

ROYCE W. FLOYD, PH.D., P.E., S.E.

School of Civil Engineering and Environmental Science
The University of Oklahoma
202 W. Boyd St., Room 334, Norman, OK, 73019
Office: (405) 325-1010 Fax: (405) 325-4217

EDUCATION

Doctor of Philosophy, Civil Engineering, University of Arkansas, Fayetteville, AR, August 2012, Dissertation: *Investigating the Bond of Prestressing Strands in Lightweight Self-Consolidating Concrete*, Supervising Professor: W. Micah Hale, Ph.D., P.E.

Bachelor of Science in Civil Engineering, University of Arkansas, Fayetteville, AR, Summa Cum Laude, May 2008, Honors Thesis: *Development Length of Prestressed Beams cast with Self-Consolidating Concrete*

ACADEMIC APPOINTMENTS

Associate Professor (July 2018 – Present), School of Civil Engineering and Environmental Science, University of Oklahoma, Norman, OK.

Assistant Professor (August 2012 – June 2018), School of Civil Engineering and Environmental Science, University of Oklahoma, Norman, OK.

Instructor (August 2009 – December 2011), Department of Civil Engineering, University of Arkansas, Fayetteville, AR. Reinforced Concrete Design (Fall 2009 and Fall 2011)

Teaching Assistant (January 2010 – May 2012), Department of Civil Engineering, University of Arkansas, Fayetteville, AR. Structural Materials Lab Assistant.

Research Assistant (August 2008 – July 2012), Department of Civil Engineering, University of Arkansas, Fayetteville, AR. Investigating strand bond in lightweight self-consolidating concrete (SCC) mixtures. Developing normal weight SCC fresh concrete specifications for use in box culverts. Mixing/testing ultra-high performance concrete (UHPC).

Undergraduate Research Assistant (Fall 2007- May 2008), Department of Civil Engineering, University of Arkansas, Fayetteville, AR. Testing 19 prestressed beams to determine development length.

ACADEMIC LEADERSHIP APPOINTMENTS

Associate Director (June 2023 – present) Southern Plains Transportation Center, University of Oklahoma, Norman, OK.

Graduate Studies Coordinator (May 2018 – January 2021) School of Civil Engineering and Environmental Science, University of Oklahoma, Norman, OK.

INDUSTRY EXPERIENCE

Sr. Project Engineer (May 2020 – Present, intermittent), Crafton Tull, Hot Springs, AR, Provide input on concrete and steel design and bridge load rating.

Exam Proctor (August 2008 – July 2012), Center for Training Transportation Professionals, Fayetteville, AR. Proctored performance evaluations for ACI Concrete Field Testing Technician Grade I certification, soil, basic aggregate, and asphalt testing certifications.

Engineer Intern (May – August 2007), Garver Engineers (now Garver), Little Rock, AR. General drafting, assisted with roadway and drainage design.

Civil Engineer Technician/Surveyor (May – August 2006), Crafton, Tull & Associates (now Crafton Tull), Little Rock, AR. Field work and surveying.

Civil Engineer Technician (May – August 2005), Arkansas Electric Cooperative Corporation, Little Rock, AR.

AWARDS AND HONORS

- 2019 University of Arkansas College of Engineering Early Career Alumni Award
- 2016 Gallogly College of Engineering Teaching Scholars Award
- 2013 ASCE ExCEED Faculty Fellowship
- 2013 “Best Breakout Session” BP DEVAS and BP Engineering Academy
- 2011 Mack-Blackwell Rural Transportation Center 2011 Outstanding Student of the Year
- 2009 American Concrete Institute Presidents’ Fellowship
- 2008 University of Arkansas Distinguished Doctoral Fellowship

TEACHING

Courses Taught

University of Oklahoma

CEES 2113 Statics: Vector representation of forces and moments; general three-dimensional theorems of statics; centroids and moments of area and inertia. Free-body diagrams, equilibrium of a particle and of rigid bodies, distributed loads, friction and internal shear and moment loads. Analysis of trusses, frames, and machines.

CEES 3453 Into to Construction Management: Introduction to methods for managing construction projects including scheduling, cost estimating, contracts, pay request, change orders, and requests for information. Students will also learn how to read construction documents and understand project specifications.

CEES 3673 Structural Design – Concrete I: Analysis and design of reinforced concrete beams, columns, slabs, footings, etc., along with discussion of current building practice. (with laboratory)

CEES 4753 Structural Design – Wood: Material properties and behavior of wood. Analysis and design of solid and laminated structural members, connections, systems, trusses and arches. Current developments in structural wood design and research.

CEES 5783 Structural Design – Concrete II: Advanced reinforced concrete behavior and design including limit design, anchorage slender columns, truss models for shear and torsion on beams, two-way and flat slabs, and the art of detailing.

CEES 5793 Prestressed Concrete Structures: Design procedures for pretensioned and post-tensioned concrete structures, with emphasis on the behavior of prestressed concrete. Topics include methods of analysis, time dependent effects, fabrication and construction procedures, connections, highway bridges, frames, composite construction, continuous structures, and anchorage zone detailing.

Summary of Courses and Student Evaluations (questions tracked for CEES evaluation)

<u>Course</u>	<u>Enrollment</u>	<u>I</u>	<u>D</u>	<u>C</u>
CEES/PE 2113 Statics and Dynamics (F. 2012)	46	4.37	4.17	4.09
CEES 5783 Structural Design – Concrete II (Sp. 2013)	22	4.33	4.30	4.15
CEES 2113 Statics (F. 2013)	37	4.67	4.31	4.15
CEES 5793 Prestressed Concrete Structures (F. 2013)	9	4.57	4.31	4.15
CEES 5783 Structural Design – Concrete II (Sp. 2014)	12	4.60	4.49	4.26
CEES 2113 Statics (F. 2014)	50	4.60	4.30	4.18
CEES 3673 Structural Design – Concrete I (F. 2014)	32	4.76	4.30	4.18
CEES 5783 Structural Design – Concrete II (Sp. 2015)	14	4.81	4.37	4.26
CEES 4753 Structural Design – Wood (F. 2015)	31	4.54	4.18	4.13
CEES 5793 Prestressed Concrete Structures (F. 2015)	13	4.90	4.18	4.13
CEES 5783 Structural Design – Concrete II (Sp. 2016)	17	4.71	4.32	4.15
CEES 4753 Structural Design – Wood (F. 2016)	40	4.73	4.26	4.22
CEES 5783 Structural Design – Concrete II (Sp. 2017)	20	4.88	4.23	4.19
CEES 4753 Structural Design – Wood (F. 2017)	43	4.60	4.32	4.15
CEES 5793 Prestressed Concrete Structures (F. 2017)	26	4.95	4.32	4.15
CEES 5783 Structural Design – Concrete II (Sp. 2018)	14	4.86	4.36	4.15
CEES 4753 Structural Design – Wood (F. 2018)	27	4.48	4.36	4.12
CEES 5793 Prestressed Concrete Structures (F. 2018)	12	4.63	4.36	4.12
CEES 5783 Structural Design – Concrete II (Sp. 2019)	22	4.75	4.29	4.17
CEES 4753 Structural Design – Wood (OL) (Su. 2019)	14	4.76	4.28	4.39
CEES 4753 Structural Design – Wood (F. 2019)	41	4.68	4.41	4.24
CEES 5793 Prestressed Concrete Structures (Sp. 2020)	16	4.79	4.36	4.21
CEES 4753 Structural Design – Wood (OL) (Su. 2020)	26	4.73	4.56	4.35
CEES 4753 Structural Design – Wood (F. 2020)	29	4.53	4.19	4.21
CEES 5783 Structural Design – Concrete II (OL) (F. 2020)	19	4.84	4.19	4.21
CEES 5793 Prestressed Concrete Structures (Sp. 2021)	16	4.88	4.34	4.18
CEES 4753 Structural Design – Wood (OL) (Su. 2021)	33	4.56	4.49	4.40
CEES 4753 Structural Design – Wood (F. 2021)	29	4.64	4.35	4.25
CEES 5783 Structural Design – Concrete II (S. 2022)	20	NA		
CEES 4753 Structural Design – Wood (OL) (Su. 2022)	34	NA		
CEES 3673 Structural Design – Concrete I (F. 2022)	61	NA		
CEES 5783 Structural Design – Concrete II (OL) (F. 2022)	15	NA		
CEES 3453 Construction Management (Sp. 2023)	44	NA		
CEES 5793 Prestressed Concrete Structures (Sp. 2023)	14	NA		
CEES 4753 Structural Design – Wood (OL) (Su. 2021)	24	NA		
CEES 3673 Structural Design – Concrete I (F. 2023)	46	NA		
CEES 5783 Structural Design – Concrete II (OL) (F. 2023)	6	NA		

Note: I indicates my score, D indicates departmental average score, C indicates college of engineering average score, Scale: 1-5 poor to excellent; evaluation system was changed to not include numerical scores in 2022

<i>Independent Study Sections</i>	<u>Enrollment</u>
CEES 5010 Advanced Concrete Materials (Sp. 2013)	2
CEES 5990 Ind. Study – Prestressed Concrete (Su. 2014)	1
CEES 5990 Ind. Study – Sustainable Cement Alt. (Sp 2016)	1
CEES 5010 Civil Engineering Problems (Sp. 2016)	1
CEES 5990 Ind. Study – Conc. Lat. Load Resisting Systems (F. 2016)	1
CEES 5990 Ind. Study – Seis. Des. of Conc. Struct. (Sp. 2017)	1
CEES 5990 Ind. Study – Bridge Deck Des. and Maintenance (Sp. 2017)	1
CEES 5990 Ind. Study – Preservation of Historic Structures (F. 2017)	1
CEES 5990 Ind. Study – Highway Bridge Design (F. 2017)	1
CEES 5990 Ind. Study – Prestressed Parking Structure Design (F. 2017)	1
CEES 5990 Ind. Study -- Concrete Design Software (Sp. 2018)	1
CEES 5990 Ind. Study – Advanced Wood Design (Sp. 2019)	1
CEES 5990 Ind. Study – Advanced Wood Design (Su. 2019)	1
CEES 5010 Civil Engineering Problems (Su. 2019)	1
CEES 5990 Ind. Study – Structural Design – Concrete 2 (F. 2019)	1
CEES 5990 Ind. Study – Concrete Parking Garage Design (Sp. 2020)	2
CEES 5990 Ind. Study – Structural Design – Concrete II (Sp. 2021)	1
CEES 5990 Ind. Study – Post-Tensioned Concrete (F. 2021)	1
CEES 5990 Ind. Study – Professional Internship (Su. 2022)	1
CEES 3980 Honors Research (Sp. 2021)	3
CEES 3980 Honors Research (F. 2022)	1

University of Arkansas

CVEG 4303 Reinforced Concrete Design I (F. 2009, F. 2011)

Graduate Student Advisement

Ph.D. (2 completed, 2 in progress)

Omar Yadak (Expected May 2027)

Mujtaba Ahmadi (Expected May 2025)

Stephen Roswurm (May 2023), *Bond and Long-term Deformation Behavior of Rapid-Setting Belitic Calcium Sulfoaluminate Cement for Pretensioned, Prestressed Concrete*

Cameron Murray (August 2017), *Understanding Ultimate Shear Behavior of Prestressed Concrete Girder Bridges as a System Through Experimental Testing and Analytical Methods*

Master's Thesis (22 completed, 2 in progress)

Courtney Dawson (Expected May 2025) *Bond Performance of Advanced Environmentally Friendly Concrete Materials for Rapid Infrastructure Repair and Rehabilitation*

Cade Harris (with S. Vemuganti, Expected December 2024) *Innovative Pavement Design Using Fiber-Reinforced Low Carbon CSA Cement*

Bruno Siri (May 2024) *Design of Precast Post-Tensioned Slabs Using Lightweight Concrete for Residential Foundations*

Omar Yadak (May 2024) *Evaluation of Hollow-Core-FRP-Concrete-Steel (HC-FCS) Column and Footing Connection*

Jacob Starks (with J. Volz, May 2023) *Mechanical Performance of Post-tensioned Foundation Slabs using Expansive BCSA Cements*

Zachary Tiry (May 2023) *Design of Continuity Connections for Precast Girders Using UHPC*

Dip Banik (August 2022) *Assessment of Ultra-High-Performance-Concrete (UHPC) Properties Using Different Fibers*

Phuoc Huynh (December 2021), *Performance of Prestressed Girder End Region Repairs Using UHPC*

Mujtaba Ahmadi (May 2021), *End Region Repair of Prestressed Concrete Girders for Restoring Shear Capacity using UHPC, FR-SCC, and MALP Concrete*

Richard Campos (December 2020), *Effect of Fiber Content on Tensile Strength of Non-Proprietary Ultra-High Performance Concrete*

Kim Serey Vuth Chea (December 2020), *Comparative Study of Proprietary and Non-Proprietary Ultra-High Performance Concrete as Partial-Depth Joint Replacement*

Yana Dyachkova (August 2020), *Effect of Fiber Content of Properties of Non-Proprietary UHPC*

John Toshima (with J. Pei, December 2019), *Identification of Piecewise Flexural Rigidity Using Experimental Measurements*

Connor Casey (August 2019), *Performance of Ultra-High Performance Concrete Continuity Joints for Precast Concrete Beams*

