

CURRICULUM VITAE

WALEED A. ZEIADA, Ph.D.

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EDUCATION

- Ph.D., Civil, Environmental and Sustainable Engineering (Transportation Materials), Arizona State University, Tempe, AZ (August 2012)
Ph.D. Dissertation: Endurance Limit for HMA based on Healing Phenomenon Using Viscoelastic Continuum Damage Analysis
Advisors: Dr. Matthew Witczak, and Dr. Kamil Kaloush
- M.S., Civil Engineering, Public Works Engineering Department, Faculty of Engineering, Mansoura University, Egypt (May 2004)
Thesis: Use of Crumb Rubber in Improving Asphalt Mixes
Advisors: Dr. Mohammed El-Shabrawy, and Dr. Metwaly El-Sekaily
- B.S.E., Civil Engineering, Faculty of Engineering, Mansoura University, Egypt (Second rank with honors) (August 1999)
Graduation Project: Planning and Design of Highways and Airports

ACADEMIC EXPERIENCE

- ⇒ Assistant Professor, Civil and Environmental Engineering, University of Sharjah (October 2014-Present)
- ⇒ Postdoctoral Scholar, Civil, Environmental and Sustainable Engineering, Arizona State University (August 2012-2014)
- ⇒ Graduate Research Associate, Civil, Environmental and Sustainable Engineering Program, Arizona State University (May 2007-2012)
- ⇒ Assistant Lecturer, Public Works Department, Faculty of Engineering, Mansoura University, Egypt (May 2004-2007)
- ⇒ Demonstrator, Public Works Department, Faculty of Engineering, Mansoura University, Egypt (January 2000-2004)

WORK EXPERIENCE

⇒ Research

- Postdoctoral Scholar, Civil, Environmental and Sustainable Engineering, Arizona State University (August 2012-2014)

- ❖ Tuning research ideas into proposals, participating in writing proposals to industry and government agencies, conducting research, and writing technical publications.
- ❖ Training/Mentoring of new graduate and undergraduate research assistants.
- ❖ Assisting in the setup of new research equipment (dynamic modulus and uniaxial fatigue FAM tests and superpave binder tests).
- ❖ Pursuing independent research that promotes the goals of the pavement research group at ASU.
- ❖ Working with industrial companies to accomplish their ambitions.

- Graduate Research Associate, Civil, Environmental and Sustainable Engineering Program, Arizona State University (August 2007-2012)

- ❖ Conducted advanced material characterization tests for several research projects. Tests included: Dynamic Creep Repeated Load Flow Number, Static Creep Flow Time, E* Dynamic Modulus Tests, Triaxial Shear Test, Beam Fatigue Test, Indirect Diameter and Creep Compliance Test, C* Integral Line Test, and Uniaxial Dynamic Fatigue Test.
- ❖ Performed Asphalt Binder Consistency Tests.
- ❖ Perform fatigue analysis and research under the NCHRP 9-44A project in order to determine the endurance limit for Hot Mix Asphalt (HMA).
- ❖ Developed a test protocol and two test software for the uniaxial dynamic fatigue test.
- ❖ Laboratory Evaluation of Rubber-modified, Polymer-modified, Fiber-Reinforced HMA Mixtures, and WMA mixtures.
- ❖ Analyzed test results and prepared technical reports.

- Graduate Research Assistance, Public Works Department, Faculty of Engineering, Mansoura University, Egypt (August 1999 – May 2007)

- ❖ Conducted laboratory pavement tests for several industry projects. These tests included Marshall Test of HMA mixture design, Los Angeles Abrasion Test, and California Bearing Ratio Test.
- ❖ Performed Soil Consistency Tests.
- ❖ QA/QC field and laboratory tests of several road projects and Shawa airport in Mansoura City.
- ❖ Director of the highways and soil research laboratory, Faculty of Engineering, Mansoura University (January 2005 - September 2006)

⇒ **Teaching**

- *Assistant Professor, Civil and Environmental Engineering, University of Sharjah*

(October 2014-Present)

