TEXAS STATE VITA

I. Academic/Professional Background

A. Name and Title

Name: Dr. Jung Yeon Title: Program Faculty

B. Educational Background

Degree	*Year*	*University*	*Major*	*Thesis/Dissertation*
PHD	2011	University of Texas at Austin	Civil Engineering	Zero-Stress Temperature and Its Implications for Long-Term Performance of Continuously Reinforced Concrete Pavements
MS	2008	University of Texas at Austin	Civil Engineering	Effect of Internal Relative Humidity on Coefficient of Thermal Expansion of Hardened Cement Paste and Concrete
BS	2006	Yonsei University	Civil and Environmental Engineering	

C. University Experience

Position	*University*	*Comments*	*Dates*
Associate Professor, Department of Civil and Environmental Engineering	Gachon University. Seongnam, South Korea		October 1, 2019 - August 31, 2021

E. Other Professional Credentials (licensure, certification, etc.)

Engineer-In-Training, Texas Board of Professional Engineers and Land Surveyors. (August 2015 - August 2031). License Number: 52729.
EIT certificate-Yeon-1.pdf

II. TEACHING

A. Teaching Honors and Awards:

Award / Honor Nominee: Of The Month Award - Institution Faculty, NRHH.
September 2023

B. Courses Taught:

Texas State University:

CE 2340 - INFRASTRUCTURE MATERIALS

CE 2350 - STRUCTURAL ANALYSIS

CE 3350 - DES OF REINFORCED CONCRETE INF

CE 4350 - DESIGN OF PS CONCRETE INFRA

CE 7352 - ADVANCED PRESTRESSED CONCRETE

CE 7699 - DISSERTATION

CE 7999 - DISSERTATION

ENGR 5105 - ENGINEERING INTERNSHIP

ENGR 5199B - THESIS

ENGR 5299B - THESIS

ENGR 5351 - ADV REINFORCED CONCRETE MEMB

ENGR 5352 - ADVANCED PRESTRESSED CONCRETE

ENGR 5399A - THESIS

ENGR 5399B - THESIS

MSEC 7303 - RESEARCH MSEC

MSEC 7399 - DISSERTATION

MSEC 7999 - DISSERTATION

C. Directed Student Learning (i.e. theses, dissertations, exit committees, etc.):

Member, Master's Thesis, "Exploring Heterogeneity in Pedestrian Crash Severity Across Lighting Conditions in Texas: A Hybrid Machine Learning and Constrained Discrete Choice Approach", Status: Proposal. (April 2026 - Present). Ingram School of Engineering, Texas State University.
Student(s): Tausif Islam Chowdhury, Graduate, MS.

Supervisor / Chair, Dissertation, "Static and Dynamic Test for 345KV Lattice Towers", Status: In Progress. (January 2026 - Present). Civil Engineering Program, Ingram School of Engineering, Texas State University.
Student(s): Alif Hussain, Doctoral, PhD.

Supervisor / Chair, Project, "Static and Dynamic Test for 345KV Lattice Towers", Status: In Progress. (January 2026 - Present). Ingram School of Engineering, Texas State University.
Student(s): Nils Mauritz-Barboza, Undergraduate.

Member, Dissertation, "Microstructural and Performance-Based Evaluation of Concrete Materials", Status: In Progress. (November 2025 - Present). Materials Science, Engineering, and Commercialization Program, Texas State University.
Student(s): Alka Subedi, Doctoral, PhD.

Member, Master's Thesis, "Development of Lightweight Zeolite-Based Geopolymer Mortars incorporating LECA and Biochar under CO_2 Curing", Status: Proposal. (September 2025 - Present). Ingram School of Engineering, Texas State University.
Student(s): Mehernaz Raazi, Graduate, MS.

Supervisor / Chair, Master's Thesis, "Machine Learning–Based Signal Modeling of CNT-Based Self-Sensing Cementitious Composites", Status: In Progress. (August 2025 - Present). Ingram School of Engineering, Texas State University.
Student(s): Jawad Ashraf, Graduate, MS.

Supervisor / Chair, Master's Thesis, "Early-Age Behavior of Transverse Construction Joints in CRCP", Status: In Progress. (August 2025 - Present). Ingram School of Engineering, Texas State University.
Student(s): Mithun Ray, Graduate, MS.

Supervisor / Chair, Dissertation, "Behavior of Continuously Reinforced Concrete Pavements under Varying Steel Reinforcement Configurations", Status: In Progress. (August 2024 - Present). Materials Science, Engineering, and Commercialization Program, Texas State University.
Student(s): Rajesh Chakraborty, Doctoral, PhD.

Supervisor / Chair, Dissertation, "Internal Carbonation Curing of Cement-Based Materials Using Superabsorbent Polymer", Status: In Progress. (August 2024 - Present). Civil Engineering Program, Ingram School of Engineering, Texas State University.
Student(s): Ramita Mohapoo, Doctoral, PhD.

Supervisor / Chair, Master's Thesis, "Mitigating Water Permeation Through Cracks in Superabsorbent Polymer-Modified Mortar", Status: Completed. (August 2024 - July 6, 2026). Ingram School of Engineering, Texas State University.
Student(s): Aditi Roy, Graduate, MS.

Supervisor / Chair, Master's Thesis, "Short-Term Moisture Diffusion in Superabsorbent Polymer-Modified Cementitious Composites", Status: Completed. (August 2024 - July 3, 2026). Ingram School of Engineering, Texas State University.
Student(s): Borhan Uddin Rabbani, Graduate, MS.

Supervisor / Chair, Master's Thesis, "Behavior of Transverse Cracks in Continuously Reinforced Concrete Pavement Under Environmental Loadings", Status: Completed. (August 2024 - July 3, 2026). Ingram School of Engineering, Texas State University.
Student(s): Md Saiful Islam, Graduate, MS.

Member, Master's Thesis, "Roller Compacted Concrete Pavement Incorporated with Recycled Steel Fiber", Status: Completed. (September 2025 - May 2026). Ingram School of Engineering, Texas State University.
Student(s): Md Khaliqul Bari, Graduate, MS.

Member, Master's Thesis, "Correlation between Clogging Level and Reduction in Infiltration of Pervious Concrete System", Status: Completed. (October 2025 - April 2026). Ingram School of Engineerig, Texas State University.
Student(s): Felipe Farias, Graduate, MS.

Member, Master's Thesis, "Synergetic Utilization of Hemp Shives as an Internal Curing Agent in Concrete", Status: Completed. (November 2024 - November 2025). Ingram School of Engineering, Texas State University.
Student(s): Picasso Kumar Debnath, Graduate, MS.

Supervisor / Chair, Project, "Machine Learning–Based Interpretation of Self-Sensing Signals", Status: Completed. (April 2025 - July 2025). Ingram School of Engineering, Texas State University.
Student(s): Ashok Paudel, Undergraduate.

Member, Dissertation, "Performance Evaluation of Goose Asphalt Binder: A Comprehensive Study on Properties and Applications", Status: Completed. (April 2024 - July 2025). Materials Science, Engineering, and Commercialization Program, Texas State University.
Student(s): Shyaamkrishnan Vigneswaran, Doctoral, PhD.

Supervisor / Chair, Master's Thesis, "A Phase Change Material-Based Heat-Absorbing Surface Cover to Reduce Early Age Thermal Cracking Risk in Concrete Pavements",

Status: Completed. (August 2023 - July 2025). Ingram School of Engineering, Texas State University.
Student(s): Alif Hussain, Graduate, MS.

Member, Master's Thesis, "Pattern Recognition in U-Turn Crashes: A comparative Analysis of Crash Severity Levels Using Association Rule Mining", Status: Completed. (November 2024 - June 2025). Ingram School of Engineering, Texas State University.
Student(s): Syed Aaqib Javed, Graduate, MS.