Chandler Funderburg (May 2018), *Evaluation of Surface Preparation and Angle Combinations for Bridge Joint Replacement using Ultra-High Performance Concrete*

Alieu Jobe (with J. Pei, May 2018), *Testing Structural Elements for Free Vibration*

Afnan Ali (May 2018), *Incorporating Grillage Model Derived Load Distribution Factors Into Ratings of Prestressed Concrete Bridges*

Stephen Tanksley (May 2018), *Internal Curing of Calcium Sulfoaluminate Cement Concrete Using Lightweight Aggregate*

Ashwin Kesiraju (May 2017), *Assessing Impact of Climate Change on Oklahoma Bridge Deck and Superstructure Deterioration Using National Bridge Inventory Data*

Troy Bowser (December 2016), *Development Length of 0.6 in. Prestressing Strands in Precast, Prestressed Calcium Sulfoaluminate Cement Concrete*

Darion Mayhorn (August 2016), *Investigation of the Effects of End Region Deterioration in Precast, Prestressed Concrete Bridge Girders*

Brittany Cranor (May 2015), *Analysis and Experimental Testing for Shear Behavior of an AASHTO Type II Girder in Service for Several Decades*

Kavitha Sadhasivam (December 2014), *Top Strand Effect in Prestressed Concrete Members using Lightweight Self-Consolidating Concrete*

Arthur Wendling (May 2014), *Long-Term Performance of Lightweight Self-Consolidating Concrete Members with Top Strands*

Exchange Students

Elvira Bella Canet (May 2016) *Effect of Vertical Strand Location on Bond of Prestressing Members: Application to Prestressing Strands Cast in Lightweight Self-Consolidating Concrete*, research performed at OU, degree granted from Universidad Politecnica de Valencia

Committee Service

Dissertation

Wassim Tabet (December 2015), Sattar Atash Bahar (December 2017), Jonathan Drury (Su. 2018), Mohammad Tehrani (Su. 2019), Tommy Bounds (December 2020), Trevor Looney (December 2021), Jacob Choate (December 2023), Esteban Villalobos Vega, Isabella Mendoza, Ali Akbarpour

Master's Thesis

Seth Carlton (Sp. 2013), Jesse Roswurm (Sp. 2013), Seth Roswurm (Sp. 2013), Yusheng Su (Sp. 2013), Jacquelyn Baker (Su. 2014), Corey Wirkman (Sp. 2016), Austin Messerli (Sp. 2016), Kodi Wallace (Su. 2016), Kevin Wise (Su. 2016), Lexis Allen (F. 2017), Corey Casey (F. 2017), Amy (Crone) McDaniel (F. 2017), Dakota Gennings (Sp. 2018), Jacob Roswurm (Sp. 2018), Stephen Roswurm (Sp. 2018), Jacob Choate (Su. 2018), Skylar Calhoun (Su. 2018), Raina Coleman (F. 2018), Maranda Leggs (Su. 2019), Thomas Cain (Sp. 2020), Kevin Lepissier (Su. 2020), Ahmad Abu Sharea (Spring 2021) Michael Mesigh (Sp. 2021), Puthynan Bin (Sp. 2021), Clay Reed (Sp. 2022), Jack Heiser (Sp. 2022), Stone Brackett (Sp. 2022), Wassime Somatri (Su. 2022), Johnathan Martin (Su. 2022), Abdirahman Ahmed Haibe (Fa. 2022), Paul Fernando Cancino Arevalo (Sp. 2023), Cody Black (Fa. 2023), Jackson Milner (Fa. 2023), Jorge Vargas Ceja, Derek Garcia (did not finish), Erik Reyes (did not finish), Rex McLaughlin (did not finish)

Master's Non-Thesis

Travis Poole (F. 2012), Jesse Berdis (F. 2013), Katie Brown (Sp. 2014), Michael Hendrick (Sp. 2014), Brandon Ezell (Sp. 2014), Gary Quinonez (Sp. 2014)

Student Awards

2021 CEES Withrow Graduate Fellowship – Stephen Roswurm
2021 American Concrete Institute Tribute to the Founders Fellowship – Stephen Roswurm
2020 CEES Withrow Graduate Fellowship – Stephen Roswurm
2019 OU Dolese Teaching Fellowship – Stephen Roswurm
2018 3rd Place Oklahoma Transportation Research Day Poster Contest– Connor Casey
2017 2nd Place SPTC Student Thesis Award – Darion Mayhorn
2016 Southern Plains Transportation Center Student of the Year – Cameron Murray
2016 1st Place Oklahoma Transportation Research Day Poster Contest– Cameron Murray
2016 Dwight David Eisenhower Graduate Fellowship – Cameron Murray
2015 1st Place SPTC Student Thesis Award – Brittany Cranor

- 2015 Honorable Mention Oklahoma Transportation Research Day Poster Contest – Darion Mayhorn
- 2014 2nd Place Oklahoma Transportation Research Day Poster Contest – Cameron Murray
- 2014 Honorable Mention Oklahoma Transportation Research Day Poster Contest – Brittany Cranor
- 2014 Boggs Graduate Fellowship, University of Oklahoma College of Engineering – Cameron Murray

Undergraduate Student Advisement

University of Oklahoma

Undergraduate Honors Research

Cade Harris (Sp. 2021) “Bond Behavior of Epoxy Coated Reinforcing Bars in UHPC”

Parker Hoffman (Sp. 2021) “Bond Behavior of Epoxy Coated Reinforcing Bars in UHPC”

John Guerrero (Sp. 2021) “Internal Curing of Ultra-High Performance Concrete

Alexandria Stumps (Sp. 2015) “Bond Stress Distribution Analysis of the Embedment Length of Prestressed Concrete Specimens”

Daniel Velazquez (Sp. 2014) “Internal Curing of Calcium Sulfoaluminate Cement Concrete Using Expanded Shale Aggregate”

Dylan Smith (Su. 2013) “Impacts of High-Percentage Lightweight Coarse Aggregate Replacement of Normal Weight Aggregate on Concrete Compressive Strength and Chloride Ion Permeability”

Undergraduate Research Assistants: (also providing general assistance for multiple projects)

Dylan Becerra, (1/2023 – present), Connection Details in UHPC

Bruno Siri (10/2022 – present), Design of Lightweight Precast Post-Tensioned Slabs

Courtney Dawson (6/2022 – 12/2022), Bond of Successive Layers of UHPC

Cade Harris (6/2021 – present), Connection Details in UHPC

Omar Yadak (4/2021 – 12/2021), Monitoring of UHPC Connections on Eufaula Spillway Bridge

John Guerrero (6/2021 – 8/2021), Internal Curing of Ultra-High Performance Concrete

Kate Maier (1/2021 – 5/2021), Internal Curing of Ultra-High Performance Concrete

Cole Walker (1/2019-5/2022), Effect of Fiber Content on Compressive Strength of UHPC

Jacob Starks (8/19/2019-12/31/2020), Freeze-Thaw Behavior of UHPC Joint Specimens

Levi Kell (5/15/2019-5/15/2020)

Mathew Alvarado (5/15/2019-5/08/2020)

Yana Dyachkova (1/2019-5/2019), Effect of Fiber Content of Properties of Non-Proprietary UHPC

Kim Serey Vuth Chea (1/2019-5/2019), Performance of Half-Depth UHPC Deck Slab Joints

Eric Budder (5/2018-12/2018), Fatigue Performance of a UHPC Slab Joint

Richard Campos (5/2018-12/2018)

Kaitlyn Anderson (10/2017-5/2018)

Chandler Funderburg (5/2016-5/2017), Evaluation of Joint Details for UHPC Bridge Joints

Connor Casey (5/2015-5/2017), Lateral Load Testing of a Masonry Wall for Evaluating Damage Detection Methods

Stephen Tanksley (5/2015-5/2016), Internal Curing of Calcium Sulfoaluminate Cement Concrete

Alexandria Stumps (5/2014-5/2016), Bond Stress Distribution Analysis of the Embedment Length of Prestressed Concrete Specimens

Troy Bowser (10/2013-5/2015), Effect of Corrosion on End Regions of Prestressed Concrete Girders

Matthew Long (5/2013-8/2013), Evaluation of Calcium Sulfoaluminate Cement Concrete for Prestressed Members

Brittany Cranor (01/2013-05/2014), Development of UHPC Using Local Materials

Clayton Bointy (01/2013-05/2013), Evaluation of Calcium Sulfoaluminate Cement Concrete for Prestressed Members

CEES Professional Internship/Co-op (CEES 4423)

Cliff Alshara (F. 2022): W&W Afco Steel

Colleen Shappee (F. 2013): Halliburton Cement Field Engineer Intern

University of Arkansas (not included in summary)

Undergraduate Honors Thesis

Michael B. Howland (May 2012) “Comparison of Strand Bond Using Surface Gages and End Slips”

Brendan Ho (May 2013) “Aggregate Distribution in Self-Consolidating Concrete Undergraduate Researchers”

Jared Bymaster (May 2011) “Segregation Evaluation of SCC”

RESEARCH

External Funding

National Grants

1. Southern Plains Transportation Center – Regional University Transportation Center (Year 1 of 5), U.S. Department of Transportation; Co-PI, Total Budget: \$3,000,000, Floyd Credit: 20% (\$600,000): PI: M. Zaman, Multiple Co-PIs; Duration 6/1/2023-9/30/2024
2. Precast Ductile End-Diaphragm System for Accelerated Construction of Slab-on-Girder Prestressed Concrete Bridges in Seismic Regions, Accelerated Bridge Construction – University Transportation Center (ABC-UTC), Florida International University; Co-PI, Total Budget: \$50,000, Floyd Credit: 40% (\$20,000); PI: P.S. Harvey; Duration: 7/1/2022 to 5/31/2024.

3. ABC-UTC Workforce Development, Outreach and Tech Transfer Activities, Accelerated Bridge Construction – University Transportation Center (ABC-UTC), Florida International University; Co-PI, Total Budget: \$20,097, Floyd Credit: 40% (\$8,039); PI: M. Zaman; Duration: 6/1/2022 to 5/31/2023.
4. Innovative Multi-Hazard-Resistant Bridge Columns for ABC, Accelerated Bridge Construction – University Transportation Center (ABC-UTC), Florida International University; Co-PI, Total Budget: \$40,000, Floyd Credit: 47% (\$18,800); PI: J. Volz; Duration: 6/1/2022 to 5/31/2023.
5. Design Guidance for UHPC Connections of Precast Girders Made Continuous for Live Load, Accelerated Bridge Construction – University Transportation Center (ABC-UTC), Florida International University; PI, Total Budget: \$44,999, Floyd Credit: 60% (\$26,999); Co-PI: J. Volz; Duration: 2/1/2021 to 3/31/2022.
6. Development of User-Friendly Tools and Decision-Making Algorithms for Service Life Design of ABC Bridges, Accelerated Bridge Construction – University Transportation Center (ABC-UTC), Florida International University; Co-PI, Total Budget: \$56,612, Floyd Credit: 30% (\$16,984); PI: S. Mohebbi; Duration: 4/1/2020 to 3/31/2022.
7. Service Life Design Guidance for UHPC Link Slabs, Accelerated Bridge Construction – University Transportation Center (ABC-UTC), Florida International University; PI, Total Budget: \$57,990, Floyd Credit: 50% (\$28,995); Co-PI: J. Volz, Md. Zaman; Duration: 4/1/2020 to 3/31/2022.
8. Development of Non-Proprietary UHPC Mix, Accelerated Bridge Construction – University Transportation Center (ABC-UTC), Florida International University; PI, Total Budget: \$99,999, Floyd Credit: 40% (\$40,000); Co-PI: J. Volz, Md. Zaman; Duration: 1/1/2019 to 12/31/2020.
9. 2016 Eisenhower Graduate Fellowship Program - Cameron Murray; U.S. Department of Transportation, Federal Highway Administration; PI, Total Budget: \$35,500, Floyd Credit: 50% (\$17,750); Co-PI: C. Murray (PhD student); Duration: 9/29/2016 to 9/28/2017.
10. RAPID: Lateral Load Resistance of Residential Housing Exposed to Extreme Wind Event; National Science Foundation; Co-PI, Total Budget: \$7,000, Floyd Credit: 25% (\$1,750); PI: C. Ramseyer; Co-PI: L. Holliday; Duration: 10/1/2013 to 9/30/2014.

State/Regional Grants

11. A Fatigue Assessment Framework for Steel Bridges Using Fiber Optic Sensors and Machine Learning, Oklahoma State University, Oklahoma DOT, OU PI, Total Budget: \$37,503 (\$16,500 Year 1, \$21,003 Year 2), Floyd Credit: 100%; Project PI: M. Soliman (OSU); Duration 10/1/2021 to 9/30/2023
12. Innovative Multi-Hazard Resistant Bridge Columns for Accelerated Bridge Construction, Oklahoma Department of Transportation; Co-PI, Total Budget: \$198,706 (\$99,332 Year 1, \$99,374 Year 2), Floyd Credit: 45% (\$89,418); PI: J. Volz; Duration 10/1/2021 to 12/31/2023.
13. Design and Monitoring of Non-Proprietary UHPC Joints of Precast Elements, Year 1, Oklahoma Department of Transportation; PI, Total Budget: \$132,730 (\$62,745 Year 1,

\$69,985 Year 2), Floyd Credit: 60% (\$79,638); Co-PI: J. Volz; Duration: 2/26/2021 to 09/30/2022.

