TEXAS STATE VITA

I. Academic/Professional Background

A. Name and Title

Name: Dr. Togay Ozbakkaloglu
Title: University Distinguished Professor and Professor of Civil Engineering

B. Educational Background

PhD, Civil Engineering, University of Ottawa, 2005

BSc, Civil Engineering, Istanbul Technical University, 1998

C. University Experience

Texas State University — Professor of Civil Engineering (Founding Faculty; contributed to program development and early accreditation activities), 2019–present

Texas State University — Honorary Professor of International Studies, 2020–present

Texas State University — Program Coordinator, Civil Engineering, 2020–2022

Texas State University — Interim Program Coordinator, Civil Engineering, 2019–2020

University of Hertfordshire (UK) — BRE Professor of Civil Engineering, 2018–2019

Southeast University (China) — NSFC Visiting Scholar, 2017–2018

University of Adelaide (Australia) — Senior Lecturer, 2010–2018; Lecturer, 2006–2009

University of Ottawa (Canada) — Part-time Professor, 2004–2006; Postdoctoral Fellow, 2005–2006

E. Other Professional Credentials

Professional Engineer (PE), Texas Board of Professional Engineers — License No. 137154

II. Teaching

B. Courses Taught

Texas State University (2019–present): CE 7351 / ENGR 5351 – Advanced Reinforced Concrete Members (graduate); CE 5390 – Infrastructure Systems Analysis (graduate); CE 2350 – Structural Analysis; CE 1210 – Introduction to Smart Infrastructure.

Previous institutions: Taught undergraduate and graduate courses in reinforced and prestressed concrete, structural design, structural analysis, mechanics of materials, and infrastructure engineering at the University of Adelaide (Australia), University of Hertfordshire (UK), Southeast University (China, invited visiting lecturer), and University of Ottawa (Canada).

Course evaluations and student feedback have consistently reflected strong student engagement, clarity of instruction, and overall instructional effectiveness.

C. Directed Student Learning (summary)

Supervised more than 90 graduate students and over 160 undergraduate students.

Graduate research supervision: PhD (9 as principal supervisor; 11 as co- or external supervisor); MSc (10 as chair; 14 as committee member or co-supervisor); MEng (72 students in year-long research-based projects).

Undergraduate research supervision: Honors (162 students in final-year research projects).

Students under my supervision have received competitive fellowships, awards, and other recognition and have progressed to positions in academia, government, and industry in several countries.

D. Courses Prepared and Curriculum Development

- CE 7353 / ENGR 5353 – Earthquake Engineering, new course, Texas State University, 2024–2025.
- CE 5390 – Infrastructure Systems Analysis, course development and instructional design, Texas State University, 2023–2024.
- CE 1210 – Introduction to Smart Infrastructure, course development and instructional design, Texas State University, 2019.
- Civil Engineering Program, curriculum development and program revision, Texas State University, 2019–2022 (as Interim Program Coordinator and Program Coordinator).

III. Scholarly/Creative

A. Works in Print (research productivity and impact)

Scopus Author ID: 9741842600 | Researcher ID: F-7102-2014 | ORCID ID: 0000-0003-3015-736X

Google Scholar Citations and Profile | ResearchGate Profile

Research contributions span structural performance and resilience under extreme conditions; low-carbon and sustainable construction materials and technologies; and intelligent, data-enabled infrastructure systems. Extensive international collaboration and joint research programs with leading universities and research centers across North America, Europe, Asia, and Australia, including large multi-institutional research initiatives.

- 380+ peer-reviewed publications, including 280+ journal articles in leading international journals in structural engineering and construction materials, 90+ refereed conference papers, 3 edited books, and 16 book chapters.
- Approximately 30,000 citations; h-index 96.
- 11 ESI Highly Cited Papers; Stanford Top 2% Scientists list since its inception in 2019; ranked #18 in Building & Construction (2025) among 50,000+ researchers worldwide.

A substantial proportion of these publications were co-authored with graduate students under my supervision, and I served as the corresponding author on the majority of these publications.

Representative Publications

- Bayram, M., Aydogmus, E., et al., and Ozbakkaloglu, T. (2026) Advancing energy savings and CO_2 emission reductions in lightweight concrete with bio-based polyurethane phase change material for sustainable building applications. *Cement and Concrete Composites*, 166, 106404.
- Bayram, M., Ustaoglu, A., et al., and Ozbakkaloglu, T. (2024) 3D-printed polylactic acid–microencapsulated phase change material composites for building thermal management. *Renewable and Sustainable Energy Reviews*, 191, 114150.
- Danish, A., Oz, A., et al., and Ozbakkaloglu, T. (2023) Performance evaluation and cost analysis of prepacked geopolymers containing waste marble powder under different curing temperatures for sustainable built environment. *Resources, Conservation and Recycling*, 192, 106910.
- Bai, Y. L., Zhang, Y. F., et al., and Ozbakkaloglu, T. (2023) Experimental and numerical study on seismic performance of PEN FRP-jacketed circular RC columns. *Journal of Composites for Construction (ASCE)*, 27(2), 04023005.
- Ozbakkaloglu, T., and Lim, J. C. (2013) Axial compressive behavior of FRP-confined concrete: Experimental test database and a new design-oriented model. *Composites Part B: Engineering*, 55, 607–634.