Supervisor / Chair, Project, "CRCP Field Data Analysis", Status: Completed. (January 2025 - May 2025). Ingram School of Engineering, Texas State University.
Student(s): Sanskriti Thapa, Undergraduate, BS.

Supervisor / Chair, Project, "Technology Recommendations for Wilson Historic District", Status: Completed. (October 2024 - May 2025). Ingram School of Engineering, Texas State University.
Student(s): Aayush Dhakal, Undergraduate, BS.

Supervisor / Chair, Project, "Technology Recommendations for Wilson Historic District", Status: Completed. (October 2024 - May 2025). Ingram School of Engineering, Texas State University.
Student(s): Purnika Dhamala, Undergraduate, BS.

Member, Dissertation, "Advancing CO2 Sequestration and Engineering Properties in Alternative Cementitious Materials", Status: Completed. (August 2023 - November 2024). Materials Science, Engineering, and Commercialization Program, Texas State University.
Student(s): Muhammed Bayram, Doctoral, PhD.

Member, Master's Thesis, "Development of Alkali-Activated Dolomite Geopolymer as a Carbon-Negative Construction Material", Status: Completed. (November 2023 - July 2024). Ingram School of Engineering, Texas State University.
Student(s): Saddam Hossain, Graduate, MS.

Member, Master's Thesis, "Experimental Investigation on the Behavior and Performance of Modified Cement Mortar Made with Fly Ash, Hydrated Lime and Spent Garnet for CO2 Uptake", Status: Completed. (October 2023 - July 2024). Ingram School of Engineering, Texas State University.
Student(s): Md Sayeed Faisal, Graduate, MS.

Supervisor / Chair, Master's Thesis, "The Effect of Environmental Loadings on the Electrical Responses of Self-Sensing Cementitious Composites under Free and

Restrained Conditions", Status: Completed. (September 2022 - July 2024). Ingram School of Engineering, Texas State University.
Student(s): Rajesh Chakraborty, Graduate, MS.

Supervisor / Chair, Master's Thesis, "An Electrically Heated Sidewalk System for Enhanced Winter Pedestrian Safety", Status: Completed. (September 2022 - June 2024). Ingram School of Engineering, Texas State University.
Student(s): Ramita Mohapoo, Graduate, MS.

Supervisor / Chair, Visiting Scholar, Status: Completed. (March 1, 2023 - January 31, 2024).
Student(s): Yun-Gon Kim.

Supervisor / Chair, Project, "Synthesis of Self-Sensing Concrete Mixture Design", Status: Completed. (October 2023 - December 2023). Ingram School of Engineering, Texas State University.
Student(s): Simren Pohkrel, Undergraduate, BS.

Supervisor / Chair, Project, "Synthesis of Self-Sensing Mixture Designs", Status: Completed. (September 2023 - December 2023). Ingram School of Engineering, Texas State University.
Student(s): Manan Patel, Undergraduate, BS.

Supervisor / Chair, Project, "Optimum Mixture Design of Electrically Conductive Concrete", Status: Completed. (February 2023 - December 2023). Ingram School of Engineering, Texas State University.
Student(s): Cameron Lavigne, Undergraduate, BS.

Supervisor / Chair, Project, "Optimum Mixture Design of Electrically Conductive Concrete", Status: Completed. (February 2023 - December 2023). Ingram School of Engineering, Texas State University.
Student(s): Chris Coronilla, Undergraduate, BS.

Supervisor / Chair, Project, "Synthesis of Self-Sensing Concrete Mixture Design", Status: Completed. (August 2023 - November 2023). Ingram School of Engineering, Texas State University.
Student(s): Franklin Ramirez, Undergraduate, BS.

Member, Dissertation, "Characterization of Polymer Modified Asphalt Binders Containing Processed Oil", Status: Completed. (September 2022 - July 2023). Materials Science, Engineering, and Commercialization Program, Texas State University.
Student(s): Navid Hemmati, Doctoral, PhD.

Supervisor / Chair, Project, "Optimum Mixture Design of Electrically Conductive Concrete", Status: Completed. (February 2023 - May 2023). Ingram School of Engineering, Texas State University.
Student(s): Selina Padilla, Undergraduate, BS.

Supervisor / Chair, Master's Thesis, "Design and Performance Evaluation of Electrically Heated Concrete Panels for Sustainable Winter Maintenance", Status: Completed. (July 2022 - May 2023). Ingram School of Engineering, Texas State University.
Student(s): Farzana Mustari Nishat, Graduate, MS.

D. Courses Prepared and Curriculum Development:

Advanced Prestress Concrete (ENGR 5352/CE 7352), New Course, Texas State University. Approved: 2022 - Present.

Advanced Reinforced Concrete Members (ENGR 5351/CE 7351), New Course, Texas State University. Approved: 2022 - Present.

Time-Dependent Behavior of Concrete Structures (CE 7354), New Course, Texas State University. Proposed: 2026 - Present.

E. Teaching Grants and Contracts

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

Yeon, Jung Heum (Supporting). REU SITE: Multidisciplinary Undergraduate Research in Technology-Enhanced Civil Infrastructure, National Science Foundation, Federal, $454,744.00. (Submitted: August 18, 2025). Grant.

Yeon, Jung Heum (Supporting). REU SITE: Multidisciplinary Undergraduate Research in Technology-Enhanced Civil Infrastructure, National Science Foundation, Federal, $439,420.00. (Submitted: August 2024). Grant.

Yeon, Jung Heum (Supporting). REU SITE: Multidisciplinary Undergraduate Research in Technology-Enhanced Civil Infrastructure, National Science Foundation, Federal, $417,706.00. (Submitted: October 2022). Grant.

F. Other:

Student Accomplishments:

Award:

Supervisor, Spring Semester Award. Status: Completed. (2026). Graduate College, Texas State University.
Student(s): Rajesh Chakraborty, Doctoral, PhD.

Scholarship:

Supervisor, Graduate College Scholarship. Status: Completed. (2026). Graduate College, Texas State University.
Student(s): Md Saiful Islam, Graduate, MS.

Supervisor, Graduate College Scholarship. Status: Completed. (2026). Graduate College, Texas State University.
Student(s): Rajesh Chakraborty, Doctoral, PhD.

Supervisor, Graduate College Scholarship. Status: Completed. (2025). Graduate College, Texas State University.
Student(s): Md Saiful Islam, Graduate, MS.

Supervisor, Graduate College Scholarship. Status: Completed. (2025). Graduate College, Texas State University.
Student(s): Rajesh Chakraborty, Doctoral, PhD.

Supervisor, 2025 ASHE CTX Scholarship. Status: Completed. (November 3, 2025).
Student(s): Md Saiful Islam, Graduate, MS.

Supervisor, 2025 ASHE CTX Scholarship. Status: Completed. (November 3, 2025).
Student(s): Rajesh Chakraborty, Doctoral, PhD.

Supervisor, Graduate College Scholarship. Status: Completed. (2023). Graduate College, Texas State University.
Student(s): Rajesh Chakraborty, Doctoral, PhD.

III. SCHOLARLY/CREATIVE

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

1. Books:

d. Chapters in Books:

Non-refereed:

Yeon, J. H., Choi, Y.-G., & Yeon, K.-S. (2024). Applications of Concrete-Polymer Composites: Where Are We Now and Where We Are Going? In *Springer Proceedings in Materials* (pp. 317–330). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-72955-3_32

Yeon, J. H., Choi, Y.-G., Yang, C.-J., & Yeon, K.-S. (2024). Effect of Polymer Paste Content on the Porosity and Strength of Pervious Polymer Concrete. In *Springer Proceedings in Materials* (pp. 260–267). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-72955-3_26

2. Articles:

a. Refereed Journal Articles:

Yeon, J. H., & Hussain, A. B. (2026). A New Prediction Model for Zero-Thermal Stress in Portland Cement Concrete Pavements Considering Nonlinear Material Properties and Environmental Interactions. *International Journal of Pavement Engineering*, *TBD*(TBD), TBD.

