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IOWA STATE UNIVERSITY
Civil, Construction, and Environmental Engineering

IOWA STATE UNIVERSITY
Institute for Transportation

EDUCATION

- PhD, Civil Engineering, University of Illinois at Urbana–Champaign, 2002
- MS, Civil Engineering, University of Illinois at Urbana–Champaign, 1995
- MS, Civil Engineering, Dokuz Eylul University, Izmir, Turkey, 1993
- BS, Civil Engineering, Dokuz Eylul University, Izmir, Turkey, 1989

PROFESSIONAL EXPERIENCE

- Professor, CCEE, Iowa State University, 2015–present
- Associate Professor, CCEE, Iowa State University, 2010–2015
- Assistant Professor, CCEE, Iowa State University, 2002–2010

SELECTED RESEARCH PROJECTS

- **Cumulative research funds for more than 125 research projects is approximately \$19.6 million (over \$22.7 million project funds including matching funds)**
- Investigators: **Ceylan, H.**, Kim, S., Cetin, B., and Tutumluer, E. **Base Stabilization of Iowa Granular Roads Using Recycled Plastics**. Sponsor: Iowa Highway Research Board (IHRB); Duration: March 1, 2022–February 28, 2025; Total funding: \$639,559; Role: PI.
- Investigators: **Ceylan, H.**, and Kim, S. **Effect of Increased Precipitation (Heavy Rain Events) on Minnesota Pavement Foundations**, Sponsor: MnDOT and LRRB, Duration: January 1, 2022–November 30, 2023; Total funding: \$169,999; Role: PI.
- Investigators: **Ceylan, H.**, Rutherford, C., Cetin, B., and White, D. J. **Base Stabilization Additives – Effect on Granular Equivalency (GE)**, Sponsor: MnDOT, Duration: December 16, 2019–January 31, 2023; Total funding: \$195,229; Role: PI.
- Investigators: **Ceylan, H.**, Buss, A., and Cetin, B. **Determining Pavement Design Criteria for Recycled Aggregate Base and Large Stone Subbase**. Sponsor: National Road Research Alliance (NRRRA)-MnDOT, Duration: October 1, 2017–June 30, 2020; Total funding: \$225,000; Role: PI.

- Investigators: **Ceylan, H.**, Kim, S., Taylor, P. C., and Mina, M. **Self-Heating Electrically Conductive Concrete Demonstration Project**, Sponsor: Iowa DOT/IHRB, Duration: April 15, 2017–October 31, 2021; Sponsored funding: \$358,870; Matching funding: \$55,000 (from IA DOT delta project cost); Total funding: \$413,870; Role: PI.
- Investigators: **Ceylan, H.**, Gopalakrishnan, K., Kim, S., and Mina, M. Partnership to Enhance General Aviation Safety, Accessibility and Sustainability (PEGASAS) Federal Aviation Administration (FAA) Center of Excellence (COE) for General Aviation, **Investigation into the Feasibility of Using Electrically Conductive Asphalt Cement Concrete for Heated Airport Pavements**; Sponsor: FAA; Duration: July 20, 2016–September 30, 2020; Sponsored funding: \$350,001; Matching funding: \$350,004; Total funding: \$700,005; Role: PI.
- Investigators: **Ceylan, H.**, Gopalakrishnan, K., Kim, S., and Taylor, P. C. **Prevention of Longitudinal Cracking in Iowa Widened Concrete Pavement**, Sponsor: IHRB; Duration: January 1, 2016–June 30, 2018; Total funding: \$120,000; Role: PI.

SELECTED PUBLICATIONS

- **Total: over 380 peer reviewed publications and over 400 presentations**
- Rahman, M. L., Malakooti, A., **Ceylan, H.**, Kim, S., and Taylor, P. C. 2022. A Review of Electrically Conductive Concrete Heated Pavement System Technologies: From the Laboratory to the Full-scale Implementation. *Construction and Building Materials*, Vol. 329, Article Number: 127139.
- Coban, H. S., Cetin, B., **Ceylan, H.**, Edil, T. B., and Likos, W. J. 2022. Evaluation of Engineering Properties of Recycled Aggregates and Preliminary Performance of Recycled Aggregate Base Layers. *Journal of Materials in Civil Engineering*, Vol. 34, Issue 5, Article Number: 04022053.
- Chen, Y., **Ceylan, H.**, Nlenanya, I., Kaya, O., Smadi, O. G., Taylor, P. C., Kim, S., Gopalakrishnan, K., and King, D. E. 2020. Long-term Performance Evaluation of Iowa Concrete Overlays. *International Journal of Pavement Engineering*, DOI:10.1080/10298436.2020.1766687.
- Amini, K., **Ceylan, H.**, and Taylor, P. C. 2019. Effect of Finishing Practices on Surface Structure and Salt Scaling Resistance of Concrete. *Cement and Concrete Composites*, Vol. 104, Article Number: 103345.
- Arabzadeh, A., Notani, M., Zadeh, A. K., Nahvi, A., Sassani, A., and **Ceylan, H.** 2019. Electrically Conductive Asphalt Concrete: An Alternative for Automating the Winter Maintenance Operations of Transportation Infrastructure. *Journal of Composites Part B: Engineering*, Vol. 173, Article Number: 106985.
- Amini, K., Vosoughi, P., **Ceylan, H.**, and Taylor, P. C. 2019. Effect of Mixture Proportions on Concrete Performance. *Construction and Building Materials*, Vol. 212, pp. 77–84.

PROFESSIONAL AFFILIATIONS, HONORS, AND SERVICE

- Member of more than 30 national and international committees and organizations, editorial board member for nine international journals, 19 track organizer/chair, presided 49 sessions, 23 other professional activities (including international advisory committees), 24 services to Iowa State University since August 2002.

GRADUATE ADVISORS AND POSTDOCTORAL SPONSORS/ THESIS ADVISOR AND POSTGRADUATE-SCHOLAR SPONSOR

- 65 Graduate Students/Thesis Advised; currently, 12 Ph.D. students and 4 Master's Student advising as Major or Co-Major professor (As of Fall 2022); 14 Postdoctoral scholars/ Professional Staff Supervised

AWARDS, RECOGNITIONS

- 2022 Class of Distinguished Member, American Society of Civil Engineers (ASCE)
- 2021 ASCE James Laurie Prize