- ❖ Engineering Graphics (Fall 2014)
- ❖ Statics (Fall 2014)
- ❖ Pavement Design (Spring 2015)
- ❖ Statics (Spring 2015)
- ❖ Pavement Design (Fall 2015)
- ❖ Statics (Fall 2015)
- ❖ Materials for Civil Engineers (Fall 2015)
- ❖ Senior Design Project I (Fall 2015)
- ❖ Senior Design Project II (Fall 2015)
- ❖ Statics (Spring 2015)
- ❖ Materials for Civil Engineers (Spring 2015)
- ❖ Senior Design Project I (Spring 2015)
- ❖ Senior Design Project II (Spring 2015)
- ❖ Materials for Civil Engineers (Summer 2016)
- ❖ Materials for Civil Engineers Lab (Summer 2016)
- ❖ Statics (Fall 2016)
- ❖ Materials for Civil Engineers (Fall 2016)
- ❖ Senior Design Project I (Fall 2016)
- ❖ Senior Design Project II (Fall 2016)
- ❖ Pavement Design (Spring 2016)
- ❖ Materials for Civil Engineers (Spring 2016)
- ❖ Senior Design Project I (Spring 2016)
- ❖ Senior Design Project II (Spring 2016)
- ❖ Materials for Civil Engineers (Fall 2017)
- ❖ Materials for Civil Engineering Lab (Fall 2017)
- ❖ Advanced Pavement Analysis and Design (Fall 2017)
- ❖ Senior Design Project I (Fall 2017)
- ❖ Senior Design Project II (Fall 2017)
- ❖ Materials for Civil Engineers Lab (Spring 2018)
- ❖ Materials for Civil Engineers (Spring 2018)
- ❖ Senior Design Project I (Spring 2018)
- ❖ Senior Design Project II (Spring 2018)
- ❖ Pavement Design (Spring 2018)
- ❖ Materials for Civil Engineers (Summer 2018)
- ❖ Materials for Civil Engineers Lab (Summer 2018)

- Postdoctoral Scholar, Civil, Environmental and Sustainable Engineering, Arizona State University (August 2012-2014)

- ❖ CEE 353-Materials (Summer 2013)
- ❖ Guest Lecturer in several courses (August 2012-2014)

- Graduate Research Associate, Civil, Environmental and Sustainable Engineering Program, Arizona State University (August 2007-2012)

- ❖ Guest Lecturer in several courses (August 2007-2012)

- Graduate Teaching Assistance, Public Works Department, Faculty of Engineering, Mansoura University, Egypt (August 1999 – May 2007)

- ❖ Plane Survey 1.
 - Instructed and handled laboratory sessions that included plane survey methods, techniques, and equipments.
- ❖ Soil Mechanics.
 - Assisted students in successfully learning the daily lesson objectives and provided related examples. Revised student's homework and recorded student's grades.
- ❖ Railway Engineering.
 - Assisted students in successfully learning the daily lesson objectives and provided related examples. Revised student's homework and recorded student's grades.
- ❖ Traffic and Transportation Engineering.
 - Assisted students in successfully learning the daily lesson objectives and provided related examples. Revised student's homework and recorded student's grades.
- ❖ Highways and Airports Engineering.
 - Assisted students in successfully learning the daily lesson objectives and provided related examples. Revised student's homework and recorded student's grades.

PROFESSIONAL ASSOCIATIONS

1. Member, Association of Asphalt Pavement Technologists, AAPT (2013-present).
2. Young Member, Characteristics of Asphalt-Aggregate Combinations to Meet Surface Requirements Committee (AFK40), Transportation Research Board (2011-2017).
3. Member of the Pavements/Materials Conference Committee, Arizona State University (2012-present).
4. Registered external expert in the area of Pavement and Geotechnical Engineering (Ext. 003 2017), Abu Dhabi Quality and Conformity Council (QCC) (2017-present)
5. Chair, Undergraduate Committee, Department of Civil and Environmental Engineering, University of Sharjah (2017-present).
6. Chair, Lab and Commercial Testing Committee, Department of Civil and Environmental Engineering, University of Sharjah (2016-2017).
7. Chair, Establishment Committee of Transportation and Pavement Research Lab, Research Institute of Sciences and Engineering, University of Sharjah (2015-present).
8. Chair, Hiring committee for Lab Officer Position of the Transportation and Pavement Research Lab, Research Institute of Sciences and Engineering, University of Sharjah (2017-2018).

