

## **CURRICULUM VITAE OF**

### **MUSHARRAF ZAMAN**

David Ross Boyd Professor and Aaron Alexander Professor of Civil Engineering and Environmental Science  
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**PERSONAL:** Born March 8, 1952; Naturalized U.S. Citizen

#### **EDUCATION:**

Doctor of Philosophy (Civil Engineering; Geotechnical Engineering), University of Arizona, Tucson, Arizona, 1982.  
Dissertation Title - "Influence of Interface Behavior in Dynamic Soil-Structure Interaction Problems."  
Dissertation Supervisor - Dr. Desai, C.S..

Master of Engineering (Civil Engineering), Carleton University, Ottawa, Canada, 1979. Thesis Title - "Finite Element Analysis of Interaction Between An Elastic Circular Plate and An Isotropic Elastic Half-space."  
Thesis Supervisors - Dr. A.P.S. Selvadurai and Prof. W.H. Bowes.

B.Sc. in Engineering (Civil Engineering), Bangladesh University of Engineering and Technology, Dhaka, 1975 (First Class with Honors). Stood first in order of merit out of about 130 students.

#### **POSITIONS HELD:**

Oct. 2013-Present: **Director, Southern Plains Transportation Center**  
Gallogly College of Engineering, The University of Oklahoma, Norman, Oklahoma 73019

July 2005-Dec. 2013: **Associate Dean for Research and Graduate Programs**  
Gallogly College of Engineering, The University of Oklahoma, Norman, Oklahoma 73019

2010–Present: **Alumni Chair Professor of Petroleum and Geological Engineering**  
Mewbourne School of Petroleum and Geological Engineering, The University of Oklahoma

July 1993-Present: **Professor (David Ross Boyd Prof. since 2003; Aaron Alexander Prof. since 2004)**  
School of Civil Engineering and Environmental Science, The University of Oklahoma, Norman, Oklahoma.

June 1988-June 1993: **Associate Professor** (Tenured May 1988)  
School of Civil Engineering and Environmental Science, The University of Oklahoma, Norman, Oklahoma.

Sept. 1982-May 1988: **Assistant Professor**  
School of Civil Engineering and Environmental Science, The University of Oklahoma, Norman, Oklahoma.

May 19-Aug. 18, 1986: **Summer Faculty Research Participant**  
Argonne National Laboratory (ANL), Argonne, Illinois.

Aug. 1981-Aug. 1982: **Research Associate**  
Department of Civil Engineering and Engineering Mechanics, University of Arizona, Tucson, Arizona.

Sept. 1979-May 1981: **Research Assistant**  
Department of Civil Engineering, Virginia Tech., Blacksburg, Virginia.

Sept. 1977 – Aug. 1979: **Teaching Assistant**  
Department of Civil Engineering, Carleton University, Ottawa, Canada.

May 1975-July 1976: **Lecturer in Civil Engineering**  
Bangladesh University of Engineering and Technology, Dhaka, Bangladesh.

**AREA OF SPECIALIZATION:**

Geotechnical Engineering, Geomechanics, Pavement Materials and Systems.

**PROFESSIONAL REGISTRATION:**

Registered Professional Engineer (Oklahoma #16199).

**PATENT:**

“Method and Apparatus for Predicting Density of Asphalt” (U.S. Patent #7,669,458; March 2, 2010).

**REFEREED JOURNAL PUBLICATIONS:**

1. “Propagation and Aperture of Staged Hydraulic Fractures in Unconventional Resources in Toughness-Dominated Regimes” (Taghichian, A., Hashemalhosseini, H., Zaman, M. and Zavareh, S.B.). Journal of Rock Mechanics and Geotech. Engineering, Vol 10, No. 2, 2018, pp. 249-258.
2. “Influence of Tensile Strain at Failure on Flexural Properties of a Cementitiously Stabilized Subgrade Soil” (Nazari, M., Ghabchi, R., Zaman, M.). International Journal of Geomechanics, ASCE, 17(2). (ASCE) GM.1943-5622.0000731, 2017.
3. “Performance Evaluation of Plant-Produced Warm Mix Asphalts Containing RAP and RAS” (Arshadi, A., Steger, R., Ghabchi, R. A., Zaman, M., Hobson, K., Commuri, S.). Road Materials and Pavement Design, 18, 2017, pp. 1-18.
4. “Modelling the Dynamics of Asphalt-Roller Interaction during Compaction” (Imran, A., Commuri, S., Barman, M., Zaman, M., Beainy, F.). Journal of Construction Engineering and Management, ASCE. DOI: 10.1061/(ASCE)CO.1943-7862.0001293, 2017.
5. “Design of Semi-Rigid Type of Flexible Pavements” (Solanki, P., Zaman, M.). International Journal of Pavement Research and Technology, 10(2), 2017, pp. 99-111.
6. “Kernel Machines and Firefly Algorithm Based Dynamic Modulus Prediction Model for Asphalt Mixes Considering Aggregate Morphology” (Singh, D.V., Maheshwari, S., Zaman, M., Commuri, S.). Journal of Construction and Building Materials, 159, 2017, 408-416.
7. “Sensitivity of Traffic Input Parameters on Rutting Performance of a Flexible Pavement Using Mechanistic Empirical Pavement Design Guide” (Hossain, N., Singh, D., Zaman, M.). International Journal of Pavement Research and Technology (IJPRT), 9(6), 2016, pp. 450-459.
8. “Quality Improvement of Subgrade Using Intelligent Compaction” (Barman, M., Nazari, M., Imran, S. A., Commuri, S., Zaman, M.). Transportation Research Record: Journal of the Transportation Research Board, the National Academies, TRR No. 2579, 2016, pp. 59-69.
9. “Micro-Structural Analysis of Moisture-Induced Damage Potential of Asphalt Mixes Containing RAP” (Ghabchi, R., Singh, D.V., Zaman, M., Hossain, Z.). ASTM Journal of Testing and Evaluation, 44(1), 2016, pp. 194-205.
10. “Influence of Tensile Strain at Failure on Flexural Properties of a Cementitiously-Stabilized Subgrade Soil” (Nazari, M., Ghabchi, R., Zaman, M., Commuri, S.). International Journal of Geomechanics, ASCE. 10.1061/(ASCE)GM.1943-5622.0000731, -4016057, 2016.
11. “Enhancing Prediction of Rut by MEPDG Using Data from Field Test Section in Oklahoma” (Hossain, N., Singh, D.V., Zaman, M.). Transportation Research Record: Journal of the Transportation Research Board, National Academies, TRR No. 2590, 2016, pp. 28-36.

12. "Continuous Monitoring of Subgrade Stiffness during Compaction" (Imran, S., Barman, M., Nazari, M., Commuri, S., Zaman, M.). *Transportation Research Procedia*, 17, 2016, pp. 617-625.
13. "Quality Control of Subgrade Soil Using Intelligent Compaction" (Barman, M., Nazari, M., Imran, S., Commuri, S., Zaman, M., Beainy, F., Singh, D.V.). *Innovative Infrastructure Solutions*, Springer Verlag, Berlin, 2016, pp. 1-23.
14. "Comparison of Laboratory Performance of Asphalt Mixes Containing Different Proportions of RAS and RAP" (Ghabchi, R., Barman, M., Singh, D.V., Zaman, M., Mubarak, M. A.). *Journal of Construction and Building Materials*, Vol. 124, 2016, pp. 343-351.
15. "Evaluation of Moisture Susceptibility of Nanoclay-Modified Asphalt Binders through the Surface Science Approach" (Hossain, Z., Zaman, M., Hawa, T., Saha, M.). *Journal of Materials in Civil Engineering*, Volume 27, Issue 10. 2015, pp. 10-18.
16. "Regression Modeling of Resilient Modulus of Unbound Aggregates" (Hossain, Z., Zaman, M. and Doiron, C.). *Journal of Marine Science and Technology*, Vol. 23, No. 3, 2015, pp. 388-398.
17. "Laboratory Characterization of Asphalt Mixes Containing RAP and RAS" (Ghabchi, R., Singh, D., Zaman, M., and Hossain, Z.). *International Journal of Pavement Engineering*, DOI: 10.1080/10298436.2015.1022778 (Available Online), 2015, pp. 1-18.
18. "Laboratory evaluation of stiffness, low-temperature cracking, rutting, moisture damage, and fatigue performance of WMA mixes" (Ghabchi, R., Singh, D.V., and Zaman, M.). *Journal of Road Materials and Pavement Design*, Vol. 16, No. 2, 2015, pp. 334-357.
19. "Moisture Susceptibility Evaluation of Nano-sized Hydrated Lime-Modified Asphalt-Aggregate Systems Based on Surface Free Energy Concept" (Diab, A., You, Z., Hossain, Z., and Zaman, M.). *Journal Transportation Research Board*, No. 2446, 2015, pp. 52–59.
20. "Numerical Analysis for a Realistic Support Design – A Case Study: Komurhan Tunnel (Elazig/Eastern Turkey)" (Yalcin, E., Gurocak, Z., Ghabchi, R., and Zaman, M.). *International J. of Geomechanics*, ASCE, DOI: 10.1061/(ASCE)GM.1943-5622.0000564, 2015.
21. "Effect of Recycled Asphalt Pavement on Thermal Cracking Resistance of Hot-Mix Asphalt" (Solanki, P., Zaman, M., Adje, D., and Hossain, Z.). *Int'l J. of Geomech.*, ASCE, 15(5), A4014001, 2015 (9 pages).
22. "Application of Intelligent Compaction Technology for Estimation of Effective Modulus for a Multilayered Asphalt Pavement" (Singh, D.V., Beainy, F., Commuri, S., and Zaman, M.). *ASTM Journal of Testing and Evaluation*, Vol. 43, Issue 2, 2015, pp. 1-11.
23. "Mechanical Behavior of Granular Materials under Continuously Varying B Values Using DEM" (Phusing, D., Suzuki, K., and Zaman, M.). *International J. of Geomechanics*, ASCE, 10.1061/(ASCE)GM.1943-5622.0000506, 04015027, 2015.
24. "Implementation of the Multiple Stress Creep Recovery (MSCR) Test Method to Characterize Polymer-Modified Asphalt Binders for Oklahoma Conditions" (Hossain, Z., Ghosh, D., and Zaman, M.). *ASTM J. of Testing and Evaluation (JTE)*, 44.1S, 2015, pp. 1-14.
25. "Development of Rut Prediction Models from an Instrumented In-Service Test Section on Interstate-35" (Hossain, N., Singh, D. and Zaman, M.). *Int. J. of Pavement Research and Tech.*, Vol. 8, No. 5, 2014, pp. 305-314.
26. "Regression Modeling of Resilient Modulus of Unbound Aggregates" (Hossain, Z., Zaman, M., and Doiron, C.). *International Journal of Marine Science and Technology (JMST)*, Vol. 19, No. 2, 2014, (29 pages).
27. "Effect of Recycled Asphalt Pavement on Thermal Cracking Resistance of Hot-Mix Asphalt" (Solanki, P., Zaman, M., Adje, D. and Hossain, Z.). *International J. of Geomechanics*, ASCE, 10.1061/(ASCE)GM.1943-5622.0000398, A4014001, 2014.
28. "Behavior of Stabilized Subgrade Soils Under Indirect Tension and Flexure," *Materials in Civil Engineering*, ASCE, 26(5), 2014, pp. 833-844.
29. "Stress Shadow Size and Aperture of Hydraulic Fractures in Unconventional Shales" (Taghichian, A., Zaman, M. and Davegowda, D.). *Journal of Petroleum Science and Engineering*, 124, 2014, pp. 209-221.

30. "Achievable Quality During the Compaction of Asphalt Pavement" (Beainy, F., Singh, D.V., Commuri, S., Zaman, M.). International Journal of Pavement Research and Technology (IJPRT), Vol. 7, Issue 5, 2014, pp. 317-323.
31. "A Visco-elastic-plastic Model of Asphalt/Roller Interaction During Field Compaction" (Beainy, F., Commuri, S., and Zaman, M.). Engineering Mechanics, ASCE, Vol. 140, Issue 7, pp. 1-12, [http://dx.doi.org/10.1061/\(ASCE\)EM.1943-7889.0000730](http://dx.doi.org/10.1061/(ASCE)EM.1943-7889.0000730), 2014.
32. "Effect of Shape Parameters and Gradation on Laboratory Measured Permeability of Aggregate Bases" (Ghabchi, R., Zaman, M., Kazmee H., and Singh, D.). International Journal of Geomechanics, 10.1061/(ASCE)GM.1943-5622.0000397, 2014.
33. "Evaluation of Moisture Susceptibility of Asphalt Mixes Containing RAP and Different Types of Aggregates and Asphalt Binders Using the Surface Free Energy Method" (Ghabchi, R., Singh, D., and Zaman, M.). Construction and Building Materials, Vol. 73, 2014, pp. 479-489.
34. "Micro-Structural Analysis of Moisture-Induced Damage Potential of Asphalt Mixes Containing RAP" (Ghabchi, R., Singh, D.V., Zaman, M., and Hossain, Z.). ASTM, Journal of Testing and Evaluation, 44, No. 1, 2014, pp. 194-205.
35. "Artificial Neural Network Modeling for Dynamic Modulus of Hot Mix Asphalt Using Aggregate Shape Properties" (Singh, D.V., Zaman, M. and Commuri, S.). Materials in Civil Engineering, Vol. 25, No. 1, 2013, pp. 54-62.
36. "Field Construction and Mechanistic Performance of Hot Mix Asphalt Containing Reclaimed Asphalt Pavement" (Solanki, P., Zaman, M., Adje, D., and Hossain, Z.). Journal of Pavement Research and Tech., Vol. 6, No. 4, 2013, pp. 403-413.
37. "Visco-Elastic-Plastic Model of Asphalt-Roller Interaction" (Beainy, F., Commuri, S., Zaman, M., and Syed, I.). International Journal of Geomechanics, ASCE, doi: 10.1061/(ASCE)GM.1943-5622.0000240, 2013.
38. "Mechanistic Evaluation of Effect of WMA-Additives on Wettability and Moisture Susceptibility Properties of Asphalt Mixes" (Ghabchi, R., Singh, D.V., Zaman, M. and Tian, Q.). Journal of Testing and Evaluation, Vol. 41, No. 6, 2013, pp. 1-10.
39. "Influence of In-Isolation Properties of Geogrid on Their Pullout Properties in a Dense Graded Aggregate" (Hatami, K., Mahmood, T., Ghabchi, R., and Zaman, M.). Indian Geotech. Journal, Vol. 43, No. 4, 2013, pp. 303-320.
40. "Behavior of Selected Warm Mix Asphalt Additive Modified Binders and Prediction of Dynamic Modulus of the Mixes" (Hossain, Z. and Zaman, M.). ASTM J. of Testing and Evaluation, DOI: 10.1520/JTE104639; Vol. 41, No. 1, 2013 (12 pages).
41. "Evaluation for Warm-Mix Additive-Modified Asphalt Binders Using Spectroscopy Techniques" (Hossain, Z., Lewis, S., Zaman, M., Buddhala, A., and O'Rear, E.). Journal of Materials in Civil Engineering, ASCE, Vol. 25, No. 2, 2013, pp. 149-159.
42. "Effects of Production and Sample Preparation Methods on Aggregate Shape Parameters" (Singh, D.V., Zaman, M. and Commuri, S.). Journal of Pavement Engineering, Vol 14, No. 2, 2013, pp. 154-175.
43. "Influence of Recovery Processes on Properties of Binders and Aggregates Recovered from Recycled Asphalt Pavement" (Hossain, Z., Solanki, P., Zaman, M., Lewis, S., and Hobson, K.). Journal of ASTM International (JAI), Vol. 9, Issue 3, February 2012, pp. 1-18.
44. "Susceptibility of Asphalt Binder with Warm Mix Additives to Moisture Induced Damage by Surface Free Energy Analysis" (Budhala, A., Hossain, Z., Wasiuddin, N. M., Zaman, M., and O'Rear, E. A.). ASTM Journal of Testing and Evaluation, Volume 40, Issue 1, January 2012.
45. "Inclusion of Aggregate Angularity, Texture, and Form in Estimating Dynamic Modulus of Asphalt Mixes" (Singh, D.V., Zaman, M., and Commuri, S). International Journal of Road Materials and Pavement Design (RMPD), Vol. 13, Issue: 2, 2012, pp. 327-344.
46. "Comparison of Shape Parameters for Selected Coarse Aggregates in Oklahoma" (Singh, D.V., Zaman, M., and Commuri, S.). ASTM Journal of Testing and Evaluation, Vol. 40, Issue: 3, 2012, pp. 409-426.