14. Monitoring of UHPC Connections on Eufaula Spillway Bridge, Oklahoma Department of Transportation Task Order; PI, Total Budget: \$32,000, Floyd Credit: 100%; Duration: 11/1/2020 to 09/30/2021.
15. Prestressed Girder Continuity Joint and End Region Repair Using Ultra-High Performance Concrete and Fiber Reinforced Self-Consolidating Concrete, Oklahoma Department of Transportation; PI, Total Budget: \$191,821 (\$96,282 Year 1, \$5,833 Year 1 Supplement, \$89,706 Year 2), Floyd Credit: 55% (\$105,501); Co-PI: J. Volz; Duration: 10/1/2018 to 12/31/2020.
16. A Systems Approach for Design, Construction, and Maintenance of Bridges and Adjacent Roadways, Years 1-2; Oklahoma Department of Transportation; Co-PI, Total Budget: \$299,274 (\$99,758 Year 1, \$99,758 Year 2, \$99,758), Floyd Credit: 25% (\$74,819); PI: K. Muraleetharan, Co-PI: G. Miller and J. Volz; Duration: 10/1/2018 to 12/31/2021.
17. Evaluation of Ultra-High Performance Concrete for Use in Bridge-Connections and Repair: Phase 2 - Partial Depth Replacements and Corrosion Behavior, Oklahoma Department of Transportation; PI, Total Budget: \$137,358 (\$98,954 Year 1, \$38,404 Year 2), Floyd Credit: 60% (\$82,414); Co-PI: J. Volz; Duration: 10/1/2018 to 10/31/2020.
18. Development of Rating Tool For Prestressed Concrete Bridges Vulnerable to Shear, Oklahoma Department of Transportation; PI, Total Budget: \$160,853 (\$78,102 Year 1, \$82,751 Year 2, Floyd Credit: 60% (\$96,512), Co-PI: J.S. Pei; Duration: 10/1/2017-09/30/2019.
19. Application of Fiber Optic Sensors for Monitoring Prestressed Concrete Bridges; Southern Plains Transportation Center Early Career Development Program; PI, Total Budget: \$12,600 OU (\$25,200 project total), Floyd Credit: 100% OU total (\$12,600); Co-PI: M. Soliman (Oklahoma State University); Duration: 7/1/2017 to 6/30/2018.
20. Evaluation of Ultra-High Performance Concrete for use in Bridge Connections and Repair; Oklahoma Department of Transportation; PI, Total Budget: \$184,713 (\$98,514 Year 1, \$86,199 Year 2), Floyd Credit: 60% (\$110,828); Co-PI: J. Volz; Duration: 10/1/2016 to 09/30/2018.
21. Prioritizing Bridge Maintenance and Repairs Considering Geospatial and Climatological Factors; Southern Plains Transportation Center Early Career Development Program; Co-PI, Total Budget: \$12,600 OU (\$25,200 project total), Floyd Credit: 100% OU total (\$12,600); PI: Y. Shan (Oklahoma State University); Co-PI: Q. J. Li (Oklahoma State University); Duration: 7/1/2016 to 6/30/2017.
22. Overturning Forces at Bridge Abutments and the Interaction of Horizontal Forces from Adjacent Roadways: Phase 3 - Post-Repair Monitoring of Instrumented Bridges; Oklahoma Department of Transportation; Co-PI, Total Budget: \$103,882 (\$51,941 Year 1, \$51,941 Year 2), Floyd Credit: 20% (\$20,776); with K. Muraleetharan (PI) and G. Miller (Co-PI); Duration: 10/1/2015 to 9/30/2017.

23. Incorporating Climate Impact to Assess the Deterioration of Bridge Decks; Southern Plains Transportation Center Early Career Development Program; Co-PI, Total Budget: \$12,600 OU (\$25,200 project total), Floyd Credit: 100% OU total (\$12,600); PI: Y. Shan (Oklahoma State University); Co-PI: Q. J. Li (Oklahoma State University), P. Lewis (Oklahoma State University); Duration: 7/1/2015 to 6/30/2016.
24. Evaluation and Repair of Existing Bridges in Extreme Environments; Southern Plains Transportation Center; PI, Total Budget: \$143,780 OU (\$158,780 project total), Floyd Credit: 100% OU total (\$143,780); Co-PI: G. Prinz (University of Arkansas); Duration: 9/1/2014 to 8/31/2016.
25. Impact of Extreme Summer Temperatures on Bridge Structures; Southern Plains Transportation Center; Co-PI, Total Budget: \$0 OU, (\$55,608 project total), Floyd Credit: 0%; PI: M. Hale (University of Arkansas); Duration: 8/1/2015 to 7/30/2016. (not included in summary totals).
26. Understanding the Behavior of Prestressed Girders After Years of Service; Oklahoma Department of Transportation; PI, Total Budget: \$327,331 (\$127,339 Year 1, \$99,996 Year 2, \$99,996 Year 3), Floyd Credit: 55% (\$180,032); Co-PI: J. Pei; Duration: 10/21/2013 to 9/30/2016.
27. Overturning Forces at Bridge Abutments and the Interaction of Horizontal Forces from Adjacent Roadways: Phase II - Pre- and Post-Repair Monitoring of SH3 North Bridge Over BNSF Railroad; Oklahoma Department of Transportation; Co-PI, Total Budget: \$132,398 (\$80,263 Year 1, \$52,135 Year 2), Floyd Credit: 20% (\$26,480); PI: K. Muraleetharan; Co-PI: G. Miller (Co-PI); Duration: 10/21/2013 to 9/30/2015.

Industry Sponsored Research

28. Design and Monitoring of Precast, Post-Tensioned Slabs for Residential Foundations; The House Factory; PI, Budget Total: \$36,881, Floyd Credit: 100%; Duration 9/15/2022 to 9/14/2023.
29. Innovative Pavement Design Using Low Carbon CSA Cement; CTS Cement Manufacturing Corporation; Co-PI, Budget Total: \$73,500, Floyd Credit: 33.3% (\$24,476); Co-PI: J. Volz, Co-PI: S. Vemuganti; Duration: 2/1/2022 to 6/30/2023.
30. Residential Slabs Using Low Carbon CSA Cement; CTS Cement Manufacturing Corporation; Co-PI, Budget Total: \$82,500, Floyd Credit: 33.3% (\$27,472); Co-PI: J. Volz, Co-PI: S. Vemuganti; Duration: 2/1/2022 to 6/30/2023.
31. Internal Curing of Calcium Sulfoaluminate Cement Concrete; Expanded Shale, Clay, and Slate Institute; PI, Total Budget: \$6,300, Floyd Credit: 100% (\$6,300), Duration: 5/1/2016 to 6/30/2017.
32. Analysis of the Load Response of the Tella Firma Slabtek Foundation System; Tella Firma Foundations; PI, Budget Total: \$6,500, Floyd Credit: 75% (\$4,875); Co-PI: J. Volz; Duration: 4/15/2015 to 3/31/2016.
33. Feasibility of Using High Early Strength Concrete Made with Rapid Set® Calcium Sulfoaluminate Cement for Prestressed Bridge Girders in Oklahoma; CTS Cement Manufacturing Corporation; PI, Total Budget: \$9,456, Floyd Credit: 100%; Duration: 11/15/2012 to 7/1/2013.

University Grants

34. Safer School Buildings for Wind and Earthquakes: A Multidisciplinary Approach; Gallogly College of Engineering Seed Funding for Interdisciplinary Research; Co-PI, Total Budget: \$10,000, Floyd Credit: 0%; PI: P. S. Harvey, Co-PI: L. Gruenwald, J. Havlicek, Y. Li (Michigan Technological University), J. Pei, Duration: 6/1/2015-5/31/2016.

Research Projects Supported by Material Donations

1. Development Length of 0.6 in. Prestressing Strands in Precast, Prestressed Calcium Sulfoaluminate Cement Concrete; PI, Donors: Coreslab Structures (prestressing strand), Dolese (aggregates), CTS Cement Manufacturing Corp. (cement); Duration: 1/15/2016 to 12/30/2016.
2. Long-Term Performance of Lightweight Self-Consolidating Concrete Prestressed Members; PI, Donors: Coreslab Structures (prestressing strand and aggregate), Dolese (aggregates, cement); Duration: 1/15/2013 to 7/30/2014.
3. Impact of High-Percentage Lightweight Coarse Aggregate Replacement on Concrete Compressive Strength and Chloride Ion Permeability; PI, Donors: CTS Cement Manufacturing Corporation (cement); Duration: 5/1/2013 to 5/30/2014.

Publications

In the following sections *indicates **graduate student**, #indicates **undergraduate student**, and +indicates Floyd advisee.

Refereed Journal Publications

Published/In press

1. Bounds, T. D., Muraleetharan, K. K., Miller, G. A., Zhang, B., Taghavi, A., Bright, Z., Peters, W. L., Floyd, R. W., and Volz, J. "Excessive Approach Pavement Pressure Against Conventional Bridges: A Case Study, *ASCE Journal of Performance of Constructed Facilities*, Vol. 38, No. 1., 2024, 9 pp. <https://doi.org/10.1061/JPCFEV.CFENG-4518>
2. Lovell, M. D., Floyd, R. W., Dymond, B. Z., and Hover, K. C. "Approaches for Teaching Shear Analysis and Design of Reinforced Concrete," *ACI Special Publication*, Vol. 359, pp. 162-181, 2023, DOI: 10.14359/51740296.
3. Floyd, R. W., Meyer, K. F., and Ross, B. E. "Teaching Flexural Strength Failure Modes in Reinforced Concrete I", *ACI Special Publication*, Vol. 359, pp. 127-144, 2023, DOI: 10.14359/51740294.
4. Wang, L., Yuan, P., and Floyd, R. W. "Generation of Optimal Load Paths for Corroded Reinforced Concrete Beams – Part I: Automatic Stiffness Adjustment Technique," *ACI Structural Journal*, Vol. 120, No. 4, pp. 103-114, 2023, DOI: 10.14359/51738750
5. Wang, L., Yuan, P., and Floyd, R. W. "Generation of Optimal Load Paths for Corroded Reinforced Concrete Beams – Part II: Multi-Angle Truss Model," *ACI Structural Journal*, Vol. 120, No. 4, pp. 115-126, 2023, DOI: 10.14359/51738751
6. *Looney, T., *Mesigh, M., Volz, J., and Floyd, R. "Repair of Damaged Continuity Joints Using Ultra-High Performance, Fiber Reinforced Self-Consolidating, and Magnesium-

Aluminum-Liquid-Phosphate Concretes,” *Applied Sciences*, Vol. 12, No. 24, 12775, 2022, <https://doi.org/10.3390/app122412775>

7. ***Looney, T., *Leggs, M.,** Volz, J., and Floyd, R. “Durability and Corrosion Resistance of Ultra-High Performance Concretes for Repair,” *Construction and Building Materials*, Vol. 345, 2022, 12 pp., <https://doi.org/10.1016/j.conbuildmat.2022.128238>
8. Muraleetharan, K. K., Taghavi, A., Bounds, T. D., Miller, G. A., Zhang, B., Peters, W. L., Floyd, R. W., “Influence of Lateral Movements of Approach Embankments on Bridges: A Case Study, *ASCE Journal of Performance of Constructed Facilities*, Vol. 36, No. 4, 2022, 10 pp., [https://doi.org/10.1061/\(ASCE\)CF.1943-5509.0001742](https://doi.org/10.1061/(ASCE)CF.1943-5509.0001742)
9. ***Looney, T.,** Volz, J., and Floyd, R. “Behavior of a 3-Span Continuous Bridge Before and After Continuity Joint Replacement Using Ultra-High Performance Concrete,” *ASCE Journal of Performance of Constructed Facilities*, Vol. 35, No. 6, 2021, 12 pp., DOI: 10.1061/(ASCE)CF.1943-5509.0001667
10. ***Shahrokhinasab, E., *Looney, T.,** Floyd, R., and Garber, D., “Effect of Fiber, Cement, and Aggregate Type on Mechanical Properties of UHPC,” *Civil Engineering Journal*, Vol. 7, No. 8, 2021, pp. 1290-1309, <http://dx.doi.org/10.28991/cej-2021-03091726>
11. Floyd, R. W., Bymaster, J., Dang, C. N., and Hale, W. M., “Development Length of Prestressing Strands Cast in Lightweight Self-Consolidating Concrete,” *Engineering Structures*, Vol. 226, 2021, 11 pp., <https://doi.org/10.1016/j.engstruct.2020.111393>
12. ***Looney, T., *Coleman, R., *Funderburg, C.,** Volz, J., and Floyd, R. “Concrete Bond and Behavior of Non-Proprietary Ultra-High Performance Concrete Bridge Slab Joints,” *ASCE Journal of Bridge Engineering*, Vol. 26, No. 2, 2021, 11 pp., DOI: 10.1061/(ASCE)BE.1943-5592.0001669.
13. ***Khandel, O.,** Soliman, M., Floyd, R. W., and ***Murray, C. D.,** “Performance Assessment of Prestressed Concrete Bridge Girders using Fiber Optic Sensors and Artificial Neural Networks,” *Structure and Infrastructure Engineering*, Vol. 17, No. 5., 2021 DOI: 10.1080/15732479.2020.1759658
14. ***Yi, J.,** Wang, L., Floyd, R. W., and Zhang, J., “Rotation-Affected Bond Strength Model Between Steel Strand and Concrete,” *Engineering Structures*, Vol. 204, 2020, 8 pp. <https://doi.org/10.1016/j.engstruct.2019.110060>
15. ***Bowser, T. *M., Murray, C. D.,** and Floyd, R. W. “Bond Behavior of 0.6 in. (15.2 mm) Prestressing Strand in Belitic Calcium Sulfoaluminate (BCSA) Cement Concrete,” *ACI Structural Journal*, Vol. 117, No. 1., 2020, pp. 43-52. DOI: 10.14359/51720196
16. ***Looney, T., *McDaniel, A.,** Volz, J., and Floyd, R., “Development and Characterization of Ultra-High Performance Concrete with Slag Cement for Use as Bridge Joint Material”, *British Journal of Civil and Architecture Engineering*, Vol. 1, No. 2, 2019, pp. 1-14.
17. Shadravan, S., Ramseyer, C. C., and Floyd, R. W., "Comparison of Structural Foam Sheathing and Oriented Strand Board Panels of Shear Walls Under Lateral Load,” *Advances in Computational Design*, 4(3): 251-272, 2019. DOI: 10.12989/acd.2019.4.3.251