9. Member of the Organizing Committee, Towards Sustainable Development International Conference, University of Sharjah, 2015.
10. Member of the Material Committee, Research Decision (4) 2014-2015, Formation of a Committee to Consider the Feasibility of Establishing a Materials Research Laboratory, University of Sharjah (2014-2015).
11. Member, Undergraduate Committee, Department of Civil and Environmental Engineering, University of Sharjah (2014-present).
12. Member, Graduate and Research Committee, Department of Civil and Environmental Engineering, University of Sharjah (2014-present).
13. Member, Stirring Committee of ABET Accreditation, Department of Civil and Environmental Engineering, University of Sharjah (2015-2016).
14. Member, Student Affairs Committee, College of Engineering, University of Sharjah (2015-2016).
15. Life Time Fellow, International Road Federation, Washington D.C. (2011-present).
16. Student Member, Institution of Transportation Engineers, Arizona State University Chapter (2009-2012)
17. Student Member, American Society of Civil Engineers, Arizona State University Chapter (2009-2012)
18. Member, Phi Kappa Phi, National Academic of Engineering Honor Society (2010-present)
19. Member, Tau Beta Pi, National Academic of Engineering Honor Society (2011-present)
20. Member, Chi Epsilon, National Academic of Civil Engineering Honor Society (2012-present)
21. Friend of FHWA Asphalt Mixture and Construction Expert Task Group (2010-present)
22. Friend, Characteristics of Bituminous Material Committee (AFK20), Transportation Research Board (2010-present).
23. Friend, Flexible Pavement Design (AFD60), Transportation Research Board (2009-present).
24. Friend, Characteristics of Bituminous Paving Mixtures to Meet Structural Requirements Committee (AFK50), Transportation Research Board (2009-present).
25. President, Egyptian Student Association of North America-ESANA, Arizona State University Chapter (2012-2014).

Journal / Conference Review

1. Transportation Research Board (TRB)
2. Journal of Materials in Civil Engineering (JMCE) – ASCE
3. Journal of Testing and Evaluation (JTE) – ASTM
4. International Journal of Pavement Research and Technology (IJPRT)
5. International Journal of Pavement Engineering (IJPE)
6. Journal of Civil Engineering and Management (JCEM)
7. Automation in Construction Journal (AUTCON)
8. Construction & Building Materials Journal (CONBUILDMAT)
9. Journal of Frontiers in Construction Engineering (FCE)
10. Journal of the Association of Asphalt Pavement Technologists (AAPT)
11. Cement and Concrete Composites (CCC) Journal
12. Civil Engineering Infrastructures Journal (CEIJ)
13. Innovative Infrastructure Solutions (IISS) Journal

14. International Road Federation (IRF) World Meeting
15. The International Society for Asphalt Pavements (ISAP) Conference
16. Towards Sustainable Development International Conference (TSDIC)
17. International Conference on Advances in Sustainable Construction Materials & Civil Engineering Systems (ASCMCES-17)

HONORS / AWARDS

1. Best Achiever Awards, Department of Civil Engineering, Mansoura University, Mansoura, Egypt, (1995, 1996, 1997, 1998, and 1999).
2. Travel Grant to attend the following conferences and meetings:
 - 6th International RILEM Conference, Cracking in Pavements, Chicago, Illinois, July 2008.
 - 2009 Asphalt Rubber Conference, Nanjing, China, November 2009.
 - 2010 Expert Task Group Meeting, ETG, Irvine, California, February 2010.
 - 3rd Four Point Bending Beam Workshop, Davis, California, September 2012.
 - 2.14 Association of Asphalt Paving Technologists (AAPT) Meeting, Denver, Colorado April 2014.
 - Transportation Research Board Annual Conference, 2008, 2009, 2010, 2011, 2012, 2013, and 2014.
3. Graduate Research Associate, Teaching Assistant, Research Assistant (January 1999-Present). Department of Civil Engineering, Mansoura University, Mansoura, Egypt and Department of Civil, Environmental, and Sustainable Engineering Program, Arizona State University.
4. International Road Federation (IRF) Executive Leadership Program for 2011, awarded by the International Road Educational Foundation's (IREF), Madison Place, 500 Montgomery Street, Suite 525, Alexandria, Virginia 22314 USA.
5. Dreznes Competition Cup for the best team at the IRF Executive Leadership Program, 2011.
6. Best graduate research award, First SSEBE (Sustainable Engineering and the Built Environment) Graduate Student Research Symposium, Arizona State University, 2011.
7. University Graduate Fellowship, 2011.
8. University Graduate Fellowship, 2012.
9. Responsible Conduct of Research (RCR) Training, Collaborative Institutional Training Initiative at the University of Miami, Sponsored by the Office of Research Integrity & Assurance, Arizona State University.
10. Sharjah Sustainability Award, Sharjah Environment and Protected Areas Authority, 2017/2018

BOOKS/CHAPTERS IN BOOKS

1. Zeiada, W. Use of Crumb Rubber in Improving Asphalt Mixes. M.Sc. Thesis, Mansoura University, Mansoura, Egypt, 2004.
2. Zeiada, W. Endurance Limit for HMA Based on Healing Phenomenon Using Viscoelastic Continuum Damage Analysis. Ph.D. Dissertation, Arizona State University, Tempe, AZ, USA, 2012.