47. "A Laboratory Investigation into the Effect of Long-Term Oven Aging on RAP Mixes Using Dynamic Modulus Test" (Singh, D.V., Zaman, M., and Commuri, S.). International Journal of Pavement Research and Technology (IJPRT), Vol.5, Issue: 3, 2012, pp. 142-152.
48. "Evaluation of Dynamic Modulus of Modified and Unmodified Asphalt Mixes for Different Input Levels of the MEPDG" (Singh, D.V., Zaman, M., and Commuri, S.). International Journal of Pavement Research and Technology (IJPRT), Vol.5, Issue: 1, 2012, pp. 1-11.
49. "Sensitivity of Oklahoma Binders on Dynamic Modulus of Asphalt Mixes and Distress Functions" (Hossain, Z., and Zaman, M.). Journal of Materials in Civil Engineering, Volume 24, No. 8, 2012, pp. 1076-1088.
50. "Effect of Gradation and Source Properties on Stability and Drainability of Aggregate Bases: A Laboratory and Field Study" (Ghabchi, R., Zaman, M., Khoury, N., Kazmee, H., and Solanki, P.). International Journal of Pavement Engineering, 13(6), 2012, pp. 1-17.
51. "New Considerations for Empirical Estimation of Tensile Strength of Rocks" (Gurocak, Z., Solanki, P., Alemdag, S. and Zaman, M. M.). Engineering Geology, 145-146, 2012, pp. 1-8.
52. "A Comparative Study of the Mechanical Behavior of Normal-Strength and High-Strength Concrete" (Solanki, P., Zaman, M. M., and Chin, M.) ASTM Advances in Civil Engineering Materials, 2012, 1(1), pp. 1-20.
53. "Evaluation of Durability of Stabilized Clay Specimens Using Different Laboratory Procedures" (Khalife, R., Solanki, P., and Zaman, M.). ASTM Journal of Testing and Evaluation, 40(3), 2012, pp. 363-375.
54. "Neural Network Modeling of 85th Percentile Speed for Two-Lane Rural Highways" (Singh, D.V., Zaman, M., and White, L.). Transportation Research Record, Journal of the Transportation Research Board TRR No. 2301, 2012, pp.17-27.
55. "Rheological Evaluation of Warm Mix and Anti-Stripping Additives Modified Performance Grade Binders" (Hossain, Z., Zaman, M., Wasiuddin, N.M., Sneed, J. and O'Rear, E.). Road Materials and Pavement Design, Vol 12, No. 4, 2011, pp. 875-895.
56. "Sensitivity of Oklahoma Binders on Dynamic Modulus of Asphalt Mixes and Distress Functions" (Hossain, Z. and Zaman, M.). Journal of Materials in Civil Engineering, ASCE, DOI:10.1061/(ASCE)MT.1943-5533.0000461, Dec. 2011.
57. "Influence of Recovery Processes on Properties of Binders and Aggregates Recovered from Recycled Asphalt Pavement" (Hossain, Z., Solanki, P., Zaman, M., Lewis, S., and Hobson, K.). Journal of ASTM International, DOI: 10.1520/JAI103679, Sept. 2011, 18 pages.
58. "Effect of Production and Sample Preparation Methods on Aggregate Shape Parameters" (Singh, D.V., Zaman, M. and Commuri, S.). International J. of Pavement Engineering, DOI: 10.1080/10298436.2011.635792, Nov. 2011, 22 pages.
59. "Effectiveness of Water-Bearing and Anti-Stripping Additives in Warm Mix Asphalt Technology" (Hossain, Z., Zaman, M., O'Rear, E.A. and Chen, D.H.). International J. of Pavement Engineering, DOI: 10.1080/10298436.2011.616588, Sept. 2011, 9 pages.
60. "Evaluation of Mechanistic-Empirical Design Guide Input Parameters for Resilient Modulus of Subgrade Soils in Oklahoma" (Hossain, Z., Zaman, M., Doiron, C., and Solanki, P.). ASTM J. of Testing and Evaluation (JTE), Vol. 39, No. 5, DOI: 10.1520/JTE103603, 2011, 12 pages.
61. "Effect of Cement Kiln Dust and Rock Dust as Mineral Fillers on Bulk Specific Gravity of Fine Aggregates" (Gupta, A., Zaman, M., Laguros, J.G. and Ghabchi, R.). ASTM Journal of Testing and Evaluation, DOI: 10.1520/JTE103255, April 2011, 9 pages, 2011.
62. "Evaluation of Predictive Models for Estimating Dynamic Modulus of Hot Mix Asphalt Mixes Used in Oklahoma" (Singh, D.V., Zaman, M. and Commuri, S.). 90th Annual TRB Meeting and Online Compendium paper (11-3885), held in Washington, DC. on Jan. 23-27, 2011. Also, published in the Journal of Transportation Research Board, National Academy of Science, No. 2210, Vol. 4, 2011, pp. 57-72.
63. "Validation of Back-Calculated Modulus Values from Falling Weight Deflectometer Through Instrumentation on I-35" (Solanki, P., Zaman, M. and Muraleetharan, K.). 90th Annual TRB Meeting and Online Compendium paper (11-3115), held in Washington, DC. on Jan. 23-27, 2011. Also, published in the Journal

- of Transportation Research Board, National Academy of Science, No. 2227, DOI: 10-3141/2227-09, 2011, pp. 79-86.
64. "Life Cycle Cost-Based Pavement Preservation Treatment Design" (Pittenger, D., Gransberg, D., Zaman, M. and Reimer, C.). 90th Annual TRB Meeting and Online Compendium paper (11-1575), held in Washington, DC. on Jan. 23-27, 2011. Also, published in the Journal of Transportation Research Board, National Academy of Science, No. 2235, DOI: 10-3141/2235-04, 2011, pp. 28-35.
  65. "In-Situ Assessment of Stiffness During Construction of an Asphalt Pavement" (Singh, D., Mai, A.T., Beainy, F.N., Commuri, S. and Zaman, M.). Int'l J. of Pvt. Research and Technology, Vol. 4, No. 2, 2011.
  66. "Use of Chat-Asphalt as a Paving Material: Field Performance Assessment" (Wasiuddin, N.M., Zaman, M. and Tarefder, R.A.). International J. of Pavement Research and Technology, Vol. 4, No. 2, 2011.
  67. "Stiffness and Drainage Characteristics of Unbound Aggregate Bases" (Khoury, N.N. and Zaman, M.). Int'l Journal of Geotech. Engineering, Vol. 4, Issue 4, 2010, pp. 461-469.
  68. "Effects of Anti-Stripping Additives on Rheological Properties of Performance Grade Binders" (Hossain, Z., Zaman, M. and Hobson, K.). Int. Journal of Pavement Research & Tech., Vol. 3, No. 4, 2010, pp. 160-170.
  69. "Polymeric Aggregate Treatment Using Styrene-Butadiene Rubber (SBR) for Moisture-Induced Damage Potential" (Wasiuddin, N.M., Zaman, M. and O'Rear, E.). Int. J. of Pavement Research and Tech., Vol. 3, No. 1, Jan. 2010, pp. 1-9.
  70. "Resilient Modulus of Clay Subgrades Stabilized with Lime, Class C Fly Ash and Cement Kiln Dust for Pavement Design" (Solanki, P., Zaman, M. and Dean, J.). J. of Transportation Research Board, No. 2186, 2010, pp. 101-110.
  71. "Neural Network Modeling of Resilient Modulus Using Routine Subgrade Soil Properties" (Zaman, M., Solanki, P., Ebrahimi, A. and White, L.W.). Int. J. of Geomechanics, Vol. 10, No. 1, 2010, pp. 1-12.
  72. "Laboratory Performance Evaluation of Subgrade Soils Stabilized with Sulfate Bearing Cementitious Additives" (Solanki, P. and Zaman, M.). ASTM J. of Testing and Evaluation, Vol. 38, No. 1, 2010, pp. 1-12.
  73. "Use of Raw Chat in HMA Surface: Environmental and Engineering Characterization" (Wasiuddin, N.M., Hamid, W.B., Zaman, M. and Nairn, R.W.). Journal of Solid Waste Tech. and Management, Vol. 36, No. 2, 2010, pp. 69-80.
  74. "Calibration of Non-Nuclear PQI Gauges and Field Comparison of PQI and Nuclear Gauge Densities" (Wasiuddin, N.M., Zaman, M. and Commuri, S.). Int. J. of Pavement Research and Tech., Vol. 2, No. 5, 2009, pp. 181-187.
  75. "A Comparative Evaluation of Various Additives Used in the Stabilization of Sulfate Bearing Soil" (Solanki, P., Khoury, N. and Zaman, M.). J. ASTM International, Vol. 6, No. 8, 2009, pp. 5-67.
  76. "Effects of Lime and Cement Kiln Dust on the Performance of Lean Clays" (Solanki, P. and Zaman, M.). International J. of Geotechnical Engineering, Vol. 3, No. 4, 2009, pp. 455-465.
  77. "Calibration Procedures for the Intelligent Asphalt Compaction Analyzer" (Commuri, S., Mai, A. and Zaman, M.). ASTM J. of Testing & Eval. Special Issue on Asphalt Materials; Vol. 37, No. 5, 2009, pp. 454-462.
  78. "Properties and Moisture Susceptibility of Silty Clay Stabilized with Lime, Class C Fly Ash and Cement Kiln Dust" (Solanki, P., Khoury, N. and Zaman, M.). J. of Materials in Civil Eng., ASCE, Vol. 21, No. 12, 2009, pp. 749-757.
  79. "Variations of Resilient Modulus of Subgrade Soils with Post-Compaction Moisture Contents" (Khoury, N., Zaman, M. and Brooks, R.M.). J. of Transportation Research Board, Vol. 2101, 2009, pp. 72-81.
  80. "Evaluation of Resilient Moduli of Pavement Layers at an Instrumented Section on I-35 in Oklahoma" (Solanki, P., Zaman, M., Muraleetharan, K. and Timm, D.). International J. Road Materials and Pavement Design, Vol. 10 (Special issue), 2009, pp. 167-188.
  81. "Neural Network-Based Intelligent Compaction Analyzer for Estimating Compaction Quality of Hot Asphalt Mixes" (Commuri, S., Mai, A.T., and Zaman, M.). J. of Construction Engineering and Management, ASCE Vol. 137, No. 9, Sept. 2011.

82. "Finite Element Modeling of Cementitiously Stabilized Unnotched Beams Using a Smeared Fracture Approach" (Zaman, M., Khoury, N., and Solanki, P.). International J. of Geomech., ASCE, Vol. 9, No. 1, 2009, pp. 34-42.
83. "Development and Validation of "Smart Dust" for Pavement Condition Monitoring." (Pei, J.S., Ivey, R.A., Lin, H., Landram, A.R., Sandburg, C.J., Ferzli, N.A., King, T., Zaman, M. and Refai, H.). J. of Intelligent Material Systems and Structures, Vol. 20, 2009, pp. 63-85.
84. "Statistical Models for Determination of the Resilient modulus of Subgrade Soils" (Solanki, P., Ebrahimi, A., and Zaman, M.). Int. J. of Pavement Research and Tech., Vol. 1, No. 3, 2008, pp. 85-93.
85. "Rock Slope Stability and Excavability Assessment of Rocks at the Kapikaya Dam Site, Turkey" (Gurocak, Z., Alemdag, S. and Zaman, M.). Engineering Geology, Vol. 96, 2008, pp. 17-27.
86. "Estimation of Bearing Capacity of Basalts at Atasu Dam Site, Turkey" (Alemdag, S., Gurocak, Z., Solanki, P., and Zaman, M.). Bulletin of Eng. Geology and The Environment, Vol. 67, No. 1, 2008, pp. 79-85.
87. "Effect of Sasobit® and Aspha-Min® on Wettability and Adhesion between Asphalt Binders and Aggregates" (Wasiuddin, N., Zaman, M., and O'Rear, E.A.). Transportation Research Record, J. of the Transportation Research Board, TRR No. 2051, 2008, pp. 80-89.
88. "A Neural Network-Based Compaction Analyzer for Density Measurement During the Construction of an Asphalt Pavement" (Commuri, S., Zaman, M., and Gonzalez, J.N.). International Journal of Pavement Engineering, Vol. 9, Issue 3, June 2008, pp. 177-188.
89. "Influences of Various Cementitious Agents on the Performance of Stabilized Aggregate Base Subjected to Wet-Dry Cycles" (Khoury, N.N. and Zaman, M.). Int. J. of Pavement Eng., Vol. 8, No. 4, 2007, pp. 265-276.
90. "A Laboratory Evaluation of Unmodified and Polymer Modified Performance-Grade Binders with Anti-Stripping Additives" (Selvamohan, S., Zaman, M., and Laguros, J.C.). Journal of Engineering, Computing and Architecture, SJI, Vol. 1, Issue 2, 2007, pp. 1-11.
91. "Empirical and Numerical Analyzes of Support Requirements for a Diversion Tunnel at the Boztepe Dam Site, Eastern Turkey" (Gurocak, Z., Solanki, P., and Zaman, M.). Engineering Geology, Vol. 91, 2007, pp. 194-208.
92. "Effect of Anti-Strip Additives on Surface Free Energy Characteristics of Asphalt Binders for Moisture-Induced Damage Potential" (Wasiuddin, N., Fogle, C.M., Zaman, M., and O'Rear, E.A.). ASTM J. of Testing and Evaluation, Vol. 35, No. 11, 2007, pp. 36-44.
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78. "Annual Report: An Expert System for Reservoir Completion and Stimulation" (Kanj, M., Zaman, M., and J.-C. Roegiers). Submitted to OCAST, Sept. 1994.
79. "Resilient Moduli of Aggregates for Improved Pavement Design" (D.H. Chen, L. Yi, Zaman, M., and Laguros, J.C.). Final Report submitted to OCAST, December 1994 (290 pgs.).
80. "Study of Pore Collapse Problems in Oil Reservoir Rocks" (A. Abdulraheem, M. Azeemuddin, S. Mowar, Zaman, M., and J.-C. Roegiers). Final Report to OCAST, Dec. 1993 (395 pgs.).
81. "AI-Applications in the Petroleum Industry—A Literature Review" (Kanj, M., Zaman, M., and J.-C. Roegiers). Report submitted to OCAST, April 1993 (66 pgs.).
82. "Workshop on User-Friendly Software for Prediction of Bridge Approach Settlements" (Zaman, M., Laguros, J.C., D. Bhat, C. Hua and K. Pandey). Workshop Handout (ODOT Study #2188), Workshop organized by the Okla. Dept. of Transp., held on July 21, 1993 (79 pgs.).
83. "Effect of Fluid Hydraulics on Petroleum Rock Behavior" (Kukreti, A.R., Zaman, M., Civan, F. and S. Singh). Progress Report (Proj. No. AR2-084) submitted to Okla. Center for Advancement of Science and Tech. (OCAST), May 1993 (241 pgs.).
84. "Statistical Models for Identification of Problematic Bridge Sites and Estimation of Approach Settlements" (Zaman, M., Laguros, J.C. and R.K. Jha). Res. Rep. submitted to Okla. Dept. of Transp., June 1993 (118 pgs.).
85. "A User-Friendly Software for Prediction of Bridge Approach Settlements" (Zaman, M., D. Bhat and C. Hua). Res. Rep. submitted to Okla. Dept. of Transp., June 1993 (182 pgs.).
86. "Resilient Modulus of Select Aggregate Bases and Their Correlations with Other Engineering Properties" (Laguros, J.C., Zaman, M., and D.H. Chen). Res. Rep. submitted to Okla. Dept. of Transp., June 1993 (118 pgs.).
87. "U.S.-Canada Workshop on Recent Accomplishments and Future Trends in Geomech. in 21st. Century" Pre-Workshop Proc. (Edited by Zaman, M., Desai, C.S. and A.P.S. Selvadurai), held at Norman, Okla., Oct. 21-23, 1992 (387 pgs.).
88. "Dynamic Response of Rigid Airport Pavements Subjected to Temperature Differentials" (M.R. Taheri, Zaman, M., and V. Khanna). Res. Rep. to the Engineering Foundation (Grant RS-A-90-3).
89. "A High Capacity (30,000 psig) Cubical Device: Development and Performance Evaluation" (Zaman, M., Kukreti, A.R. and Mishra, D.K.). Res. Rep. to National Science Foundation (Grant #MSM-8705972), Dec. 1991 (325 pgs.).
90. "Constitutive Modeling of Geological Formations Considering Porosity and Permeability Alterations Due to Fluid Withdrawal" (Kukreti, A.R., Zaman, M., and Civan, F.). Proj. Report for Grant No. G1104140, submitted to the U.S. Dept. of Interior, Bureau of Mines, Washington, D.C., July 1991, (50 pages).
91. "Expert Systems Applications for ODOT" (Laguros, J.C., G. Bozai, Zaman, M., A. Mangaokar, J.F. Harp and J.L. Gattis). Final Rep. to ODOT, July 1991 (49 pgs.).
92. "Assessment of Resilient Modulus Testing Methods and Their Application to Design of Pavements" (R. Danayak, Zaman, M., Laguros, J.C.). Final Rep. to ODOT, June 1991 (87 pgs.).
93. "Evaluation of Causes of Excessive Settlements of Pavements Behind Bridge Abutments and Their Remedies: Phase III" (Laguros, J.C., Zaman, M., A. Alvappillai and K. Vavarapis). Res. Rep. to ODOT, June 1991, (216 pgs.).
94. "Pore Collapse in Reservoir Rocks: A Critical Review" (A. Mohammed, Zaman, M., and Roegiers, J.C). Int. Rep. CEES and PG & E., Univ. of Oklahoma, Nov. 1990 (40 pgs.).
95. "Three -Dimensional Testing and Constitutive Modeling of an Oklahoma Coal for Effective Mine System Design and Ground Control" (with Najjar, Y.M., and Kukreti, A.R.). Submitted to Oklahoma Mining and Mineral Resources Research Institute, University of Oklahoma, July 1990.