18. Shadravan, S., Ramseyer, C. C., and Floyd, R. W. "Lateral Resistance of Strapped Wood Shear Walls", *Journal of Structural Integrity and Maintenance*, 4(2): 65-75, 2019. DOI: 10.1080/24705314.2019.1603193.
19. *Hagedorn, R., Marti-Vargas, J. R., *Dang, C. N., Hale, W. M., and Floyd, R. W. "Temperature Gradients in Bridge Concrete I-Girders under Heat Wave", *ASCE Journal of Bridge Engineering*, Vol. 24, No. 8, 2019. DOI: 10.1061/(ASCE)BE.19435592.0001454.
20. +*Murray, C. D., Floyd, R. W. and Ramseyer, C. C. E. "Using Belitic Calcium Sulfoaluminate Cement for Precast, Prestressed Concrete Beams," *PCI Journal*, Vol. 64, No. 2, 2019, pp. 55-67. <https://doi.org/10.15554/pcij64.2-03>
21. +*Murray, C. D., +*Cranor, B. N., Floyd, R. W., Pei, J. S., "Experimental Testing of Older AASHTO Type-II Bridge Girders with Corrosion Damage at the Ends," *PCI Journal*, Vol. 64, No. 1, 2019, pp. 49-64. <https://doi.org/10.15554/pcij64.1-02>
22. +*Murray, C. D., *Diaz Arancibia, M., Okumus, P., and Floyd, R. W., "Destructive Testing and Computer Modeling of a Scale Prestressed Concrete I-girder Bridge," *Engineering Structures*, Vol. 183, 2019, pp. 195-205. DOI: 10.1016/j.engstruct.2019.01.018.
23. Wang, L., *Yi, J., Zhang, J., Floyd, R. W., and Ma, Y. (2018) "Bond Behavior of Corroded Strand in Pre-tensioned Concrete Beams," *ACI Structural Journal*, Vol. 115, No. 6, 2018, pp. 1803-1812, DOI: 10.14359/51706892.
24. Dai, L., Wang, L., Deng, M., Wu, B., Floyd, R. W., and Zhang, J., "Strengthening a 20-Year-Old Post-Tensioned Concrete Box Beam with Double-Layer Prestressed Steel Wire Ropes," *ASCE Journal of Bridge Engineering*, Vol. 23, No. 11, 2018, DOI: 10.1061/(ASCE)BE.1943-5592.0001301.
25. +*Wendling, A., +*Sadhasivam, K., and Floyd, R. W., "Creep and Shrinkage of Lightweight Self-Consolidating Concrete for Prestressed Members," *Construction and Building Materials*, Vol. 167, 2018, pp. 205-215, DOI: 10.1016/j.conbuildmat.2018.02.017.
26. Floyd, R. W., Pei, J. S., and Wright, J. P., "Prediction of Time-Dependent Bond Transfer in Pretensioned Concrete Using Draw-In Data," *Engineering Structures*, Vol. 160, 2018, pp. 546-553, DOI:10.1016/j.engstruct.2018.01.031.
27. Dang, C., Floyd, R., Hale, W. M., and Marti-Vargas, José R., "Prediction of Development Length from Free-end Slip in Pretensioned Concrete Members," *Magazine of Concrete Research*, Vol. 70, No. 14, 2018, pp. 714-725, DOI: 10.1680/jmacr.17.00334.
28. Ramseyer, C., Floyd, R., and Holliday, L., "Performance of Enhanced Residential Building Code Requirements During the March 25, 2015 Moore Tornado," *Journal of Performance of Constructed Facilities*, Vol. 31, No. 5, 2017, DOI: 10.1061/(ASCE)CF.1943-5509.0001070.
29. +*Sadhasivam, K., +*Bella Canet, E., +*Wendling, A., and Floyd, R. W., "Effect of vertical strand location on bond performance of prestressing strands cast in lightweight self-consolidating concrete," *Journal of Structural Integrity and Maintenance*. Vol. 2, No. 1, 2017, pp. 39-47, DOI: 10.1080/24705314.2017.1280588.

30. ***Naji, B.**, Ross, B. E., and Floyd, R. "Characterization of Bond-Loss Failures in Pretensioned Concrete Girders," *ASCE Journal of Bridge Engineering*. Vol. 22, No. 4, 2017, DOI: 10.1061/(ASCE)BE.1943-5592.0001025.
31. ***Ward, D. B.**, ***Dang, C. N.**, Floyd, R. W., and Hale, W. M. "Prestress Losses of Double-Tee Girders Cast with Lightweight Self-consolidating Concrete," *Journal of Building Engineering*, Vol. 6, 2016, pp. 173-183, DOI: 10.1016/j.job.2016.06.004.
32. ***Dang, C. N.**, Floyd, R. W., Hale, W. M., and Marti-Vargas, J. R. "Measured Development Lengths of 0.7 in. (17.8 mm) Strands for Pretensioned Beams," *ACI Structural Journal*, Vol. 113, No. 3, 2016, pp. 525-535, DOI: 10.14359/51688823.
33. ***Ramirez-Garcia, A. T.**, Floyd, R. W., Hale, W. M., and Marti-Vargas, J. R. "Influence of Concrete Strength on Development Length of Prestressed Concrete Members," *Journal of Building Engineering*, Vol. 6, 2016, pp. 173-183, DOI: 10.1016/j.job.2016.03.005.
34. ***Ramirez-Garcia, A. T.**, Floyd, R. W., Marti-Vargas, J. R., and Hale, W. M. "Effect of Concrete Compressive Strength on Transfer Length," *Structures*. Vol. 5, 2016, pp. 131-140, DOI: 10.1016/j.istruc.2015.10.006.
35. ***Dang, C. N.**, Floyd, R. W., Prinz, G. S., and Hale, W. M. "Determination of the Bond Stress Distribution Coefficient by the Maximum Likelihood Method," *ASCE Journal of Structural Engineering*. Vol. 142, No. 5, 2016, DOI: 10.1061/(ASCE)ST.1943-541X.0001460, 04016003.
36. ***Dang, C. N.**, Floyd, R. W., Hale, W. M., and Marti-Vargas, J. R. "Spacing Requirements of 0.7 in. (18 mm) Prestressing Strands," *PCI Journal*, Vol. 61, No. 1, 2016, pp. 70-87.
37. Ramseyer, C., Holliday, L., and Floyd, R. "Enhanced Residential Building Code for Tornado Safety," *ASCE Journal of Performance of Constructed Facilities*. Vol. 30, No. 4, 2016, DOI: 10.1061/(ASCE)CF.1943-5509.0000832.
38. ***Dang, C. N.**, Floyd, R. W., Hale, W. M., and Marti-Vargas, J. R. "Measured Transfer Lengths of 0.7 in. Strands for Pretensioned Beams," *ACI Structural Journal*, Vol. 113, No. 1, 2016, pp. 85-94, DOI: 10.14359/51687941
39. ***Dang, C. N.**, ***Murray, C. D.**, Floyd, R. W., Hale, W. M., and Marti-Vargas, J. R. "Bond Stress-Slip Model for 0.6 in. (15.2 mm) Diameter Strand", *ACI Structural Journal*, Vol 112, No. 5, 2015, pp. 625-634, DOI: 10.14359/51687750
40. Floyd, R., Hale, W. M., and ***Howland, M. B.**, "Measured Transfer Length of 0.6 in. Prestressing Strands Cast in Lightweight Self-Consolidating Concrete," *PCI Journal*, Vol. 60, No. 3, 2015, pp. 84-98, <https://doi.org/10.15554/pcij.05012015.84.98>.
41. Floyd, R., Hale, W., and ***Bymaster, J.**, "Effect of Aggregate and Cementitious Material on Developing Lightweight Self-Consolidating Concrete Mixtures," *Construction and Building Materials*, Vol. 85, 2015, pp. 91-99, DOI: 10.1016/j.conbuildmat.2015.03.084.
42. ***Bymaster, J. C.**, ***Dang, C. N.**, Floyd, R. W., and Hale, W. M., "Prestress Losses in Pretensioned Concrete Beams Cast with Lightweight Self-Consolidating Concrete," *Structures*, Vol. 2, 2015, pp. 50-57, DOI: 10.1016/j.istruc.2015.01.003
43. ***Standohar-Alfano, C. D.**, Freyne, S., Graettinger, A. J., Floyd, R. W., and Dao, T. N., "Performance of Residential Shelters during the May 20, 2013 Tornado in Moore,

Oklahoma,” *Journal of Performance of Constructed Facilities*, Vol. 29, No. 5, 2015, DOI: 10.1061/(ASCE)CF.1943-5509.0000636

44. ***Dang, C.**, ***Murray, C.**, Floyd, R., Hale, W., and Marti-Vargas, J., “Analysis of Bond Stress Distribution in Prestressing Strands Using the Standard Test for Strand Bond,” *Engineering Structures*, Vol. 72, 2014, pp. 152-159, DOI: 10.1016/j.engstruct.2014.04.040
45. ***Dang, C. N.**, ***Murray, C. D.**, Floyd, R., Hale, W. M., and Marti-Vargas, J., “A Correlation of Strand Surface Quality to Transfer Length,” *ACI Structural Journal*, Vol. 111, No. 5, 2014, pp. 1245-1252.
46. *John, E., Ruiz, E., Floyd, R., and Hale, W., “Transfer and Development Length and Prestress Losses in Ultra-High Performance Concrete”, *Transportation Research Record, Journal of the Transportation Research Board*, No. 2251, 2011, pp. 76-91. DOI: 10.3141/2251-08
47. Floyd, R., #Howland, M., and Hale, W., “Evaluation of Strand Bond Equations for Prestressed Members Cast with Self-Consolidating Concrete”, *Engineering Structures*, Vol. 33, No. 10, 2011, pp. 2879 – 2887. DOI: 10.1016/j.engstruct.2011.06.012
48. Floyd, R., Ruiz, E., Do, N., Staton, B., and Hale, W., “Development Lengths of High Strength Self-Consolidating Concrete Beams”, *PCI Journal*, Vol. 56, No. 1, 2011, pp. 36-53.

Under Review

49. *+**Banik, D.**, *+**Ahmadi, M.**, Volz, J. S., and Floyd, R. W. “Effect of Fiber Content on Properties of Non-proprietary UHPC for Prestressed Girder Repair, *Transportation Research Record* (Submitted July 28, 2023, rejected and revised for resubmission to another journal 2024)
50. Ali, S. A, ***Cancino Arevalo, P.**, Zaman, M., **Floyd, R. W.**, and Rojas-Pochyla, J. “Durability of Recycled Concrete Aggregate as a Pavement Base Material including Drainage: A Laboratory and Simulation Study,” *Transportation Research Record*, (submitted August 1, 2023, revision submitted November 30, 2023)

Refereed Conference Publications

1. *+**Yadav, O.**, *+**Banik, D.**, Floyd, R. W. “Flexural Resistance of Ultra-High Performance Concrete Subjected to Freeze-Thaw Cycles”, Third International Interactive Symposium on Ultra-High Performance Concrete 2023, Wilmington, DE, June 4-7, 2023, 8 pp.
2. ***Khandel, O.**, Soliman, M. and Floyd, R. “Application of Fiber Optic Sensors for Damage Detection and Performance Monitoring of Prestressed Concrete Bridge Girders,” 9th International Conference on Structural Health Monitoring of Intelligent Infrastructure, St. Louis, MO, August 4-7, 2019.
3. *+**Mayhorn, D. T.**, *+**Murray, C. D.**, Floyd, R. W., and Prinz, G. S., “Effect of Corrosion on End Region Behavior of Pretensioned, Prestressed Bridge Girders,” 2018 PCI Convention and National Bridge Conference, Denver, CO, February 20-24, 2018.
4. Floyd, R. W. and Freyne, S. F., “A Hands-on Project for a Wood Structures Course,” Proceedings of the 2017 ASEE Conference & Exposition, Columbus, OH, June 25-28, 2017.

