, Education, Research, and Development Foundation, St. Louis, MO, Awarded: \$5,000 (March 2016 – March 2017)
14. Sponsored Research Agreement: **Torres, A.** (PI), “The Impact of Fibers on the Compressive Strength of Conventional Concrete” Fountain People, San Marcos, TX: Awarded: \$1,500 (Nov. 2015 – Nov. 2016)
15. Memorandum of Understanding (MOU): **Torres, A.** (PI), “Optimizing The Effect of Foundry Waste on the Performance of Concrete” Concrete Industry Management (CIM) Patrons, San Marcos, TX: Awarded: \$6,000 (May 2015 – May 2016),
16. Memorandum of Understanding (MOU): **Torres, A.** (PI), “Development of a CIM Webpage” Concrete Industry Management (CIM) Patrons, San Marcos, TX: Awarded: \$4,500 (May 2015 – August 2015)
17. Subcontract: **Torres, A.** (PI), “The Effect of Gravity on Material Properties,” Utah State University Research Foundation – Space Dynamics Laboratory, North Logan, UT, June 1, 2014 – May 31, 2016; Received (TxState): \$286,198
18. Contract: Kim, Y. J. (PI), **Torres, A.** (Co-PI), “Concrete Based on Portland Limestone Cement with Limestone Content Greater Than 15%,” Capital Aggregates Inc., Austin, TX, June 1, 2014 – May 31, 2015; Received: \$30,000

2. Submitted, but not Funded, External Grants and Contracts:

Submitted (Under Review)

1. **Submitted:** Moro, C, **Torres, A.** (Co-PI), " Identification of Fly Ash Alternatives to be used in Highway Construction" Arizona Department of Transportation, Requested \$25,000, January 2023 – December 2023
2. **Submitted:** Moro, C., **Torres, A.** (Co-PI), " Economic Assessment of CO2-Cured Mortars with High Volume Recycled Materials" American Concrete Institute (ACI) Foundation. Concrete Research Council (CRC), Requested \$57,500, January 2023 – December 2023  
Note: Obtained proposal support from ACI Committee 130 - Sustainability of Concrete and ACI Committee 555 – Concrete with Recycled Materials
3. **Submitted: Torres, A., (PI)**, "Developing a performance-based concrete overlay mix design for improved resistance to early-age cracking and increased durability" Texas Department of Transportation, White Paper
4. **Submitted: Torres, A., (PI)**, Shi, X., “Developing Electrically Conductive Cementitious Materials for Smart Infrastructure" Texas Department of Transportation, White Paper

5. **Submitted: Torres A., (PI)**, Moro, C., "Ultra High Performance Concrete University Transportation Center - ULTRAns - Tier 1 University Transportation Center" U.S. Department of Transportation; Subcontract with New Mexico State University; Requested: \$105,000; November 15, 2022 - November 14, 2023
6. **Submitted: Torres, A. (PI)**, Moro, C., Shi, X., "Incorporating Plant Based High Purity Graphene into Concrete Materials for Improved Performance; Phase 1 Testing" SurgePower (local industry company) Requested \$30,000, September 1, 2022 – December 2022
7. **Submitted:** Moro, C., Torres, A. (Co-PI) "Regional Low Embodied Carbon Concrete Mixture Development and Constructability Review" National Ready-Mix Concrete Association (NRMCA), Requested \$28,500, October 2022 – March 2023
8. **Submitted:** Moro, C., Shi, X., Torres, A. (Co-PI), "Improving the Workability, Finish Quality, and Freeze-Thaw Durability of Concrete for Plungie's Products" Plungie Concrete Swimming Pool (US/Australia Based Company), Requested \$70,000, September 1, 2022 – August 31, 2022
9. **Submitted: Torres, A., (PI)**, "Developing and Improving ICON's Concrete for 3D Printing (short and long-term durability)" ICON 3D Printing (local company), Requested \$200,000, Fall 2022 – Fall 2025
10. **Submitted:** Moro, C., **Torres, A., (Co-PI)** "Improving the Sustainability of Cementitious Materials with High Percentages of Calcium Sulfoaluminate Cement, Slag, and CO2 Curing" NEx (An ACI Center of Excellence for Nonmetallica Building Materials), Requested: \$79,851, September 2023 - August 2023
11. **Submitted:** Membrillo, J. (PI), **Torres, A. (Co-PI)**, "Building an alternative border wall: education as a tool for transiting to a new society" Spencer Foundation, Submitted Spring 2022, Requested \$500,000, 3-year project
12. **Submitted:** Grasley, Z., Juenger, M., Ley, T., Taha, M.M., **Torres, A. (Co-PI)**, "NSF Engines: Type 1: South-Central Engine for Innovative and Sustainable Construction Materials" National Science Foundation, Requested \$1,000,000 in total, to be distributed to all participating schools, amount to TxState TBD, January 1, 2023 – December 31, 2023
13. **Submitted: Torres, A. (PI)**, Shi, Xijun (Co-PI), "Implementation of advanced technology and materials recycling techniques for use of alternative materials in concrete as plain or reinforced material" California DOT, Submitted Fall 2021 Requested \$350,000, 3-year project
14. **Submitted: Torres, A., (PI)**, Trueba, L. (Co-PI), "Enabling Space Based Remote Assessment of Austere Landing Sites, Universities Space Research Association, Submitted 2021, Requested \$350,000 [not initially awarded, but reviewers stated "significant merit" to be placed in a "pending future funding" category. Likely to be awarded within a year] 3-year project