96. "Evaluation of Causes of Excessive Settlements of Pavements Behind Bridge Abutments and Their Remedies: Phase II" (with Laguros, J.C. and I.U. Mahmood). Res. Rep. to Research Division, Oklahoma Department of Transportation, January 1990 (199 pgs).
97. "Stability Analysis and Characterization of Ground Subsidence of Abandoned Lead-Zinc Mines in Northeastern Oklahoma" (with Ahern, J.L.). Final Report to Oklahoma Mining and Mineral Resources Research Institute, University of Oklahoma, July 1988, (73 pgs).
98. "Development of a Constitutive Model for Predicting Yielding and Failure Behavior of Rocks Under Three-Dimensional Loading" (with Kukreti, A.R. and Najjar, Y.M.). Final Report to the Energy Resources Institute, University of Oklahoma, Aug. 1988, (99 pgs).
99. "Ground Subsidence in Oklahoma Due to Mining: Potential, Problems and Numerical Modeling" (with Najjar, Y.M., and Koragappa, N.). Research Report to Oklahoma Mining and Mineral Resources Research Institute, University of Oklahoma, 1987.
100. "Evaluation of Causes of Excessive Settlements of Pavement Behind Bridge Abutments and Their Remedies - Phase I" (with Laguros, J.C. and I.U. Mahmood). Submitted to the Research Division, Oklahoma Department of Transportation, January 1986.
101. "Modeling of Flow of Immiscible Fluids in Heterogeneous Irregular Shaped Reservoirs for Efficient Oil Recovery" (Kukreti, A.R. and Civan, F.). Submitted to the Energy Resources Institute, University of Oklahoma, 1985.
102. "Influence of Interface Behavior in Dynamic Soil-Structure Interaction Problems" (with Desai, C.S.). Report to National Science Foundation, University of Arizona, Tucson, 1982.
103. "Finite Element Analysis of Interaction Between an Elastic Circular Plate and Isotropic Elastic Half Space." M. Eng. Thesis, Carleton University, Ottawa, Canada, 1979.
104. "The Evaluation of Polluting Effects of Tannery Waste on Natural Water Resources of Bangladesh and Its Treatment" (Research report, with A.F. Ahmed and M.N. Islam). Submitted to the Univ. Grants Commission, Bangladesh, 1976.

#### PRESENTATIONS:

1. "Improved Characterization of Polymer- and RAP-Modified Binders Commonly Used in Oklahoma" (Ali, S. A., Ghabchi, R., Rani, S., Zaman, M.). Oral presentation at 2017 SPTC Summer Symposium held in Oklahoma City, Oklahoma.
2. "Rutting Resistance of Warm Mix Asphalt and Hot Mix Asphalt Containing RAP" (Rahman, A., Arshadi, A., Ghabchi, R., Ali, S. A., Barman, M., Zaman, M.). Poster presentation at 2017 Oklahoma Transportation Research Day, held in Oklahoma City, Oklahoma.
3. "Rutting and Cracking Resistance of Foamed Warm Mix Asphalt Containing RAP" (Rahman, A., Arshadi, A., Ghabchi, R., Ali, S. A., Zaman, M.). Poster presentation at 2017 SPTC Summer Symposium held in Oklahoma City, Oklahoma.
4. "Laboratory Evaluation of Interlayer Shear Strength of Commonly Used Tack Coats in Oklahoma" (Rani, S., Ali, S. A., Ghabchi, R., Zaman, M.). Poster presentation at 2017 SPTC Summer Symposium held in Oklahoma City, Oklahoma.
5. "Evaluation of Interlayer Shear Strength of Different Tack Coats Used in Oklahoma" (Rani, S., Ali, S. A., Ghabchi, R., Zaman, M.). Poster presentation at 2017 Oklahoma Transportation Research Day, held in Oklahoma City, Oklahoma.
6. "Effects of Waste Vegetable Oil in High Concentration Recycled Asphalt Binder" (Dugan, C., Rani, S., Ali, S. A., O'Rear, E. A., Zaman, M.). Poster presentation at 2017 Oklahoma Transportation Research Day, held in Oklahoma City, Oklahoma (First Prize).
7. "Development of a Surface Free Energy (SFE) Database for Screening of Mixes for Moisture-induced Damage in Oklahoma" (Ali, S. A., Ghabchi, R., Rani, S., Rahman, M. A., Zaman, M.). Presented at 2017 Oklahoma Transportation Research Day, held in Oklahoma City, Oklahoma.
8. "Field and Laboratory Investigation of Fatigue Performance of Oklahoma Warm Mix Asphalts" (Ali, S. A., Arshadi, A., Ghabchi, R., Zaman, M.). Presented at 2016 SPTC Summer Symposium, Aug. 10, 2016.



9. "The Response of Polyphosphoric Acid Modified Asphalt Binders to the Addition of an Anti-Stripping Agent" (Rani, S., Ali, S. A., Ghabchi, R., Zaman, M.). University of Oklahoma, Norman: Graduate Student Research & Creativity Day, 2016.
10. "Characterization of Rheological Properties of Polymer and RAP Modified Asphalt Binders Using Multiple Stress Creep and Recovery Method" (Ali, S. A., Rani, S., Ghabchi, R., Zaman, M.). Presented at University of Oklahoma, Norman: Graduate Student Research & Creativity Day - 2016.
11. "Response of Oklahoma Asphalt Binder Modified using Polyphosphoric Acid, Warm-Mix Asphalt Additive and Anti-Stripping Agent" (Zaman, M.). Presented at 2016 Oklahoma Transportation Research Day, October 18, 2016.
12. "Interlayer Shear Strength of Tack Coats in Asphalt Pavements" (Rani, S., Ali, S. A., Ghabchi, R., Zaman, M.). Presented at 2016 Oklahoma Transportation Research Day, October 18, 2016.
13. "Evaluation of High Temperature Characteristics of Polymer and RAP Modified Asphalt Binders Using Multiple Stress Creep and Recovery Method" (Ali, S. A., Rani, S., Ghabchi, R., Zaman, M.). Presented at 2016 Oklahoma Transportation Research Day, Oklahoma City, Oklahoma, October 18, 2016.
14. "Performance of Asphalt Binders Modified with Polysphosphoric Acid" (Rani, S., Ali, A.S., Ghabchi, R. and Zaman, M.). Poster presentation at 2015 Oklahoma Transportation Research Day, held in OKC, OK, October 2015.
15. "Fatigue Characteristics of Asphalt Mixes Containing RAP and RAS" (Zaman, M., Ghabchi, G. and Barman, M.). Presented at Shandong Highway Department, Jinan, China, April 28, 2015.
16. "Southern Plains Transportation Center: Overview and Opportunity for Collaboration" (Zaman, M.). Presented at Shandong University, Jinan, China, April 27, 2015.
17. "Intelligent Asphalt Compaction Analyzer for Quality Control of Asphalt Pavement during Compaction" (Imran, S., Commuri, S., Barman, M., Arshadi, A., and Zaman, M.). Poster presentation at 2015 Oklahoma Transportation Research Day, Oklahoma City, OK, October 20.
18. "Development of Guidelines Toward Adopting the Multiple Stress Creep Recovery (MSCR) Test Method for Extreme Weather Conditions Prevailing in the Southern Plains" (Ali, A., Rani, S., Ghabchi, R. and Zaman, M.). Poster presentation at 2015 Oklahoma Transportation Research Day, held in OKC, OK, October 20.
19. "Fatigue Performance of Asphalt Pavement Containing RAS and RAP" (Zaman, M., Ghabchi, R. and Barman, M.). Workshop presentation at Oklahoma Dept. of Transportation, March 12, 2015.
20. "Superpave® Performance Grading of Oklahoma Asphalt Binders" (Rani, S., Ali, S.A., Ghabchi, R., and Zaman, M.). Presented at Oklahoma Research Day, held on March 6, 2015.
21. "Southern Plains Transportation Center: An Overview and Collaboration Potential" (Zaman, M.). Presented at OSSM on Jan. 21, Oklahoma City, OK, 2015.
22. "Southern Plains Transportation Center: Overview and Collaboration Potential" (Zaman, M.). Presented at University of Tokyo, Tokyo, Japan, February 25, 2014.
23. "Southern Plains Transportation Center: Overview of a Regional University Transportation Center" (Zaman, M.). Presented at Kajima Technical Research Institute, Tokyo, Japan, February 27, 2014.
24. "Traffic and Transportation Safety Issues in Bangladesh" (Zaman, M.). Presented at Metropolitan Expressway Co. Ltd., Tokyo, Japan, February 27, 2014.
25. "Modeling Nanoclay Modified Asphalt Binder Through Molecular Dynamic Simulations" (Baker, D.S., Hawa, T., Hossain, M.Z., Saha, M.C. and Zaman, M.). Presented at AIAA/ASME Oklahoma Symposium, held in Oklahoma City, Oklahoma, March 29, 2014.
26. "Recommended Fatigue Test Method for ODOT: Discussion of Results" (Barman, M., Ghabchi, R., Singh, D., Zaman, M. and Commuri, S.). Presented to the Project Panel, held in Norman, Oklahoma, June 19, 2014.
27. "Intelligent Compaction – Oklahoma Style" (Dark, T., Beainy, F., Commuri, S. and Zaman, M.). Presented at OAPA Awards Banquette and Conference, Midwest City, OK, Feb. 5-6, 2013.

28. "Field Performance of Asphalt Pavements Containing Mine Tailings: A Case Study on Green Paving" (Zaman, M.). Invited Keynote Presentation at 8th International Conf. on Road and Airfield Pavement Tech., held at Taipei, Taiwan on July 14-18, 2013.
29. "Pavement Preservation Research in Oklahoma" (Pittenger, D., Zaman, M., Riemer, C., Gransberg, D. and Bulut, R.). Presented at ODOT-OTC Transportation Research Day, held in OKC on Sept. 12, 2013.
30. "Southern Plains Transportation Center: Vision, Mission, and Collaboration Potential" (Zaman, M.). Presented at UT-Arlington on November 8, 2013.
31. "Southern Plains Transportation Center: Overview of Plan and Progress" (Zaman, M.). Presented at RITA Kickoff Visit, held at OU on December 4, 2013.
32. "Use of High RAP Contents in Hot Mix Asphalt Pavements" (Zaman, M., Hossain, Z., Ghabchi, R., Singh, D.). OkTC-ODOT Workshop, Oklahoma City (September 2012).
33. "Mechanistic Approach for Evaluation of Moisture Damage Potential of Green Pavement Technologies" (Ghanbchi, R., Singh, D., Tian, Q., Zaman, M.). Poster Presentation at GeoCongress, ASCE, Oakland, CA (March 2012).
34. "Environmentally Friendly Asphalt Technologies for Pavement Applications: Advantages and Technical Challenges" (Ghabchi, R., Singh, D., Tian, Q., Zaman, M.). Graduate Program Information Symposium, CoE, Norman, OK. Poster, 2012.
35. "Field Performance of a Test Road Containing Mine Tailings" (Zaman, M.). Shell Energy Security and Climate Change Seminar Series, UTEP, El Paso, Texas (December 2012).
36. "Recycled Asphalt Pavement in New Asphalt Mixtures: State of the Practice" (Hossain, Z., Buddhala, A., O'Rear, E. A., Zaman, M., Laguros, J., Lewis, S.). 2nd International Symposium on Asphalt Pavement and Environment, Fortaleza, Brazil (October 2012).
37. "Key to Green Paving: Challenges and Opportunities" (Zaman, M.). Big Idea Seminar, AME, Norman, Oklahoma. (October 2012).
38. "Preparation and Evaluation Of Nanoclay-Modified Asphalt Binders" (Hossain, Z., Zaman, M., Saha, M., Hawa, T.). Poster Presentation at ODOT-OkTC Research Day, Oklahoma City, OK. (October 2012).
39. "Design, Construction and Performance of a Pavement Test Section with High Reclaimed Materials" (Zaman, M., Solanki, P., Adje, D., Hossain, Z., Singh, D., Ghabchi, R., Lewis, S.). ODOT-OkTC Transportation Research Day, Oklahoma City. (October 2012).
40. "Effect of Recycled Asphalt Pavement on Mechanistic Properties of Hot Mix Asphalt" (Solanki, P., Hossain, Z., Adje, D., Ghabchi, R., Singh, D., Zaman, M.). Poster Presentation at ODOT-OkTC Transportation Research Day, Oklahoma City. (October 2012).
41. "Fatigue and Rut Behavior of an Instrumented Pavement Under Vehicular Traffic" (Singh, D., Hossain, N., Zaman, M., Muraleetharan, K., Breidy, M.). Poster Presentation at ODOT-OkTC Transportation Research Day, Oklahoma City. (October 2012).
42. "Warm Mix Asphalt and Intelligent Compaction" (Zaman, M.). Presented at Shandong University, China, Dec. 1, 2011.
43. "Durability of Stabilized Aggregates" (Zaman, M.). Presented at Shandong University, China, Dec. 2, 2011.
44. "Warm Mix Asphalt Moisture Susceptibility Evaluation Using Surface Free Energy Approach" (Zaman, M., Bulut, R., Cross, S.A, Ghabchi, R., Tian, Q., Singh, D. and Murat, K.). Poster presentation at ODOT-OkTC Transportation Research Day, Oct. 11, 2011 (First Prize).
45. "Involvement of University Transportation Centers in Pavement Preservation Research" (Zaman, M., Gransberg, D., Riemer, C. and Pittenger, D.). Southeast Pavement Preservation Partnership Annual Meeting, held in OKC, May 4, 2011
46. "Enhancing Flexible Pavement Design through Field Performance Monitoring and Testing" (Zaman, M.). Presented at Shandong University, China, Nov. 21, 2011.
47. "Characterization of Cementitiously Stabilized Subgrades for Mechanistic-Empirical Pavement Design" (Zaman, M.). Presented at Shandong University, China, Nov. 22, 2011.

48. "Using Mine Chat in Asphalt Paving: A Field Demonstration Study" (Zaman, M.). Presented at Shandong University, China, Nov. 23, 2011.
49. "Energy Efficient Paving: Prospects and Concerns" (Zaman, M.). Presented at Shandong University, China, Nov. 24, 2011.
50. "Effect of Gradation on Stiffness and Flow Behavior of Aggregate Bases: A Laboratory and Field Study" (Zaman, M.). Presented at Shandong University, China, Nov. 25, 2011.
51. "Dynamic Modulus of Asphalt Mixes for Asphalt Pavement Applications: A Laboratory Study and Modeling" (Zaman, M.). Presented at Shandong University, China, Nov. 28, 2011.
52. "Civil Engineering Education and Research in the United States" (Zaman, M.). Presented at Shandong University, China, Nov. 28, 2011.
53. "Laboratory Performance Evaluation of Hot Mix Asphalt Mixes with RAP" (Singh, D.V., Zaman, M., and Commuri, S.). International Symp. on Testing and Spec. of Recycled Materials for Sustainable Geotechnical Construction, held in Maryland on Feb. 2-4, 2011.
54. "Traffic and Transportation Issues in Bangladesh" (Zaman, M.). Presented at NABIC's Annual Convention, held in Richardson, Texas, May 21, 2011.
55. "Effectiveness of Advera on Warm Mix Asphalt" (Hossain, Z., Zaman, M., O'Rear, E. and Chen, D-H.). Presented at GeoHunan Int'l Conf. II, held in Hunan, China on June 6-8, 2011.
56. "Enhancing Structural Design of Pavement Through Field Performance Monitoring" (Zaman, M.). Presented at Oklahoma Structural Engineering Association Meeting, held in OKC, July 26, 2011.
57. "Field Performance of a Test Pavement Section on I-35" (Zaman, M., Muraleetharan, M., Breidy, M. and Solanki, P.). Presented at ODOT-OkTC Transportation Research Day, held in OKC, October 11, 2011.
58. "Tube Suction Test for Evaluating Durability of Cementitiously Stabilized Soils" (Zaman, M., Solanki, P., and Khalife, R.). OTC RITA Site Visit, Poster Presentation, March 30, 2010, NCED Conference Center, Norman, Oklahoma.
59. "Effect of Gradation on Stability and Drainability of Selected Aggregate Bases in Oklahoma: A Field Case Study" (Ghabchi R. and Zaman M.). ODOT-OTC Transportation Research Day. Poster presentation, held in OKC, Oct. 14, 2010.
60. "Local Calibration of the MEPDG for Asphalt Pavements with RAP" (Zaman, M., Hossain, Z., Solanki, P., Laguros, J., Lewis, S., Doiron, C., Adje, D., and Autrey, J.), ODOT-OTC Research Day, Poster Presentation, held in OKC on Oct. 14, 2010.
61. "Tube Suction Test for Evaluating Durability of Cementitiously Stabilized Soils" (Solanki, P., Zaman, M. M., and Khalife, R.). ODOT-OTC Research Day, Poster Presentation, held in OKC on Oct. 14, 2010 (Received Second Prize).
62. "Measurement of Stiffness of Pavement Using Intelligent Asphalt Compaction Analyzer" (Singh, D.V., Commuri, S., and Zaman, M.). Student Research and Performance Day, The University of Oklahoma, Norman, 2010.
63. "Stabilization of Sulfate Containing Soil For Construction of Pavements" (Singh, D.V., Ghabchi, R., Laguros, J.G., and Zaman, M.M.). Student Research and Performance Day, The University of Oklahoma, Norman, 2010.
64. "Improvement of Subgrade Soil Properties Using Chemical Stabilization: A Case Study" Singh, D.V., Ghabchi, R., Laguros, J.G., and Zaman, M.M.). BGSA Research Symposium, The University of Oklahoma, Norman, 2010. (Awarded 2nd Prize).
65. "Continuous Real-Time Measurement of Pavement Quality during Construction" (Singh, D.V., Commuri, S., and Zaman, M.). ODOT-OkTC Research Day, held in OKC on Oct. 14, 2010 (Awarded 1st Prize).
66. "Pavement Research in OTC" (Zaman, M.). Presentation at the RITA site visit, Postal Training Center, March 30, 2010.
67. "Data Collection and Performance Monitoring of an Instrumented Flexible Pavement Section on I-35" (Solanki, P., Zaman, M. and Muraleetharan, K.). Presented at the Pavement Performance Prediction Symp:

- Validation of Predictive Models Using Full Scale and Field Pavement Performance, in Laramie, Wyoming, July 15-17, 2010.
68. "Timberdell Aggregate Testing Update." Presentation at the 8th Annual Meeting of the Oklahoma Aggregate Association (OKAA), OKC, Feb. 18, 2009.
  69. "Durability of Chemically Stabilized Soils." Presentation at the Rajshahi Univ. of Engineering and Technology, Bangladesh, October 16, 2008.
  70. "Rheological Properties of WMA Additives and Anti-Stripping Agent Modified Performance Grade Binder." Presentation (with Z. Hossain, D. Singh, A. Budhala and O'Rear, E.A.) at the 45th Petersen Asphalt Conference, held at Laramie, Wyoming, July 14-16, 2008.
  71. "OU Works for Cooperative Efforts with Industry." Presentation at 7th Annual Meeting of Oklahoma Aggregate Association, OKC, Feb. 13, 2008.
  72. "Soil Stabilization in Pavement Structures." Poster Presentation (with Solanki, P., and Khoury, N.) at the ODOT-OTC Research Day, Poster Presentation, October 17, 2007, OKC, Oklahoma.
  73. "Soil Stabilization," Graduate Student Research and Creative Endeavor, Poster Session (with Solanki, P., and Khoury, N.), Univ. of Oklahoma, April 6, Norman, Oklahoma.
  74. "Effect of Aging on Surface Free Energy Characteristics of Asphalt Binders." Presentation (with Wasiuddin, N.) at Second Int'l Workshop on Moisture Damage in Asphalt Pavements, College Station, Texas, College Station, Texas. (September 2007).
  75. "Effect of Polymeric Aggregate Treatment Using Styrene-Butadiene Rubber (SBR) for Moisture-Induced Damage Potential," Presentation (with Wasiuddin, N., and O'Rear, E.A.) at Annual Meeting of the Int'l Soc. for Asphalt Pvt. (ISAP), Technical Committee (on Constitutive Modeling of Asphaltic Materials), Washington, D.C., Jan. 2007.
  76. "Effect of Mineral Filler on Bulk Specific Gravity of Fine Aggregates." Presented (with A. Gupta, S. Selvaratnam and Laguros, J.C.) at Peterson Asphalt Research Conf., 16-18, July, 2007, Laramie, WY.
  77. "Advances in Intelligent Compaction of Asphalt Concrete Pavement." Presented (with Commuri, S.) at ODOT-OTC Research Day, Oklahoma City, Sept. 19, 2006.
  78. "Overview of OU Asphalt Program." Presented (with Commuri, S.) to OTC, February 1, 2006.
  79. "Civil Engineering: An Exciting Career with an Incredible History." Presentation at ENGR 2113: Intro to Engineering Class, June 17, 2004.
  80. Tarefder, R.A., White, L. and Zaman, M., "Neural Network Assessment of Asphalt Concrete Permeability Factors." Presentation at the 83rd Annual Meeting of the Transp. Research Board, January 11-15, 2004, Washington, D.C.
  81. "Oklahoma Transportation Center: An Overview." Presentation at the CEES Visiting Council Meeting, Nov. 7, 2003.
  82. "Cold Asphalt Pavement Recycling: Laboratory and Field Aspects." Presentation at the Asphalt Pavement Recycling Workshop, held on September 16, 2003 in Oklahoma City, OK.
  83. "Resilient Characteristics of Fly Ash Stabilized Marginal Aggregate Base." Presentation at the. ASCE Texas Section Fall Meeting, held on September 24-27, 2003 at Dallas, Texas.
  84. "Limiting Source Dimensions of Three-Dimensional Point Source Model for Solute Transport." (with Ahsanuzzaman, A.N.M. and Kolar, R.). Presentation at the AGU Hydrology Days 2003 Conference, held on March 31-April 2, 2003 at Fort Collins, Colorado.
  85. "Scanning Electron Microscopy in Identifying the Microstructural Development of Stabilized Aggregate Bases." Presented (with Khoury, N., and Laguros, J.C.) at the Annual Oklahoma Academy of Science Fall Technical Mtg., held on Nov. 7, 2003 at Chickasha, OK.
  86. "Effect of Freeze-Thaw Cycles on Class C Fly Ash Stabilized Aggregate Base." Presented (with Khoury, N.) at 82nd Annual Meeting of the Transportation Research Board, held on January 12-16, 2003 in Washington, D.C. Also, appeared in CD publication of TRB.
  87. "Asphalt Program: Accomplishment and Goal." Presented at the CEES Visiting Council Mtg., April 4, 2002.

88. "Testing and Constitutive Modeling of HPC" Invited Presentation at Kansas State University, Manhattan, April 1, 2002.
89. "Overview of OU Asphalt Program." Presented at the OAPA Board Meeting, December 18, 2002.
90. "Soft Sediments." Presented at RMI Bi-Annual Meeting, October 24-25, 2002.
91. "Poroplastic Multi-Laterals in ABAQUS Using Cam Clay Model" (with Singanayagam, A., and Abousleiman, Y.,). Presented at RMI Bi-Annual Meeting, March 5, 2002.
92. "Asphalt Pavement Recycling: Laboratory Aspects." Presented at OCAST-Sponsored Technology Transfer Workshop, held at Univ. of Oklahoma, May 21, 2002.
93. "Evaluation of Rutting Potential of Selected Mixes Using APA." Presented at Oklahoma Department of Transportation, Nov. 30, 2000.
94. "Numerical Modeling Efforts at RMI." Presentation at RMI Consortium Bi-Annual Meeting, July 26-27, 2000.
95. "Asphalt Encapsulation of Contaminated Soils and Aggregates" (Rarefder, R.A., Ruckgaber, M.E., Zaman, M., and Patton, D.). Presented at 7th IPEC Conf., held in Albuquerque, New Mexico, Nov. 7-10, 2000.
96. "Hydraulic Fracture in Complex Stress Fields and Weak Formations." Presentation at RMRC Bi-Annual Meeting, held in Norman, OK, Nov. 16-17, 1999.
97. "Resilient Modulus and Mechanistic Pavement Design: Are We There Yet." Panel Discussion in Session 333, 78th Annual Meeting, Transportation Research Board, Washington, D.C., Jan. 10-14, 1999.
98. "Durability Effects on Resilient Modulus of Stabilized Aggregate Bases." Presentation at Session 238, 78th Annual Meeting, Transportation Research Board, Washington, D.C., Jan. 10-14, 1999.
99. "Evaluation of Crack Formation and Spacing in Continuously Reinforced Concrete Pavement." Presented at the Structure/Geotech. Seminar, School of CEES, Univ. Of Oklahoma, Aug. 27, 1997.
100. "Physical and Numerical Modeling of CRC Pavement." Presentation at the ACI meeting in Oklahoma City, Aug. 12, 1997.
101. "Soft Sediment Mechanics: Sanding, Drill-Cutting ReInjection--Overview of Progress." Presentation (with RMI colleagues) at the Rock Mechanics Institute Bi-Annual Meeting, held in Norman, Oklahoma, December 3-5, 1996.
102. "Cyclic Testing for Improved Pavement Design." Presentation at the Freshman Seminar: Discovering Engineering--What Does It Mean? organized by Prof. John Cheung, School of Electrical Engineering, University of Oklahoma, October 9, 1996.
103. "Resilient Moduli of Aggregate Materials: Variability due to Gradation and Moisture Content." Presentation at the Structures-Geotech Seminar, School of CEES, October 9, 1996.
104. "Soft Sediment Mechanics: Sanding--Project Overview and Research Plan." Presentation (with RMI colleagues) at the Pre-Consortium Mtg. on Sanding, held in Norman, Oklahoma, September 17-18, 1996.
105. "Statistical and Deterministic Models for Identification of Problematic Bridges and Estimation of Approach Settlements." Invited Presentation at the Highway Engineering Exchange Program Area III conference, held at Radisson Inn, Oklahoma City, Oklahoma, May 13-16, 1996.
106. "Resilient Modulus of Aggregate Bases." Presented at 21st Southwest Geotechnical Engineering Conf., held in Tulsa, Oklahoma, April 22-25, 1996.
107. "Field Evaluation of Drainable Bases in Oklahoma" (with M. Rahman and T. Curtis). Research Presentation at the Oklahoma Dept. of Transp., Oklahoma City, Oklahoma, March 22, 1996.
108. "Soft Sediment Mechanics." Presentation at Bi-annual RMC/RMRC Meeting, held at Norman Campus, O.U., November 9, 1995.
109. "Study of Differential Settlement Problems at Bridge Ends." Seminar at Helwan Univ., Cairo, Egypt, September 30, 1995.
110. "Technology Transfer and Industrial Collaborations." Presentation at NSF/OCAST Site Visit, June 20, 1995.

111. "Mechanics of Pore Collapse in Reservoir Rocks and Unconsolidated/Poorly Consolidated Sediments." Presentation at NSF/OCAST Assessment/Review Site Visit, held in Norman Campus, O.U., June 20, 1995.
112. "Cooling Properties of Asphalt Pavement." Presentation at Research Review Day, ODOT, February 1995.
113. "Pore Collapse Mechanisms, Reservoir Compaction and Subsidence, Unconsolidated Sands and Soft Sediments." Presentation at RMC/RMRC Biannual/Fall Meeting, Nov. 16, 1994.
114. "Bridge Approach Settlement Workshop" (Laguros, J.C., H. Chen and M. Rahman). Presentation at Workshop held at the Univ. of Oklahoma for ODOT, Nov. 9, 1994.
115. "Pore Collapse Mechanisms and Unconsolidated Sands—A Review of Progress During March—October 1993" (with H. Wang, P. Suri, A. Mohammed and Scott, T.). Presentation at the RMC/RMRC Biannual/Fall Meeting, October 12, 1993.
116. "Overview of Rock Mechanics Research Center." Presented to CSIRO visitors, Australia, July 2, 1993.
117. "The Role of Small Companies in a Centers Operation/Research Program Development." Presentation at the Roundtable Discussion Sessions at the NSF State-IUCRC Meeting in Washington, DC, April 19, 1993.
118. "Pore Collapse Mechanisms and Unconsolidated Sands—A Review of Progress" (with A. Abdulraheem, M. Azeemuddin, S. Mowar and H. Wang). Presentation at the Rock Mechanics Consortium-Spring Meeting and Rock Mechanics Research Center Meeting, April 1, 1993.
119. "Bridge Approach Settlement Problems in Oklahoma." Presented at the ASCE Monthly Mtg. in Oklahoma City, Oklahoma, March 3, 1993.
120. "Bridge Approach Settlement." Presented at the Research Review Day, Okla. Dept. of Transp. in Oklahoma City, Oklahoma, February 3, 1993.
121. "Workshop on Bridge Approach Settlement" (with Laguros, J.C., D. Bhat, C. Hua, and K. Pandey). Oklahoma Dept. of Transportation, July 21, 1993.
122. "Overview of Rock Mechanics Research Center at University of Oklahoma". Presented to Petrobras Visitors, May 12, 1993.
123. "Thermal Effects on Dynamic Response of Concrete Pavements" (with V. Khanna and M.R. Taheri). Presented at the Transportation Research Board Meeting, January 10-14, 1993.
124. "Pore Collapse Research at the University of Oklahoma" (with A. Abdulraheem and S. Mowar). Presented to Statoil, Norway Visitors, June 22, 1992.
125. "Role of Rock Mechanics in Reserving Compaction". Reservoir Compaction Forum, held at Las Teques (INTEVEP) Venezuela, April 9-10, 1992.
126. "Dynamic Response of Jointed Concrete Pavements to Moving Aircraft" (with A. Alvappillai). Presented at the 80th Annual Meeting of Oklahoma Academy of Science, held at Southeastern Oklahoma State University, Durant, Nov. 7, 1991.
127. "3-D Testing and Constitutive Modeling of Coal" (with D.H. Chen and Kukreti, A.R.). Presented at the 80th Annual Meeting of Oklahoma Academy of Science held at Southeastern Oklahoma State University, Durant, Nov. 7, 1991.
128. "Pore Collapse Mechanisms in Poorly Consolidated Reservoir Rocks" (with J.-C. Roegiers, A. Abdulazeez, M. Azeemuddin). Presented at the Rock Mechanics Consortium (RMC) meeting. March 12, 1991.
129. "Three-Dimensional Testing of Plain and Fiber Reinforced Concrete" (with Kukreti, A.R. and Mishra, D.K.). Presented at the 79th Annual (Technical) Meeting of the Oklahoma Academy of Sciences, held at Oral Roberts Univ., Tulsa, Oklahoma on Nov. 9, 1990.
130. "Application of Constitutive Modeling in Underground Mining" (with Kukreti, A.R. and Chen, D.). Presented at the 79th Annual (Technical) Meeting of the Oklahoma Academy of Sciences, held at Oral Roberts Univ., Tulsa, Oklahoma on Nov. 9, 1990.
131. "An Anisotropic Constitutive Model for Concrete and Rocks" (with Kukreti, A.R. and Najjar, Y.M.). Presented at the 79th Annual (Technical) Meeting of the Oklahoma Academy of Sciences, held at Oral Roberts Univ., Tulsa, Oklahoma on Nov. 9, 1990.

132. "Thick Plate Response to Moving Suspended Point Load" (with M.R. Taheri and A. Alvappillai). Presented at the 78th Annual Mtg. of Okla. Acad. Science, held at Central State Univ., Edmond, OK, Nov. 10, 1989.
133. "Finite Element Analysis of Consolidation Settlements of Bridge Approach Pavements in Oklahoma" (with A. Gopalasingam and Laguros, J.C.). Presented at the 78th Annual Mtg. of the Okla. Acad. Science, held at Central State Univ., Edmond, OK, Nov. 10, 1989.
134. "A Single Surface Plasticity Model for Rocks and Concrete" (with Najjar, Y.M., and Faruque, M.O.). Presented at the 78th Annual Mtg. of the Okla. Acad. Sc., Central State Univ., Edmond, Nov. 10, 1989.
135. "Application of Elastoplastic and Viscoplastic Finite Element Analyses to Prediction of Bridge Approach Settlements" (with A. Gopalasingam and Laguros, J.C.). Presented at the 77th Annual Meeting of the Okla. Academy of Science, held at the Univ. of Science and Arts, Chickasha, Oklahoma, Nov. 11, 1989.
136. "Prediction of Stress-Strain Response of Concrete Under Three-Dimensional Loading by a Two-Surface Constitutive Model" (with Najjar, Y.M., and Kukreti, A.R.). Presented at the 77th Annual Meeting of the Okla. Academy of Science, held at the Univ. of Science and Arts, Chickasha, Oklahoma, Nov. 11, 1989.
137. "Soil Liquefaction and Foundation Response Under Earthquake Loading." Presented at a seminar organized by the Dept. of Meteorology, Univ. of Oklahoma, Dec. 8, 1987.
138. "Analysis of Cylindrical Storage Tanks on Rectangular or Square Foundations Including Interaction Effects" (with Koragappa, N.). Presented at the 76th Annual Meeting of the Oklahoma Academy of Science, held at Northwestern State Univ., Alva, Oklahoma, Nov. 13, 1987.
139. "A Generalized Plasticity Model and Its Application to Some Field Problems in Geomechanics." Presented at a seminar organized by the OU School of Aerospace, Mechanical and Nuclear Engineering, March 1987.
140. "Seismic Response of a Bridge Pier Including a Base Isolator and Energy Dissipator." Presented at the 75th Annual Fall Meeting of the Oklahoma Academy of Science, held at Northeastern Univ., Tahlequah, Oklahoma, Nov. 14, 1986.
141. "Three-Dimensional Nonlinear Behavior of Pile Group Foundation: Effect of Loading Sequence" (with Najjar, Y.M.). Presented at the 75th Annual Fall Meeting of the Oklahoma Academy of Science, held at Northeastern State Univ., Tahlequah, Oklahoma, Nov. 14, 1986.
142. "Modeling of Immiscible Displacements in Heterogeneous Reservoirs" (with Kukreti, A.R. and Civan, F.). Presented at the 74th Annual Meeting of the Oklahoma Academy of Science, held at the Oklahoma Baptist Univ., Shawnee, Oklahoma, Nov. 11, 1985.
143. "A Finite Element Model for Analysis of Drilled Piers" (with A. Uppal). Presented at the 74th Annual Meeting of the Oklahoma Academy of Science, held at the Oklahoma Baptist Univ., Shawnee, Oklahoma, Nov. 11, 1985.
144. "Modeling of Flow of Immiscible Fluids in Heterogeneous, Irregular Shaped Reservoirs for Efficient Oil Recovery" (with Kukreti, A.R. and Civan, F.). Workshop organized by the Energy Resources Institute (ERI), April 11, 1985.
145. "Finite Element Simulation of Borehole Dilatometer Tests in Discontinuous Rocks" (with Kuang S.L.). Presented at the 72nd Annual Meeting of the Oklahoma Academy of Science, Oral Roberts University, Tulsa, Oklahoma, November 1983.
146. "Behavior of Subway Tunnels Under Static and Cyclic Loading." Presented at the Fifteenth Annual Meeting of the Mid-Continent Regional Science Association, held at Oklahoma City, June 1983.
147. "Cyclic Testing and Modelling of Interfaces" (with Desai, C.S., Drumm, E.C. and Janardhanam, R.). Presentation at session: 'Cyclic Loading of Soils, Concrete and Metals'. National Spring Convention, ASCE, Las Vegas, 1982.