Hussain, A. B., Chakraborty, R., Choi, J., & Yeon, J. H. (2026). Field Performance of Emerging Concrete Technologies: CNT-Based Cementitious Strain Sensors and PCM Covers for Early-Age Cracking Mitigation. *International Journal of Concrete Structures and Materials*, *20*, 75. https://doi.org/https://doi.org/10.1186/s40069-026-00957-7

Hussain, A. B., & Yeon, J. H. (2026). A Potential Application of PCM Covers to Mitigate Early-Age Thermal Cracking in Concrete Pavements. *Construction and Building Materials*, *537*, 147053. https://doi.org/https://doi.org/10.1016/j.conbuildmat.2026.147053

Islam, M. S., Chakraborty, R., Alalade, S., & Yeon, J. H. (2026). Behavior of Transverse Cracks in Continuously Reinforced Concrete Pavement under Environmental Loadings. *Case Studies in Construction Materials*, *24*, e06182. https://doi.org/https://doi.org/10.1016/j.cscm.2026.e06182

Alalade, S., Chakraborty, R., Bae, S.-W., Yeon, J. H., & Won, M. (2025). Preliminary Mechanistic Optimization of Two-Mat Reinforcement Design in Continuously Reinforced Concrete Pavement. *Infrastructures*, *10*(12), 334. https://doi.org/https://doi.org/10.3390/infrastructures10120334

Mousavi, S. S., Ahmadi, K., Dehestani, M., & Yeon, J. H. (2025). Influence of Nanocoated Steel Fibers on Mechanical Properties of UHPC Considering Nano-Graphene Oxide, Nano-Aluminium Oxide, and Nano-Calcium Carbonate. *Fibers*, *13*(4), 37. https://doi.org/https://doi.org/10.3390/fib13040037

Mohapoo, R., Chakraborty, R., & Yeon, J. H. (2025). Development of an Electrically Heated Sidewalk System for Enhanced Winter Pedestrian Safety. *Buildings*, *15*(4), 533. https://doi.org/https://doi.org/10.3390/buildings15040533

Sadaghian, H., Khalilzadehtabrizi, S., Khodadoost, S., & Yeon, J. H. (2025). Torsional Performance of Vat-Photopolymerized Tough Resin: Influence of Gauge Length and UV Post-Curing. *Experimental Mechanics*, *65*(1), 365–384. https://doi.org/https://doi.org/10.1007/s11340-024-01135-0

Yeon, J. H., & Chakraborty, R. (2024). Field Implementation of Electrically Heated Precast Concrete Panels: A Case Study. *Case Studies in Construction Materials*, *21*, e04010. https://doi.org/https://doi.org/10.1016/j.cscm.2024.e04010

Shehu, L., Yeon, J. H., & Song, Y. (2024). Piezoelectric Energy Harvesting for Civil Engineering Applications. *Energies*, *17*(19), 4935. https://doi.org/https://doi.org/10.3390/en17194935

Sajedi, S., Saffarian, I., Pourbaba, M., & Yeon, J. H. (2024). Structural Behavior of Circular Concrete Columns Reinforced with Longitudinal GFRP Rebars under Axial Load. *Buildings*, *14*(4), 988. https://doi.org/https://doi.org/10.3390/buildings14040988

Hong, G., Kim, J., Song, C., Yeon, J. H., & Choi, S. (2024). Effect of Internal Curing by Superabsorbent Polymers on the Densification and Microstructural Development of Cementitious Materials Exposed to Different Environmental Conditions. *Construction and Building Materials*, *411*, 134778. https://doi.org/10.1016/j.conbuildmat.2023.134778

Sadaghian, H., Dadmand, B., Pourbaba, M., Jabbari, S., & Yeon, J. H. (2023). The Effect of Size on the Mechanical Properties of 3D-Printed Polymers. *Sustainability*, *16*, 367. https://doi.org/10.3390/su1601035

Nishat, F. M., Chakraborty, R., Oh, H.-J., Yoo, D.-Y., Mohapoo, R., & Yeon, J. H. (2023). Design and Performance Evaluation of an Electrically Heated Concrete Panel for Sustainable Winter Maintenance. *Developments in the Built Environment*, *16*, 100259. https://doi.org/10.1016/j.dibe.2023.100259

Pourbaba, M., Chakraborty, R., Pourbaba, M., Belarbi, A., & Yeon, J. H. (2023). A New Insight into the Design Compressive Strength of Ultra-High Performance Concrete. *Buildings*, *13*, 2909. https://doi.org/10.3390/buildings13122909

Oh, T., Chun, B., Jang, Y. S., Yeon, J. H., Banthia, N., & Yoo, D.-Y. (2023). Effect of Nano-SiO2 on Fiber–Matrix Bond in Ultra-High-Performance Concrete as Partial Substitution of Silica Flour. *Cement and Concrete Composites*, *138*, 104957. https://doi.org/10.1016/j.cemconcomp.2023.104957

Hwang, S. S., & Yeon, J. H. (2022). Fly Ash-Added, Seawater-Mixed Pervious Concrete: Compressive Strength, Permeability, and Phosphorus Removal. *Materials*, *15*, 1407. https://doi.org/https://doi.org/10.3390/ma15041407
Hwang and Yeon 2022-1.pdf

Salim, M. U., Nishat, F. M., Oh, T., Yoo, D.-Y., Song, Y., Ozbakkaloglu, T., & Yeon, J. H. (2022). Electrical Resistivity and Joule Heating Characteristics of Cementitious Composites Incorporating Multi-Walled Carbon Nanotubes and Carbon Fibers. *Materials*, *15*(22), 8055. https://doi.org/https://doi.org/10.3390/ma15228055

Danish, A., Ozbakkaloglu, T., Ali, M. M., Salim, M. U., Bayram, M., Yeon, J. H., & Jaffar, K. (2022). Sustainability Benefits and Commercialization Challenges and Strategies of Geopolymer Concrete: A Review. *Journal of Building Engineering*, *58*, 105005. https://doi.org/10.1016/j.jobe.2022.105005

Gholampour, A., Danish, A., Ozbakkaloglu, T., Yeon, J. H., & Gencel, O. (2022). Mechanical and Durability Properties of Natural Fiber-Reinforced Geopolymers Containing Lead Smelter Slag and Waste Glass Sands. *Construction and Building Materials*, *352*, 129043. https://doi.org/10.1016/j.conbuildmat.2022.129043

Hong, G., Choi, S., Yoo, D.-Y., Oh, T., Song, Y., & Yeon, J. H. (2022). Moisture Dependence of Electrical Resistivity in Under-Percolated Cement-Based Composites with Multi-Walled Carbon Nanotubes. *Journal of Materials Research and Technology*, *16*(2), 47–58. https://doi.org/https://doi.org/10.1016/j.jmrt.2021.11.151

Hong, G., Kim, J., Yeon, J. H., Won, M., & Choi, S. (2021). Comparison of Stress Fields near Longitudinal Construction Joints of Tied and Doweled Sections in Portland Cement Concrete Pavements. *Sustainability*, *13*(20), 11217. https://doi.org/10.3390/su132011217

3. Conference Proceedings:

a. Refereed Conference Proceedings:

Yeon, J. H., Choi, Y.-G., & Yeon, K.-S. (2023). Applications of Concrete-Polymer Composites: Where Are We Now and Where Are We Going? International Congress on Polymers in Concrete (ICPIC).

Yeon, J. H., Choi, Y.-G., & Yang, C.-J. (2023). Effect of Polymer Paste Content on the Porosity and Strength of Pervious Polymer Concrete. International Congress on Polymers in Concrete (ICPIC).

Chakraborty, R., Mohapoo, R., Song, I.-H., Oh, H.-J., & Yeon, J. H. (2023). An Electrical Heating Technique for Environmentally Friendly Winter Maintenance of Transportation Infrastructure. UKC 2023.