5. ***Bowser, T.** and Floyd, R. W., “Calcium Sulfoaluminate Cement Concrete for Precast, Prestressed Concrete Components,” Proceedings of the AEI Conference 2017, Oklahoma City, OK, April 11-13, 2017.
6. Harvey, P. S., Floyd, R. W., Pei, J. S., Gruenwald, L., ***Tang, P., *Doan, D. V.**, and Havlicek, J. P., “Nonlinear Vibrations Based Damage Detection for Building Structural Systems, Proceedings of the AEI Conference 2017, Oklahoma City, OK, April 11-13, 2017.
7. ***Murray, C. D., *Cranor, B. N.**, Floyd, R. W., and Pei, J. S., “Shear Behavior of 45-Year-Old AASHTO Type II Bridge Girders,” Proceedings of the PCI Convention and National Bridge Conference, Cleveland, OH, February 28-March 4, 2017 Paper 57.
8. ***Sadhasivam, K., *Wendling, A.**, and Floyd, R. “Prestress Transfer in Self-Consolidating Concrete Members with Top Strands,” Proceedings of the 2016 PCI Convention and National Bridge Conference at the Precast Show, Nashville, TN, March 1-5, 2016, Paper No. 66.
9. Floyd, R. and Ramseyer, C. “Behavior of Precast, Prestressed Calcium Sulfoaluminate Cement Concrete Beams,” Proceedings of the 2016 PCI Convention and National Bridge Conference at the Precast Show, Nashville, TN, March 1-5, 2016, Paper No. 37.
10. Ramseyer, C., Holliday, L., and Floyd, R., “Influence of Lateral Load Bracing Systems on Damage and Survivability of Residential Structures Impacted by the Moore Oklahoma Tornado of May 20th, 2013,” 2014 Structures Congress, Boston, MA, April 3-5, 2014.
11. Floyd, R. and ***Sadhasivam, K.** “Calcium Sulfoaluminate Cement for Precast, Prestressed Bridge Girders”, Proceedings of the PCI Convention and National Bridge Conference, Grapevine, TX, September 21-24, 2013, Paper No. 93.
12. ***Ramirez-Garcia, A.**, Floyd, R., Hale, W. M., and Martí-Vargas, J.R., “Effect of Concrete Compressive Strength on Transfer Length and Development Length”, Proceedings of the PCI Convention and National Bridge Conference, Grapevine, TX, September 21-24, 2013, Paper No. 56.
13. ***Dang, C., *Murray, C.**, Floyd, R., Hale, W., and Marti-Vargas, J, “A Review of Factors Influencing Strand Bond”, PCI Convention and National Bridge Conference, Grapevine, TX, September 21-24, 2013, Paper No. 91.
14. ***Murray, C., *Deschenes, Jr., R.**, Floyd, R., and Hale, W. 2012. “The Effect of Mortar Strength on the Standard Test for Strand Bond”, Proceedings of the PCI Convention and National Bridge Conference, Nashville, TN, September 29 – October 2, 2012, Paper No. 105.
15. Floyd, R. and Hale, W. 2012. “Sensitivity of Lightweight SCC to Variations in Aggregate Moisture”, Proceedings of the PCI Convention and National Bridge Conference, Nashville, TN, September 29 – October 2, 2012, Paper No. 126.
16. Floyd, R., and Hale, W., “Developing Lightweight Self-Consolidating Concrete Mixtures”, Proceedings of the PCI Annual Convention and National Bridge Conference, Salt Lake City, UT, October 22-26, 2011 Paper No. 66.

17. Floyd, R., Bymaster, J., and Hale W., "Strand Bond in Lightweight Self-Consolidating Concrete", Proceedings of the PCI Annual Convention and National Bridge Conference, Salt Lake City, UT, October 22-26, 2011 Paper No. 67.
18. Smith, J., Floyd, R., Bymaster, J., and Hale, W., "From the Lab to the Field: Batching SCC", Proceedings of the PCI Annual Convention and National Bridge Conference, Salt Lake City, UT, October 22-26, 2011 Paper No. 104.
19. Floyd, R., Howland, M., Ward, D., and Hale, W., "Modulus of Elasticity of Lightweight Self-Consolidating Concrete for Prestressed Members," Proceedings of the 9th Symposium on High Performance Concrete, Rotorua, New Zealand, August 9-11, 2011, Paper No. IS117P.
20. Howland, M., Floyd, R., and Hale, W., "Bond Performance of Lightweight Self-Consolidating Concrete," Proceedings of the 9th Symposium on High Performance Concrete, Rotorua, New Zealand, August 9-11, 2011, Paper No. IS118P.
21. John, E., Ruiz, E., Floyd, R., and Hale, W., "Transfer and Development Length and Prestress Losses in Ultra-High Performance Concrete", Proceedings of the 2011 Transportation Research Board Annual Meetings, Paper No. 11-2656.
22. Floyd, R. and Hale, W., "Review of Strand Bond Performance in Lightweight Concrete", Proceedings of the 2010 Concrete Bridge Conference, National Concrete Bridge Council, Phoenix, AZ, February 24-26, 2010, Paper No. 65.
23. Floyd, R., Tackett, A., and Hale, W., "Developing Fresh Concrete Specifications for SCC", Proceedings of the FHWA National Bridge Conference, San Antonio, TX, September 12-15, 2009. Paper No. 62.
24. Ward, D., Floyd, R., and Hale, W., "Bond of 0.5 in. Strands Cast in Lightweight SCC", Proceedings of the FHWA National Bridge Conference, San Antonio, TX, September 12-15, 2009, Paper No. 46.
25. Ruiz, E., Tackett, A., Floyd, R., and Hale, W., "Performance of Prestressed Members Cast with Ultra-High Performance Concrete", Proceedings of the 11th Annual International fib Symposium, London, United Kingdom, June 22-24, 2009.
26. Tackett, A., Floyd, R., Ruiz, E., and Hale, W., "Effect of Mixer Type on the Performance of Ultra-High Performance Concrete". Proceedings of the 11th Annual International fib Symposium, London, United Kingdom, June 22-24, 2009.
27. Ruiz, E., Do, N., Staton, B., Floyd, R., and Hale, W., "Transfer and Development Lengths of Prestressed Beams Cast with Ultra-High Performance Concrete", Proceedings of the FHWA National Bridge Conference, Orlando, FL, October 4-7, 2008, Paper No. 22.
28. Floyd, R., Ruiz, E., Do, N., Staton, B., and Hale, W., "Development Lengths of High Strength SCC Beams", Proceedings of the FHWA National Bridge Conference, Orlando, FL, October 4-7, 2008, Paper No. 25.
29. Ward, D., Floyd, R., Hale, W., and Grimmelman, K., "Performance of Precast/Prestressed Double-Tees Cast with Lightweight SCC", Proceedings of the PCI Annual Convention, Orlando, FL, October 4-7, 2008, Paper No. 8.

Technical Reports

1. Floyd, R. W., Volz, J. S., ***+Banik, D.**, and ***+Yadak, O.**, “Design and Monitoring of Non-Proprietary UHPC Joints of Precast Elements,” Report No. FHWA-OK-23-01, Oklahoma Department of Transportation, Oklahoma City, OK, 2023, 181 pp.
2. Floyd, R. W., ***+Yadak, O.**, “Monitoring of UHPC Connections on Eufaula Spillway Bridge,” Final Report Task Order Number 2160-20-08, Oklahoma Department of Transportation, Oklahoma City, OK, 2022, 54 pp.
3. Floyd, R. W., Volz, J. S., ***Looney, T.**, ***Mesigh, M.**, ***Ahmadi, M.**, ***Roswurm, S.**, ***Huynh, P.**, and ***Manwarren, M.** “Evaluation of Ultra-High Performance Concrete, Fiber Reinforced Self-Consolidating Concrete, and MALP Concrete for Prestressed Girder Repair,” Report No. FHWA-OK-21-03, Oklahoma Department of Transportation, Oklahoma City, OK, 2021, 313 pp.
4. Floyd, R. W., Volz, J. S., ***Funderburg, C. K.**, ***McDaniel, A. S.**, ***Looney, T.**, ***Choate, J.**, ***Roswurm, S.**, ***Casey, C.**, ***Coleman, R.**, ***Leggs, M.**, and ***Chea, K. S. V.**, “Evaluation of Ultra-High Performance Concrete for Use in Bridge Connections and Repair,” Report No. FHWA-OK-21-03, Oklahoma Department of Transportation, Oklahoma City, OK., 2021, 358 pp.
5. Floyd, R. W., Pei, J. S., ***Murray, C. D.**, ***Toshima, J.**, ***Ali, A.**, ***Roswurm, S.** “Development of Rating Tool for Prestressed Concrete Bridges Vulnerable to Shear,” Report No. FHWA-OK-20-01, Oklahoma Department of Transportation, Oklahoma City, OK, January 2020, 274 pp.
6. Floyd, R., Soliman, M. ***Shen, L.** and ***Casey, C.**, “Application of Fiber Optic Sensors for Monitoring Prestressed Concrete Bridges,” Report No. SPTC17.1-01A, Southern Plains Transportation Center, Norman, OK, September 2018, 33 pp.
7. Floyd, R. W., Pei, J. S., ***Murray, C. D.**, ***Cranor, B.**, ***Tang, P. F.**, “Understanding the Behavior of Prestressed Girders after Years of Service,” Report No. FHWA-OK-16-03, Oklahoma Department of Transportation, Oklahoma City, OK, December 2016, 184 pp.
8. ***Pough, K.**, ***Mayhorn, D.**, Prinz, G. S., and Floyd, R. W., “Evaluation and Repair of Existing Bridges in Extreme Environments, Report No. SPTC14.1-58-F, Southern Plains Transportation Center, Norman, OK, January 2017, 199 pp.
9. Floyd, R., Volz, J. S., ***Murray, C. D.**, and ***Bowser, T.**, “Load Response of the Tella Firma Foundation System”, Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, April 2016, 48 pp.
10. Graettinger, A., Ramseyer, C., Freyne, S., Prevatt, D., Myers, L., Dao, T., Floyd, R., Holliday, L., Agdas, D., Haan, F., Richardson, J., Gupta, R., Emerson, R., ***Alfano, C.**, “Tornado Damage Assessment in the Aftermath of the May 20th 2013 Moore, Oklahoma Tornado,” National Science Foundation, March 2014, 138 pp.
11. Floyd, R. and ***Sadhasivam, K.**, “Feasibility of Using High Early Strength Concrete Made with Rapid Set[®] Calcium Sulfoaluminate Cement for Prestressed Bridge Girders in Oklahoma,” Research Report, Fears Structural Engineering Laboratory, School of Civil Engineering and Environmental Science, May 2013, 34 pp.

Other Publications

1. Giannini, E. R., Aidoo, J., Solnosky, R., Al-Hammoud, R., Brodland, G. W., **Floyd, R. W.**, Ross, B. E., Snell, L. M., Lamanna, A. J., and Hartell, J. A., “Classroom Demonstrations Demonstrated,” *Concrete International*, Vol. 39, No. 6, 2017, pp. 52-58.

Presentations

In the following sections * indicates graduate student, # indicates undergraduate student, and + indicates Floyd advisee.

National and International Conference Presentations

1. ***+Yadak, O. (presenter)**, Floyd, R. W., Volz, J. S. “Evaluation of Hollow-Core-FRP-Concrete-Steel (HC-FCS) Column and Footing Connection,” ACI Fall 2023 Convention, Boston, MA, October 29-November 2, 2023.
2. ***+Yadak, O. (presenter)**, ***+Banik, D.**, Floyd, R. W. “Flexural Resistance of Ultra-High Performance Concrete Subjected to Freeze-Thaw Cycles”, Third International Interactive Symposium on Ultra-High Performance Concrete 2023, Wilmington, DE, June 4-7, 2023.
3. Floyd, R. W. (presenter) and Roswurm, S. J. “Time-Dependent Behavior of Prestressed Concrete Beams Cast with Calcium Sulfoaluminate Cement Concrete,” AC 423 Committee Meeting, ACI Fall 2023 Convention, Boston, MA, October 30, 2023.
4. Bandelt, M. (presenter) and Floyd, R. W. “UHPC Certificate Program Module 1 Topic 2 – What is UHPC?”, ACI Spring 2023 Convention, San Francisco, CA, April 2-6, 2023.
5. Floyd, R. (presenter), Volz, J. S., ***McDaniel, A.**, ***Looney, T.**, **+Walker, C.**, and **+Starks, J.**, “Introduction and Mix Design,” W-04: Non-Proprietary ABC-UTC UHPC Workshop: Mix Design, Material Properties, and Applications, 2022 International ABC Conference, December 7, 2022.
6. Floyd, R. (presenter), Volz, J. S., ***Looney, T.**, **+Dyachkova, Y.**, **+Campos, R.**, **+Roswurm, S.**, **+Banik, D.**, **+Walker, C.**, and **+Starks, J.**, “Material Properties,” W-04: Non-Proprietary ABC-UTC UHPC Workshop: Mix Design, Material Properties, and Applications, 2022 International ABC Conference, December 7, 2022.
7. Floyd, R. (presenter), “Testing Methods and Quality Control,” W-04: Non-Proprietary ABC-UTC UHPC Workshop: Mix Design, Material Properties, and Applications, 2022 International ABC Conference, December 7, 2022.
8. Floyd, R. (presenter), “Summary of UHPC Work Across the Country,” W-04: Non-Proprietary ABC-UTC UHPC Workshop: Mix Design, Material Properties, and Applications, 2022 International ABC Conference, December 7, 2022.
9. ***+Banik, D. (presenter)**, Volz, J. S., and Floyd, R. W., “Effect of Fiber Type and Content on Behavior of UHPFRC for Prestressed Girder Repair,” ACI Spring 2022 Convention, Orlando, FL, March 27-31, 2022.
10. Floyd, R. and ***+Banik, D.** “Practical Demonstration of ABC-UTC Non-Proprietary UHPC,” Ultra-High Performance Concrete (UHPC) Workshop, 2021 Virtual Accelerated Bridge Construction Conference, December 9-10, 2021.