#### **AWARDS AND HONORS:**

Japanese Society for the Promotion of Science Fellowship at Saitama University, Japan, February 16 – March 16, 2014.

“Outstanding Contributions” award given by the 8th International Conference on Road and Airfield Pavement Engineering, July 2013.

Invention disclosure: “A Method to Determine the Stiffness of a Hot Mix Asphalt (HMA) Pavement During its Construction” (Commuri, S. and Zaman, M.), February 22, 2011.

Outstanding Contribution Award, given by IACMAG, for life-long contributions in geomechanics, 2011.

IJOG Excellent Paper Award (2008) given by IACMAG for the paper “Modeling Fully Coupled Oil-Gas Flow in Dual-Porosity Medium” (Nair, R., Abousleiman, Y., Zaman, M.), Int. J. of Geomech., ASCE, Vol. 5, 2005, pp. 326-338.

Chandra Desai Medal (2005) from the International Association for Computer Methods and Advances in Geomechanics (IACMAG).

David Ross Boyd Professorship (2003, life-time teaching award for outstanding contributions to teaching).

Ker McGee Presidential Professor (1997-2001).

Agilent Technologies Award for Excellence in Laboratory Instruction, ASEE (2000)

ASEE Midwest Section Teaching Excellence Award (1998)

College of Engineering Distinguished Lectureship Award (1997).

Citation of Meritorious Achievement by International Biographical Center, Cambridge, England (1996).

Who's Who in the World (1995, 1996).

Who's Who in South and Southwest (1995).

Desai, C.S. Biennial Prize, Indian Geotechnical Society (1994) for the best paper published in Indian Geotechnical Journal during 1991-1992.

IACMAG Award for significant contribution in Constitutive Laws and Application (1994).

Who's Who in Science and Engineering (1993, 1996/1997).

Regents' Award for Superior Research and Creative Activity, The University of Oklahoma (1992).

Regents' Award for Superior Teaching, The University of Oklahoma (1990).

CoE Distinguished Lectureship Award, College of Engineering (for a five year period: 9/88 to 9/93).

National Science Foundation Travel Award to attend the International Symp. on Tunnelling for Water Resources and Power Projects, held in New Delhi, India, 19-23 Jan., 1988.

Summer Faculty Research Participation Fellowship, Argonne National Laboratory, Argonne, Illinois (1987).

Associates Distinguished Lectureship Award, College of Engineering, University of Oklahoma (1986, 1987).

Outstanding Youngmen of America - 1983, 1984, 1986 by U.S. Jaycees

Young Faculty Development Award, College of Engineering, University of Oklahoma, Norman (1985).

Junior Faculty Summer Fellowship, University of Oklahoma (1985).

Young Faculty Development Award, College of Engineering, University of Oklahoma, Norman (1984).

Annual Dissertation Award, College of Engineering, University of Arizona, Tucson (1983).

Merit Award (given to top student of the year), Bangladesh University of Engineering and Technology (BUET), Dhaka (1975).

Merit Scholarship, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh (1970-1975).

#### **FUNDED RESEARCH PROJECTS:**

1. “Year 2 Support for the SPTC 15.2 Projects” (PI; Co-PIs: Miller, Barnes). Funded by State of Oklahoma Department of Transportation, State, \$391,981. (April 2017 - September 2018).
2. “Management of the ODOT Transportation Library - FY 18” (PI; Co-PI; Pittenger). Funded by Oklahoma Department of Transportation, \$169,740. (October 2017 - September 30, 2018).



3. “Accelerated Bridge Construction - University Transportation Center (ABC-UTC)” (PI; Co-PI: Muraleetharan). Funded by Florida International University \$120,000. (October 2016 – September 2017).
4. “Development of Statewide WIM Data Quality Control and Axle Load Spectra and Traffic Volume Adjustment Factors for Oklahoma” (PI). Funded by Oklahoma State University/SPTC. \$69,315. (May 2016 - April 2017).
5. “Development of Aggregate Characteristics-Based Preventative Maintenance Treatments using 3D Laser Imaging and Aggregate Imaging Technology for Optimized Skid” (Co-PI; PI: Pittenger). Funded by Oklahoma State University/ODOT. \$73,838. (October 1, 2015 - September 30, 2017).
6. “Management of the Oklahoma Transportation Library: FFY2017” (PI; Co-PI: Pittenger). Funded by Oklahoma, Department of Transportation, \$169,745. (October 1, 2016 - September 30, 2017).
7. Southern Plains Regional Transportation Center (SPRTC): Year 3.” (PI; Co-PIs: Miller and Barnes). Funded by OST-R, USDOT (total fund \$2,554,400). Oct. 2015 – Sept. 2018.
8. “Matching Funds for Southern Plains Transportation Center: Year 3.” (PI; Co-PIs: Miller and Barnes). Funded by ODOT (total fund \$1,000,168). Oct. 2015 – Sept. 2018.
9. “Recommended Fatigue Test for Oklahoma Department of Transportation.” (PI; Co-PI: Commuri and Barman). Funded by ODOT (extension with new funds, total fund \$74,820). Oct. 2013 – Sept. 2016.
10. “Management of the ODOT Library: FFY2016.” (PI; Co-PI: Pittenger). Funded by ODOT. (total fund \$178,693). Oct. 2015 – Sept. 2016.
11. “Development of Guidelines for Selection of and Evaluation of Tack Coats in Oklahoma.” (Co-PI; PI: Ghabchi). Funded by ODOT (total fund \$166,319). Oct. 2015 – Sept. 2017.
12. “Development of Aggregate Characteristics-Based Preventative Maintenance Treatments using 3D Laser Imaging and Aggregate Imaging Technology for Optimized Skid.” (Co-PI; PI: Pittenger). Funded by ODOT with OSU as lead (total fund \$84,701). Oct. 2015 – Sept. 2017.
13. “Use of Ground Tire Rubber in Asphalt Pavements: Literature Review and DOT Survey.” (Co-PI; PI: Ghabchi). Funded by ODEQ (total fund \$18,496). Nov. 2015 – May 2016.
14. “Special Provisions for Intelligent Compaction of Stabilized Soil Subgrades.” (Co-PI; PI: Commuri, Barman). Funded by SPTC (total funds \$162,045). Oct. 2014 – Sept. 2016.
15. “Performance of Asphalt Binders Modified with Polyphosphoric Acid (PPA).” (PI; Co-PI: Ghabchi). Funded by ODOT/SPTC (total funds \$162,045). Oct. 2014 – Sept. 2016.
16. “Matching Funds for Southern Plains Transportation Center: Year 2.” (PI; Co-PIs: Miller and Barnes). Funded by ODOT (total fund \$1,000,168). Oct. 2014 – Sept. 2017.
17. “Southern Plains Transportation Center (SPTC): Year 2” (PI; Co-PIs: Miller and Barnes). Funded by OST-R, USDOT (total fund \$2,581,600). Oct. 2014 – Sept. 2017.
18. “Field Performance Monitoring and Modeling of Instrumented Pavement on I-35 in McClain County: Phase II.” (PI; Co-PI: Singh). Funded by ODOT (total funds \$91,432). Oct. 2012 – Dec. 2014.
19. “Fatigue Performance of Asphalt Pavements Containing RAS and RAP.” (PI; Co-PI: Boeck and Singh). Funded by ODOT (total funds \$217,253). Oct. 2012 – Dec. 2014.
20. “Evaluation of Performance of Asphalt Pavements Constructed Using Intelligent Compaction Technologies.” (Co-PI; PI: Commuri). Funded by ODOT (total funds \$219,417). Oct. 2012 – Sept. 2014.
21. “Creep Compliance and Percent Recovery of Oklahoma Certified Binders Using the Multiple Stress Creep Recovery (MSCR) Method.” (PI; Co-PI: Hossain). Funded by ODOT (total funds \$203,871). Oct. 2012 – Dec. 2014.
22. “Matching Funds for Southern Plains Transportation Center.” Funded by ODOT; PI (50%); \$1,000,168; with G. Miller and R. Barnes; Oct. 2013 – Sept. 2017.
23. “Southern Plains Regional Transportation Center (SPRTC).” Funded by OST-R, US Dept. of Transp., PI (50%) \$2,592,500; with G. Miller, R. Barnes; Oct. 2013 – Sept. 2017.
24. “Technology Transfer Support for Intelligent Compaction of Pavements – FY 2014.” (Co-PI; PI: Commuri, Braman). Funded by Volvo Road Machinery (total funds \$119,960). Jan. 2014 – Dec. 2014.

25. "Evaluate Densifier-Over-Shotblasting (DOS) Treatment Performance for Pavements and Bridge Decks." (Co-PI; PI: Pittenger). Funded by ODOT (total funds \$217,929). Oct. 2013 – Sept. 2015.
26. "Management of the ODOT Library." (PI). Funded by ODOT (total fund \$149,803). Oct. 2014 – Sept. 2015.
27. "Management of the ODOT Library." (PI). Funded by ODOT (total funds \$74,984). Apr. 2014 – Sept. 2014.
28. "Recommended Fatigue Test for Oklahoma Department of Transportation." (PI; Co-PI: Commuri and Singh). Funded by ODOT (total funds \$458,527). Oct. 2012 – Sept. 2015.
29. "Matching Funds for Southern Plains Transportation Center: Year 1." (PI; Co-PIs: Miller and Barnes). Funded by ODOT (total fund \$1,000,168). Oct. 2013 – Sept. 2017.
30. "Southern Plains Transportation Center (SPTC): Year 1" (PI; Co-PIs: Miller and Barnes). Funded by OST-R, USDOT (total fund \$2,592,500). Oct. 2013 – Sept. 2017.
31. "Intelligent Compaction of Soil Subgrades and Asphalt Pavements" (Co-PI; PI: Commuri). Funded by Volvo Road Machinery (total fund \$119,993). Jan. 2012 – Dec. 2012).
32. "Evaluation of Enhanced Integrated Climatic Model for Oklahoma Pavements" (Co-PI; PI: Bulut and Muraleetharan). Funded by Oklahoma Transportation Center (total fund \$40,000). Oct. 2011 – Sept. 2013.
33. "Evaluation of Asphalt Pavements using a Portable Lightweight Deflectometer" (Co-PI; PI: Commuri). Funded by Oklahoma Transportation Center (total fund \$98,087). Oct. 2011 -June 2013.
34. "Improved Cover Aggregate Specifications to Enhance Chip Seal Performance" (PI; Co-PI: Commuri, Pittenger). Funded by Oklahoma Transportation Center (total fund \$139,660). Oct. 2011 – June 2013.
35. "Drying Shrinkage Problems in High PI Subgrade Soils" (Co-PI; PI: Bulut). Funded by Oklahoma Transportation Center (total funds: \$60,000). Oct. 2011 – Sept. 2013.
36. "New Asphalt Mix Design Program for ODOT" (Co-PI; PI: Commuri). Funded by ODOT (total fund \$89,995). Oct. 2011 – Sept. 2012.
37. "Develop Draft Chip Seal Cover Aggregate Specifications Based on Aggregate Imaging System (AIMS) Angularity, Shape and Texture Test Results" (PI; Co-PI: Commuri, Pittenger). Funded by ODOT (total funds \$131,380). Jan. 2011-Sept. 2013.
38. "OkTC Web Site, Electronic Warehouse and Networking" (PI). Funded by Oklahoma Transportation Center (total fund \$10,000). Jan – Dec. 2011.
39. "Enhancing Laboratory Facilities in Asphalt Research and Education: Sharing to Gain" (PI; Co-PI: Hatami, Commuri). Funded by Oklahoma Transportation Center (total fund \$333,288). Jan. 2011 – June 2013.
40. "Continuous Real-Time Measurement of Quality During the Compaction of Subgrade Soils." OTC; \$199,946; March 2010 – Feb. 2012 (Co-PI; PI: Commuri).
41. "Implementation of MEPDG for Asphalt Pavements with RAP." OTC; \$245,683; Feb. 2010 – Jan. 2012 (PI; Co-PI: Solanki, Hossain, Laguros).
42. "WMA Pavements in Oklahoma: Moisture Damage and Performance Issues." OTC/OSU; \$190,265; Feb. 2010 – March 2012; (PI; Co-PI: O'Rear).
43. "OTC Workshops and Seminars," Oklahoma Transportation Center (OTC-H2RO(00!0 22013(04)), March 2010 – Dec. 2011; \$64,312; (PI; Co-PI: Court).
44. "ODOT Guidelines for Geosynthetic Reinforcement in Aggregate Base Roadways in Oklahoma," OTC; Aug. 2009 – July 2011; \$194,304; (Co-PI; PI: Hatami).
45. "Development of ODOT Guidelines for Use of Geogrids in Aggregate Bases," ODOT, Oct. 2009 –Sept. 2011; \$189,638; (Co-PI; PI: Hatami).
46. "Analysis of Aggregates and Binders Used for the ODOT Chip Seal Program," ODOT, Oct. 2009 –Sept. 2010; \$111,084; (Co-PI; PI: Gransberg).
47. "Quantifying the Costs and Benefits of Pavement Retexturing as a Pavement Preservation Tool," OTC, Aug. 2009 – July 2011; \$118,602; (Co-PI; PI: Gransberg).
48. "Intelligent Asphalt Compaction Analyzer" (Co-PI; PI: Commuri, S., Haskell Lemon and EST). Funded by Highways for Life, FHWA (total fund \$200,000). May 2007 – Dec. 2009.

49. "Continuous Real-time Measurement of Pavement Quality during Construction" (Co-PI; PI: Commuri, S.). Funded by Volvo Road Machinery (total fund \$140,393). Jan. – Dec. 2009.
50. "Modeling 85th Percentile Speed for Rural Highways for Enhanced Traffic Safety" (PI; Co-PI: White, L.). Funded by ODOT (total fund \$96,192). Oct. 2008 – Sept. 2010.
51. "Development of Flexible Pavement Database for Local Calibration of MEPDG" (PI). Funded by ODOT (total fund \$80,325). Oct. 2008 – Sept. 2010.
52. "Tube Suction Test for Evaluating Durability of Cementitously Stabilized Soils" (PI; Co-PI: Solanki). Funded jointly by ODOT and OTC (total fund \$194,393). Oct. 2008 – Sept. 2010.
53. "OTC Summer Internship" (PI). Funded by OTC (total fund \$74,994). June 2008 – May 2011.
54. "Quantifying the Costs and Benefits of Pavement Retexturing as a Pavement Preservation Tool" (Co-PI; PI: Gransberg, D.). Funded by Oklahoma Transp. Center (total fund \$195,501). May 2008 – Apr. 2010.
55. "Continuous Real-Time Measurement of Compaction Quality During the Construction of Asphalt Pavement" (Co-PI; PI: Commuri, S.). Funded by OTC (Total fund \$99,893). Jan. – Dec. 2009.
56. "Wireless Sensor Packaging for Monitoring Airport Runways and Highway Bridges" (Co-PI with J. Pei (PI) and T. Ibrahim (Co-PI)). Funded by OCAST (total fund \$300,000). Dec. 2007 – Nov. 2011.
57. "Intelligent Asphalt Compaction Analyzer – Proposal for Refinement and Development of a Commercial Prototype" (Co-PI; PI: Commuri, S.). Funded by Volvo Road Machinery (total fund \$190,782. June 2007 – Aug. 2009.
58. "OTC Work Program for the Remaining FY04 OTC Appropriation Funds Through FHWA" (PI; Co-PI: M. Court, J. Pei, C. Ramseyer and others). Funded by FHWA (total fund \$797,035). Jan. – Dec., 2008.
59. "OTC Work Program for FY05 OTC Appropriation Through FHWA: Turner-Fairbank Highway Research Center" (PI; Co-PIs: P. Pulat, K.D. Mish and others). Funded by T-FHRC, FHWA (total fund \$1.155M). Sept. 2006 – Mar. 2009.
60. "Field Correlation of PQI Gauge with Nuclear Density Gauge: Phase I" (PI; Co-PI: Commuri, S.). Funded by Okla. Dept. of Transp. (total fund \$20,000). June – Sept. 2006.
61. "Field Performance Monitoring and Modeling of Instrumented Pavement on I-35 in McLain Co" (PI; Co-PI: Muraleetharan, K.). Funded by Okla. Dept. of Transportation (total fund \$287,961). Oct. 2006 – Sept. 2011.
62. "OTC FY04 Federal Highway Earmark Projects for OSU and LU" (PI; Co-PI: T. Landers). Funded by Oklahoma Transportation Center (total fund \$534,630). Feb. 2006 – Dec. 2008.
63. "Public Perception of Noise Barriers in Oklahoma (Phase: I)" (Co-PI; PI: M. Nanny). Funded by Oklahoma Transportation Center (total fund \$67,500). Mar. 2005 – Aug. 2007.
64. "Permeability and Resilient Modulus of Different Aggregate Bases Commonly Used in Oklahoma" (Co-PI; PI: Khoury, N.). Funded by Okla. Transp. Center (total fund \$58,000). Mar. 2005 – Oct. 2006.
65. "Effect of Anti-Stripping Additives on Performance-Graded Binders in Oklahoma" (PI; Co-PI: Laguros, J.C.). Funded by Oklahoma Transportation Center (total fund \$68,672). Mar. 2005 – Mar. 2006.
66. "Engineering Properties of Stabilized Subgrade Soils for Implementation of the AASHTO 2002 Pavement Design Guide" (PI; Co-PI: Khoury, N.). Funded by Oklahoma Dept. of Transportation (total fund \$296,152). Oct. 2005 – Sept. 2008.
67. "National Public Transportation Analysis" (Co-PI with Court (PI), Landers and others). Funded by Federal Transit Administration (total fund \$1,5M). Sept. 2004 – Aug. 2007.
68. "Maximum Chat Utilization – Test Road" (PI; Co-PIs: Nairn, R., Miller, G.A. and Strevett, K.). Funded by DoD-Corps of Engineers (total fund \$500K). May 2004 – Dec. 2007.
69. "Doctoral Fellowships in Sustainable Technologies for Civil and Environmental Systems" (Co-PI with Kolar, R. (PI) and others). Funded by U.S. Dept. of Education (total fund \$793,344). Sept. 2003 – Aug. 2006.
70. "Research Experience for Undergraduates in Geoenvironmental Systems" (Co-PI with Kolar, R. (PI) and others). Funded by National Science Foundation REU (total fund \$542,318). Mar. 2000 – Feb. 2005.