Sung, J., Park, S. J., Yeon, J. H., & Cho, B. H. (2022). Combined Effects of PVA Fibers and EOGO Nanoflakes on Flexural Behavior of Cement Composites. International Conference for Road Engineers (ICRE 2022).

Nishat, F. M., Ha, S., Song, I.-H., Ozbakkaloglu, T., & Yeon, J. H. (2022). An Analysis Framework for Electrically Heated Precast Concrete Panels. UKC 2022.

Yeon, J. H., Choi, K.-B., & Choi, W. (2021). Effect of Crack Width on the Electrical Resistivity of Cement Mortar Containing Carbon Nanotubes and Carbon Fibers (2nd ed., Vol. 33, pp. 601–602). Korea Concrete Institute.

Choi, J. H., So, H. S., & Yeon, J. H. (2021). Heating Performance of Cement Mortar Incorporating Carbon Nanotubes and Carbon Fibers (2nd ed., Vol. 22, p. 96). Korean Society of Road Engineers.

Oh, H.-J., Han, S.-J., Yeon, J. H., Kim, S.-R., & Park, J.-K. (2021). Development of a Smart Deicing System for Preemptive Response to Black Ice. Korean Society of Hazard Mitigation.

b. Non-refereed:

Roy, A., Rabbani, B. U., & Yeon, J. H. (Accepted / In Press). Self-Sealing Responses of Superabsorbent Polymers-Modified Cementitious Composites.

Yeon, K.-S., Hwang, J.-Y., & Yeon, J. H. (Accepted / In Press). Visual Inspection of the Long-Term Performance of an Aqueduct Retrofitted with Polymer Concrete: Assessment 13 Years after Rehabilitation.

B. Works Not in Print:

2. Invited Talks, Lectures, and Presentations:

Yeon, J. H., MSEC Seminar and Commercialization Forum, "Smart Concrete Infrastructure - Where Do We Stand Today?," Texas State University, Online. (November 4, 2022).
Seminar_Announcement_Dr. Jung Yeon_11.04.2022-1.pdf

Yeon, J. H., Research Seminar, "Multi-Functional Cement-Based Materials for Technology-enhanced, Smart Infrastructure," The University of Texas Rio Grande Valley, Edinburg, TX, United States. (January 30, 2025).

Yeon, J. H., TxDOT FY CM&M ROC meeting, "Develop Best Practice to Improve CRCP Performance near Transverse Construction Joints," Texas Department of Transportation. (December 11, 2024).

Yeon, J. H., TxDOT FY CM&M FAC meeting, "Develop Best Practice to Improve CRCP Performance near Transverse Construction Joints," Texas Department of Transportation. (October 23, 2024).

Yeon, J. H., International Congress on Polymers in Concrete, "Effect of Polymer Paste Content on the Porosity and Strength of Pervious Polymer Concrete," International Congress on Polymers in Concrete, Warsaw (virtual), Poland. (December 2023).

Yeon, J. H., ACI Concrete Convention Fall 2023 - Technical Committee 236: Material Science of Concrete, "A Novel Method to Extract True Structural Signal from Self-Sensing Cement-Based Composites," American Concrete Institute, Boston, MA, United States. (October 2023).

Yeon, J. H., ACI Concrete Convention Fall 2023 - Technical Committee 241: Nanotechnology of Concrete, "A Novel Method to Extract True Structural Signal from Self-Sensing Cement-Based Composites," American Concrete Institute, Boston, MA, United States. (October 2023).

Yeon, J. H., ACI Concrete Convention Fall 2023 - Technical Committee 444: Structural Health Monitoring, "A Novel Method to Extract True Structural Signal from Self-Sensing Cement-Based Composites," American Concrete Institute, Boston, MA, United States. (October 2023).

Yeon, J. H., Research Seminar, "Design and Application of Electrically Heated Concrete Panel System," Korea Conformity Laboratory, Jincheon, South Korea. (July 4, 2023).

Yeon, J. H., "Design and Performance of CRCP in Texas," Korea Expressway Corporation, Korea Expressway Corporation Research Institute, Hwaseong, South Korea. (June 26, 2023).

Yeon, J. H., ACI Concrete Convention Fall 2022 - Technical Committee 241: Nanotechnology of Concrete, "A Novel Method to Decouple Stress-Driven Electrical Signal from Total Electrical Signal of Self-Sensing Cementitious Composites," American Concrete Institute, Dallas. (October 2022).

Yeon, J. H., ACI Concrete Convention Fall 2022 - Technical Committee 444: Structural Health Monitoring, "A Novel Method to Decouple Stress-Driven Electrical Signal from Total Electrical Signal of Self-Sensing Cementitious Composites," American Concrete Institute, Dallas. (October 2022).

Yeon, J. H., CE 1210: Introduction to Smart Infrastructure, "Introduction to Structural Engineering." (September 21, 2022).

Yeon, J. H., Invited Talk (Chung-Ang University, South Korea), "Design and Operation of CNT/CF-Based Self-Heated Pavement Systems," Chung-Ang University, South Korea, Online, Seoul, South Korea. (June 7, 2022).

Yeon, J. H., Texas State University / Quanta Services Meeting, "Self-Sensing Integrated, Data-Driven, Wireless Structural Health Monitoring / IoT-Based Self-Heated Pavement System for Environmentally Friendly and Cost-Effective Winter Road Maintenance," Texas State University, San Marcos, TX, United States. (April 4, 2022).

Yeon, J. H., CE 1210: Introduction to Smart Infrastructure, "Introduction to Structural Engineering," Texas State University. (March 21, 2022).

Yeon, J. H., ACI Concrete Convention Fall 2021 - Technical Committee 241: Nanotechnology of Concrete, "Calibration of Self-Sensing Signal from Multi-Walled Carbon Nanotubes (MWCNT)-Embedded Cement-Based Composites Considering Internal Moisture State," American Concrete Institute, Online. (October 17, 2021).

Yeon, J. H., ACI Concrete Convention Fall 2021 - Technical Committee 305: Hot Weather Concreting, "Development of a Phase Change Material-Based Heat-Absorbing Surface Covering for Concrete Pavements/Bridge Decks," American Concrete Institute, Online. (October 17, 2021).

Yeon, J. H., CE 1210: Introduction to Smart Infrastructure, "Introduction to Structural Engineering," Texas State University. (October 14, 2021).

11. Consultancies:

Government, Korea Institute of Civil Engineering and Building Technology, Ilsan, South Korea. (September 2022).

13. Other Works not in Print:

a. Works "submitted" or "under review":

Journal Articles:

Rabbani, B. U., & Yeon, J. H. (Submitted / Under Review). Electrical Resistivity-Based Estimation of Autogenous Shrinkage in Cement Mortars under Different Internal Curing Conditions. *Measurement*. (July 17, 2026)

Roy, A., & Yeon, J. H. (Submitted / Under Review). Mitigation of Water Permeation Through Cracks in Mortar Using Superabsorbent Polymers. *Construction and Building Materials*. (July 15, 2026)

Rabbani, B. U., & Yeon, J. H. (Submitted / Under Review). Monitoring Short-Term Moisture Progression in Superabsorbent Polymer-Modified Mortar Using Hygro-Electrical Measurements. *Materials Today Communications*. (July 13, 2026)

Chakraborty, R., & Yeon, J. H. (Submitted / Under Review). The Effect of Environmental Loadings on the Electrical Responses of CNT-Based Piezoresistive, Self-Sensing Cementitious Composites under Free and Restrained Conditions. *Cement and Concrete Composites*. (March 2026)

b. Works "in progress":

Books:

Mousavi, S. S., Dehestani, M., & Yeon, J. H. (In Preparation; Not Yet Submitted). *Coatings for Concrete*. Elsevier.

c. Other Works Not in Print:

Demonstrations:

Yeon, J. H., "Static and Dynamic Test for 345KV Lattice Towers," Infrastructure Research Laboratory, San Marcos, TX, United States. (March 11, 2026).