Submitted (Not Funded)

1. Grant: Obaldia, E., Shi, X., **Torres, A** (Senior Personnel), “Undergraduate and Mobility Research Program Between Universidad Tecnologica de Panama and Texas State University” SENACYT, Requested \$50,000,
2. Grant: **Torres, A. (PI)**, Shi, Xijun (Co-PI), Moro, Carlos (Co-PI), “Evaluate Nanomaterials in Concrete for Improved Durability” Texas Department of Transportation, Submitted Spring 2022, Requested \$572,042, 3-year project
3. Grant: Shi, Xijun (PI), Torres, A. (Co-PI), "The Use of Alternative Cementitious Materials in Concrete Pavements" National Road Research Alliance, Submitted 2021, Requested: \$150,000
4. Grant: Torres, A. (PI), Shi, Xijun (Co-PI), "Chemistry and Performance of Supplementary Cementitious Materials (SCMs) for Wisconsin Concrete Pavement" Wisconsin Department of Transportation, Requested: \$200,000, 3-year project
5. Grant: Torres, A. (PI), Shi, Xijun (Co-PI), "Use of Alternative Pozzolanic Materials Towards Reducing Cement Content in Concrete" National Road Research Alliance, Submitted 2021, Requested: \$170,000, 3-year project
6. Grant: Trueba, L, Torres, A., "Determination of Critical Thread Engagement Length for UN and M Profile Threads" Submitted to the Department of Defense, Submitted 2021, Requested: \$443,795, 3-year project
7. Grant: **Torres, A. (PI)**, Shi, Xijun (Co-PI), “Assessment of Alternative Pozzolans for use in Minnesota Concrete” Minnesota Department of Transportation, Submitted 2021, Requested: \$325,915
8. Grant: **Torres, A. (PI)**, “Developing a Novel Device and Procedure to Calibrate Satellite Imagery of Austere Airfields for Concrete Pavements” Submitted to the Air Force Research Laboratory. Submitted 2020, Requested: \$150,000
9. Grant: **Torres, A. (PI)** “Understanding the Effect of Vibration on the Crystallization of Materials Studied in Microgravity” Submitted to the Air Force Research Laboratory. Submitted 2020, Requested: \$146,000
10. Grant: **Torres, A. (PI)** “Enabling Space Based Remote Assessment of Austere Landing Sites: PHASE 1 – Prototype Development and Testing” Submitted to the Air Force Air Mobility Command. Submitted 2020, Requested: \$383,563
11. Grant: **Torres, A. (PI)**, Aguayo, F. (Co-PI) “Asphalt versus Concrete – Tool to guide in Selection of Pavement Type” Submitted to the Minnesota Department of Transportation, Submitted 2020, Requested: \$128,828