3. Witczak, M., Mamlouk, M., Souliman, M., and Zeiada, W. Laboratory Validation of an Endurance Limit for Asphalt Pavements, NCHRP report 762, Transportation Research Board, National Academies of Sciences and Engineering, Washington, DC, USA, 2013.
4. Braham, A., and B.S. Underwood. "State of the Art and Practice in Fatigue Cracking Evaluation of Asphalt Concrete Pavements, Version 1.0, An Experimental and Numerical Synthesis from the Mid-1990s to 2016", Section 5.1.2., Association of Asphalt Paving Technologists (AAPT), USA, pp. 22-27, 2017.

REFEREED ARCHIVAL JOURNAL PUBLICATIONS

5. **Zeiada, W.A.**, S. Abu-Dabous, R. Al-Ruzouq, G. Al-khateeb, and M. Souliman. Effect of Air Void and Asphalt Content Changes on Laboratory and Field Predicted Fatigue Performance of Asphalt Concrete Pavements. Submitted for presentation and publication at the 98th Annual Meeting of the Transportation Research Board, Washington D.C., 2019.
6. Isied, M.M., M. Souliman, and **W.A. Zeiada**. Predictive Artificial Neural Network Fatigue Endurance Limit Model for Asphalt Concrete Pavements Based on the Volumetric Properties. Submitted for presentation and publication at the 98th Annual Meeting of the Transportation Research Board, Washington D.C., 2019.
7. **Zeiada, W.A.**, S. Abu-Dabous, K. Hamad, R. Al-Ruzouq, and M. A. Khalil. Machine Learning Models for Investigating the Significance of Asphalt Pavement Design Factors in Warm Climate Regions. *International Journal of Pavement Engineering (IJPE)*, 2018. (Under Review)
8. Soulima, M., **W.A. Zeiada**, M.G. Arab., and K.E. Kaloush. Effect of Asphalt Binders with Identical PG Grading from Different Suppliers on the Laboratory Performance of Asphalt Mixture, *International Journal of Pavement Research and Technology*, 2018. (Under Review)
9. Abu-Dabous, S., **W.A. Zeiada**, T. Zayed. Sustainability-Informed AHP-MAUT Decision Support Method for Pavement Infrastructure Management, *Construction Management and Economics*, 2018 (Under Review).
10. Hamad, K., R. Al-Ruzouq, **W.A. Zeiada**, S. Abu-Dabous, and M. Khalil. Predicting Incident Duration Using Random Forests, *Expert Systems with Applications Journal*, 2018. (Under Review)
11. Abu-Dabous, S., **W.A. Zeiada**, K. Hamad, R. Al-Ruzouq, G. Al-khayyat. Distress-Based Evidential Reasoning Method for Pavement Infrastructure Condition Assessment and Rating, *Engineering Applications of Artificial Intelligence Journal*, 2018 (Under Review).
12. **Zeiada, W.A.**, P. Gudipudi, B.S. Underwood, and M. Souliman. Effect of Loading Waveform Pattern and Rest Period on Fatigue Life of Asphalt Concrete Using Viscoelastic Continuum Damage Model, *Transportation Research Record: Journal of the Transportation Research Board*, Vol. 3 (03274), 2018 (Accepted for Publication).
13. **Zeiada, W.A.**, K. Hamad, M. Omar, B.S. Underwood, M. Khalil, and A. Karzad. Investigation and Modeling of Asphalt Pavement Performance in Cold Regions. *International Journal of Pavement Engineering (IJPE)*, 2017. <https://doi.org/10.1080/10298436.2017.1373391>

