

MOON WON
Professor of Civil, Environmental and Construction Engineering
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Professional Preparation

B.S. in Civil Engineering, Seoul National University, Seoul, Korea, 1984

M.S in Civil Engineering, The University of Texas at Austin, 1987

Ph. D. in Civil Engineering (transportation), The University of Texas at Austin, 1989

Professional Chronology

Professor of Civil Engineering, Texas Tech University (2008-present)

Research Associate, Center for Transportation Research, The University of Texas at Austin (2004-2008)

Design/Research/Materials Engineer, Texas Department of Transportation (1990-2014)

Research Interests

Behavior, performance and evaluations of rigid pavement

Portland cement materials

Rehabilitation of rigid pavements

Forensic evaluations of failures in rigid pavements and concrete structures

Honors/Awards

Graduated Magna Cum Laude from Seoul National University

Synergistic Activities/Committee Membership

1. Editorial Board – International Journal of Concrete Structures and Materials
2. TxDOT Concrete Pavement Working Group
3. Beijing-Seoul-Tokyo International Concrete Pavement Conference Committee

Selected Publications (Last 10 years)

1. Choi, S., Ha, S., and Won, M. (2015) "Mechanism of Transverse Crack Development in Continuously Reinforced Concrete Pavement at Early Ages" Transportation Research Record 2524, Transportation Research Board, National Research Council, Washington D.C., pp. 42-58.
2. Zhou, W., Choi, P., Ryu, S., and Won, M. (2015) "Evaluation of Pavement Support for Pavement Design," ASCE Journal of Transportation Engineering, ASCE, Vol 141, No. 9
3. Chen, D. and Won, M. (2015) "CAM and SMA mixtures to delay reflective cracking in PCC pavements," Journal of Construction and Building Materials, Vol. 96, pp. 226 - 237.
4. Zhou, W., Choi, P., Saraf, S., Ryu, S. and Won, M. (2014) "Premature Distresses at Transverse Construction Joints in Continuously Reinforced Concrete Pavement," Journal of Construction and Building Materials, Vol. 55, pp. 212- 219.
5. Ryu, S., Choi, P., Choi, S., and Won, M. (2013) "Improvements of Full Depth Repair Practices for CRCP Distresses" accepted for publication at Transportation Research Record 2368, Transportation Research Board, National Research Council, Washington D.C., pp. 102-113.
6. Yeon, J., Choi, S., Won, M. (2013). Evaluation of Zero-Stress Temperature Prediction Model for Portland Cement Concrete Pavements. Construction and Building Materials, Vol. 40, pp. 492-500.
7. Yeon, J., Choi, S., Ha, S. and Won, M. (2013) "Effects of Creep and Built-in Curling on Stress

Development of Portland Cement Concrete Pavement under Environmental Loading," ASCE Journal of Transportation Engineering, Vol. 139, No. 2, pp. 147-155.

8. Nam, B., Suh, C. and Won, M. (2013) "Fatigue-Life Prediction of Full-Scale Concrete Pavement Overlay over Flexible Pavement: Super-Accelerated Pavement Testing Application," ACI Materials Journal, Vol. 110, No. 1, pp. 13-22.
9. Choi, S., Yeon, J. and Won, M. (2012) "Improvements of Curing Operations for Portland Cement Concrete Pavement," Construction and Building Materials, Vol. 35, pp. 597-604.
10. Ryu, S., Jaiswal, H., Choi, S., Senadheera, S., Jayawickrama, J. and Won, M. (2012) "Rational Use of Terminal Anchorages in Portland Cement Concrete Pavement," Transportation Research Record 2305, Transportation Research Board, National Research Council, Washington D.C., pp. 62-73.
11. Won, M. (2011) "Continuously Reinforced Concrete Pavement: Identification of Distress Mechanisms and Improvement of Mechanistic-Empirical Design Procedures," Transportation Research Record 2226, Transportation Research Board, National Research Council, Washington D.C., pp. 51-59
12. Choi, S., Ha, S., and Won, M. (2011) "Horizontal Cracking of Continuously Reinforced Concrete Pavement under Environmental Loadings," Journal of Construction and Building Materials, Vol. 25, Issue 11, pp. 4250-4262.
13. Choi, S. and Won, M. (2010) "Thermal Strain and Drying Shrinkage of Concrete Structures in the Field," ACI Materials Journal, Vol. 107, No. 5, pp. 498-507.
14. Choi, S. and Won, M. (2010) "Time-Dependent Behavior of Post-tensioning Concrete Pavements under Environmental Loading," Transportation Research Record 2154, Transportation Research Board, National Research Council, Washington D.C., pp. 44-56.
15. Ha, S., Choi, S. and Won, M. (2010) "Behavior of Tied Multiple-Lane Portland Cement Concrete Pavement: Effects of Environmental Loading and Dowel Bar Use," Transportation Research Record 2154, Transportation Research Board, National Research Council, Washington D.C., pp. 57-77.
16. Choi, S. and Won, M. (2009) "Design of Tie Bars in Portland Cement Concrete Pavement Considering Nonlinear Temperature Variations," Transportation Research Record 2095, Transportation Research Board, National Research Council, Washington D.C., pp. 24-33.
17. Yeon, J., Choi, S. and Won, M. (2009) "Effect of Relative Humidity on Coefficient of Thermal Expansion of Hardened Cement Paste and Concrete," Transportation Research Record 2113, Transportation Research Board, National Research Council, Washington D.C., pp. 83-91.
18. Chen, D., Won, M. and Hong, F. (2009) "Investigation of Settlement of a Jointed Concrete Pavement" ASCE Journal of Performance of Constructed Facilities, Vol. 23, Issue 6, pp. 440-446.
19. Chen, D., Won, M. and Zha, X. (2008) "Performance of Dowel Bar Retrofit (DBR) Projects in Texas" Journal of Performance of Constructed Facilities, ASCE, Vol. 22, Issue 3, pp. 162-170.
20. Nam, J., Kim, D., Choi, S., and Won, M. (2007) "Variation of Crack Width over Time in Continuously Reinforced Concrete Pavement," Transportation Research Record 2037, Transportation Research Board, National Research Council, Washington D.C., pp. 3-11.
21. Joh, S., Kang, T., Kwon, S., and Won, M. (2006) "Accelerated Stiffness Profiling of Aggregate Bases and Subgrades for Quality Assessment of Field Compaction" Transportation Research Record 1975, Transportation Research Board, National Research Council, Washington D.C., pp. 63-72.
22. Nam, J., Kim, S., and Won, M. (2006) "Measurement and Analysis of Early-Age Concrete Strains and Stresses: Continuously Reinforced Concrete Pavement under Environmental Loading," Transportation Research Record 1947, Transportation Research Board, National Research Council, Washington D.C., pp. 79-90.