12. Grant: Aguayo, A. (PI), **Torres, A.** (Co-PI), “Developing a Bridge Low Slump Concrete Overlay Mix Design for Improved Resistance to Early-Age Cracking” Submitted to the Minnesota Department of Transportation, Submitted 2020, Requested: \$224,950
13. Grant: Aguayo, F., **Torres, A.** (Co-PI), Ozbakkalogly, T., “Increasing the Allowable Content of Recycled Crushed Concrete Fine Aggregate in Class P Concrete” Texas Department of Transportation, Submitted 2020, Requested: \$385,930
14. Grant: **Torres, A.**, (PI), Wilde, J., “Exploring Feasibility of Using Rapid Setting Cements as a Cost-Effective Solution for Structural Applications in Texas” Texas Department of Transportation, Submitted 2019, Requested: \$300,942.50
15. Grant: Aguayo, F., **Torres, A.** (Co-PI), Bandelt, M., Adams, M., “Synthesis of Engineered Cementitious Composites (ECC) for its Application in Texas”, Texas Department of Transportation, Submitted 2019, Requested: \$54,840
16. Grant: Aguayo, Federico M. (PI), Khaleghian, Seyedmeysam (Co-PI), You,Byoung H., Song, In-Hyounk, **Torres, Anthony S.**, Schemmel, John, Ozbakkaloglu, Togay. Research Experience for Undergraduates in Enhanced Infrastructure Systems, NSF, Federal, \$399,097.00. Not Funded: (Submitted: August 2019).
17. Grant: Aguayo, F., **Torres, A.** (Co-PI), Bandelt, M., Adams, M., “Utilizing Steel Fibers as Concrete Reinforcement in Bridge Decks”, Texas Department of Transportation, Submitted 2018, Requested: \$315,583
18. Contract: Aguayo, F., **Torres, A.** (Co-PI), “Evaluation of Binary Cementitious Mixtures Incorporating Granulated Ground Blast Furnace Slag for use in Precast Concrete Elements, Bexer Concrete Works, Submitted September 2018, Requested: \$40,724
19. White Paper: Aguayo, F., **Torres, A.** (Co-PI), “Increasing reliability and performance in concrete produced by volumetric-batching and continuous-mixing” Texas Department of Transportation, Submitted 2018
20. Grant: **Torres, A.**, (PI) Aguayo, F., Kim, Y.J., Wilde, J., Bandelt, M., Adams, M., “Utilization of UHPC Bridge Superstructures in Texas”, Texas Department of Transportation, Submitted 2018, Requested: \$529,439.30
21. NSF Proposal: Aguayo, F., **Torres, A.** (Co-PI), “Acquisition of a Large Capacity, High Shear Pan Mixer for Sustainable, High-Performance and Ultra-High Performance Concrete Research” National Science Foundation Major Research Instrumentation (MRI) internal competition; Submitted 2018, Requested: \$173,000
22. Grant: Aguayo, F., **Torres, A.** (Co-PI), “Using Reclaimed Concrete to Determine Appropriate Methods and Procedures to Assess Alkali-Silica Reactivity of Recycled Concrete Aggregate” Submitted November 2017 to ACI Concrete Research Council; Requested \$50,000