14. **Zeida, W.A.**, Alossta, A.A. and Kaloush, K.E., 2017. Laboratory evaluation of foaming-based and chemical-based warm mix asphalt. *Innovative Infrastructure Solutions*, 2(1), p.6.
15. **Zeida, W.A.**, Kaloush, K.E., Underwood, B.S. and Mamlouk, M., 2016. Development of a Test Protocol to Measure Uniaxial Fatigue Damage and Healing. *Transportation Research Record: Journal of the Transportation Research Board*, Vol. 3(2576), pp.10-18.
16. Gundla, A., J. Medina, P. Gudipudi, R. Stevens, R. Salim., **W.A. Zeida**, and S.B. Underwood. Investigation of Aging in Hydrated Lime and Portland Cement Modified Asphalt Concrete at Multiple Length Scales. *Journal of Materials in Civil Engineering*, 10.1061/(ASCE)MT.1943-5533.0001501, 04015205, 2015.
17. **Zeida, W.A.**, S.B. Underwood, and K.E. Kaloush. Impact of Asphalt Concrete Fatigue Endurance Limit Definition on Pavement Performance Prediction. *International Journal of Pavement Engineering*, DOI:10.1080/10298436.2015.1127372, 2015.
18. **Zeida, W.A.**, Souliman, M.I., K.E. Kaloush, M.S. Mamlouk, and S.B. Underwood. Comparison of Fatigue Damage, Healing, and Endurance Limit using Beam and Uniaxial Fatigue Tests. *Journal of the Transportation Research Board*, Washington, D. C, Transportation Research Record TRR 4826, Vol. 4 (2447), pp. 32-41, 2014.
19. Underwood, B.S., and **W.A. Zeida** .Characterization of Microdamage Healing in Asphalt Concrete with a Smeared Continuum Damage Approach. *Journal of the Transportation Research Board*, Washington, D. C, Vol. 4(2447), pp. 126-135, 2014.
20. **Zeida, W.A.**, S.B. Underwood, T. Pourshams, J.J. Stempihar, and K.E. Kaloush. Comparison of Conventional, Polymer, and Rubber Asphalt Mixtures Using Viscoelastic Continuum Damage Model. *Road Materials and Pavements Design Journal*, Volume 15, Issue 3, pp 588-605, May 2014.
21. **Zeida, W.A.**, M.I. Souliman, M.S. Mamlouk, and K.E. Kaloush. Endurance Limit for HMA Based on Healing Concept Using Uniaxial Tension-Compression Fatigue Test. *Journal of Materials in Civil Engineering-ASCE*, Volume 15, Issue 3, DOI: 10.1061/(ASCE)MT.1943-5533.0000917, 2013.
22. **Zeida, W.A.**, K.E. Kaloush, S.B. Underwood, and M.S. Mamlouk. Improved Method to Consider Air Void and Asphalt Content Changes on Long-Term Performance of Asphalt Concrete Pavements. *International Journal of Pavement Engineering (IJPE)*, 2013. Volume 15, Issue 8, 2013, pp. 718-730.
23. Souliman, M.I., **W.A. Zeida**, M.S. Mamlouk, and K.E. Kaloush. Laboratory Validation of Healing-Based Fatigue Endurance Limit for HMA. *Journal of the Transportation Research Board*, Washington, D. C, Transportation Research Record TRR 0691, Volume 4(2373), 2013, pp. 1-10.
24. Souliman, M.I., **W.A. Zeida**, M.S. Mamlouk, and K.E. Kaloush. Fatigue Endurance Limit for HMA Based on Healing. *Proceeding of Association of Asphalt Paving Technologists (AAPT)*, Denver, Colorado, Vol.82, 2013, pp. 503-531.

25. Mamlouk, M. S., M.I. Souliman, **W.A. Zeiada**, and K.E. Kaloush. Refining HMA Beam Fatigue Testing Conditions. *ASTM Journal of Advances in Civil Engineering Materials*, Vol. 1, Issue 1, 2012.
26. **Zeiada, W.A.**, K.E. Kaloush, K.P. Biligiri, J. Reed, and J. Stempihar. Significance of Confined Dynamic Modulus Laboratory Testing for Dense, Gap and Open Graded Asphalt Concrete Mixtures. *Journal of the Transportation Research Board*, Transportation Research Record TRR 2206, Washington, D. C., Volume 4(2210), 2011, pp. 9-19.
27. Kaloush, K.E., K.P. Biligiri, **W.A. Zeiada**, M. Rodezno, and J. Reed. Evaluation of Fiber-Reinforced Asphalt Mixtures Using Advanced Material Characterization Tests. *Journal of Testing and Evaluation, ASTM International*, Volume 38, Number 4, 2010, pp. 400-411.
28. Atish A.N., K.E. Kaloush, **W.A. Zeiada**, K.P. Biligiri. Using the Dynamic Modulus Test for Moisture Susceptibility Evaluation of Asphalt Mixtures. *Journal of the Transportation Research Board*, Washington, D. C, Transportation Research Record TRR 2127, Volume 2(2127), 2009, pp. 29-35.