11. Floyd, R. (presenter), Volz, J. S., ⁺***Dyachkova, Y.**, ⁺***Roswurm, S.**, [#]**Walker, C.**, and [#]**Starks, J.** “Introduction and Basic Properties of UHPC,” Ultra-High Performance Concrete (UHPC) Workshop, 2021 Virtual Accelerated Bridge Construction Conference, December 9-10, 2021.
12. Floyd, R. W. (presenter), Volz, J. S., ⁺***Ahmadi, M.**, ***Mesigh, M.**, and ⁺***Huynh, P.** “Novel Structural Repair Using Shrinkage Compensating Concrete,” ACI Fall 2021 Convention, Virtual, October 17-21, 2021.
13. Floyd, R. W. (presenter), Volz, J. S., ⁺***Ahmadi, M.**, and ***Looney, T.** “High Strength Magnesium Alumino Liquid Phosphate Concrete for Bridge Repair,” ACI Fall 2021 Convention, Virtual, October 17-21, 2021.
14. Floyd, R. W. (presenter), ⁺***Tanksley, S.** “The Use of LWA with Calcium Sulfoaluminate Cement Concrete,” Workshop 1: Internal Curing for Concrete Pavements, 12th International Conference on Concrete Pavements (12th ICCP), Virtual, September 27 – October 1, 2021.
15. Floyd, R. W. (presenter), Pei, J.S., and Wright, J. P. “Simple Model for Time-Dependent Bond Transfer in Pretensioned Concrete using Draw-in Data,” EMI/PMC 2021 Conference, Virtual (Hosted by Columbia University), May 25-28, 2021.
16. Lovell, M. D., Floyd, R. W. (presenter), Dymond, B. Z., and Hover, K. C., “Approaches for Teaching Shear Analysis and Design of Reinforced Concrete,” ACI Spring 2021 Convention, Virtual, March 28 – April 1, 2021.
17. ⁺***Ahmadi, M.** (presenter) and Floyd, R. “End Regions Repair of Prestressed Girders for Restoring the Shear Capacity using UHPC, FR-SCC, and MALP, ACI Spring 2021 Convention, Virtual, March 28 – April 1, 2021.
18. Floyd, R. W. (presenter), Meyer, K. F., and Ross, B. E. “Teaching Flexural Strength (Failure Modes) in Reinforced Concrete I,” ACI Spring 2021 Convention, Virtual, March 28 – April 1, 2021
19. Floyd, R. (presenter), Volz, J., and ⁺***Casey, C.**, “Structural Performance of Precast Members Made Continuous for Live Load with UHPC Connections,” ACI Fall 2020 Convention, Virtual, October 25-29, 2020.
20. Volz, J. (presenter) and Floyd, R. “Non-Proprietary UHPC Mix Design and Material Selection” 2019 International Accelerated Bridge Construction Conference Pre-Conference Workshop W-03, Miami, FL, December 11, 2019.
21. Floyd, R. (presenter) and Volz, J., “Material and Bond Properties of “ABC-UTC Non-Proprietary UHPC Mix”, 2019 International Accelerated Bridge Construction Conference Pre-Conference Workshop W-03, Miami, FL, December 11, 2019.
22. Floyd, R. (presenter) and Volz, J., “ABC-UTC Non-Proprietary UHPC Mix” Durability Considerations,” 2019 International Accelerated Bridge Construction Conference Pre-Conference Workshop W-03, Miami, FL, December 11, 2019.
23. Floyd, R. (presenter) and Volz, J. “Non-Proprietary UHPC Across the United States,” 2019 International Accelerated Bridge Construction Conference Pre-Conference Workshop W-03, Miami, FL, December 11, 2019.

24. Floyd, R. (presenter) and ***Looney, T.** (presenter) “UHPC Mixing and Placement Interactive Demonstration,” 2019 International Accelerated Bridge Construction Conference Pre-Conference Workshop W-07, Miami, FL, December 11, 2019.
25. Floyd, R. (presenter) and ***Looney, T.** (presenter) “UHPC Material Property Testing Interactive Demonstration,” 2019 International Accelerated Bridge Construction Conference Pre-Conference Workshop W-07, Miami, FL, December 11, 2019.
26. Floyd, R., Volz, J., Zaman, M., **+*Walker, C.,** **+*Roswurm, S.,** **+*Dyachkova, Y.,** ***Looney, T.** (presenter), “Development of ABC-UTC Non-Proprietary UHPC Mix,” (poster), 2019 International Accelerated Bridge Construction Conference, Miami, FL, December 12-13, 2019.
27. ***Khandel, O.** (presenter), Soliman, M. and Floyd, R. “Application of Fiber Optic Sensors for Damage Detection and Performance Monitoring of Prestressed Concrete Bridge Girders,” 9th International Conference on Structural Health Monitoring of Intelligent Infrastructure, St. Louis, MO, August 4-7, 2019.
28. ***Looney, T. (presenter),** ***McDaniel, A.,** Volz, J., and Floyd, R., “Evaluation of Ultra-High Performance Concrete for Use in Bridge Connections and Repair,” Slag Cement Project of the Year Awards Ceremony, Quebec City, QC, Canada, March 27, 2019.
29. Floyd, R.W. (presenter) and **+*Tanksley, S.** “Internal Curing of Calcium Sulfoaluminate Cement Concrete Using Lightweight Aggregate,” ACI Spring 2019 Convention, Quebec City, QC, March 24-28, 2019.
30. Floyd, R. W. (presenter), ***Bymaster, J.,** Hale, W. M., “High Strength Lightweight Self-Consolidating Concrete for Prestressed Members,” ACI Spring 2019 Convention, Quebec City, QC, March 24-28, 2019.
31. Floyd, R. W. (presenter), Volz, J. S., Zaman, M., “Development of Non-Proprietary UHPC,” TRB ABC Subcommittee, 2019 TRB Annual Meeting, Washington, D.C., January 14, 2019.
32. **+*Murray, C. D.** (presenter), Floyd, R., and Ramseyer, C. “Performance of Precast Prestressed Beams Cast with Calcium Sulfoaluminate-Belite Cement Concrete,” ACI Fall 2018 Convention, Las Vegas, NV, October 14-18, 2018.
33. **+*Murray, C.,** **+*Cranor, B.,** Floyd, R. (presenter), and Pei, J. S. “Shear Testing of AASHTO Type II Bridge Girders with Corrosion Damage in the End Regions”, ACI Committee 423 , ACI Fall 2018 Convention, Las Vegas, NV, October 14-18, 2018.
34. **+*Mayhorn, D. T. (presenter),** **+*Murray, C. D.,** Floyd, R. W., and Prinz, G. S., “Effect of Corrosion on End Region Behavior of Pretensioned, Prestressed Bridge Girders,” 2018 PCI Convention and National Bridge Conference, Denver, CO, February 20-24, 2018.
35. Floyd, R. W., Freyne, S. F., and Carroll, J. C. (presenter) “A Hands-on Project for a Wood Structures Course,” ASEE Conference & Exposition, Columbus, OH, June 25-28, 2017.
36. **+*Bowser, T.** and Floyd, R. W. (presenter), “Calcium Sulfoaluminate Cement Concrete for Precast, Prestressed Concrete Components,” AEI Conference 2017, Oklahoma City, OK, April 11-13, 2017.

37. Harvey, P. S. (presenter), Floyd, R. W. (presenter), Pei, J. S., Gruenwald, L., ***Tang, P., *Doan, D. V.**, and Havlicek, J. P., “Nonlinear Vibrations Based Damage Detection for Building Structural Systems, AEI Conference 2017, Oklahoma City, OK, April 11-13, 2017.
38. Floyd, R., “Simple Demonstrations for Teaching Reinforced Concrete,” ACI Spring 2017 Convention, Detroit, MI, March 26-29, 2017
39. Floyd, R., “End Region Deterioration in Precast, Prestressed Concrete Bridge Girders in Oklahoma,” ACI Spring 2017 Convention, Detroit, MI, March 26-29, 2017
40. ***Murray, C. D. (presenter), *Cranor, B. N.**, Floyd, R. W., and Pei, J. S., “Shear Behavior of 45-Year-Old AASHTO Type II Bridge Girders,” PCI Convention and National Bridge Conference, Cleveland, OH, February 28-March 4, 2017.
41. ***Bowser, T. M.** (presenter) and Floyd, R. W., “Calcium Sulfoaluminate Cement Concrete for Precast, Prestressed Concrete Components” ACI Fall 2016 Convention, Philadelphia, PA, October 24, 2016.
42. Floyd, R. W. and ***Murray, C. D.** (presenter), “Bond Performance of Top Strands Cast in Lightweight Self-Consolidating Concrete, ACI Fall 2016 Convention, Philadelphia, PA, October 24, 2016.
43. ***Sadhasivam, K., *Wendling, A.**, and Floyd, R. (presenter), “Prestress Transfer in Self-Consolidating Concrete Members with Top Strands,” 2016 PCI Convention and National Bridge Conference at the Precast Show, Nashville, TN, March 1-5, 2016.
44. Floyd, R. (presenter) and Ramseyer, C., “Behavior of Precast, Prestressed Calcium Sulfoaluminate Cement Concrete Beams,” 2016 PCI Convention and National Bridge Conference at the Precast Show, Nashville, TN, March 1-5, 2016.
45. Floyd, R. (presenter), ***Wendling, A., and *Sadhasivam, K.**, “Creep and Shrinkage of Lightweight Self-Consolidating Concrete,” XIX Congreso Nacional de Ingenieria Civil, Huaraz, Peru, November 11-14, 2015.
46. Floyd, R. (presenter) and ***Wendling, A.**, “A Review of Creep and Shrinkage of Self-Consolidating Concrete for Prestressed Applications,” ACI Fall 2014 Convention, Washington, D.C., October 28, 2014.
47. Floyd, R. (presenter) and Ramseyer, C., Behavior of Precast, Prestressed Calcium Sulfoaluminate Cement Concrete Beams ACI Fall 2014 Convention, Washington, D.C., October 27, 2014.
48. Ramseyer, C. (presenter), Holliday, L., and Floyd, R., “Influence of Lateral Load Bracing Systems on Damage and Survivability of Residential Structures Impacted by the Moore Oklahoma Tornado of May 20th, 2013,” 2014 Structures Congress, Boston, MA, April 3-5 2014.
49. Floyd, R., ***Dang, C.**, and Hale, W. (presenter), “A Review of Strand Bond in Lightweight Concrete”, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea, January 17, 2014.
50. Floyd, R., ***Dang, C.**, and Hale, W. (presenter), “A Review of Strand Bond in Lightweight Concrete”, Seoul National University, Seoul, Korea, January 16, 2014.

51. Floyd, R. (presenter) and ⁺***Sadhasivam, K.**, “Calcium Sulfoaluminate Cement for Precast, Prestressed Bridge Girders”, PCI Convention and National Bridge Conference, Grapevine, TX, September 21-24, 2013, Paper No. 93.
52. ***Ramirez-Garcia, A.** (presenter), Floyd, R., Hale, W. M., and Martí-Vargas, J.R., “Effect of Concrete Compressive Strength on Transfer Length and Development Length”, PCI Convention and National Bridge Conference, Grapevine, TX, September 21-24, 2013, Paper No. 56.
53. ***Dang, C. (presenter)**, ***Murray, C.**, Floyd, R., Hale, W., and Marti-Vargas, J, “A Review of Factors Influencing Strand Bond”, PCI Convention and National Bridge Conference, Grapevine, TX, September 21-24, 2013, Paper No. 91.
54. ***Murray, C. (presenter)**, ***Deschenes, Jr., R.**, Floyd, R., and Hale, W. “The Effect of Mortar Strength on the Standard Test for Strand Bond”, PCI Convention and National Bridge Conference, Nashville, TN, September 29 – October 2, 2012, Paper No. 105.
55. Floyd, R. and Hale, W. (presenter) “Sensitivity of Lightweight SCC to Variations in Aggregate Moisture”, PCI Convention and National Bridge Conference, Nashville, TN, September 29 – October 2, 2012, Paper No. 126.
56. John, E. (presenter), Ruiz, E., Floyd, R., and Hale, W., “Transfer and Development Length and Prestress Losses in Ultra-High Performance Concrete”, 2011 Transportation Research Board Annual Meetings, Paper No. 11-2656.
57. Floyd, R. (presenter), Howland, M., Ward, D., and Hale, W., "Modulus of Elasticity of Lightweight Self-Consolidating Concrete for Prestressed Members," 9th Symposium on High Performance Concrete, Rotorua, New Zealand, August 9-11, 2011.
58. Howland, M. (presenter), Floyd, R., and Hale, W., "Bond Performance of Lightweight Self-Consolidating Concrete," 9th Symposium on High Performance Concrete, Rotorua, New Zealand, August 9-11, 2011.
59. Floyd, R. and Hale, W. (presenter), “Review of Strand Bond Performance in Lightweight Concrete”, 2010 Concrete Bridge Conference, National Concrete Bridge Council, Phoenix, AZ, February 24-26, 2010.
60. Floyd, R. (presenter), Tackett, A., and Hale, W., “Developing Fresh Concrete Specifications for SCC”, FHWA National Bridge Conference, San Antonio, TX, September 12-15, 2009.
61. Ward, D., Floyd, R., and Hale, W. (presenter), “Bond of 0.5 in. Strands Cast in Lightweight SCC”, FHWA National Bridge Conference, San Antonio, TX, September 12-15, 2009.
62. Ruiz, E., Tackett, A., Floyd, R. (presenter), and Hale, W., “Performance of Prestressed Members Cast with Ultra-High Performance Concrete”, 11th Annual International fib Symposium, London, United Kingdom, June 22-24, 2009.
63. Tackett, A. (presenter), Floyd, R., Ruiz, E., and Hale, W., “Effect of Mixer Type on the Performance of Ultra-High Performance Concrete”. 11th Annual International fib Symposium, London, United Kingdom, June 22-24, 2009.