23. Grant: Aguayo, F., **Torres, A.** (Co-PI), “Development of Performance Criteria for Recycled Concrete Aggregate Through Simultaneous Laboratory and Field Testing” Submitted November 2016 to ACI Concrete Research Council; Requested \$50,000
24. White Paper: **Torres, A** (PI), Aguayo, F, Kim, Y.J. “Durability and Strength Validation of Waste Foundry Sand in Hydraulic Cement Concrete” Texas Department of Transportation Submitted 2017
25. White Paper: Aguayo, F., **Torres, A.** (Co-PI), “Evaluating Hydraulic Cement Concrete Containing Greater than 40% Supplementary Cementitious Materials” Texas Department of Transportation, Submitted 2017
26. Grant: Aguayo, F., **Torres, A.** (Co-PI), “Simultaneous Thermal Analyzer for Evaluating Cementitious Materials” Letter of Intent (LOI): National Science Foundation Major Research Instrumentation (MRI) internal competition; Requested: \$200,000
27. Grant: Lee, S.J., (PI), Humphries, E., **Torres, A.**, Kim, Y.J., (Co-PIs) “Comparative Analysis of Tack Coat, Underseal Membrane, and Underseal Technologies”, Texas Department of Transportation (TxDOT), 2015, Amount Requested: \$481,140, January 2016 – August 2020, Submitted October 2015
28. Subcontract: Newton, C., **Torres, A.** (Co-PI), “Entrained Air Void System for Durable Highway Concrete” National Cooperative Highway Research Program (NCHRP) – Transportation Research Board (TRB) - New Mexico State University, Submitted: December, 2014; Requested (NMSU): \$600,000; Requested (TxState): \$189,521
29. White Paper: Bartlett, L., **Torres, A** (Co-PI), “Using Foundry Waste to Increase the Strength of Conventional and High Performance Concrete” American Foundry Society, Submitted: November 2014, Requested: \$25,078
30. Grant: **Torres, A.** (PI), Chen, H., Schemmel, J., “Validation of RAP and RAS in Hydraulic Cement Concrete” Texas Department of Transportation, Submitted: August 2014; Requested: \$258,960
31. Grant: Kim, Y., Hu, J., Lee, S., Chen, H., **Torres, A.** (Co-PI), “Evaluating Limestone Cements Containing > 15% Limestone” Texas Department of Transportation, Submitted: August 2014; Requested: \$124,100
32. **Torres, A.** (PI), “Real Time Monitoring of ZBLAN Crystallization” Texas Space Grant Consortium New Investigator New Investigator Program, Submitted: March 2014; Requested: \$20,000
33. **Torres, A.** (PI), “Real Time Monitoring of ZBLAN Crystallization” Texas Space Grant Consortium Higher Education Program, Submitted: March 2014; Requested: \$30,000
34. **Torres, A.** (PI), Air Force Fiscal Year 2014 Young Investigator Research Program proposal, “Real-Time Monitoring of Crystallization in ZBLAN Glass while in Microgravity” Requested: \$349,574

3. Funded Internal Grants and Contracts: ***(4 Funded \$42,000 Awarded)***

1. **Torres, A. (PI)**, "Acquisition of an Accelerated Carbonation Chamber for More Sustainable and Longer-Lasting Concrete" Texas State University Materials Application Research Center (MARC) Equipment Fund, Funded \$20,000,
2. **Torres, A. (PI)**, "Developing Low Carbon Footprint Concrete Mixtures Using Local Materials" TxState Research Enhancement Program (REP), January 1, 2022 – January 1, 2023, Office of Sponsored Programs (OSP), Texas State University-San Marcos, TX Funded amount: \$8,000
3. **Torres, A. (PI)**, "Characterization of Recycled Aggregate Concrete in Ultra High Performance Concrete" TxState Research Enhancement Program (REP), January 1, 2014 – January 1, 2015, Office of Sponsored Programs (OSP), Texas State University-San Marcos, TX Funded amount: \$8,000
4. Aguayo, F., **Torres, A., (Co-PI)** "Durability Testing of Sustainable High Strength Concrete" Texas State Research Enhancement Program (REP), January 1, 2017 – January 1, 2017, Office of Sponsored Programs (OSP), Texas State University-San Marcos, TX; Funded Amount \$16,000 (January 2017 – December 2017)

## 4. Submitted, but not Funded, Internal Grants and Contracts:

1. Grant: **Torres, A. (PI)**., "Mechanical and Durability Testing of Slag Based Concrete" Texas State Research Enhancement Program (REP), Submitted October 2020, Office of Sponsored Programs (OSP), Texas State University-San Marcos, TX; Requested Amount \$8,000
2. Grant: **Torres, A., (PI)**, "Challenge Based Learning of Sustainable Concrete Materials in Mexico City- An International Learning & Research Opportunity for Engineering Technology Students", International Research Accelerator (IRA), Texas State University, Submitted 2020, Requested: \$15,000
3. Grant: **Torres, A., (PI)**, "Durability Testing of Sustainable High Strength Concrete", International Research Accelerator (IRA), Texas State University, Submitted 2019, Requested: \$15,000
4. Grant: **Torres, A. (PI)**., "Mechanical and Durability Testing of Slag Based Concrete" Texas State Research Enhancement Program (REP), Submitted October 2019, Office of Sponsored Programs (OSP), Texas State University-San Marcos, TX; Requested Amount \$8,000
5. Grant: Aguayo, F., **Torres, A. (Co-PI)**, "Mechanical and Durability Testing of Slag Cement Concrete" Texas State Research Enhancement Program (REP), Submitted October 2018, Office of Sponsored Programs (OSP), Texas State University-San Marcos, TX; Requested Amount \$16,000