PEER REVIEWED CONFERENCE PUBLICATIONS

29. Arab M., A. Elgamal, M. Omar, **W.A. Zeiada**. Settlement Induced during CFA Pile Installation in Egyptian Nile Valley Region: Case Study, International Foundations Congress and Equipment Exposition conference (IFCEE 2018), Orlando, Florida, USA, 2018. (Accepted).
30. Hamad, K., R. Al-Ruzouq, **W.A. Zeiada**, S. Abu-Dabous, and M. Khalil. Predicting Incident Duration Using Random Forests, 97th Transportation Research Board Annual Meeting, No. (18-03090), Washington D.C., 2018.
31. Lolly, R., **W.A. Zeiada**, M. Souliman, and K.E. Kaloush. Effects of Short-Term Aging on Asphalt Binders and Hot Mix Asphalt at Elevated Temperatures and Extended Aging Time, International Conference on Advances in Sustainable Construction Materials & Civil Engineering Systems Sharjah, UAE, April 2017.
32. Souliman, M., **W.A. Zeiada**, and L.Walubita. Mechanical and Economical Impacts of Adding Polymers into Asphalt Mixtures, International Conference on Advances in Sustainable Construction Materials & Civil Engineering Systems Sharjah, UAE, April 2017.
33. Abu Dabous S, **W.A. Zeiada**, and K. Kaloush. Multi-Criteria Sustainability-Informed Ranking Method for Pavement Management. 96th Transportation Research Board Meeting, Washington D.C., 2017.
34. **Zeiada, W.A.**, S.B. Underwood, and K.E. Kaloush. Cost Analysis of Fiber-Reinforced Pavements. 2nd IRF Asia Regional Congress & Exhibition, Kuala Lumpur, Malaysia, March 2016.
35. Jeff, J.S., **W.A. Zeiada**, S.B. Underwood, and K.E. Kaloush. Laboratory Cracking Evaluation of a Warm Mix Rubber Modified Pavement. Rubberized Asphalt Rubber 2015, Las Vegas, Nevada, October 2015.

36. Kaloush, K.E., **W.A. Zeiada**, and Jeff, J.S. Fiber Reinforced Asphalt Concrete: Performance Tests and Pavement Design Consideration. 6th International Conference: Bituminous Mixtures and Pavements VI. June 2015, 313 -318.
37. **Zeiada, W.A.**, K. Hamad. Sustainable Practices of Pavement Engineering. 3rd Towards Sustainable Development International Conference (3rd TSDIC2015), University of Sharjah, Sharjah, UAE, March 2015.
38. Khaled. H., M. Omar, R. Al-Ruzouq, **W.A. Zeiada**, and R. Raad. Sustainable Public Transportation Potential at Sharjah University City. 3rd Towards Sustainable Development International Conference (3rd TSDIC2015), University of Sharjah, Sharjah, UAE, March 2015.
39. **Zeiada, W.A.**, S.B. Underwood, and K.E. Kaloush. Impact of Asphalt Concrete Fatigue Endurance Limit Definition on Pavement Performance Prediction. Presented at the 94th Annual Transportation Research Board Meeting, Washington, D.C., 2015.
40. Gundla, A., J. Medina, P. Gudipudi, R. Stevens, R. Salim., **W.A. Zeiada**, and S.B. Underwood. Multi Scale Investigation of Aging in Hydrated Lime and Portland Cement Modified Asphalt Concretes. Presented at the 94th Annual Transportation Research Board Meeting, Washington, D.C., 2015.
41. Underwood, S.B., **W.A. Zeiada**, and K.E. Kaloush. Comparison of Hot Mix Asphalt Endurance Limit Using Nchrp944-A Developed Methodology to other Analytical Techniques. 2014 International Conference on Perpetual Pavement (ICPP), Columbus, Ohio, USA, October 2014.
42. **Zeiada, W.A.**, K.E. Kaloush, S.B. Underwood, and M.S. Mamlouk. Uniaxial Fatigue Testing of Diverse Asphalt Concrete Mixtures. ISAP Conference, Raleigh, North Carolina, USA, June 2014.
43. **Zeiada, W.A.**, K.E. Kaloush, S.B. Underwood, and M.S. Mamlouk. Effect of Air Voids and Asphalt Content on Fatigue Damage Using the Viscoelastic Continuum Damage Analysis. Airfield and Highway Pavement Conference, Los Angeles, California, 2013.
44. **Zeiada, W.A.**, M.I. Souliman, K.E. Kaloush, and M.S. Mamlouk. Endurance Limit for HMA Based on Healing-Damage Balance Criterion Using Viscoelastic Continuum Damage Analysis. Transportation Research Board, Transportation Research Record 4507, Washington, D.C., January 2013.
45. **Zeiada, W.A.**, S.B. Underwood, T. Pourshams, J.J. Stempihar, and K.E. Kaloush. Comparison of conventional, polymer, and rubber asphalt mixtures using viscoelastic and continuum damage model. Asphalt Rubber 2012 International Conference, Munich, Germany, 2012.
46. Kaloush, K.E., K.P. Biligiri, T. Nordgren, **W.A. Zeiada**, M.C. Rodezno, M.I. Souliman, J.X. Reed, and J.J. Stempihar. Laboratory Evaluation of Asphalt-Rubber Gap Graded Mixture Constructed on Stockholm Highway in Sweden. Asphalt Rubber 2012 International Conference, Munich, Germany, 2012.
47. **Zeiada, W.A.**, M.I. Souliman, K.P. Biligiri, K.E. Kaloush, and H. Hakim. Fatigue Resistance and Crack Propagation Evaluation of Asphalt Rubber Gap Graded Mixture in Sweden. 7th Rilem International Conference cracking on pavements, Delft, The Netherlands, Volume 4, 2012, 1359 p.