B. Works Not in Print

Invited and Keynote Lectures

Delivered more than 10 keynote and over 20 invited lectures at major international conferences and workshops in structural engineering and construction materials.

Intellectual Property (selected)

Co-inventor on three U.S. patent families (six filings total) related to smart materials, energy dissipation systems, and sustainable concrete technologies.

- CO_2-cured precast masonry units using alternative cementitious materials, U.S. patent applications (provisional and nonprovisional filed 2024–2025).
- Hybrid steel–shape memory alloy energy dissipation system, U.S. patent applications (provisional and nonprovisional filed 2024–2025).
- Lateral load resisting system with energy absorbing mechanisms, U.S. patent applications (provisional and nonprovisional filed 2023–2024).

C. Scholarly / Creative Grants and Contracts (selected)

Summary: PI or Co-PI on more than 100 funded research projects, securing cumulative funding exceeding $5 million from major national and international funding agencies and industry partners, including NSF, TxDOT, ARC, and NSFC.

Selected major funded projects and programs

- 2025–2026 — Formosa Innovation Award Project, Texas State University, Sole PI, $17,000
- 2024–2025 — Translation Potential of Smart Structural Systems for Seismic Resilience, National Science Foundation, Sole PI, $50,000
- 2023–2027 — Researcher Network for Decarbonising the Building Industry (RNDBI), Australian Government, International PI, AUD 2 million
- 2023–2025 — Barrier Striping for Accident Reduction, Texas Department of Transportation, Co-PI, $68,049 (TXST share)
- 2021–2026 — 111 Center on Seismic Resilience and Disaster Reduction of Infrastructure, Ministry of Education and Ministry of Science and Technology of China, International PI, RMB 5 million
- 2018 — Micro-Computed Tomography Facility (ARC LIEF), Australian Research Council, Co-PI, AUD 1,052,000

D. Scholarly / Creative Fellowships, Awards, Honors (selected)

- 2025–2026 — Formosa Innovation Award, Texas State University.
- 2025 — Visiting Research Fellowship, Researcher Network for Decarbonising the Building Industry (RNDBI), University of Melbourne.
- 2025 — Re-appointed to the Council, International Institute for FRP in Construction (IIFC).
- 2023 — Best Paper Award, International Conference on Construction Materials and Structures.
- 2020–present — Honorary Professor of International Studies, Texas State University.

IV. Service

A. Institutional (selected)

- Civil Engineering program leadership: Interim Program Coordinator (2019–2020) and Program Coordinator (2020–2022).
- Faculty recruitment: Chaired and served on multiple faculty search committees across structural, geotechnical, environmental, transportation, and materials engineering.
- Governance and committees (member): ISoE Personnel Committee; ISoE Research Committee; ISoE Award Nomination Committee; Shared Resources ISoE/ET Selection Committee; CE ABET Professional and Career Advising Committee; MSEC PhD Admissions Committee; Infrastructure Research Laboratory (IRL) Program Committee; CIEDAR Consortium.
- Research and instructional infrastructure: Led the acquisition and setup of equipment for the Civil Engineering Materials Laboratory; served as the lead contributor to the design and configuration of the $12M Infrastructure Research Laboratory (IRL).

B. Professional Service (selected)

Editorial leadership

- Section Editor-in-Chief, CivilEng (Construction and Materials Engineering section)
- Associate Editor, ASCE Journal of Structural Engineering
- Associate Editor, Innovative Infrastructure Solutions
- Associate Editor, Frontiers in Built Environment – Earthquake Engineering
- Editorial board member for 13 SCI/SCIE-indexed international journals

Professional organizations and leadership

- Elected Council Member, International Institute for FRP in Construction (IIFC) (since 2019; re-elected 2025)
- Voting Member, ACI Committee 440J; Associate Member, ACI Committee 441 (American Concrete Institute).

Research and funding review

- Reviewer for over ten major international funding agencies, including the Australian Research Council (ARC), Swiss National Science Foundation (SNSF), Qatar National Research Fund (QNRF), and FNRS and FWO (Belgium).

Journal peer review

- Regular reviewer for numerous leading international journals in structural engineering, construction materials, and infrastructure engineering.

Conference and technical committees

- Scientific and technical program committee member for major international conferences in structural engineering and construction materials, including CICE, FRPRCS, and APFIS.

D. Organization Memberships

Member: International Institute for FRP in Construction (IIFC); American Society of Civil Engineers (ASCE); American Concrete Institute (ACI); Australian Association for Steel-Concrete Composite Structures (AASCCS).