6. Grant: **Torres, A.** (PI) and Chen, H. (Co-PI), “The Effect of Foundry Waste on the Performance of Portland Cement Concrete” TxState Research Enhancement Program (REP), Requested amount: \$16,000

D. Fellowships, Awards, Honors:

<i>Fellowship, Award, Honor</i>	<i>Entity</i>	<i>Dates</i>
Presidential Distinction and College Achievement Award for Excellence in Scholarly/Creative Activity	Texas State University	Spring 2022
Student Competition Win (1 <sup>st</sup> place)	Texas Aggregate and Cement Association (TACA)	Spring 2022
Student Competition Win (1 <sup>st</sup> Place)	NASA MINDS	Spring 2022
AFRL HyperSpace Challenge (3 <sup>rd</sup> place, 1 <sup>st</sup> place Crowd Favorite)	AFRL	Fall 2021
Developmental Leave Supplemental (\$20,000) Award	President Trauth/Board of Regents	Fall 2020 and Spring 2021
Faculty Fellow	LBJ Institute for STEM Education and Research	2018 – 2020
Best Paper Award	American Society of Engineering Education, Paper Titled, “Teaching Sustainable Engineering and Industrial Ecology using a Hybrid Problem-Project Based Learning Approach”	2017
Influential Faculty	Graduating Student Recognition of Campus Support, Texas State University	2017
Program for Excellence in Teaching and Learning	Texas State University	2013 – 2014
Distinction - PhD Dissertation	University of New Mexico	2013
Graduate Research Fellow	National Science Foundation – Louis Stokes Alliance for Minority Participation	2009 – 2011
Chi Epsilon	New Mexico State University	2006 – 2013

#### IV. SERVICE

##### A. Institutional

## 1. University:

<i>Texas State University</i>	<i>Dates</i>
Member of Sustainability Council to develop minor in Sustainability	2022 - Present
Member of Engineering Technology's Department Representative for the Chief Research Officer's "PI Council"	2022 – Present
Participant: Student Technology and Research STAR Showcase (MSEC Seminar Forum) November 18, 2022	Fall 2022
Invited Member University Representative for the Austin Resource Recovery (ARR) Circular Economy Sustainability Initiative	2022 – Present
Chaired a concurrent session titled, "Computer Science/ MSEC/Physics" at the "Eighth Annual International Research Conference for Graduate Students"	2017
Graduate Faculty	2013 - Present
Undergraduate Advising	2013 - Present
Annual Graduation Commencement	2013 - Present
<i>New Mexico State University</i>	<i>Dates</i>
American Society of Civil Engineering Student Chapter - President	2008
Chi Epsilon – Marshall	2008
American Society of Civil Engineering Student Chapter – Vice President	2007

## 2. College:

<i>Texas State University – College of Science and Engineering</i>	<i>Dates</i>
Participant: Student Technology and Research STAR Showcase (MSEC Seminar Forum)	November 18, 2022
Member of Sustainability Council to Develop Minor in Sustainability	2022 - Present
Graduate Faculty Member	2013 - Present
Undergraduate Advisor	2013 – Present
Attend Commencement Ceremonies	2013 – Present
Civil Engineering Full Professor Search Committee	2017 - 2018
Bobcat Days	2013 - Present
SACNAS Annual Conference – COSE Booth, San Antonio, TX	2013

## 3. Department/School:

<i>Texas State University – Engineering Technology</i>	<i>Dates</i>
TECH 2351 & CSM 3360 Teaching Methods Committee	2022 – Present
CIM National Steering Committee (NSC) Education Committee	2022 – Present
Research Enhancement Program Department Representative	Fall 2022/Spring 2023
Developed student summer internship opportunity with the Space Force	Fall 2022/Spring 2023
Space Scholar program (the most prestigious DoD	