Yeon, J. H., "Performance Evaluation of Electrically Heated Precast Concrete Panels," Seoul Institute of Technology, Seoul, South Korea. (November 7, 2023).

Keynote / Plenary Addresses:

Yeon, J. H., International Congress on Polymers in Concrete, "Applications of Concrete-Polymer Composites: Where Are We Now and Where Are We Going?," International Congress on Polymers in Concrete, Warsaw (virtual), Poland. (September 2023).

Posters:

Islam, M. S., Chakraborty, R., Hussain, A. B., Yeon, J. H., The 2026 IAI Summit, "Analysis of Transverse Cracks Behavior of Continuously Reinforced Concrete Pavement," Houston, TX, United States. (May 18, 2026).

Roy, M. S., Yeon, J. H., The 2026 IAI Summit, "Mitigating Water Permeation in Cracked Mortar Using Superabsorbent Polymers," Houston, TX, United States. (May 18, 2026).

Hussain, A. B., Chakraborty, R., Islam, M. S., Ray, M., Yeon, J. H., The 2026 IAI Summit, "Structural Performance Evaluation of Old and New Static Arms for 345kV Electrical Transmission Lattice Tower under Static and Dynamic Loading," Houston, TX, United States. (May 18, 2026).

Islam, M. S., Chakraborty, R., Hussain, A. B., Yeon, J. H., CECON 2025, "Behavior of Continuously Reinforced Concrete Pavement under Environmental Loading," ASCE, Embassy Suites by Hilton San Marcos Hotel Conference Center, San Marcos, TX, United States. (September 17, 2025).

Patents:

Yeon, Jung Heum, Chakraborty, Rajesh. "Use of Recycled Superabsorbent Polymers (SAPs) to Create Multifunctional Concrete". United States. Number / ID: 19/294,100. (Date of Application: 2026).

C. Scholarly / Creative Grants and Contracts:

1. Funded External Grants and Contracts:

Yeon, Jung Heum (Principal). 0-7273: Develop Best Practice to Improve CRCP Performance near Transverse Construction Joints, Texas Department of Transportation, State, $656,129.00. (Submitted: June 2025, Funded: January 2026 - August 2028). Grant.

Additional Comments: The RFP (FY 26-031) is based on Yeon's research problem statement. TXST is the project lead, with an allocated budget share of $311,135.

Yeon, Jung Heum (Principal). 0-7206: Develop Optimum 2-Mat Reinforcement Design in Continuously Reinforced Concrete Pavement (CRCP), Texas Department of Transportation, State, $737,886.00. (Submitted: March 2024, Funded: September 2024 - August 2027). Grant.

Additional Comments: TXST share: $209,726.25

Yeon, Jung Heum (Principal). I-Corps: Translation Potential of Multi-Functional Concrete with Recycled Superabsorbent Polymers, National Science Foundation, Federal, $50,000.00. (Submitted: November 2024, Funded: May 2025 - April 2027). Grant.

Yeon, Jung Heum (Principal), Dong, Yongtao (Co-Principal). Static and Dynamic Test for 345KV Lattice Tower, Lower Colorado River Authority (LCRA), Private / Foundation / Corporate, $156,883.00. (Submitted: December 2024, Funded: April 1, 2025 - September 30, 2026). Grant.

Hwang, Sangchul Scott (Principal), Yeon, Jung (Co-Principal), Shi, Xijun (Co-Principal), Ozbakkaloglu, Togay (Co-Principal), Kulesza, Stacey (Co-Principal), Carvallo, Andres (Co-Principal). Professional Services and Studies on Green and Technology-Enhanced Infrastructure Management and Firefighter's Health, Hays County, State, $167,454.00. (Funded: January 2023 - June 2026). Grant.

1.CIEDAR Research Agreemen_FE-1.pdf

Speed, Jennifer (Principal), Hwang, Sangchul Scott (Co-Principal), Ptak, Thomas Walter (Co-Principal), Yeon, Jung Heum (Co-Principal), Pemberton, Sue Ann (Co-Principal). Wilson Historic District Energy and Water Conservation Study, Meadows Foundation, Private / Foundation / Corporate, $150,000.00. (Funded: December 10, 2024 - May 31, 2025). Grant.

Yeon, Jung Heum (Principal). Technical Support for Forensic Evaluation, Maintenance, and Rehabilitation of Rigid Pavements, Texas Department of Transportation - Interagency Cooperation Contract (IAC), State, $49,998.00. (Funded: September 2023 - August 2024). Grant.

Yeon, Jung Heum (Principal), Ozbakkaloglu, Togay (Co-Principal). Development of a Phase Change Material-Based Heat-Absorbing Surface Covering for Concrete Pavements/Bridge Decks, American Concrete Institute Foundation, Private / Foundation / Corporate, $57,500.00. (Submitted: December 1, 2021, Funded: August 2022 - January 2024). Grant.

Additional Comments: $30K matching from TXST

Yeon, Jung Heum (Principal), Ozbakkaloglu, Togay (Co-Principal), Hwang, Sangchul (Co-Principal), Song, In-Hyouk (Co-Principal). Development of IoT-Based Snow Removal System for Preemptive Response to Heavy Snow and Black Ice, The Ministry of the Interior and Safety of Korea (through Seoul Institute of Technology), Other, $326,551.00. (Funded: September 2021 - December 2023). Grant.

Yeon, Jung Heum (Principal). Technical Support for Forensic Evaluation, Maintenance, and Rehabilitation of Rigid Pavements, Texas Department of Transportation - Interagency Cooperation Contract (IAC), State, $49,998.00. (Funded: September 2022 - August 2023). Grant.

Yeon, Jung Heum (Principal). Develop High Energy-Efficient Carbon Product-Based Self-Heating Cementitious/Polymeric Pavement and Coating Materials to Mitigate Ice Build-Up on Roadways, National Research Foundation of Korea, Other, $111,766.00. (Funded: June 2021 - August 2021). Grant.

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

Yeon, Jung Heum. CAREER: Environmentally Adaptive Self-Sensing Cementitious Composites for Reliable, Autonomous Structural Health Monitoring, National Science Foundation, Federal, $664,538.00. (Submitted: July 2026). Grant.

Kalfas, Konstantinos (Principal), Pajouh, Mojdeh (Co-Principal), Yeon, Jung Heum (Co-Principal). Investigating the Structural Impact of Delamination in Precast Concrete Panel Decks, Texas Department of Transportation, State, $850,000.00. (Submitted: March 2026). Grant.

Additional Comments: Under review

Yeon, Jung Heum (Principal), Lee, Chul Ho (Co-Principal). Optimize Opening-to-Traffic Criteria for Texas Concrete Pavements & Repairs via Reliable In-Place Measurements, Texas Department of Transportation, State, $332,391.25. (Submitted: March 5, 2026). Grant.

Additional Comments: Under review

Yeon, Jung Heum (Principal). Technical Support for Forensic Evaluation, Maintenance, and Rehabilitation of Rigid Pavements, Texas Department of Transportation - Interagency Cooperation Contract (IAC), State, $49,998.00. (Funded: September 2024 - August 2025). Grant.

Additional Comments: This IAC contract was initially scheduled to be signed in August 2024; however, the process was cancelled due to the retirement of the signing authority, Eliza Paul, TxDOT Houston District Engineer, and the departure of the managing Transportation Engineer, Dr. ASM Rahman.

Haque, Ariful (Principal), Piner, Edwin L (Co-Principal), Yeon, Jung Heum (Co-Principal), Auciello, Orlando (Co-Principal), Yeon, Hao (Co-Principal), Chen, Yihong (Supporting), Miyahara, Yoichi (Supporting), Tate, Jitendra S (Supporting), Droopad, Ravindranath (Supporting), Kim, Namwon (Supporting), Nguyen, Hieu (Supporting), Lopez, Manuel Q. (Supporting), Scolfaro, Luisa M (Supporting). Acquisition of a Microwave Plasma- Assisted Chemical Vapor Deposition System with Laser-based Processing and Doping Features for Research and Education in Central Texas, Department of Defense, Federal, $650,000.00. (Submitted: April 29, 2025). Grant.