71. “Resilient Modulus and Other Geotechnical Testing of Subgrade Soils” (PI). Funded by Burgess Engineering and Testing, OKC (total fund \$6,396). Jan. 2003 – May 2004.
72. “Evaluation of Surface Free Energy Characteristics of Aggregate and Binders in HMA: Phase II” (PI). Funded by Oklahoma Transportation Center (total fund \$87,541). Oct. 2003 – Sept. 2004.
73. “Evaluation of Surface Free Energy Characteristics of Aggregate and Binders in HMA: Phase I” (PI). Funded by Oklahoma Transportation Center (total amount \$40,980). Jan. – Sept. 2003.
74. “Effect of Suction and Moisture on RM of Subgrade Soils in Oklahoma” (PI; Co-PI: Miller, G.A.). Funded by Oklahoma Dept. of Transportation (total fund \$105,242). Oct. 2003 – Sept. 2005.
75. “Intelligent Asphalt Compaction Analyzer” (Co-PI; PI: Commuri, S.). Funded by OCAST (total fund \$594,279, including match). Sept. 2003 – Aug. 2006.
76. “Evaluation of Surface Free Energy Characteristics of Aggregates and Binders in Hot Mix Asphalt: Phase I” (PI; C-PI: Wasiuddin, N.). Funded by Oklahoma Transp. Center (total fund \$8,900). May – Sept. 2002.
77. “An Alternate Method for the Determination of Asphalt Content” (PI; Co-PIs: Tarefder, R.A. and Abousleiman, Y.). Funded by Oklahoma Transportation Center (total fund \$59,117). May – Sept. 2002.
78. “A Lab.Study to Optimize the Use of Raw Chat in Hot Mix Asphalt for Pavement Application” (PI; Co-PI: Nairn, R.). Funded by Oklahoma Department of Environmental Quality (total fund \$200,000). Sept. 2002 – August 2004.
79. “Resilient Modulus and Density Gradient Analysis of Selected Asphalt Mixes” (PI). Funded by Oklahoma Dept. of Transportation and Federal Highway Administration (total fund \$153,044). Oct. 2001 – Sept. 2003.
80. “Rock Mechanics Institute Consortium: Phase III” (Co-PI; PI: Abousleiman, Y.). Funded by Industry (total fund \$600,000, Year 3). Jan. – Dec. 2001.
81. “Acquisition and Development of Equipment for Unsaturated Soil Research” (Co-PI with Miller, G.A. (PI) and Muraleetharan, K. (Co-PI)). Funded by National Science Foundation (MRI Prog.) (total fund \$368,778). July 2000 – June 2002.
82. “Acoustic Imaging and Mechanical Properties of Soft Rocks and Marine Sediments” (Co-PI with Scott, T. (PI) and Abousleiman, Y., (Co-PI)). Funded by U.S. Dept. of Energy (total fund \$366,718). Jan. 2001 – Dec. 2002.
83. “Integrated, Scalable MBS for Flow Through Porous Media” (Co-PI with Pasavassiliou, D. (PI) and Neeman, H. (Co-PI)). Funded by National Science Foundation (total fund \$150,071). Sept. 2000 – Feb. 2002.
84. “High Performance Pavement Using Recycled Materials” (PI). Funded by OCAST (total fund \$115,000). Mar. 2000 – May 2003.
85. “Ray C. Broce Materials Laboratory” (Asphalt) (PI; Co-PIs: Kukreti, A.R. and Miller, G.A.). Funded by Broce Construction Co. (total fund \$140,000 including \$40,000 matching from VPRA). Aug. 1998 – Sept. 2000.
86. “Evaluation of Rutting Potential of Selected Mixes Using an Asphalt Pavement Analyzer” (PI). Funded by Oklahoma Dept. of Transportation. (total fund \$174,127 including \$40,000 matching from VPRA and \$30,000 matching from OAPA). Oct. 1999 – Sept. 2000.
87. “Settlement of Compacted Fill Embankments” (PI; Co-PI: Miller, G.A. and Muraleetharan, K.). Funded by Oklahoma Dept. of Transportation. (total fund \$80,944). April 1999 – March 2001.
88. “Durability of Chemically Stabilized Aggregate Bases” (PI; Co-PI: Miller, G.A.). Funded by Oklahoma Dept. of Transportation. (total fund \$140,554). May 1999 – July 2001.
89. “Pavement Management Data Analysis” (PI). Funded by Oklahoma Dept. of Transportation. (total fund \$14,626). May 1999 – Jan. 2000.
90. “Technology Transfer Workshops” (PI; Co-PIs: Kanj, M., Scott, T. and J.-C. Roegiers). Funded by OCAST. (total fund \$20,000). Sept. 1999 – Aug. 2000.
91. “Sooner City – Design Across the Curriculum” (Co-PI; Kukreti, A.R. (PI), Kolar, Bush, Muraleetharan, Sabatini, Miller and others). Funded by National Science Foundation. (total fund \$750,000). Sept. 1998 – Aug. 2001.

92. "International Workshop on Sea Level Rise and Coastal Management" (PI). Funded by National Science Foundation. (total fund \$14,700). Feb. 1999 – Jan. 2000.
93. "Chemicals in the Environment – Doctoral Fellowships in Environmental Engineering" (Co-PI with Knox, R.C. (PI), Canter, Kolar, Kukreti, Nairn, Strevett, Sabatini, Vieux and others). Funded by U.S. Dept. of Education. (total fund \$751,530). Aug. 1998 – July 2002.
94. "Mix Design Using Asphalt Millings" (PI; Co-PIs: Kukreti, A.R. and Miller, G.A.). Funded by Oklahoma Dept. of Transportation. (total fund \$77,655). Aug. 1998 – Sept. 2000.
95. "Automated Triaxial Test System for Unsaturated Soils" (Co-PI with Muraleetharan, K. (PI), M.A. Mooney (Co-PI) and Miller, G.A. (CoPI). Funded by OU Research Council (total fund \$51, 900). Sept.-Dec.1997.
96. "Laboratory and Field Evaluation of Soil Stabilization Using Cement Kiln Dust" (PI; Co-PI: G. Miller). Funded by Oklahoma Department of Transportation (total fund \$44,091). Oct. 1997-Sept. 1998.
97. "Use of Asphalt Millings for Subbase" Funded by Oklahoma Dept. Of Transportation (total fund \$12,938) (PI). Sept. 1, 1997 – Jan. 31, 1998.
98. "Improving Concrete Performance Through the Use of Blast Furnace Slag" (Co-PI with T. Bush (PI) and B. Russell (Co-PI)). Funded by Oklahoma Dept. of Transp. (total fund \$98,737). Jan. 1997 - December 1998.
99. "Laboratory Investigation of Soft Railroad Subgrade Failure Under Repeated Load Applications" (Co-PI; PI; Miller, G.A.). Funded by Assoc. of American Railroad (total fund \$19,910). Jan. - June 1997.
100. "Impact of Loaded Trucks on Transportation Infrastructure Deterioration" (PI; Co-PI: M.A. Mooney). Funded by Oklahoma Dept. of Transportation (total fund \$10,364). Oct. 1996 - Jan. 1997.
101. "Groundwater Sensitivity Analysis for Potential Pollution Sources" (P.I.: Zaman, M.; Co-P.I.s: Kukreti, A.R. and Strevett, K.). Funded by EPA (total fund \$253,038, including \$25,000 equipment match by OU). Oct. 1996 - Sept. 1999.
102. "Modeling the 85th Percentile Speed on Oklahoma Two-Lane Rural Highways: A Neural Net Approach" (PI; Co-PI: Muraleetharan, K.) (total fund \$39,787). Funded by Oklahoma Department of Transportation, Jan. 1997 - June. 1998.
103. "Testing Screen for Sieving of Coarse and Fine Aggregates" (PI; Co-PI: Laguros, J.C.). Funded by OU Research Council (total fund \$4,850). June - July, 1995.
104. "Nonlinear Analysis of Coupled Fluid/Rock Interaction" (Co-PI with Abousleiman, Y., (PI), J.-C. Roegiers (Co-PI), G. Scott (Co-PI)). Funded by OCAST (total fund \$373,234). July 1995 - June 1998.
105. "Experimental Study of the Effects of Reinforcing Steel Arrangement in CRCP" (PI; Co-PI: Miller, G.A.). Funded by Concrete Reinforcing Steel Institute (total fund (\$30,000). Feb. 1995 - Jan. 1996.
106. "Field Evaluation of Drainable Bases in Oklahoma" (PI; Co-PIs: Muraleetharan, K., Laguros, J.C.). Funded by ODOT (total fund \$53,959). Jan. - Sept. 1995.
107. "Resilient Moduli of Raw and Stabilized Aggregate Bases and Evaluation of Layer Coefficients for AASHTO Flexible Pavement Design" (PI; Co-P.I.: Laguros, J.C.). Funded by ODOT and FHWA (total fund \$274,053). Oct. 1994 - Dec. 1997.
108. "Cooling Properties of Asphalt Surfaces" (PI; Co-PI: Laguros, J.C.). Funded by ODOT and FHWA (total fund \$7,410). Sept. - Dec. 1994.
109. "Demonstration of Engineering Mechanics: Physical and Computer Models as Teaching Tools" (Co-PI; PI: B. Russell). OU Instructional Improvement Award (total fund \$6,800). July 1994 - July 1995.
110. "Rock Mechanics Research Center: (Co-PI: with J.-C. Roegiers (PI) and D.W. Stearns (Co-PI))". Funded by NSF and OCAST (total fund NSF \$2.4M; OCAST \$2.4M; over \$2.4 M in industry matching). Sept. 1992 - Aug. 2000.
111. "Sample Preparation Equipment for Resilient Modulus Testing of Soils" (PI; Co-PI: Laguros, J.C.). Funded by OU Research Council (total fund \$2,225; excluding matching). June - Dec. 1992.
112. "Effect of fluid Hydraulics on Petroleum Rock Behavior" (with Kukreti, A.R. (PI) and Civan, F.). Funded by OCAST (total fund \$115,241). Aug. 1992 - July 1995.

113. "Resilient Moduli of Select Aggregate Bases and Their Correlations with Other Engineering Properties" (PI; Co-P.I.: Laguros, J.C.). Funded by Oklahoma Dept. of Transportation (ODOT) and Federal Highway Administration (FHWA) (total fund \$60,000). July 1991 - Sept. 1993.
114. "Laboratory and Field Testing to Characterize Bridge Approach Settlements at Selected Sites and Development of Settlement Evaluation Methodology for Predominantly Clay Sites" (PI; Co-PI: Laguros, J.C.). Funded by Oklahoma Dept. of Transportation (ODOT) and Federal Highway Administration (FHWA), (total fund \$181,598). July 1991 - Sept. 1995.
115. "Resilient Moduli of Soils for Improved Pavement Design" (PI; Co-PI: Laguros, J.C.). Funded by OCAST (total fund \$97,095). Dec. 1991 - Nov. 1994.
116. "Expert Systems for Reservoir Completion and Stimulation" (Co-PI; PI: Roegiers, J.C). Funded by OCAST and Rock Mechanics Consortium (RMC) (total fund \$245,402, excluding matching). Dec. 1991 - Jan. 1995.
117. "U.S.-Canada Workshop on Recent Accomplishments and Future Trends in Geomechanics in the 21st Century" (PI; Co-PIs: Desai, C.S. and A.P.S. Selvadurai). Funded by the National Science Foundation (\$44,200). July 1, 1991 - Jan. 31, 1994.
118. "Study of Pore Collapse Problems in Oil Reservoir Rocks" (Principal Investigator; Co-P.I. - Roegiers, J.C). Funded by the Oklahoma Center for the Advancement of Science and Technology (OCAST) and Rock Mechanics Consortium (RMC), (total fund \$199,404, excluding cost-sharing). July 1990 - June 1993.
119. "Assessment of Current Resilient Modulus Testing Methods and Their Application to Design of Pavements". (PI; Co-PI: Laguros, J.C.) Funded by the Oklahoma Dept. of Transportation (ODOT) and Federal Highway Administration (FHWA) (total fund \$7,500). July 1 - Dec. 30, 1990.
120. "Constitutive Modeling of Geological Formations Considering Porosity and Permeability Alterations Due to Fluid Withdrawal" (PI; Co-PI: Kukreti, A.R. and Civan, F.). Funded by the Oklahoma Mining and Mineral Resources Institute (total fund \$50,864, including cost-sharing). July 1, 1990 - June 30, 1991.
121. "Evaluation of Dynamic Response of Offshore Drilling Platforms and Soil Liquefaction Due to Arctic Loading" (PI). Funded by Univ. of Okla. Research Council (total fund \$6,361). March 1990 - Dec. 1990.
122. "Experimental Study of Pore Collapse Mechanisms in Porous Rock." (PI; Co-PI: Faruque, M.O.). Funded by Energy Center, Univ. of Oklahoma (total fund \$6,000). Sept. 1989 - Aug. 1990.
123. "Underground Storage Tank Assessment Methodology" (Co-PI, PI: D. Sabatini). Funded by SEARCH, Inc. (total fund \$16,529). Aug. 1989 - Jan. 1990.
124. "Procurement of Software for CE 1111: Handheld Computers and ENGR 1112: Introduction to Engineering" (PI; Co-PIs: Laguros, J.C. and B.J. Wallace) Funded by OU Inst. Support Program (total fund \$4,735 including cost-sharing). October 1988 to March 1989.
125. "Evaluation of Properties of Rocks and Characterization of Mine Collapse in the Picher Field Mining District, Oklahoma" (PI; Co-P.I. Ahern, J.L). Funded by Oklahoma Mining and Mineral Resources Research Institute (OMMRRI) (total fund \$39,469 - including cost-sharing). July 1, 1988 - June 30, 1989.
126. "Evaluation of Causes of Excessive Settlements of Pavements Behind Bridge Abutments and Their Remedies: Phase III" (Co-PI; PI: Laguros, J.C.). Funded by Oklahoma Dept. of Transportation (ODOT) and Federal Highway Administration (FHWA) (total fund for Phase III \$258,619), Dec. 1988 to May 1991.
127. "A Laboratory Model for Simulation of Transient Phreatic Surface Seepage Through Earth Dams" (PI; Co-PI: Laguros, J.C.). Funded (total fund = \$3,740 including CEES and CoE cost-sharing) by OU Instructional Support Funds, Dec. 1987 to June 1988.
128. "Engineering Research Equipment Grant: A High Capacity (30,000 psig) Cubical Device." (PI; Co-PI: Kukreti, A.R.). Matching funds for NSF from Okla. Dept. of Com. (total fund \$31,469), Jan. to Dec. 1988.
129. "A Cyclic Triaxial Device for Simulation of Soil Liquefaction." (PI) Funded by the OU Associates Fund, University of Oklahoma (total fund \$20,000, including cost sharing). Jan. 1 to June 30, 1988.
130. "Evaluation of Causes of Excessive Settlements of Pavements Behind Bridge Abutments and Their Remedies: Phase II." (Co-PI; PI: Laguros, J.C.). Funded by Oklahoma Department of Transportation (ODOT) and FHWA (total fund for Phase II \$114,584), March 1987 to May 1989.