internship program)	
Developing first ever ET Study Abroad Program	Fall 2020 - Present
ACI Student Chapter Design Competition Advisor (every Fall and Spring)	2013 - Present
Travel to and participate in competitions	
ATMAE accreditation course outcomes manager for the CIM program	2019 - Present
TACA Student Design Competition Advisor	2021 – Present
CIM Scholarship Committee	2013 - Present
CIM Assistant Professor Search Committee Chair	Fall 2021
Department Presidential Awards Committee	2019 – Present
CIM Director Search Committee	2019 – Present
CIM Recruiter Search Committee	2019 – 2019
CIM Director Search Committee	2016 - 2017
Develop and Submit SACS data for CIM Program	2016 – Present
Travel to Chico, CA for CIM/NSC Meeting	2016
Attend ICRI Conference to Promote CIM Program	2015 – Present
CIM Assistant/Associate Professor Search Committee	2015 – 2016
Engineering Technology Website Committee	2015 – 2017
CIM Director Search Committee	2014
CIM Patrons Website Kick Off Meeting in Bourne, TX	2014
Travel to ACI Meetings to Promote CIM Program and Student Competition	2014 – Present
Travel to Murfreesboro, TN for CIM/NSC Meeting	2013, 2014
Attend ACI Student Chapter meetings	2013 – Present
Attend CIM Patrons Meetings	2013 – Present
Attend CIM Socials and Industrial Tours	2013 – Present
Maintain and Develop CIM Website	2013 – Present
Aid in development of CIM update presentation	2013 – Present
Travel to World of Concrete Convention for CIM/NSC Meeting	2013 – 2017

#### B. Professional:

<i>Texas State University</i>	<i>Dates</i>
American Concrete Institute Sustainability of Ultra High Performance Concrete (239-0F) Committee and Voting Member	2022 - Present
Society of Hispanic Professional Engineers mentorship committee leader. Leading the “How to get a job in academia?”	2022 - Present
Special Guest Editor - Education Sciences - Challenge-Based and Community-Based Teaching and Learning in Engineering and STEM Education	2022 - Present
Special Guest Editor – Journal of Buildings Construction Science	2022 – Present
Advisory Board Member – International Journal on Engineering Structures and Materials	2022 – Present
Special Guest Editor/Curator – Journal of Sustainability	2022 – Present
NRRA Rigid Committee Member	2022 – Present

MnDOT Technical Advisory Panel (TAP) “Use of Alternative Pozzolanic Materials Towards Reducing Cement Content in Concrete Pavements”	2022 – Present
MnDOT Technical Advisory Panel (TAP) “ “The Use of Alternative Cementitious Materials in Concrete Pavements.”	2022 - Present
Journal of Testing and Evaluation (ASTM) – Peer Reviewer	2019 – Present
ACI Materials – Peer Reviewer	2019 – Present
Journal of Infrastructures – Peer Reviewer	2019 – Present
Journal of Professional Issues in Engineering Education and Practice – Peer Reviewer	2018 – Present
Construction and Building Materials – Peer Reviewer	2017 – Present
American Society of Engineering Education – Peer Reviewer	2017 – Present
Journal of Materials in Civil Engineering – Peer Reviewer	2017 – Present
Case Studies in Construction Materials – Peer Reviewer	2017 – Present
Journal of Aerospace Engineering – Peer Reviewer	2016 – 2017
International Journal of Basic and Applied Research – Peer Reviewer	2016 – Present
Undergraduate poster session judge, Society of Hispanic Professional Engineers Conference	2017
Agricultural, Civil, Environmental & Biological Engineering Co-Session Chair & Moderator, Society of Hispanic Professional Engineers Conference	2017
American Concrete Institute Recycled Concrete (555) Committee and Voting Member	2016 - Present
American Concrete Institute Pervious Concrete (522) Committee Member	2016 – Present
American Concrete Institute Material Science of Concrete (236) Committee Member	2021 - Present
American Concrete Institute Ultra High Strength Concrete (239) Committee Member	2021 - Present
American Concrete Institute Member	2013 – Present
American Society for Engineering Education Member	2013 – Present
a. Member of Engineering Technology Committee	
b. Member of Construction Engineering Committee	
c. Member of Civil Engineering Division	
d. Member of Minorities in Engineering Division	
e. Member of Educational Research Division	

## C. Community:

None

## D. Service Honors and Awards:

None

## E. Service Grants and Contracts

## 1. Funded External Service Grants and Contracts:

None

2. Submitted, but not Funded, External Service Grants and Contracts:

None

3. Funded Internal Service Grants and Contracts:

None

4. Submitted, but not Funded, Internal Service Grants and Contracts:

None

Updated 10/12/2018