Yeon, Jung Heum (Principal). Develop Best Practice to Improve CRCP Performance near Transverse Construction Joints, Texas Department of Transportation, State, $612,078.00. (Submitted: March 2025). Grant.

Haque, Ariful (Principal), Piner, Edwin L (Co-Principal), Yeon, Jung Heum (Co-Principal), Auciello, Orlando (Co-Principal), Yeon, Hao (Co-Principal), Chen, Yihong (Supporting), Miyahara, Yoichi (Supporting), Tate, Jitendra S (Supporting), Droopad, Ravindranath (Supporting), Kim, Namwon (Supporting), Nguyen, Hieu (Supporting), Lopez, Manuel Q. (Supporting), Scolfaro, Luisa M (Supporting). MRI: Track 1 Acquisition of a Microwave Plasma-Assisted Chemical Vapor Deposition System with Laser-based Processing and Doping Features for Research and Education, National Science Foundation, Federal, $650,000.00. (Submitted: November 15, 2024). Grant.

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Full submission package Final (2)-1.pdf

Yeon, Jung Heum (Principal). Evaluation of Adhesive Anchors in Concrete Pavement Applications, Texas Department of Transportation, State, $520,810.00. Grant.

Hwang, Sangchul Scott (Principal), Kim, Namwon (Co-Principal), Yeon, Jung Heum (Co-Principal), Lopez, Christina Wright (Co-Principal). Mitigation of micro- and nano-plastics in stormwater runoff by a Biologically active Pervious concrete Interception Trap (BioPIT), NOAA Sea Grant, Federal, $2,000,000.00. (Submitted: March 2024). Grant.

Yeon, Jung Heum, Ozbakkaloglu, Togay (Co-Principal). A Novel Method to Extract True Structural Signals from Self-Sensing Cement-Based

Composites, American Concrete Institute Foundation, Private / Foundation / Corporate, $57,500.00. (Submitted: December 2023). Grant.

Additional Comments: $30K matching from TXST

Ozbakkaloglu, Togay (Principal), Yeon, Jung Heum (Co-Principal), Gullu, Ahmet (Co-Principal). Flexural behavior of concrete bridge columns produced with UHPC incorporating recycled carbon fibers, American Concrete Institute, Private / Foundation / Corporate, $87,500.00. (Submitted: December 2023). Grant.

Ozbakkaloglu, Togay (Principal), Gullu, Ahmet (Co-Principal), Yeon, Jung Heum (Co-Principal). Flexural behavior of concrete bridge columns produced with UHPC incorporating recycled carbon fibers, American Concrete Institute, Private / Foundation / Corporate, $87,500.00. (Submitted: December 2023). Grant.

Ozbakkaloglu, Togay (Principal), Gullu, Ahmet (Co-Principal), Yeon, Jung Heum (Co-Principal). Green Concrete Mixes to Promote Carbon-Neutral Economy Transition Goal of Quanta Services, Quanta Services, Private / Foundation / Corporate, $0.00. (Submitted: September 2023). Grant.

Additional Comments: Total award/requested amount is to be determined.

Moro, Carlos (Principal), Torres, Anthony S (Co-Principal), Espinoza Chavez, Wilson F (Co-Principal), Kisi, Krishna P (Co-Principal), Shi, Xijun (Co-Principal), Kim, Yoo-Jae (Co-Principal), Yeon, Jung Heum (Co-Principal), Asiabanpour, Bahram (Co-Principal), Penlerick, Delwin Ryan (Co-Principal). Advancing Innovation in Construction: Acquiring 3D Concrete Printer Systems for Texas State University, Department of Defense, Federal, $641,050.00. (Submitted: September 15, 2023). Grant.

Yeon, Jung Heum (Supporting). Global Center for ZERO-Emissive BUILT Environment Technologies (BUILT-ZERO), National Science Foundation, Federal, $5,000,000.00. (Submitted: August 2023). Grant.

Ozbakkaloglu, Togay (Principal), Gullu, Ahmet (Co-Principal), Yeon, Jung Heum (Co-Principal), Talley, Kimberly (Co-Principal), Faroughi, Salah (Co-Principal), Das, Subasish (Co-Principal). CREST Phase I Center for Smart, Sustainable, and Connected Infrastructure, National Science Foundation, Federal, $7,500,000.00. (Submitted: July 2023). Grant.

Yeon, Jung Heum (Principal), Chakraborty, Rajesh (Co-Principal). Developing an Energy-Efficient Resistive Heating Technique for Environmentally Friendly and Cost-Effective Winter Maintenance of Airport Runways, Federal Aviation Administration, Federal, $12,000.00. (Submitted: May 2023). Grant.

Yeon, Jung Heum (Principal), Faroughi, Salah (Co-Principal). Self-Sensing Integrated, Data-Driven, Wireless Structural Health Monitoring, Korea Evaluation Institute of Industrial Technology, Other, $350,000.00. (Submitted: April 2023). Grant.

Yeon, Jung Heum (Co-Principal). MRI: Acquisition of a hybrid 3D printing system for additively manufactured electronics (AME) for multidisciplinary research and education, National Science Foundation, Federal, $299,759.00. (Submitted: November 2022). Grant.

Ozbakkaloglu, Togay (Principal), Gullu, Ahmet (Co-Principal), Yeon, Jung Heum (Co-Principal). Flexural and shear behavior of concrete bridge columns produced with green UHPC incorporating recycled concrete aggregates and recycled carbon fibers, American Concrete Institute, Private / Foundation / Corporate, $87,500.00. (Submitted: November 29, 2022). Grant.

Yeon, Jung Heum, Ozbakkaloglu, Togay (Co-Principal). A Novel Method to Decouple Stress-Driven Electrical Signal from Total Electrical Signal of Self-Sensing Cementitious Composites, American Concrete Institute Foundation, Private / Foundation / Corporate, $57,500.00. (Submitted: September 2022). Grant.

Yeon, Jung Heum (Co-Principal). National Center for Equitable, Transformative, Safe and Zero-Emissive Transportation Systems through Education and Research Opportunities (NETZERO), US Department of Transportation, Federal, $1,200,000.00. Grant.

Faroughi, Salah (Principal), Yeon, Jung Heum (Principal), Lee, Chul-Ho (Co-Principal). Fiber Optics Data Intelligence at Extreme Edge to Power Continuous and Adaptive Monitoring of Vessels, Korea Evaluation Institute of Industrial Technology, Other, $350,000.00. (Submitted: May 2022). Grant.

Faroughi, Salah Aldin (Principal), Yeon, Jung Heum (Co-Principal), Lee, Chul Ho (Co-Principal), Ozbakkaloglu, Togay (Co-Principal). Fiber Optic Sensing Fusion and Uncertainty Quantification using 5G-enabled Edge Computing for Real-time Hydrogen Leakage Detection, USDOT, Federal, $1,581,000.00. (Submitted: May 16, 2022). Grant.

Shi, Xijun (Principal), Yeon, Jung Heum (Co-Principal), Zollinger, Dan (Co-Principal). Develop Design Details for CRCP Whitetopping at Intersections, Texas Department of Transportation, State, $447,714.00. (Submitted: March 2022). Grant.

Yeon, Jung Heum (Principal). Self-Sensing Integrated, Data-Driven, Wireless Structural Health Monitoring, Quanta Services, Private / Foundation / Corporate, $50,000.00. (Submitted: March 2022). Grant.

Yeon, Jung Heum (Principal). Advanced, Accelerated Carbonation Treatment for Sustainable, Green Concrete Production, Hanwha Solutions, Private / Foundation / Corporate, $20,000.00. (Submitted: March 18, 2022). Grant.

