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Biography

Dr. Khoury has extensive experience, skills and credentials as a researcher particularly in the area of geotechnical, geophysical, geomaterials, nano-enhanced plastic based cementitious materials and the potential use of byproducts and waste materials in engineering applications. His research extends to the use of geophysical techniques in geotechnical engineering and the use of analytical techniques such as X-ray diffraction, scanning electron microscopy (SEM and E-SEM) and energy dispersive spectroscopy with the aim of developing better understanding of the microstructure in cementitious and nano-based plastic cementitious mixtures. Dr. Khoury has been working on developing novel approaches and patentable products for sustainable infrastructure applications with ecological and economic benefits to our society. His work has been extensively published in prestigious national and international journals, including Journal of the Transportation Research Board, ASCE Journal of Materials in Civil Engineering and ASTM Journal of Testing and Evaluation. During his academic career, Dr. Khoury has published over 40 academic papers. Not only are these publications and his extensive involvement in research indicative of his outstanding contributions, but Dr. Khoury is also a peer reviewer for the ASCE Journal of Materials in Civil Engineering and the Journal of the Transportation Research Board, among others.

Refereed Journal Publications

- Khoury, C., Khoury, N. and Miller, G. "Effect of Cyclic Suction Stress Loading History (Hydraulic Hysteresis) on Resilient Modulus of Unsaturated Fine-Grained Soil," Transportation Research Record, Journal of Transportation Research Board, Issue No. 2232, Washington D.C., 2011, pp. 68-75
- Maalouf, N., Khoury, N., Laguros, J. and Kumin, H. "Support Vector Machine to Predict the Performance of Stabilized Aggregate Bases Subject to Wet-Dry Cycles," International Journal for Numerical and Analytical Methods in Geomechanics, DOI: 10.1002/nag.1023, 2011.
- Bobo, A., Khoury, N., Li H. and Boufadel, M. "Groundwater Flow in a Tidally Gravel Beach in Prince William Sound, Alaska," ASCE, Journal of Hydrologic Engineering, DOI:10.1061. 2011.
- Khoury, N., Brooks, R. and Santhoshini, B. "Assessment of Micro-Structural Development of Cementing Products in a Stabilized Aggregate Base Using Analytical Techniques," International Journal of Applied Engineering Research, Vol (6), No. 5, 2011, pp. 603 - 614.
- Khoury, N.N., Brooks, R. and Zaman, M.M. "Stiffness and Drainage Characteristics of Unbound Aggregate Bases," International Journal of Geotechnical Engineering, Vol.4, Issue 4, October 2010, pp. 461-469.
- Khoury, N. and Brooks, R. "Performance of a Stabilized Aggregate Base Subject to Different Durability Procedures," ASCE Journal of Materials in Civil Engineering, Vol. 22, No. 5, May 2010, pp. 506-514.
- Khoury, N.N., Brooks, R. and Khoury, C.N. "Environmental Influences on the Engineering Behavior of Unsaturated Undisturbed Soils: Effect of Soil Suctions on Resilient Modulus," International Journal of Geotechnical Engineering, Vol. 3, Issue 2, 2009, pp. 303-311.
- Solanki, P., Khoury, N.N., Musharraf, Z. "A Comparison Evaluation of Various Additives Used in the Stabilization of Sulfate Bearing Lean Clay," Journal of ASTM International, Vol. 6, No. 8, 2009.