48. Souliman, M.I, **W.A. Zeiada**, K.E. Kaloush, and M.S. Mamlouk. Assessment of Different Fatigue Failure Criteria to Estimate Number of Cycles to Failure. 3rd 4PBB- Point Bending Beam Conference, Davis, California, USA, September 2012.
49. Kaloush, K. E., **W.A. Zeiada**, M.I. Souliman, J.J. Stempihar, T.P. Manzouri. Pavements and the Urban Heat Island Effect. 3rd IRF Middle East Regional Congress, Manama, Kingdom of Bahrain, 2012.
50. Mamlouk, M.S., M.I. Souliman, and **W.A. Zeiada**. Optimum Testing Conditions to Measure HMA Fatigue and Healing Using Flexural Bending Test., Transportation Research Board, Transportation Research Record 1266 Washington, DC, January 2012.
51. Kaloush, K.E., M.I. Souliman, **W.A. Zeiada**, and J.J. Stempihar. Sensitivity of Mixture Performance Tests to Identical PG Binders from Different Suppliers. Transportation Research Board, Transportation Research Record 1964, Washington, D.C., January 2012.
52. **Zeiada, W.A.**, K.E. Kaloush, and M.S. Mamlouk. Rational Approach for Adjusting HMA Dynamic Modulus due to Changes in Air Voids and Asphalt Content. Transportation Research Board, Washington, D.C., Transportation Research Record 0844, January 2012.
53. Alossta. A.A., **W.A. Zeiada**, and K.E. Kaloush. Evaluation of Warm Mix Asphalt versus Conventional Hot Mix Asphalt for Field and Laboratory-Compacted Specimens. 2nd International Conference on Warm Mix Asphalt, St. Louis, Missouri, October 2011.
54. Kaloush, K.E., T. Nordgren, K.P. Biligiri, **W.A. Zeiada**, M.C. Rodezno, M.I. Souliman, and J.X. Reed. Laboratory Evaluation of Asphalt Rubber Gap Graded Mixture in Sweden. Asphalt Rubber 2009 International Conference, Nanjing, China, 2009.
55. Kaloush, K.E., A. Nadkarni, **W.A. Zeiada**, P. Burch, and C. Dimitroplos. Asphalt Rubber Mixtures Susceptibility to Moisture Damage. Asphalt Rubber 2009 International Conference, Nanjing, China, 2009.
56. **Zeiada, W.A.**, M.A. Elshabrawy, A. Elagamy and M.A. Elsekelly. Use of Crumb Rubber to Improve the Properties of Asphalt Mixes against Climatic Temperature Changes. 3rd International Engineering Conference, Sharm El-Sheikh, Egypt, 2005.

PAPERS IN PROGRESS

57. Sharma, S., J.J. Stempihar, **W.A. Zeiada**, K.E. Kaloush, and S.B. Underwood. “Development of a Fiber Extraction Test Method for Quality Control of Fiber Reinforced Asphalt Concrete,” ASTM Journal of Testing and Evaluation, 2014. In Progress.
58. Alrajhi, A., **W.A. Zeiada**, and, K.E. Kaloush. “Effect of Fiber Dosages on Asphalt Concrete Performance,” To be determined, 2014. In Progress.

TECHNICAL REPORTS

59. Jose Medina, **Waleed A. Zeiada**, Shane Underwood, and Kamil E. Kaloush, “Summary of Tests Results, Montreal Second Fiber-Reinforced Asphalt Mixtures,” Final Report Submitted to FORTA Corporation, 100 Forta Drive, Grove City, PA 16127-9990, February 2014.