Yeon, Jung Heum (Supporting). Flood Resilience Center (FRC) for Marginalized Communities, National Science Foundation - NSF Centers of Research Excellence in Science and Technology, Federal, $5,000,000.00. (Submitted: September 30, 2021). Grant.

Yeon, Jung Heum (Principal), Hwang, Sangchul (Co-Principal). Calibration of Self-Sensing Signal from Multi-Walled Carbon Nanotubes (MWCNT)-Embedded Cement-Based Composites Considering Internal Moisture State, American Concrete Institute Foundation, Private / Foundation / Corporate, $57,500.00. (Submitted: September 16, 2021). Grant.

Yeon, Jung Heum (Principal), Faroughi, Salah (Co-Principal). DeepPave: An AI-based Pavement Distress Detection and Classification System to Prioritize Road Rehabilitation and Maintenance in Texas, Texas Department of Transportation, State, $140,000.00. (Submitted: September 3, 2021). Grant.

Additional Comments: Problem statement

Yeon, Jung Heum (Principal), Ozbakkaloglu, Togay (Co-Principal). Develop Phase Change Material-Based Thermal Covering for Concrete Pavements/Bridge Decks, Texas Department of Transportation, State, $120,000.00. (Submitted: September 3, 2021). Grant.

Additional Comments: Problem statement

3. Funded Internal Grants and Contracts:

Faroughi, Salah Aldin (Principal), Yeon, Jung Heum (Co-Principal). Hybrid Wettability Coatings to Enhance Bridge Structure Durability and Performance Under Surge and Icing Conditions, Other, $100,000.00. (Submitted: November 2023, Funded: August 2024 - Present). Grant.

Additional Comments: Early termination due to the departure of PI, Dr. Salah Faroughi. $50K matching.

Shi, Xijun (Principal), Torres, Anthony S (Co-Principal), Moro Martinez, Carlos (Co-Principal), Ozbakkaloglu, Togay (Co-Principal), Yeon, Jung Heum (Co-Principal), Kim, Yoo-Jae (Co-Principal), Lee, Soon Jae (Co-Principal), Kim, Hyunhwan (Co-Principal). Acquisition of a flexural fixture for Instron

5989 Test Instrument, Texas State University, Texas State University, $59,848.00. (Funded: November 2022 - Present). Grant.

Yeon, Jung Heum (Principal). IRL Demonstration Projects, College of Science and Engineering/Ingram School of Engineering, Texas State University, $10,000.00. (Funded: February 2022 - Present). Grant.

Yeon, Jung Heum (Principal), Lee, Chul Ho (Co-Principal). Data-Driven Assessment of Rigid Pavement Vulnerability in Texas Coastal Regions, Other, $88,450.00. (Submitted: September 2025, Funded: January 1, 2026 - June 30, 2027). Grant.

Additional Comments: $45,000 soft matching from PI Yeon's two ongoing TxDOT research projects (0-7206 and 0-7273)

Yeon, Jung Heum (Principal), Faroughi, Salah Aldin (Co-Principal). Self-Sealing Concrete to Enhance Durability and Longevity of Coastal Concrete Infrastructure Under Corrosive Environment, Other, $100,280.00. (Submitted: November 2023, Funded: September 2024 - August 2026). Grant.

Additional Comments: Yeon is the sole PI due to the departure of Co-PI, Dr. Salah Faroughi. $50K matching from Yeon's start-up.

Yeon, Jung Heum (Principal). Use of Recycled Superabsorbent Polymers to Achieve Multifunctional Concrete, Faculty Innovation Accelerator Program (FIAP), Texas State University, $11,000.00. (Funded: May 2024 - May 2025). Grant.

Yeon, Jung Heum (Co-Principal). Applications of Smart Infrastructure Materials to Automated Construction, Gachon University, Institutional (Higher Ed), $21,000.00. (Funded: June 2020 - August 2021). Grant.

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

Yeon, Jung Heum (Principal). Accelerated Carbonation Treatment for Sustainable, Green Concrete Production, Texas State University, $8,000.00. (Submitted: October 2023). Grant.

Yeon, Jung Heum (Principal), Lee, Chul-Ho (Co-Principal), Ozbakkaloglu, Togay (Co-Principal). Enhancing Infrastructure Resilience through Self-Sensing Integrated, Data-Driven Structural Health Monitoring, Texas State University, Texas State University, $16,000.00. (Submitted: October 2022). Grant.

Yeon, Jung Heum (Principal), Lee, Chul-Ho (Co-Principal), Stapleton, William (Co-Principal), Haque, Ariful (Co-Principal), Ozbakkaloglu, Togay (Co-Principal). Enhancing Infrastructure Resilience through Self-Sensing Integrated, Data-Driven, Wireless Structural Health Monitoring, MIRG, Texas State University, $30,000.00. (Submitted: February 20, 2022). Grant.

Yeon, Jung Heum (Principal), Ozbakkaloglu, Togay (Co-Principal), Yoo, Doo-Yeol (Co-Principal). A Wireless Cement-Based Sensor for Advanced Structural Health Monitoring of Concrete Infrastructure, Texas State University - IRA, Texas State University, $15,000.00. Grant.

Yeon, Jung Heum (Principal), Ozbakkaloglu (Co-Principal). A Wireless Cement-Based Sensor for Advanced Structural Health Monitoring of Concrete Infrastructure, Texas State University - REP, Texas State University, $16,000.00. (Submitted: October 13, 2021). Grant.

D. Scholarly / Creative Fellowships, Awards, Honors:

Award / Honor Recipient: Sigma Xi, Sigma Xi The Scientific Research Honor Society.
January 2024

Award / Honor Recipient: ACI Foundation CRC Grant.
2022

Award / Honor Recipient: Editor's Choice Article, Materials.
November 2022

Award / Honor Recipient: Scientists and Engineers Early Career Development (SEED) Fellow, Korean-American Scientist and Engineers.
December 2021

E. Scholarly / Creative Professional Development Activities Attended:

Workshop, "Scientists and Engineers Early Career Development (SEED) Workshop," Korean-American Scientist and Engineers, Garden Grove, CA, United States. (December 14, 2021 - December 15, 2021).

F. Media Recognition:

Internet, American Concrete Institute. (May 19, 2022).

Additional Comments:
https://www.concrete.org/news/newsdetail.aspx?f=51734830

IV. SERVICE

A. Institutional

1. University:

Participant, Infrastructure Research Laboratory (IRL) Groundbreaking Ceremony. (August 31, 2021).

2. College:

Member, Graduate Faculty for MSEC PhD Program. (September 2022 - Present).

3. Department/School:

Member, CE PhD Admission Committee. (September 2024 - Present).

Member, Professional Career Advising for CE Students. (September 2022 - Present).

Member, CE Faculty Search Committee (Assistant Professor in Geotech). (November 2025 - April 2026).

Member, ISoE Research Committee. (September 2024 - May 2025).

Member, CE Faculty Search Committee (Assistant Professor in Geotech). (September 2024 - April 2025).

Member, ISoE Recruiting, Graduation, Career Fair Events Committee. (September 2021 - May 2024).

Participant, Bobcat Day. (February 17, 2024).

Faculty Advisor, TXST ASCE Student Chapter. (September 2022 - September 2023).

Additional Comments: Led the establishment of the official TXST ASCE Student Chapter in November 2023

Participant, Bobcat Day. (April 15, 2023).

Scholarship Review. (September 2022 - March 2023).

Member, CE Faculty Search Committee (Assistant or Associate Professor of Practice). (September 2022 - February 2023).

Participant, ISoE Strategic Planning Meeting. (November 11, 2022 - December 15, 2022).

Participant, Bobcat day. (November 12, 2022).

Participant, Bobcat Day. (October 15, 2022).

Member, Scholarship Committee. (April 2022 - August 2022).

Member, CE Faculty Search Committee (Associate Professor of Practice). (October 6, 2021 - August 2022).