131. "Engineering Research Equipment Grant: A High Capacity (30,000 psig) Cubical Device". (PI; Co-PI: Kukreti, A.R.). Funded by National Science Foundation (total fund \$62,939). June 1, 1987 to Nov. 30, 1988. Supplemental funds from NSF \$10,000 (January 1989). Duration: through May 31, 1990.
132. "Stability Analysis and Characterization of Ground Subsidence of Abandoned Lead-Zinc Mines in Northeastern Oklahoma". (PI; Co. PI - Ahern, J.L). Funded by Oklahoma Mining and Mineral Resources Research Institute (total fund \$40,200, including cost sharing). July 1, 1987 to Sept. 1, 1988.
133. "Development of a New Constitutive Model for Predicting Yielding and Failure Behavior of Rocks Under Three-Dimensional Loading". (PI; Co-PI: Kukreti, A.R.). Funded by Energy Resources Institute (ERI)(total fund \$39,106, including CEES and CoE cost sharing), July 1, 1987 to July 31, 1988.
134. "Development of Constitutive Relationships for Anisotropic Materials under Three-Dimensional Loadings" (Co-PI; PI: Kukreti, A.R.). Funded by the OU Research Council (total fund - \$9,190, including CEES and CoE contributions, for fabrication of a cubical device), April 1986.
135. "High Pressure Cubical Device: Deformation Measuring Unit" (Co-PI; PI: Kukreti, A.R.). Funded by Energy Resources Institute (ERI) (total fund = \$7,000), March 1986.
136. "Development of a Numerical Procedure for Prediction of Ground Subsidence due to Coal Mining" (PI). Funded by the Oklahoma Mining and Mineral Resources Institute, (total fund \$21,043 including CEES and CoE cost sharing). July 1, 1986 to June 30, 1987.
137. "Computer Modelling and Simulation of Mining Systems" (PI). Funded by the Oklahoma Mining and Mineral Resources Research Institute, (total fund = \$7,236). July 1, 1985 to June 30, 1986.
138. "Evaluation of Causes of Excessive Settlements of Pavements Behind Bridge Abutments and their Remedies: Phase I" (Co-PI; PI: Laguros, J.C.). Funded by the Oklahoma Department of Transportation (ODOT) and Federal Highway Administration (FHWA) (total fund = \$12,400). June 1985 to Feb. 1986.
139. "Modelling of Earthquake Induced Pore Pressure Buildup and Soil Liquefaction Including Effects of Dynamic Soil-Structure Interaction" (PI). Funded by the University of Oklahoma Research Council, (total fund - \$3,500). June 1 to August 30, 1985.
140. "Modelling of Flow of Immiscible Fluids in Heterogeneous, Irregular Shaped Reservoirs for Efficient Oil Recovery" (PI; Co-PIs Kukreti, A.R. and Civan, F.). Funded by the Energy Resources Institute (ERI), (total fund = \$24,080). July 1, 1984 to June 30, 1985.
141. "Procurement of Computer Software for Earthquake Engineering Research". Funded by the University of Oklahoma Research Council (total fund = \$2,207), (Co-PI; PI: L.R.L. Wang), February 1984.
142. "Analysis of Potential Environmental Implications Resulting from the Operation of Off-Site Oil and Gas Drilling Fluid Disposal Pits" (Faculty Associate; PI: Canter, L.W.). Funded by Oklahoma Corporation Commission (total fund=\$108,922). Sept. 1983 to Apr. 1984.

#### GRADUATE STUDENT SUPERVISION:

1. Nur Hossain (Ph.D. 2017). "Mechanistic Input Parameters and Model Calibration for Design and Performance Evaluation of Flexible Pavements in Oklahoma."
2. Moeen Nazari (Ph.D. 2016). "Laboratory and Field Assessment of Chemically Treated Subgrade Moduli under Compressive and Flexural Loading."
3. Syed Ashik Ali (M.S. 2016). "Rheological Properties of Polymer and RAP-Modified Asphalt Binders using Multiple Stress Creep and Recovery Method."
4. Liam Cumberpatch (M.S. 2015). "Evaluate Densifier-Over-Shortblasting Pavement Treatment Performance for Oklahoma Limestone Aggregate" (Co-Advisor: Pittenger).
5. Rouzbeh Ghabchi (Ph.D. 2014), "Laboratory Characterization of Recycled and Warm Mix Asphalt for Enhanced Pavement Applications."
6. Debaroti Ghosh (M.S. 2014), "Characterization of Oklahoma Binders Using Multiple Stress Creep Recovery Method."

7. Ali Taghichian (M.S. 2013). "On the Geomechanical Optimization of Hydraulic Fracturing in Unconventional Shale."
8. Dominique Pittenger (Ph.D., 2012). "Stochastic Life Cycle Cost Analysis for Pavement Preservation Treatments." General Engineering (Co-Chair with Dr. Gransberg).
9. David Adje (M.S., 2012). "Effect of Recycled Asphalt Pavement on Mechanistic Performance of Hot Mix Asphalt."
10. Marc Breidy (2011). "Development of a Field-Based Fatigue Transfer Function for Flexible Pavement Section on I-35 in Oklahoma" (Co-Chair with Dr. Muraleetharan).
11. Roy Khalife (M.S., 2011). "Evaluation of Durability of Stabilized Clay Specimens Using Different Laboratory Procedures."
12. Caleb Riemer (Ph.D., 2011). "Quantifying the Costs and Benefits of Pavement Retexturing as a Pavement Preservation Tool" (Co-Chair: Dr. Gransberg).
13. Dharamveer Singh (Ph.D., 2011). "A Laboratory Investigation of Dynamic Modulus of Asphalt Mixes for Pavement Applications."
14. Zahid Hossain (Ph.D., 2011). "Evaluation of Rheological Properties of Asphalt Binders for Pavement Design Applications."
15. Nur Hossain (M.S. 2010). "Observed and Predicted Rut Behavior of an Instrumented Test Section on I-35."
16. Hasan Kazmee (M.S. 2010). "Effect of Gradation on Stiffness and Flow Behavior of Aggregate Bases: A Laboratory & Field Study."
17. Pranshoo Solanki (Ph.D. 2010). "Characterization of Cementitiously Stabilized Subgrades for Mechanistic-Empirical Pavement Design."
18. Ashish Gupta (M.S. 2009). Thesis title – "Effect of Mineral Fillers on Specific Gravity of Fine Aggregates".
19. Kunal Shah (M.S. 2007). Thesis title - "Effects of Gradation and Compaction Energy on the Hydraulic Conductivity of an Aggregate Base Commonly Used in Oklahoma" (Co-Advisor: Khoury, N.).
20. `Selvaratnam Selvamohan (M.S. 2007). Thesis title - "Effect of Anti-Stripping Additives on Performance Graded Binders in Oklahoma."
21. Nazimuddin Wasiuddin (Ph.D. 2007). Dissertation title - "Effect of Additives on Surface Free Energy Characteristics of Aggregates and Binders in Hot Mix Asphalt."
22. Sinniah K. Navaratnarajah (M.S. 2006). Thesis title - "Performance Characteristics of Selected Asphalt Mixes: A Laboratory and Field Study."
23. Ali Ebrahimi (Ph.D. 2006). Dissertation title - "Regression & Neural Network Modeling of Resilient Mod. Based on Routine Soil Properties & Stress State."
24. High-Ming Lim "(M.S. 2005). Project title - Use of MDT for Subsurface Characterization."
25. Rajul V. Teredesai (M.S. 2005). Thesis title - "Stabilization of Pile Run Chat for Roadway Base Application."
26. Roland D. Sisson (M.S. 2005). Thesis title - "Laboratory and Field Study of Partial Depth Cold In-Place Recycling for Pavement Rehabilitation."
27. Naji Khoury, N., (Ph.D. 2005). Dissertation title - "Durability of Cementitiously Stabilized Aggregate Bases for Pavement Application."
28. Salima Shamim (M.S. 2004). Project title - "A Comparative Laboratory Study of Hot Mix Asphalt and Warm Asphalt Using Sasobit."
29. Nishad Kolothody (M.S. 2004). Project title - "Superpave Mix Design Methodology for Chat Asphalt."
30. Wamiq Bin Hamid (M.S. 2004). Thesis title - "Use of Raw Chat in Hot Mix Asphalt Employing Superpave Design Methodology."
31. Abu Noman Ahsanuzzaman (Ph.D. 2004). Dissertation title - "Expert System for Evaluation of Nutrient Pollution Potential in Groundwater from Land Application of Manure." (Co-Adv.: Strevett, K.).



32. Chadi A. Srour (M.S. 2003). Project title - “Flexural Strength and Resilient Modulus Limestone Aggregate Base Stabilized with Class C Fly Ash.”
33. Tobia Elias Kmeid (M.S. 2003). Thesis title - “Experimental Study of Unconsolidated Sand Under High Confining Pressures.”
34. Cheong Fung Ting (M.S. 2003). Thesis title - “Laboratory and Field Investigation of Asphalt Millings in Cold-Mixed, Cold-Laid Pavement Rehabilitation.”
35. Rafiqul Tarefder (Ph.D. 2003). Dissertation title - “Laboratory and Model Prediction of Rutting in Asphalt Concrete.”
36. Rajesh Nair (Ph.D. 2003). Dissertation title - “The Poromechanics of Naturally Fractured Rock Formations: A FEM Approach.” (Co-Adv.: Abousleiman, Y.,).
37. Yanhui Han (M.S. 2001). Thesis Title: “Poroelastic Response of a Hollow Cylinder in a Non-Hydrostatic Stress Field” (Co-Chair; Chair: Abousleiman, Y.,).
38. Michelle P.-Y. Chin (M.S. 2001). Thesis Title: “Laboratory Testing and Constitutive Modeling of High Performance Concrete (HPC)” (Co-Supervisor: Kukreti, A.R.).
39. Naji Najib Houry (M.S. 2001). Thesis Title - “Effect of Freeze-Thaw and Wet-Dry Cycles on Resilient Modulus of Class C Fly Ash Stabilized Aggregate Base.”
40. Emad Alnamasy (M.S. 2001). Thesis title - “Rutting Evaluation of Selected Mixes Using an Asphalt Pavement Analyzer (APA).”
41. Ping Tian (Ph.D. degree 1998). Dissertation title - “Evaluation of Resilient Moduli and Layer Coefficients of Aggregate Materials for AASHTO Flexible Pavement Design.”
42. Jian-Hua Zhu (Ph.D. 1998). Dissertation title - “Characterization of Cement-Kiln-Dust Stabilized Base/Subbase Aggregate.”
43. Marty Ray (M.S. 1997). Project title – “Comparison of MODULUS and ILLI-BACK Microcomputer-Based Systems for Backcalculation of Pavement Layer Moduli.”
44. Md. Emtazul Haque (M.S. 1997). Thesis title – “Experimental and Numerical Study of Model Continuously Reinforced Concrete Pavement Under Tensile Loading.”
45. Jिंगgang Cao (M.S. 1997). Thesis title – “Modeling of Flow and Transport in Anisotropic and Heterogeneous Porous Media.”
46. Kundan Pandey (Ph.D. 1996). Dissertation title - “Evaluation of Resilient Moduli and Layer Coefficients of a Coal Ash Stabilized Aggregate Base for AASHTO Flexible Pavement Design.”
47. Motiar Rahman (M.S. 1996). Thesis title - “Evaluation of Pavement Drainage Systems Based on Field Performance.”
48. Alan Soltani (Ph.D. 1996). Dissertation title - “Evaluation of Crack Formation and Spacing in Continuously Reinforced Concrete Pavements Using Small Scale Laboratory Experiments and Numerical Modeling.”
49. Mazen Kanj (Ph.D. 1995). Dissertation title - “SITEX: The Sand Inflow Treatment Expert.”
50. Geetha Krishnan (M.S. 1995). Thesis title - “Experimental Evaluation of Physical and Mechanical Properties of Antler Sandstone.”
51. Hua Chen (M.S. 1995). Thesis title - “A User-Friendly Software for Prediction of Bridge Approach Settlement.”
52. Luping Yi (M.S. 1995). Thesis title - “Resilient Moduli of Fly Ash Stabilized Aggregates.”
53. Puneet Suri (M.S. 1995). Thesis title - “Stress Dependent Permeability of Rocks: The Experimental and Modeling Aspects.” (Co-supervision with Professor Kukreti).
54. Dar-Hao Chen (Ph.D. 1994). Dissertation title - “Resilient Moduli of Aggregate Bases and A Mechanistic-Empirical Methodology for Flexible Pavements.”
55. Rajesh Sehgal (M.S. 1994). Thesis title - “Numerical Modeling of Rigid Airport Pavements Including Effect of Initial Restraint on Warping and Rotation of Aircraft.”

56. Dinesh Gupta (M.S. 1994). Thesis title - “Stability of Boreholes in a Transversely Isotropic Geologic Medium.”
57. Ratan K. Jha (M.S. 1994). Thesis title - “Identification of Problematic Sites and Estimation of Bridge Approach Settlements using Statistical Models.”
58. Abdulazeez Abdulraheem (Ph.D. 1993). Dissertation title - “Constitutive Modeling of Rocks and Numerical Simulation of Oil Reservoirs Exhibiting Pore Collapse.”
59. Santanu Mowar (M.S. 1993). Thesis title - “Experimental Study of Pore Collapse in Limestone: Macroscopic and Microscopic Aspects.”
60. Adhir K. Agarwal (M.S. 1993), Thesis title - “Free Vibration Analysis of Rectangular Plates Resting on a Two-Parameter Elastic Medium.”
61. Ahmad I. Sayah (M.S. 1992). Thesis title - “Stabilization of a Highly Expansive Clay Using Cement Kiln Dust.”
62. Ming-Way Wei (M.S. 1993). Thesis title - “A Phenomenological Creep Model for Geomaterials.”
63. Arumugam Alvappillai (Ph.D. 1992). Dissertation title - “Dynamic Analysis of Rigid Pavements Considering Pavement-Subgrade-Aircraft Interaction.”
64. Adedamola Oyesanya (M.S. 1992). Thesis title - “Laboratory Testing and Constitutive Modeling of Canadian River Sand.”
65. Md. Iftekhar Hossain (M.S. 1992). Thesis title - “A Preliminary Creep Model for Avery Island Dome Salt for Nuclear Waste Repository Application.”
66. Anuradha Khanna (M.S. 1992). Thesis title - “Dynamic Response of Cable-Stayed Bridges to Moving Vehicles Using Finite Element and Structural Impedance Methods.”
67. Vivek Khanna (M.S. 1992). Thesis title - “Dynamic Response of Rigid Airport Pavement Subjected to Temperature-Induced Warping and Multiple Aircraft.”
68. Dar-Hao Chen (M.S. 1992). Thesis title - “Three-Dimensional Testing and Constitutive Modeling of Coal for Analysis of Ground Subsidence Due to Mining.”
69. Weng Chuan Low (M.S. 1990). Thesis title - “Analysis of Free Vibration of Plane Frames Resting on the Vlazov Two-Parameter Elastic Medium.”
70. Yacoub M. Najjar (Ph.D. 1990). Dissertation title - “Constitutive Modeling and Finite Element Analysis of Ground Subsidence Due to Mining.”
71. Iqbal U. Mahmood (Ph.D. 1990). Dissertation title - “Evaluation of Causes of Bridge Approach Settlement and Development of Settlement Prediction Models.”
72. Riad Tabbaa (M.S. 1990). Thesis title - “A Comparative Study of Some Selected Plasticity Models for Granular Soil.”op
73. Jasney Abdul Ghani (M.S. 1989). Thesis title - “Analysis of Drilled Pier and Its Application to a Case Study of a Damaged Building on Expansive Soil.”
74. Arumugum Gopalasingam (M.S. 1989). Thesis title - “Finite Element Analysis of Consolidation Settlements of Bridge Approach Foundation.”
75. Nasim Uddin (M.S. 1989). Thesis title - “Analysis of Tank-Foundation - Halfspace Interaction Using Variational Approaches.”
76. Azhar Mahmood (M.S. 1989). Thesis title - “Analysis of Circular Plate - Elastic Halfspace Interaction by Using a Variational Method.”
77. Ali Honarmandbrahimi (M.S. 1988). Thesis title - “Laboratory Testing of a Weathered Shale Using Cubical and Triaxial Devices.”
78. Imad Houssamy (M.S. 1987). Thesis title - “Three-Dimensional Nonlinear Finite Element Analysis of Underreamed Drilled Pies.”
79. Nagesh Koragappa (M.S. 1987). Thesis title - “Analysis of Cylindrical Tank-Foundation Interaction Using an Energy Approach.”

80. Yacoub Mohammad Najjar (M.S. 1986). Thesis title - "Three-Dimensional Nonlinear Finite Element Analysis of Pile Groups."
81. Saifuddin M. Mamoon (M.S. 1986). Thesis title - "Soil Liquefaction and Foundation Response Under Earthquake Loading."
82. Gopal Chandra Biswas (M.S. 1985). Thesis title - "Modeling of Soil Liquefaction and Foundation Response Under Cyclic and Earthquake Loading."
83. Asif Iqbal Uppal (M.S. 1985). Thesis title - "The Ultimate Capacity of Underreamed Drilled Piers by Finite Element Method."
84. Adnan Issa (M.S. 1985 co-supervision with Kukreti, A.R.). Thesis title - "Analysis of Cylindrical Storage Tanks and Circular Plate Foundations Resting on Isotropic Elastic Halfspace Using an Energy Method."
85. Iqbal Uddin Mahmood (M.S. 1984). Thesis title - "Finite Element Analysis of Cylindrical Tank Foundations Resting on Isotropic Soil Medium Including Soil-Structure Interaction."
86. Soon-Lee Kuang (M.S. 1983). Thesis title - "Evaluation of Interface behavior in Soil-Structure Interaction."

