



## PROF. DR. HOUSSAM TOUTANJI

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**L2MGC LABORATORY**

LABORATORY OF MECHANICS AND CIVIL  
ENGINEERING MATERIALS

Dr. Toutanji is Chair and Professor of Civil and Environmental Engineering at the University of Alabama in Huntsville. He is also Director of the University Transportation Center for Alabama.

### CURRENT RESEARCH INTERESTS

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His research interests include: smart materials, smart structures, structural retrofitting and structural repair, durability and long-term performance of advanced composites, fiber-reinforced cementitious composites, high strength concrete, nondestructive testing, modeling the freezing process and durability of concrete, and self-consolidating concrete.

### EDUCATION

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- Ph.D. in Civil Engineering, Worcester Polytechnic Institute, Worcester, MA, Oct. 1992.
- M.S. in Civil Engineering, Northeastern University, Boston, MA, August 1987.
- B.S. in Civil Engineering, Northeastern University, Boston, MA, August 1985.

### RECENT PUBLICATIONS

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- Toutanji, H.**, Choi, and Wang, D., "Applying a Polyurea on High-Performance Organic Aggregate Cementitious Materials," *Construction & Building Materials Journal*, Volume 38, No. 1, 2013, pp. 1170-1179.
- Toutanji, H.**, Ueno, S. and Vuddandam, R., "Prediction of the Interfacial Shear Stress of Externally Bonded FRP to Concrete Substrate Using Critical Stress State Criterion," *Composite Structures Journal*, Volume 95, No. 1, 2013, pp. 375-380.
- Allredge, D., Gilbert, J., **Toutanji, H.**, Lavin, T., and Balasubramanyam, M., "Uplift Capacity of Polyurea-Coated Light-Frame Rafter to Top Plate Connections," *ASCE Materials Journal*, Volume 24, Issue 9, 2012, pp. 1201-1210.
- Toutanji, H.**, Goff, C., Ethridge, E., and Stokes, E., "Gas Permeability and Flow Characterization of Simulated Lunar Regolith," *Advances in Space Research Journal*, Volume 49, No. 8, 2012, pp. 1271-1276.
- Toutanji, H.** and Han, M., "Interfacial Bond Strength Characteristics of FRP and RC Substrate", *ASCE Composites for Construction Journal*, Volume 16, Issue 1, 2012.
- King, L and **Toutanji, H.**, "Load and Resistance Factor Design for Fiber Reinforced Polymer Composite bridge Deck," *Composites B Journal*, Volume 43, Issue 2, 2012, pp. 673-680.
- Toutanji, H.**, Evans, Steve, and Grugel, R., "Performance of "Waterless Concrete." *Construction & Building Materials Journal*, Volume 29, Issue 1, 2012, pp. 444-448.
- Haidar, M., Ghorbel, E., and **Toutanji, H.**, "Optimization of the Formulation of Micro-polymer Concrete," *Construction & Building Materials*, Volume 25, Issue 4, 2011, pp. 1632-1644.
- Xu, B., **Toutanji, H.**, Lavin, T., and Gilbert, J., "Characterization of Poly(vinyl alcohol) Fiber Reinforced Organic Aggregate Cementitious Materials," *Polymer of Concrete: Key Engineering Materials*, Vol. 466, 2010, pp. 73-83.
- Toutanji, H.**, Han, M., Gilbert, J. and Matthys, S., "Behavior of Large-Scale Rectangular Columns Confined with FRP Composites," *ASCE Composites for Construction Journal*, Volume 14, No. 1, 2010, pp. 62-71.