Participant, Bobcat Day. (April 9, 2022).

Member, Presidential Awards for Excellence Committee. (December 8, 2021 - January 31, 2022).

Participant, Bobcat Day. (November 20, 2021).

B. Professional:

Associate Member, American Concrete Institute - ACI Committee 209: Creep and Shrinkage. (March 2026 - Present).

Associate Member, American Concrete Institute - ACI Committee 231: Properties of Concrete at Early Ages. (March 2026 - Present).

Associate Member, American Concrete Institute - ACI Committee 308: Curing. (March 2026 - Present).

Associate Member, American Concrete Institute - ACI Committee 325: Pavements. (March 2026 - Present).

Associate Member, American Concrete Institute - ACI Committee 548: Polymers & Adhesives for Concrete. (March 2026 - Present).

Voting Member, American Concrete Institute - ACI Committee 325-0A: Pavements-Design. (March 2026 - Present).

Reviewer / Referee, Coatings. (December 2025 - Present).

Reviewer / Referee, Journal of Materials Cycles and Waste Management. (December 2025 - Present).

Reviewer / Referee, Results in Materials. (November 2025 - Present).

Reviewer / Referee, Advances in Civil Engineering. (October 2025 - Present).

Reviewer / Referee, International Journal of Energy Research. (October 2025 - Present).

Reviewer / Referee, Journal of Materials Science. (October 2025 - Present).

Reviewer / Referee, Structures. (September 2025 - Present).

Reviewer / Referee, Journal of Reinforced Plastics and Composites. (August 2025 - Present).

Reviewer / Referee, International Journal of Pavement Engineering. (July 2025 - Present).

Reviewer / Referee, Structures and Buildings. (July 2025 - Present).

Editor, Suez Canal Engineering, Energy and Environmental Science, Ismailia, Egypt. (February 2025 - Present).

Additional Comments:
https://sceee.journals.ekb.eg/journal/editorial.board#edb26916

Reviewer / Referee, Journal of Alloys and Compounds. (January 2025 - Present).

Reviewer / Referee, Structural Concrete. (July 2024 - Present).

Editor, Discover Polymers - Springer Nature. (June 2024 - Present).

Reviewer / Referee, ASCE Journal of Cold Regions Engineering. (June 2024 - Present).

Reviewer / Referee, Sustainable Chemistry and Pharmacy. (February 2024 - Present).

Reviewer / Referee, Carbon Letters. (January 2024 - Present).

Reviewer / Referee, Developments in the Built Environment. (December 2023 - Present).

Section Editor, Buildings. (February 2023 - Present).

Reviewer / Referee, Journal of Composite Science. (September 2022 - Present).

Reviewer / Referee, Sustainable Chemistry. (September 2022 - Present).

Reviewer / Referee, Sustainable Futures. (September 2022 - Present).

Section Editor, Technologies. (May 2022 - Present).

Reviewer / Referee, Case Studies in Construction Materials. (January 2022 - Present).

Reviewer / Referee, Advances in Concrete Construction. (January 2021 - Present).

Reviewer / Referee, Cement and Concrete Composites. (January 2021 - Present).

Reviewer / Referee, Construction and Building Materials. (January 2021 - Present).

Reviewer / Referee, Gels. (January 2021 - Present).

Reviewer / Referee, Journal of Building Engineering. (January 2021 - Present).

Reviewer / Referee, Materials. (January 2021 - Present).

Reviewer / Referee, Materials and Structures. (January 2021 - Present).

Reviewer / Referee, Polymers. (January 2021 - Present).

Reviewer / Referee, Sustainability. (January 2021 - Present).

Reviewer / Referee, Symmetry. (January 2021 - Present).

Editor, International Journal of Concrete Structures and Materials. (January 1, 2017 - Present).

Proposal Review Panel, National Research Foundation of Korea. (March 2015 - Present).

Member, RILEM - International Union of Laboratories and Experts in Construction Materials, Systems and Structures. (March 2014 - Present).

Board Member, International Congress on Polymers in Concrete (ICPIC). (January 2012 - Present).

Scientific Committee, 1st International Online Conference on Technologies (IOCTe2026). (2026).

Scientific Committee, The 2nd Annual International Congress on Civil Engineering, London, United Kingdom. (December 2025 - 2026).

Scientific Committee, 18th International Congress on Polymers in Concrete (ICPIC), Turkey. (February 2026 - October 2026).

Reviewer / Referee, Grant Reviewer for National Science Foundation. (May 2025).

Member, Korean Society of Road Engineers - Concrete Pavements. (January 2023 - December 2024).

Vice President, Korean American Scientists and Engineers Association - Austin Chapter. (August 2023 - August 2024).

Special Issue Guest Editor, Buildings. (March 2023 - January 2024).

Associate Editor, Journal of Asian Concrete Federation. (January 2017 - December 2023).

Speaker, American Concrete Institute - Technical Committee 236: Material Science of Concrete, Boston, MA, United States. (October 2023).

Speaker, American Concrete Institute - Technical Committee 241: Nanotechnology of Concrete, Boston, MA, United States. (October 2023).

Speaker, American Concrete Institute - Technical Committee 444: Structural Health Monitoring, Boston, MA, United States. (October 2023).

Scientific Committee, 17th International Congress on Polymers in Concrete (ICPIC), Poland. (October 31, 2021 - September 20, 2023).

Co-Chair, UKC 2023 - CEA Symposium, Dallas, TX, United States. (August 2, 2023 - August 5, 2023).

Proposal Review Panel (Doctoral Research Excellence Program), National Research Foundation of Korea. (July 2023).

Proposal Review Panel (Mid-Career Program), National Research Foundation of Korea. (July 2023).

Chair, Korea Concrete Institute - Technical Committee 207: Polymer Concrete. (January 2021 - December 2022).

Editor, Korean Recycled Construction Resources Institute - Magazine of the Korean Recycled Construction Resources Institute. (January 2021 - December 2022).

Editor, Korean Society of Road Engineers - Magazine of the Korean Society of Road Engineers. (January 2021 - December 2022).

Secretary, Korea Concrete Institute - Magazine of the Korea Concrete Institute. (January 2017 - December 2022).

Special Issue Guest Editor, Materials. (October 9, 2021 - December 20, 2022).

Speaker, American Concrete Institute - Technical Committee 444: Structural Health Monitoring, Dallas, TX, United States. (October 25, 2022).

Speaker, American Concrete Institute - Technical Committee 241: Nanotechnology of Concrete, Dallas, TX, United States. (October 23, 2022).

Best Paper Award Review Panel, Korean-American Scientists and Engineers Association (KSEA). (October 16, 2022).

Co-Chair, UKC 2022 - CEA Symposium, Arlington, VA, United States. (August 17, 2022 - August 20, 2022).

Session Chair, UKC 2022 - CEA Symposium, Arlington, VA, United States. (August 17, 2022 - August 20, 2022).

Speaker, American Concrete Institute - Technical Committee 241: Nanotechnology of Concrete. (October 17, 2021).

Speaker, American Concrete Institute - Technical Committee 305: Hot Weather Concreting. (October 17, 2021).

D. Organization Memberships:

Korean Recycled Construction Resource Institute (RCR). (2019 - Present).

Asian Concrete Federation (ACF). (2015 - Present).

Korea Concrete Institute (KCI). (2014 - Present).

Korean Society of Road Engineers (KSRE). (2014 - Present).

International Congress on Polymers in Concrete (ICPIC). (2012 - Present).

American Society of Civil Engineers (ASCE). (2009 - Present).

American Concrete Institute (ACI). (2008 - Present).

Korean-American Scientists and Engineers Association (KSEA). (2008 - Present).

Korean-American Society of Civil and Environmental Engineer (KSCEA). (2008 - Present).

E. Service Honors and Awards:

Award / Honor Recipient: Recognition, Gachon University.
November 2021