- Khoury, N.N., Brooks, R., Musharraf, Z., Khoury, C. "Variations of Resilient Modulus of Subgrade Soils with PostCompaction Moisture Content," Transportation Research Record, Journal of the Transportation Research Board, Geomaterials, No. 2101, 2009, pp. 72-81.
- Solanki, P., Khoury, N.N., Musharraf, Z. " Engineering Properties and Moisture Susceptibility of Silty Clay Stabilized with Lime, Class C Fly Ash, and Cement Kiln Dust," ASCE Journal of Materials in Civil Engineering, Vol. 21, No. 12, December 2009, pp. 749-757.
- Zaman, M.M., Khoury, N.N. and Solanki, P. "Finite Element Modeling of Cementitiously Stabilized Un-notched Beams Using a Smeared Fracture Approach," ASCE Int. J. Geomech. Volume 9, Issue 1, 2009, pp. 34-42.
- Maalouf, M., Khoury, N.N. and Trafalis, T. "Support Vector Regression to Predict Hot Mix Asphalt Performance," International Journal for Numerical and Analytical Methods in Geomechanics, 32, pp. 1989–1996.
- Khoury, N.N. and Zaman, M.M. "Influences of Various Cementitious Agents on the Performance of Stabilized Aggregate Base Subjected to Wet-Dry Cycles," International Journal of Pavement Engineering, Vol. 8, Issue 4, 2007, pp. 265-276.
- Khoury, N.N., Teredesai, R.V., Zaman, M.M. and Khoury, C.N. "Laboratory and Field Assessment of Pile run Chat from the Tar Creek Superfund Site Stabilized with Class C Fly Ash and Cement Kiln Dust," International Journal of Geotechnical Engineering, Vol. 1, Issue 1, 2007, pp. 71-80.
- Khoury, N.N. and Zaman, M. "Environmental Effects on Durability of Aggregates Stabilized with Cementitious Materials," ASCE Journal of Materials in Civil Engineering, Vol. 19, No. 1, 2007, pp. 1-8.
- Khoury, N.N., Zaman, M. and Laguros, J. "Semi-Quantification of Cementing Products using X-Ray Diffraction Technique in Stabilized Aggregate," Journal of X-ray Science and Technology, Volume 14, Number 1, 2006, pp. 39-54.
- Khoury, N.N. and Zaman, M. "Durability Effect on Flexural Behavior of Cementitiously Stabilized Limestone Aggregate," ASTM Journal of Testing and Evaluation, Vol. 34, No.3, 2006, pp. 167-175.
- Khoury, N.N. and Zaman, M. "Correlation Among Resilient Modulus, Moisture Variation, and Soil Suction for Subgrade Soils," Transportation Research Record, Journal of the Transportation Research Board, Geology and Properties of Earth Materials, No. 1874, 2004, pp. 99-107.
- Khoury, N.N., and Zaman, M. "Effect of Wet-Dry Cycles on Class C Fly Ash Aggregate Base," Transportation Research Record, Journal of the Transportation Research Board, Geomaterials, No. 1787, 2002, pp. 13-21.

Conference Proceedings

- Damodar, Y., Al-Bihani, J., Khoury, N., Abousleiman, Y. and Khoury, C., "Plastic Waste as an Effective Stormwater Best Management Practice," Proceedings of the GeoFrontiers 2011, March 13-16, Dallas, Texas, USA. Presentation made by Al-Bihani.
- Okoro, C., Vogtman, J., Yousif, M. and Agnaou, M., Khoury, N. "Consolidation Characteristics of Soils Stabilized with Lime, Coal Combustion Products and Plastic Waste," Proceedings of the GeoFrontiers 2011, March 13-16, Dallas, Texas, USA. Presentation made by Al-Bihani.
- Khoury, C., Khoury N., and Miller, G. (2011), " Effect of Hydraulic Hysteresis on Resilient Modulus of Unsaturated Fine-Grained Soil, " Transportation Research Board 89th Annual Meeting Compendium of Papers CD-ROM, January 23-27, 2011, Washington D.C. Presentation Made by C. Khoury.
- Khoury, C., Khoury N., and Miller, G. (2010), " Effect of Suction Hysteresis on Resilient Modulus of Subgrade Soil, " Transportation Research Board 89th Annual Meeting Compendium of Papers CD-ROM, January 10-14, 2010, Washington D.C. Presentation Made by N. Khoury.
- Khoury, C. and Khoury N., "The effect of Moisture Hysteresis on Resilient Modulus of Subgrade Soils," Proceedings of the Eighth International Conference on the Bearing Capacity of Roads, Railways, and Airfields, June 29-July 2, 2009, Champaign, Illinois, USA. Presentation Made by N. Khoury.
- Solanki, P., Khoury, N. and Zaman, M.M., "Performance Assessment of Cementitiously Stabilized Subgrade Soils," Transportation Research Board 88th Annual Meeting Compendium of Papers CD-ROM, January 11-15, 2009, Washington D.C.
- Khoury, N., Abousleiman, Y., Miller, G. and Khoury C., "PlastiSoil™: Superior Engineering Performance and Sound Environmentally," Proceedings of 8th International Congress on Advances in Civil Engineering. Presentation made by Khoury, September 15-17, 2008, Famagusta, N. Cyprus.
- Khoury, N., Khoury, C., and Abousleiman, Y. "Soil Fused with Recycled Plastic Bottles for Various Geo-Engineering Applications," Proceedings of the GeoCongress 2008, March 9-12, 2008, New Orleans, Louisiana, USA. Presentation made by Khoury, March 9-12, 2008, New Orleans, Louisiana, USA.
- Solanki, P., Khoury, N. and Zaman, M.M. "Experimental Analysis and Statistical Modeling of Cementitiously Stabilized Subgrade Soils," Transportation Research Board 87th Annual Meeting Compendium of Papers CD-ROM, Paper No. 08-2474, 2008, 29 pages Presentation made by Khoury, January 13-17, 2008, Washington, D.C., USA.
- Solanki, P., Gupta, A., Hoang, S. and Khoury, N. "A Comparative Study of Lean Clay Stabilized with Lime and Class C Fly Ash," Proceedings of the 13th Asian Regional Conference of Soil Mechanics and Geotechnical Engineering, December 10-14, 2007, Kolkata, India. Presentation made by Solanki, December 10-14, 2007, Kolkata, India.
- Khoury, N., Zaman, M and Laguros, J. "Optimizing Aggregate Base Gradation for Maximum Performance," Proceedings of the International Conference: Advanced Characterization of Pavement and Soil Engineering