64. Ruiz, E., Do, N., Staton, B., Floyd, R., and Hale, W. (presenter), “Transfer and Development Lengths of Prestressed Beams Cast with Ultra-High Performance Concrete”, FHWA National Bridge Conference, Orlando, FL, October 4-7, 2008.
65. Floyd, R.(presenter), Ruiz, E., Do, N., Staton, B., and Hale, W., “Development Lengths of High Strength SCC Beams”, FHWA National Bridge Conference, Orlando, FL, October 4-7, 2008.
66. Ward, D., Floyd, R., Hale, W. (presenter), and Grimmelsman, K., “Performance of Precast/Prestressed Double-Tees Cast with Lightweight SCC”, PCI Annual Convention, Orlando, FL, October 4-7, 2008.

State and Local Presentations

67. Floyd, R. (presenter), Volz, J. S., Yadak, O., Banik, D., Funderburg, C., Coleman, R., and Casey, C. “Laboratory Performance and Implementation of UHPC Connections in Oklahoma, Oklahoma Transportation Research Day, Oklahoma City, OK, October 17, 2023.
68. Yadak, O., Banik, D., and Floyd, R., “Flexural Resistance of Ultra-High Performance Concrete Subjected to Freeze-Thaw Cycles” (poster), Oklahoma Transportation Research Day, Oklahoma City, OK, October 17, 2023.
69. Dawson, C., Yadak, O., and Floyd, R., “Tensile Bond Behavior of Nonproprietary Ultra-High Performance Concrete” (poster), Oklahoma Transportation Research Day, Oklahoma City, OK, October 17, 2023.
70. Floyd, R. W. (presenter), and ⁺**Tiry, Z. (Presenter)** “Design Guidance for UHPC Connections of Precast Girders Made Continuous for Live Load,” ABC-UTC Research Seminar, July 28, 2023.
71. Yadak, O., Banik, D., and Floyd, R. “Flexural Resistance of Ultra-High Performance Concrete Subjected to Freeze-Thaw Cycle,” 2023 Oklahoma Transportation Summer Symposium, Oklahoma City, OK, July 24, 2023.
72. Peters, W. (presenter), Floyd, R. W. (presenter), and Looney, T. J. (presenter), “UHPC Connections for Accelerated Restoration of Live Load Continuity – Oklahoma’s U.S. 183/412 Bridge over Wolf Creek,” ABC-UTC Monthly Webinar, December 15, 2022.
73. Floyd, R. “Non-Proprietary/Open-Source Mix Design,” ABC-UTC In-Depth Web Training on Non-Proprietary Ultra-High Performance Concrete (UHPC), September 13, 2022.
74. ⁺**Banik, D. (presenter)**, ⁺**Yadak, O. M.**, ⁺**Ahmadi, M.**, Volz, J. S., and Floyd, R., “Assessment of Ultra-High-Performance-Concrete (UHPC) Properties Using Different Fibers,” 2022 Oklahoma Transportation Symposium, Oklahoma City, OK, August 4, 2022.
75. Floyd, R. W. (presenter), Volz, J. S., and ⁺**Tiry, Z.** “Design Guidance for UHPC Connections of Precast Girders Made Continuous for Live Load,” 2022 ABC-UTC Research Day 1, April 7, 2022.
76. Floyd, R. W., ^{*}**Reed, C.**, and Volz, J. S. “Service Live Design Guidance for UHPC Link Slabs, ABC-UTC Quarterly Research Seminar, Virtual, October 29, 2021.

77. Floyd, R., Volz, J. S., and ⁺***Tiry, Z.** “Design Guidance for UHPC Connections of Precast Girders Made Continuous for Live Load,” 2021 ABC-UTC Research Day 2, November 4, 2021.
78. Floyd, R. (presenter), Volz, J. S., ⁺***Ahmadi, M.,** ⁺***Huynh, P.,** and ^{*}**Looney, T.,** “Innovative Concrete Materials for Prestressed Concrete Girder End Region Repair,” 2021 Oklahoma Transportation Symposium, July 27, 2021.
79. Floyd, R. W. (presenter), Volz, J. S., and Reed, C. “Design Guidance for UHPC Continuity Linkage Connections,” 2021 ABC-UTC Research Day 1, Virtual, April 29, 2021.
80. Floyd, R. (presenter), Volz, J., ⁺***Ahmadi, M.,** and ^{*}**Mesigh, M.,** “Ultra-High Performance Concrete and Innovative Concrete Materials for Prestressed Concrete Girder Repair, Tran-SET UTC Webinar, March 9, 2021.
81. Floyd, R. W., “Overview of Changes and Additions in ACI 318-19” National Council of Structural Engineers Associations (NCSEA) Webinar, March 4, 2021.
82. Floyd, R.W., “Basics of Strut and Tie Modeling,” Structural Engineers Association of Texas (SEAoT), Virtual Conference, October 29-30, 2020.
83. Floyd, R. W., “Non-Proprietary UHPC for Transportation Structures,” Oklahoma Transportation Research Day, Oklahoma City, OK, October 20, 2020.
84. ⁺***Ahmadi, M. (presenter),** Floyd, R., and Volz, J., “End Regions Repair of Prestressed Girders for Restoring the Shear Capacity using UHPC, FR-SCC, and MALP,” (poster) Oklahoma Transportation Research Day, Oklahoma City, OK, October 20, 2020.
85. ⁺***Huynh, P. M. (presenter)** and Floyd, R., “Rehabilitation of the End Corroded Region of Prestressed Concrete Bridge Girders,” (poster) Oklahoma Transportation Research Day, Oklahoma City, OK, October 20, 2020.
86. Floyd, R. W., “Basics of Strut and Tie Modeling,” Structural Engineers Association of New Mexico (SEANM) Monthly Meeting, August 12, 2020.
87. Floyd, R. W., “Basics of Strut and Tie Modeling,” National Council of Structural Engineers Associations (NCSEA) Webinar, February 20, 2020.
88. ^{*}**Contreras-Nieto, C.,** Shan, Y. (presenter), and Floyd, R. (presenter), “Consideration of Climate and Spatial Information in Assessing Oklahoma Bridge Condition and Prioritizing Maintenance,” Oklahoma Transportation Research Day, Oklahoma City, OK, November 5, 2019.
89. Floyd, R., Volz, J., Zaman, M., ⁺***Walker, C. (presenter),** ⁺***Roswurm, S.,** and ⁺***Dyachkova, Y.,** “Development of ABC-UTC Non-Proprietary UHPC Mix,” (poster), Oklahoma Transportation Research Day, Oklahoma City, OK, November 5, 2019.
90. ⁺***Roswurm, S. (presenter),** ⁺***Casey, C.,** ^{*}**Coleman, R.,** ⁺***Funderburg, C.,** Volz, J. and Floyd, R., “Ultra-High Performance Concrete for Bridge Joint Retrofit,” 2019 SPTC Summer Symposium, Oklahoma City, OK, August 8, 2019.
91. ⁺***Walker, C. (presenter),** ⁺***Dyachkova, Y.,** ⁺***Roswurm, S.,** ^{*}**Looney, T.,** Volz, J., Zaman, M., and Floyd, R., “Development of ABC-UTC Non-Proprietary UHPC Mix,” (poster), 2019 SPTC Summer Symposium, Oklahoma City, OK, August 8, 2019.

92. Hale, W. M. and Floyd, R. (presenter), “Recently Sponsored SPTC/ODOT Research on Bridges in Extreme Environments,” Oklahoma Transportation Research Day, Oklahoma City, OK, October 23, 2018.
93. Floyd, R., Soliman, M., ***Shen, L. and *Casey, C. (presenter)**, “Application of Fiber Optic Sensors for Monitoring Prestressed Concrete Bridges,” (poster), Oklahoma Transportation Research Day, Oklahoma City, OK, October 23, 2018.
94. **+*Casey, C. (presenter)**, Floyd, R., and Volz, J. “Ultra-High Performance Concrete for Connections of Precast, Prestressed Girders Made Continuous for Live Load,” (poster), Oklahoma Transportation Research Day, Oklahoma City, OK, October 23, 2018.
95. ***Choate, J. (presenter)**, ***Wirkman, C.**, **+*Murray, C.**, Volz, J. and Floyd, R., “Implementing Fiber-Reinforced, Self-Consolidating Concrete as a Repair Material for AASHTO Prestressed Concrete Girders,” (poster), Oklahoma Transportation Research Day, Oklahoma City, OK, October 23, 2018.
96. Pei, J. S., **+*Toshima, J. M. (presenter)**, Floyd, R. W., Beck, J. L. “Identification of Piecewise Flexural Rigidity Using Experimental Measurements,” (poster), Oklahoma Transportation Research Day, Oklahoma City, OK, October 23, 2018.
97. Floyd, R. “Development of UHPC Using Local Material,” Accelerated Bridge Construction Transportation Center Workshop on Accelerated Bridge Construction (ABC), Oklahoma City, OK, October 11, 2018.
98. Floyd, R. W., “Overview of Changes and Additions in ACE 318-14,” National Council of Structural Engineers Associations (NCSEA) Webinar, September 20, 2018.
99. ***Looney, T. (presenter)**, Floyd, R. W., and Volz, J. S. "Mechanical Property Characterization of Non-Proprietary Ultra-High Performance (UHPC) Mix Designs," SPTC Summer Symposium, Oklahoma City, OK, August 14, 2018.
100. **+*Budder, E. (presenter)**, **+*Funderburg, C.**, **+*Casey, C.**, and Floyd, R. W., "Determining Effects of Cyclic Loading on a Small-Scale Slab with UHPC Joint," SPTC Summer Symposium, Oklahoma City, OK, August 14, 2018.
101. Floyd, R. W. (presenter), Pei, J. S., and Wright, J. P., "Simple Model for Time-Dependent Bond Transfer in Pretensioned Concrete Using Draw-In Data," SPTC Summer Symposium, Oklahoma City, OK, August 14, 2018.
102. **+*Casey, C. (presenter)**, Floyd, R., and Volz, J. “Ultra-High Performance Concrete for Connections of Precast, Prestressed Girders Made Continuous for Live Load,” (poster), SPTC Summer Symposium, Oklahoma City, OK, August 14, 2018.
103. Floyd, R. “Consideration of Climate in Prioritizing Bridge Maintenance and Repair,” Southern Plains Transportation Center Climate and Transportation Seminar Series, Norman, OK, November 8, 2017.
104. **+*Funderburg, C.**, **+*Casey, C.**, Floyd, R., and Volz, J. “Ultra-High Performance Concrete for Bridge Joint Replacement and Repair,” (poster and demonstration), Oklahoma Transportation Research Day, Oklahoma City, OK, October 17, 2017.