### PROFESSIONAL ACTIVITIES/SERVICE:

#### (i) Role in International/National Conferences/Symposia/Workshops:

1. Co-Chair, 2019 IACMAG Symposium, to be held in Gandhinagar, India on March 5-7.
2. Co-Chair, 2018 GeoChina Conference, to be held at HangZhou, China on July 23-25.
3. Co-Chair, 2016 GeoChina International Conference, to be held at Shandong, China on July 25-27, 2016.
4. Executive Committee Member, 2016 International Conference on Transportation Infrastructure and Materials, to be held at Xian, China on July 16-18, 2016.
5. Co-Chair, 15th IACMAG International Conference, held in Wuhan, China on October 20-23, 2017.
6. Co-Organizer, Transportation-Climate Summit, held in Norman, Oklahoma, September 30, 2014.
7. Co-Chair, GeoHubei International Conference, Hubei, China, July 20-22, 2014.
8. Co-Chair, 14th IACMAG Conference, held at Kyoto, Japan, September 22-25, 2014.
9. Co-Chair, 13th IACMAG Conference, held in Melbourne, Australia, May 9-11, 2011.
10. Chief Proctor, EIT Exam. (ELSES) (from 2002 to 2010).
11. Co-Chair, 12th IACMAG Conference, held at Goa, India, Oct. 1-6, 2008.
12. Co-Chair, 11th IACMAG Conference, held at Turin, Italy, 2005.
13. Member of the Organizing Committee, Oklahoma Asphalt Pavement Association Conf., 2004.
14. Organizer, Asphalt Pavement Recycling Workshop (with OCAST, ODOT and Koch Pavement Solutions), Sept. 16, 2003.
15. Organizer of Technical Session "Computational Mechanics 1" at the 14th U.S. National Congress on Theoretical and Applied Mechanics, Virginia Tech., 2002.
16. Co-Chair, 10th IACMAG Conference, held at Tucson, Arizona, 2001.
17. Organizer and Chair of Session T4/2 "Neural Networks in Structural Analysis." Fourth Int. Conf. on Constitutive Laws for Engineering Materials, R.P.I., Troy, New York, July 27-30, 1999.
18. Co-Organizer (with Drumm, E.C., Univ. of Tennessee) of sessions 238, 272 and 333 at the 78th Annual Meeting, Transportation Research Board, Jan. 10-14, 1999.
19. Developer of Technical Session on Plasticity of Granular Materials (with Prof. Kukreti, A.R.), Sixth International Symp. on Plasticity, held in Alaska, July 14-18, 1997.
20. Session Chair, "D2: Deep Excavation", 9th IACMAG Conf., held in Wuhan, P.R.C., Nov. 2-7, 1997.

21. Member, International Advisory Com., 9th IACMAG Conf., held in Wuhan, P.R.C., Nov. 2-7, 1997. Also, developing two technical sessions, one on Petroleum Rock Mechanics (with Dr. Abousleiman, Y.) and the other on Discontinuous Deformation Analysis (with Prof. Salami).
22. Session Chair, Discrete Element Methods II, 2nd North American Rock Mech. Symp., held in Montreal, Canada, June 19-21, 1996.
23. Session Organizer, Session: Discrete Element Method/DDA, 2nd North American Rock Mech. Symp., held in Montreal, Canada, June 19-21, 1996.
24. Member, International Tech. Comm., First International Symp. on Discontinuous Deformation Analysis, held in Berkeley, California, June 12-14, 1996.
25. Developer of Technical Session and Chair, Third International Conference on Comp. Methods and Water Resources, held in Beirut, Lebanon, Sept. 25-28, 1995.
26. Co-Chairman, "Session - Mechanical and Hydraulic Properties of Rock", 35th U.S. Symp. on Rock Mechanics, held at Lake Tahoe, June 4-7, 1995.
27. Co-Chairman, "International Conf. of the Int'l. Assoc. of Computer Methods and Advances in Geomechanics (IACMAG-94)", held at the West Virginia Univ., Morgantown, May 22-28, 1994.
28. Chairman, "Session SM7 - Solid Mechanics", Second Asian-Pacific Conf. on Computational Mech., held in Sydney, Australia, Aug. 3-6, 1993.
29. Co-Organizer, "U.S.-Canada Workshop on Recent Accomplishments and Future Trends in Geomechanics in the 21st Century", held in Norman, Oklahoma, October 21-23, 1992.
30. Chairman of Session 7 "Thermoelasticity", Southeastern Conf. on Theoretical and Appl. Mech. (SECTAM XVI), held at Houston, Texas, Jan. 26-29, 1992.
31. Vice Chairman of Session CM-3 "Dynamics and Experimental Mechanics of Composite Materials II", Energy Technology Conf. and Exhibition (ETCE), held at Houston, Texas, Jan. 26-29, 1992.
32. Chairman of session "Constitutive Modeling", IACMAG-91 Conf., held in Cairns, Australia, May 6-11, 1991.
33. Co-Chairman of session "General and Cyclic Plasticity", Third International Conf. on constitutive Laws for Engineering Materials, held in Tucson, Arizona, January 7-11, 1991.
34. Co-Editor, Newsletter of the International Assoc. for Computer Methods and Advances in Geomechanics (1989 - present).
35. Member and Treasurer, Organizing Committee, 32nd U.S. Rock Mechanics Symposium, held in Norman, Oklahoma, July 1991.
36. Member, International Advisory Committee, 7th International Conference on Recent Advances and Comp. Methods in Geomechanics, held in Australia in 1991.
37. Chairman of Session CM-5 "Plasticity and Dynamics in Composite Materials", Energy Tech. Conference, New Orleans, Louisiana, January 14-18, 1990.
38. Reviewer, ASME Winter Annual Meeting, held at Chicago, Illinois, 1988.
39. Chairman of Session "Flow and Consolidation", 6th International Conference on Numerical Methods in Geomechanics, held in Austria, April 11-15, 1988.
40. Reviewer, 6th International Conference on Numerical Methods in Geomechanics, held April 1988 at Innsbruck, Austria.
41. Co-Chairman of session "Discontinuities, Contacts, Interfaces, Joints", Second International Conference on Constitutive Laws of Engineering Materials: Theory and Application, held at Tucson, Arizona, Jan. 5-8, 1987.
42. Moderator of session "Engineering", 75th Annual Meeting of the Oklahoma Academy of Science, held at Southeastern State University, Tahlequah, Oklahoma, November 14, 1986.
43. Moderator of session, "Structures", Southeastern Conference on Theoretical and Applied Mechanics (SECTAM) XIII, held at Columbia, South Carolina, April 17-18, 1986.

44. Co-editor, Proceedings of the International Symposium on Variational Methods in Geosciences, held at Norman, Oklahoma, October 15-17, 1985.
45. Member, Organizing and Steering Committee, ADSC Drilled Foundation Workshop for Engineering Faculty, held in Fort Collins, Colorado, July 12-18, 1987.
46. Organizer and co-chairman of session "Geomechanics," International Symposium on Variational Methods in Geosciences, held at Norman, Oklahoma, October 15-17, 1985.
47. Session Chairman, "Soil-Structure Interaction," 5th International Conference on Numerical Methods in Geomechanics, held at Nagoya, Japan, April 1-5, 1985.
48. Member, International Advisory Committee, 5th International Conference on Numerical Methods in Geomechanics, held at Nagoya, Japan, April 1-5, 1985.

**(ii) Society Offices:**

1. Vice President, International Assoc. for Computer Methods and Advances in Geomech. (since 2008).
2. Interim Technical Director, Oklahoma Transportation Center (Jan. Dec., 2009).
3. Chair, OTC Education and Outreach Committee (since 2007).
4. Member, Council of University Transportation Center (CUTC) (since 2006).
5. Chair, Oklahoma Transportation Center Technical Committee (2006 – 2007).
6. OU Director, Oklahoma Transportation Center (October 2003 – December 2004).
7. Member (OU), Oklahoma Asphalt Pavement Task Force (since 2002).
8. Member, American Society of Engineering Education (ASEE) (since 1997).
9. Member, Society of Petroleum Engineers (SPE) (1997 - 2000).
10. Member, A2JO2 (Chemical and Mechanical Stabilization), Transportation Research Board (2001-2010).
11. Member, A2K05 (Modeling Techniques in Geomechanics; sub-committee on Neural Network).
12. Member, A2L02 (Soil and Rock Properties), Transportation Research Board (1997-2003).
13. Founding Member, American Rock Mechanics Association (since 1996).
14. Co-Chair, IACMAG Award Committee (since August 1996).
15. Board Member, International Association for Computer Methods and Advances in Geomechanics (IACMAG) (since 1996).
16. University Representative, Transportation Research Board, (since September 1993).
17. Chair, ASCE Deep Foundation Sub-Committee for Nominating Papers for Awards (June-August, 1993).
18. Editor, Newsletter of the International Association for Computer Methods and Advances in Geomechanics (IACMAG) (since 1991) (Co-Editors: Gioda, Ichikawa).
19. Elected Chairperson (Section I: Engineering), Oklahoma Academy of Science (11/87 - 11/88).
20. Member, U.S. Universities Council for Geotechnical Engineering Research (USUCGER) By-Laws Committee (3/87 - 3/88).
21. Co-Chairman of ADSC Joint Contractor-Technical Affiliate Committee (for establishing criteria for research to be funded by the HBW fund) (1987).
22. Chairman, ADSC Technical Affiliate Committee (6/84 - 12/94).
23. Elected Vice-Chairperson (Section I: Engineering), Oklahoma Academy of Science (11/86 - 11/87).
24. Member, ASCE Deep Foundations Committee (June 1987 - 1996).

**(iii) Journal Editorial Board:**

1. Associate Editor, Petroleum Science and Engineering.

2. Co-Editor (Application Briefs), International Journal for Numerical and Analytical Methods in Geomechanics (until 2000).
3. Associate Editor, International Journal of Geomechanics, ASCE (until 2008).
4. Editor-in-Chief, International Journal of Geomechanics, ASCE (since January 2009).
5. Member, Editorial Board, International Journal of Geotechnical Engineering (since 2007).
6. Associate Editor, Editorial Board, Journal of Pavement Research and Technology (since 2008).
7. Editorial Board Member, Soils and Foundation (Elsevier) (Since 2017).

## TEACHING

### Courses Taught:

CE 2153	Strength of Materials
CE 3363	Soil Mechanics
CE 2553	Engineering Surveying
CE 2113	Rigid Body Mechanics (Statics)
CE 3403	Macromeritics
CE 2103	Elementary Surveying
CE 5333	Foundation Engineering
CE 5413 <sup>+</sup>	Soil-Structure Interaction
CE 5443 <sup>+</sup>	Constitutive Laws of Engineering Materials
CE 5353 <sup>*</sup>	Soil Dynamics
CE 6713	Theory of Elasticity
CE 5343	Advanced Soil Mechanics
CE 5693	Structural Design of Pavement
CE 5020 <sup>+</sup>	Dynamic Soil-Structure Interaction
CE 5020 <sup>+</sup>	Selected Topics in Foundation Engineering
CE 5020 <sup>*</sup>	Theory of Plasticity
CE 5020 <sup>+</sup>	Advanced Foundation Design
<sup>*</sup> Irregular courses	<sup>+</sup> Courses developed and taught

### UNIVERSITY SERVICE:

1. Search Committee Member, MPGE Chair (since April 2018)
2. Member, GCoE Dean's Senior Advisory Committee (2016, 2017)
3. OU Councilor, Oak Ridge Associated Universities (since 2009).
4. Member, Presidential Professor Selection Committee (Sept. 2004 – Aug. 2007).
5. Member, VPR Advisory Com. (since 2007); Co-Chair, Strategy & Budget Sub-Com. (2009).
6. Member, VPR Task Force on Centers, Institutes and Consortia (April 2007 – Aug. 2007).
7. Associate Dean for Research and Graduate Education, College of Engineering (since July 2005).
8. Member, Faculty Awards and Honors Council (Sept. 2004 – Aug. 2007).
9. Acting Director, Rock Mechanics Institute (April 2000 – May 2001).
10. Member, OU Research Council (9/99 – 8/02; Chair, 9/01 – 8/02).
11. Member, Campus Tenure Committee (8/96 – 7/99).
12. Member, CoE Dean's Senior Advisory Committee (11/93 - 8/96; 10/97-10/98).
13. Member, OU Budget Council (appointed by the President) (9/93 - 8/96).
14. Committee A (CEES) (9/90 - 8/92; 8/94 – 8/96)

15. Member, OU Commencement Committee (9/89 - 8/92).
16. Member, OU Class Scheduling Committee (9/89 - 8/93).
17. Member, OU Faculty Senate (9/89 - 8/93).
18. Member, OU Parking and Transportation Subcommittee (9/86 - 10/88).
19. Chair, CoE Library Committee (8/86 - 8/87)
20. College of Engineering Library Committee (CEES rep.) (9/84 – 8/00)
21. Faculty Sponsor, Univ. of Oklahoma Vietnamese Student Association (8/83 - 12/90).
22. Faculty Sponsor, Univ. of Oklahoma Bangladesh Student Association (since Aug. 1982).

#### **ADMINISTRATIVE EXPERIENCE:**

1. Director, Southern Plains Transportation Center (SPTC) (Oct. 2013 – Present). Thanks to strong collaborations, outstanding institutional support, and hard work by many individuals, SPTC has accomplished a great deal during its relatively short existence. It has: (1) administered five funding competitions resulting in more than 60 research, education and workforce development grants totaling \$5.23 Million; (2) supported six early career research project collaborations between OU and OSU; (3) supported 17 research projects involving collaborations between at least two of the SPTC or external university partners; (4) provided financial support to more than 250 graduate research assistants, so far; (5) funded more than 150 undergraduate internships with partner companies, so far; (6) sponsored 26 workshops and seminars; (7) spearheaded and organized, in partnership with the South Central Climate Science Center, the 1st and 2nd Transportation-Climate Summit; (8) co-organized the Oklahoma Transportation Research Day (OTRD) with ODOT each year; (9) developed a student organization, Transportation Leadership Council (TLC), which now has a vibrant chapter at OU and partner institutions; (10) granted four SPTC Student of the Year Awards, two Dissertation Awards, and three Master Thesis Awards to deserving students; and (11) hosted the inaugural SPTC Leadership Forum at UTEP-EI Paso, which included a strong TLC program with participation of 32 students from partner institutions. There are many other activities and tangible benefits from SPTC that are not on this list. Furthermore, execution of these programs and building of formal relationships with partner institutions, state DOTs and the industry required a tremendous amount of behind the scenes work to develop the business infrastructure and needed policy and procedure.
2. Associate Dean for Research and Graduate Programs (July 2005 to December 2013). (a) Provided leadership in expanding the annual research expenditures of the College from \$17.9 Million (FY06) to more than \$21 Million in FY13; (b) Grants in-force increased from \$49.2 Million (239 projects in FY06) to \$71.8 Million (258 projects in FY10); (c) Archival publications of the College increased steadily. Also, CoE invention disclosures (about 10 per year) and patents (about 9 per year) remained healthy; (d) Introduced and funded Seed Funding for Interdisciplinary Research (\$10K/project) to promote interdisciplinary collaboration; (e) Formalized the graduate programs in General Engineering; (f) Introduced and funded Interdisciplinary Undergraduate Research Opportunity Program (ID-UROP; \$2K/project) to enhance interdisciplinary research among undergraduate students; (g) Organized Graduate Programs Information Symposium (GPiS) to enhance graduate enrollment; (h) Played a key role in introducing Centennial Fellowship (\$5K/year for up to three years); and (i) Organized interdisciplinary seminars and research roundtables.
3. Interim Technical Director, OTC (Jan. – Dec., 2009). (a) Developed a process for submission and review of quarterly progress report; (b) Developed a process for submission and review of annual progress report; (c) Prepared OTC Newsletters; (d) Enhanced ODOT-OkTC Research Day making it a major venue for dissemination of OkTC products; (e) Organized seminars and workshops; (f) Held a successful funding competition in 2009; (g) Developed a process and used it to select OTC Student of the Year.
4. OU Director, Oklahoma Transportation Center (OTC) (2003-2005; Executive Director for one year, 2005). Organized monthly meetings; prepared grant applications for major funding; provided leadership in strengthening collaborations among OTC institutions (OU, Oklahoma State University and Langston University) in securing matching funds, required by the funding agency, RITA-USDOT.

5. Acting Director, Rock Mechanics Institute (2000-2001). Managed the affairs of the institute including the research program, students, research scientists and staff. The institute had an annual budget of more than \$1 Million.
6. Technology Transfer Manager, Rock Mechanics Research Center (RMRC) (1992-2000). Provided leadership in organizing technology transfer activities including bi-annual meetings with the members of the Rock Mechanics Consortium and organizing seminars and workshops. The annual expenditures of the Center were about \$1.2 Million.
7. Member, Committee A (1990-1992, 1994-1996). As a member of Committee A, Dr. Zaman was actively involved in the administrative affairs of Civil Engineering and Environmental Science (CEES) including faculty evaluation, faculty recruitment, budget discussions, and policy decisions.