Materials, June 20-22, 2007, Athens, Greece. Presentation made by Laguros at the conference, June 20-22, 2007, Athens, Greece.

- Solanki, P, Khoury, N. and Zaman, M. "Engineering Behavior and Microstructure of Soil Stabilized with Cement Kiln Dust," Proceedings of the Geo-Denver 2007 conference, 2007 Denver, Colorado. Presentation made by Solanki at the conference, February 18-21, 2007, Denver, Colorado, USA.
- Khoury, N.N. and Zaman, M.M. "Influence of Matric Suction on the Resilient Modulus of Kirkland Soil Series in Oklahoma," Proceedings of the 11th IACMAG Conference, 2005, 18 pages. Presentation made by Zaman at the conference, June 16-18, 2005, Turin, Italy.
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- Khoury, N.N, and Zaman, M., "Flexural Properties of Stabilized-Aggregate Beams Subjected to Freeze-Thaw Cycles," Transportation Research Board 84th Annual Meeting Compendium of Papers CD-ROM, Paper No. 05-2046, 2005, 24 pages.
- Nevels, J.N., Jr. and Khoury, N.N., "Effect of Partial Saturation on CPTU Readings in Burlinson Clay," Proceedings of the 2nd International Site Characterization Conference, Geotechnical and Geophysical Characterization, Volume 1, 2004, pp. 1319 – 1324. Presentation made at the conference by Nevels, September 19-22, 2004, Porto, Portugal.
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- Khoury, N.N., Zaman, M.M. and Laguros, J. "The Use of XRD Patterns to Evaluate the Compressive Strength of Stabilized Aggregates," Proceedings of the 52nd Annual Conference on Applications of X-Ray Analysis, Vol. 47, 2004, pp. 379-384. Presentation made at the conference by Khoury, August 4-8, 2003, Denver, Colorado, USA.
- Zaman, M. and Khoury, N.N. "Effect of Freeze-Thaw Cycles on Class C Fly Ash Stabilized Aggregate Base," Transportation Research Board 82nd Annual Meeting Compendium of Papers CD-ROM, Paper No. 03-3874, 2003, 22 pages. Presentation made at the conference by Khoury, January 12-16, 2003, Washington D.C., USA.
- Khoury, N.N., Zaman, M., Nevels, J. and Mann, J. "Effect of Soil Suction on Resilient Modulus of Subgrade Soil Using the Filter Paper Technique," Transportation Research Board 82nd Annual Meeting Compendium of Papers CD-ROM, Paper No. 03-3457, 2003, 22 pages. Presentation made at the conference by Khoury, January 12-16, 2003, Washington D.C., USA.