105. **+*Ali, A., +*Murray, C. D.,** Floyd, R., and Pei, J.S. “Grillage Models for Determining Shear Load Distribution Factors,” (poster), Oklahoma Transportation Research Day, Oklahoma City, OK, October 17, 2017.
106. **+*Tanksley, S.** and Floyd, R. “Internal Curing of Calcium Sulfoaluminate Cement Concrete,” (poster), Oklahoma Transportation Research Day, Oklahoma City, OK, October 17, 2017.
107. **+*Casey, C., +*Funderburg, C.,** Floyd, R., and Volz, J. “Ultra-High Performance Concrete for Bridge Joint Replacement and Repair,” (poster), SPTC Summer Symposium, Oklahoma City, OK, August 15, 2017.
108. **+*Tanksley, S.** and Floyd, R. “Internal Curing of Calcium Sulfoaluminate Cement Concrete,” (poster), SPTC Summer Symposium, Oklahoma City, OK, August 15, 2017.
109. Floyd, R. “Shear Behavior of 45-Year Old AASHTO Type II Bridge Girders”, Oklahoma Chapter of American Concrete Institute Monthly Meeting, Oklahoma City, OK, January 10, 2017.
110. Floyd, R. “Reorganization of ACI 318-14. What is new and what is the same?”, Oklahoma Structural Engineers Association Central Chapter Monthly Meeting, Oklahoma City, OK, November 15, 2016.
111. **+*Murray, C. (presenter),** Floyd, R., and Pei, J. S. “Construction of a half-scale bridge to examine load transfer and shear behaviour of composite bridge-slab system,” (poster) Oklahoma Transportation Research Day, Oklahoma City, OK, October 18, 2016.
112. **+*Murray, C. D. (presenter), +*Cranor, B. N.,** Floyd, R. W., and Pei, J. S., “Shear Behavior of 45-Year-Old AASHTO Type II Bridge Girders,” Southern Plains Transportation Center Summer Symposium, Oklahoma City, OK, August 10, 2016.
113. **+*Bowser, T. M. (presenter), +*Murray, C. D.,** and Floyd, R. “Development Length of 0.6 in. Prestressing Strands in Precast, Prestressed Calcium Sulfoaluminate Cement Concrete,” (poster), Southern Plains Transportation Center Summer Symposium, Oklahoma City, OK, August 10, 2016.
114. **+*Murray, C. (presenter), +*Cranor, B.,** Floyd, R., and Pei, J. “Understanding the Behavior of Prestressed Concrete Girders after Years of Service,” (poster) Oklahoma Transportation Research Day, Oklahoma City, OK, October 20, 2015.
115. **+*Mayhorn, D. (presenter), *Pough, K., +*Murray, C.,** Prinz, G., and Floyd, R., “Evaluation and Repair of Existing Bridges in Extreme Environments,” (poster), Oklahoma Transportation Research Day, Oklahoma City, OK, October 20, 2015.
116. **+*Mayhorn, D., *Pough, K., +*Murray, C. (presenter),** Prinz, G., and Floyd, R., “Evaluation and Repair of Existing Bridges in Extreme Environments,” (poster), Southern Plains Transportation Center Open House, Norman, OK, June 30, 2015.
117. Floyd, R., “Rapid Setting Concrete for Prestressed Members,” Oklahoma Transportation Research Day, Oklahoma City, OK, October 20, 2014.
118. **+*Cranor, B.,** Floyd, R., and Pei, J.S., “Understanding the Behavior of Prestressed Concrete Girders After Years of Service” (poster), Oklahoma Transportation Research Day, Oklahoma City, OK, October 20, 2014.

119. *Hagedorn, R., *Dang, C., Hale, W. M., and Floyd, R., “Impact of Extreme Summer Temperatures on Concrete Bridge Structures” (poster), Oklahoma Transportation Research Day, Oklahoma City, OK, October 20, 2014.
120. Holliday, L. (presenter), Ramseyer, C. (presenter), and Floyd, R. (presenter), “High Wind Construction City of Moore – New Building Code for Tornado Resistance,” American Planning Association Oklahoma Chapter Annual Conference, Norman, OK, October 2, 2014.
121. Floyd, R., “Rapid Setting Concrete for Prestressed Members,” Oklahoma ACI Chapter Monthly Meeting, Oklahoma City, OK, September 9, 2014.
122. Floyd, R. (presenter) and Ramseyer, C., “Performance of Structures in the May 20th Moore Tornado, NSF Evaluation – A quick review,” CVEG Graduate Seminar, The University of Arkansas, Fayetteville, AR, January 23, 2014.
123. Floyd, R., “Investigating the Bond of Prestressing Strands in Lightweight Self-Consolidating Concrete”, CEES Seminar, The University of Oklahoma, Norman, OK, November 26, 2012.
124. Floyd, R. (presenter), Howland, M., and Hale, W., “Bond of Prestressing Strands in Lightweight Self-Consolidating Concrete: Transfer Length”, Oklahoma Transportation Center Research Symposium, Midwest City, OK, August 6, 2012.
125. Bymaster, J. (presenter), Floyd, R., and Hale, W., “Prestress Losses in Beams Cast with Lightweight Self-Consolidating Concrete”, Oklahoma Transportation Center Research Symposium, Midwest City, OK, August 6, 2012.
126. Floyd, R., Bymaster, J., and Hale, W. (presenter), “Performance of Prestressed Bridge Girders”, Arkansas State Highway and Transportation Department, Transportation Research Committee, May 10, 2012, Little Rock, AR.
127. Floyd, R., Bymaster, J., and Hale, W. (presenter), “Performance of Prestressed Girders Cast with Lightweight Self-Consolidating Concrete”, Mack-Blackwell Rural Transportation Center, Annual Advisory Board Meeting, November 18, 2011, Fayetteville, AR.
128. Floyd, R., and Hale, W., (presenter), “Performance of Prestressed Girders Cast with Lightweight SCC”, Arkansas State Highway and Transportation Department, Transportation Research Committee, April 28, 2011, Little Rock, AR.
129. Smith, G., Bymaster, J., Floyd, R., and Hale, W. (presenter), “Investigating the Use of SCC in Transportation Structures”, Arkansas State Highway and Transportation Department, Transportation Research Committee, April 28, 2011, Little Rock, AR.
130. Smith, G., Floyd, R., and Hale, W. (presenter), “Investigating the Use of SCC in Transportation Structures”, Arkansas State Highway and Transportation Department Transportation Research Committee, November 10, 2010, Little Rock, AR.
131. Floyd, R. (presenter), Hale, W. “A Comparison of Transfer and Development Length Predictions in Self-Consolidating Concrete”, University of Arkansas Civil Engineering Seminar Series, October 14, 2010, Fayetteville, AR.

132. Smith, G., Floyd, R., and Hale, W. (presenter), “Investigating the Use of SCC in Transportation Structures”, Arkansas State Highway and Transportation Department, Transportation Research Committee, May 12, 2010, Little Rock, AR.
133. Floyd, R., and Hale, W. (presenter), “Review of Strand Bond Performance in Lightweight Concrete”, American Concrete Institute – Oklahoma City, OK Chapter, March 9, 2010, Oklahoma City, OK.
134. Tackett, A., Floyd, R., Ruiz, E., and Hale, W. (presenter), “Examining the Effects of Mixer Type on the Properties of UHPC”, Arkansas State Highway and Transportation Department, Transportation Research Committee, November 17, 2009, Little Rock, AR.
135. Do, N., Staton, B., Floyd, R. (presenter), Tackett, A., and Hale, W., “Investigating the Use of Self-Consolidating Concrete (SCC)”, Arkansas State Highway and Transportation Department, Transportation Research Committee, May 6, 2009, Little Rock, AR.
136. Tackett, A., Floyd, R., Ruiz, E. and Hale, W. (presenter), “Examining the Effects of Mixer Type on the Properties of UHPC”, Arkansas State Highway and Transportation Department, Transportation Research Committee, November 20, 2008, Little Rock, AR.
137. Floyd, R. (presenter), “Development Length of Prestressed Beams cast with Self-Consolidating Concrete”, University of Arkansas, Freshman Engineering Honors Colloquium, October 2008, Fayetteville, AR.

Service and Contribution to the Profession

Summary: I am currently Associate Director of the Southern Plains Transportation Center and I served as the CEES Graduate Studies Coordinator/Graduate Liaison from 2018-2021 where I helped oversee the creation of two online master’s degrees and an increase in total graduate students from 75 to more than 250. I have also served the department on search committees for 5 faculty positions. I have been involved in multiple outreach programs to high school students and veterans and have co-organized an annual graduate student symposium for the Southern Plains Transportation Center/ODOT for eight years. I am a registered structural engineer in Oklahoma, am a member of three professional organizations, and am a member of four technical committees within the American Concrete Institute. I am currently secretary of ACI Committee 363 High Strength Concrete where I lead Task Group working to update a guide document on high-strength concrete mix design.

Departmental Service

CEES Committee A (01/2021 – pres.)
 Transportation Engineering Faculty Search Committee (10/2023 – 5/2024)
 Led CEES Director Reappointment Process for Committee A (9/2022 – 11/2022)
 Structural Engineering Faculty Search Committee (10/2021 – 5/2022)
 Structural Engineering Faculty Search Committee (11/2020 – 5/2021)
 Graduate Studies Coordinator/Graduate Liaison (05/2018 – 01/2021)
 Graduate Studies Committee (08/2014 – 08/2021)
 ASCE Concrete Bowling Ball Team Advisor (11/2018 – May 2019)
 Office of Undergraduate Research Liaison (02/2017 – 2019)
 Acting Graduate Liaison (01/2017 – 04/2017)

Fears Structural Engineering Laboratory Oversight Committee (08/2012 – 08/2014)
Structural Engineering Search Committee (09/2013 – 04/2014)
Architectural/Structural Engineering Search Committee (09/2012 – 05/2013)

College Service

Led Civil Engineering portion of Boeing Engineering Days (06/2021, 06/2022)
Led a breakout session for Shell High School Girls Day (04/2015, 04/2016, 04/2017)
Co-led a breakout session for BP DEVAS and BP Engineering Academy (06/2013)
Judge for Student Research & Performance Day (03/2013)

Professional Registration

Registered Structural Engineer, State of Oklahoma (2021-pres.)
Registered Professional Engineer, State of Oklahoma, PE 28047 (2015-pres.)

Professional Affiliations

American Concrete Institute (ACI): Member 2012-pres., Student Member 2006-2012
Precast/Prestressed Concrete Institute (PCI): Member 2012-pres., Student Member 2009-2012
American Society of Civil Engineers (ASCE): Member 2015-pres., Associate Member 2012-2015, Student Member 2004-2012
American Society for Engineering Education (ASEE): Member 2017-2019.

Professional Committees

ACI 239, Ultra-High Performance Concrete, Associate Member, (2018 – pres.)
ACI 239-0E, UHPC Educational Outreach, Voting Member (2019-pres.)
Joint ASCE/ACI 423, Prestressed Concrete, Voting Member (2020 – pres.)
Joint ASCE/ACI 423, Prestressed Concrete, Associate Member (2018 – 2020)
ACI 363, High-Strength Concrete, Secretary (2019 – pres.)
ACI 363, High-Strength Concrete, Voting Member (2019 – pres.)
ACI 363, High-Strength Concrete, Associate Member (2014 – 2019)

- Led writing chapter of ACI 363 document on high strength lightweight concrete related to mix design (2016-2017)

ACI 213, Lightweight Aggregate and Concrete, Voting Member, (2018 – pres.)
ACI 213, Lightweight Aggregate and Concrete, Associate Member (2011 – 2018)

Professional Activities

Organized a workshop on Non-Proprietary UHPC at the 2022 International Accelerated Bridge Construction Conference
Moderated a Technical Session at 2022 Oklahoma Transportation Research Day
Organized two workshops on Non-Proprietary UHPC for ABC at the 2021 International ABC Conference

- Session 1: Properties of ABC-UTC Non-Proprietary UHPC and Lessons Learned
- Session 2: Practical Demonstration of ABC-UTC Non-Proprietary UHPC

Co-organized ABC-UTC Professor Workshop Series (2021)

Assistant Mentor at ASCE ExCEED Teaching Workshop (2018, 2019)

Webinar Presenter for National Council of Structural Engineers Associations (2018, 2020, 2021)

Session Moderator for 3 sessions at AEI Conference 2017

Local Planning Committee for AEI Conference 2017

Organized two ½ day pre-conference workshops on Non-Proprietary UHPC for ABC at the 2019 International ABC Conference

- W-03: Non-Proprietary UHPC for ABC, Part 1: Mix Development and Material Properties
- W-07: Non-Proprietary UHPC for ABC, Part 2: Demonstration and Implementation

Technical Paper Reviewer for:

- *ACI Structural Journal*
- *ACI Materials Journal*
- *Journal of Materials in Civil Engineering* (ASCE)
- *Journal of Performance of Constructed Facilities* (ASCE)
- *Journal of Structural Engineering* (ASCE)
- *Journal of Bridge Engineering* (ASCE)
- *Measurement* (Elsevier)
- *Construction and Building Materials* (Elsevier)
- *Engineering Structures* (Elsevier)
- *Structures* (Elsevier)
- *Advances in Civil Engineering Materials* (ASTM)
- *Journal of Structural Integrity and Maintenance* (Taylor and Francis)
- *PCI Journal*
- *Materials* (MDPI)
- *Sustainability* (MDPI)
- *KSCE Journal of Civil Engineering* (Springer, Korean Society of Civil Engineers)
- *Structure and Infrastructure Engineering* (Taylor and Francis)
- ACI Special Publication
- 2015 AEI Conference
- 2016 AEI Conference
- 2017 AEI Conference

University Service

Judge for Three Minute Thesis Competition Final Round (02/2021)

Judge for Three Minute Thesis Competition Preliminary Round (01/2020, 02/2022, 02/2023, 02/2024)

Co-Chair of the Southern Plains Transportation Center Summer Symposium (08/2016, 08/2017, 08/2018, 08/2019, 07/2021, 07/2022, 07/2023, 07/2024)

Led a demonstration session for the OU Warrior Scholar Project (07/2016, 07/2017, 06/2018, 07/2019)

Professional Development

NSF CAREER Proposal Development Series, University of Oklahoma Center for Research
Program Development and Enrichment (01/2016 – 05/2016)

ASCE ExCEED Teaching Workshop (07/21/2013-07/26/2013)

“Writing Your Journal Article in 12 Weeks” University of Oklahoma Writing Center (01/2013-
05/2013)