60. Kamil E. Kaloush, **Waleed A. Zeiada** “Summary of Tests Results, Montreal First Asphalt Mixtures,” Final Report Submitted to FORTA Corporation, 100 Forta Drive, Grove City, PA 16127-9990, June 2013.
61. B. Shane Underwood, Kamil E. Kaloush, **Waleed A. Zeiada**, and Padmini Gudipudi “Summary of Extraction Test Results for First MTQ Mixture,” Final Report Submitted to FORTA Corporation, 100 Forta Drive, Grove City, PA 16127-9990, December 2013.
62. Mathew Witczak, Michael Mamlouk, **Waleed A. Zeiada**, and Mena Souliman “Validating An Endurance Limit for HMA Pavements,” Quarterly Reports Submitted to the NCHRP 9-44A Panel, Washington D.C., 2009 to 2012.
63. Kamil E. Kaloush, Krishna P. Biligiri, Maria C. Rodezno, **Waleed A. Zeiada**, Jordan X. Reed, and Mena I. Souliman “Performance Evaluation of Asphalt Rubber Mixtures in Arizona – Palo Parado Project”, Final Report Submitted to Arizona Department of Transportation, Materials Group, 1221 North 21st Avenue, Phoenix, AZ 85009, Aug 2009.
64. Kamil E. Kaloush, Krishna P. Biligiri, Maria C. Rodezno, **Waleed A. Zeiada**, Mena I. Souliman, and Jordan X. Reed, “Performance Evaluation of Asphalt Rubber Mixtures in Arizona – Lake Havasu Project”, Final Report Submitted to Arizona Department of Transportation, Materials Group, 1221 North 21st Avenue, Phoenix, AZ 85009, May 2009.
65. Kamil E. Kaloush, Atish Nadkarni and **Waleed A. Zeiada** “Asphalt Rubber Mixtures Susceptibility to Moisture Damage” Final Report 656, Arizona Department of Transportation in cooperation with U.S. Department of Transportation, Federal Highway Administration, September 2008.
66. Kamil E. Kaloush, Krishna Prapoorna Biligiri, **Waleed A. Zeiada** and Maria C. Rodezno, “Laboratory Pavement Performance Evaluation of Swedish Gap Graded Asphalt Concrete Mixtures – Eksjo E-06 Highway”, Final Report Submitted to Swedish Road Administration, Vägverket, 405 33 Göteborg, Kruthusgatan 17, Sweden, 2009.
67. Kamil E. Kaloush, Krishna Prapoorna Biligiri, **Waleed A. Zeiada**, Maria C. Rodezno and Mena Souliman, “Laboratory Pavement Performance Evaluation of Swedish Gap Graded Asphalt Concrete Mixtures – Malmo E-06 Highway”, Final Report Submitted to Swedish Road Administration, Vägverket, 405 33 Göteborg, Kruthusgatan 17, Sweden, September 2008.
68. Kamil E. Kaloush, Krishna P. Biligiri, Maria C. Rodezno, **Waleed A. Zeiada** and Luiz de Mello, “Performance Evaluation of Asphalt Rubber Mixtures in Arizona – Burro Creek And Antelope Wash Projects”, Final Report Submitted to Arizona Department of Transportation, Materials Group, 1221 North 21st Avenue, Phoenix, AZ 85009, USA, July 2008.
69. Michael Mamlouk, Claudia E. Zapata, Matthew W. Witczak, Krishna P. Biligiri, Carlos Cary, Smita Dwivedi, Mena Souliman, **Waleed A. Zeiada**, Natalie Lopez, and Berenice Barranco, “Pavement Design Research Towards the Implementation of the Mechanistic-Empirical Pavement Design Guide”, Final Report Submitted to Maricopa County Department of Transportation, 2901 W Durango, Phoenix, Arizona 85009, July 2008.

70. Kamil E. Kaloush, Krishna P. Biligiri, **Waleed A. Zeiada**, Carlos Cary, Smita Dwivedi, Jordan Reed, and Carolina Rodezno, "Evaluation of FORTA Fiber-Reinforced Asphalt Mixtures Using Advanced Material Characterization Tests – Evergreen Drive, Tempe, Arizona", Final Report Submitted to FORTA Corporation, Grove City, PA, April 2008.

PRESENTATIONS/POSTERS

1. Poster Presentation, Transportation Research Board Conference, Annual Meeting, "Effect of Loading Waveform Pattern and Rest Period on Fatigue Life of Asphalt Concrete Using Viscoelastic Continuum Damage Model", Washington, D.C., January 6-11, 2018.
2. Poster Presentation, Transportation Research Board Conference, Annual Meeting, "Predicting Incident Duration Using Random Forests", Washington, D.C., January 6-11, 2018.
3. Podium Presentation "Healing Based Approach for Perpetual Asphalt Pavement Design," IRF Middle East & North Africa Regional Congress, Dubai, UAE, October 2017.
4. Podium Presentation, "Effects of Short-Term Aging on Asphalt Binders and Hot Mix Asphalt at Elevated Temperatures and Extended Aging Time," International Conference on Advances in Sustainable Construction Materials & Civil Engineering Systems, Sharjah, UAE, April 2017.
5. Podium Presentation, "Mechanical and Economical Impacts of Adding Polymers into Asphalt Mixtures," International Conference on Advances in Sustainable Construction Materials & Civil Engineering Systems, Sharjah, UAE, April 2017.
6. Podium Presentation, "Going Deep on Superpave", Superpave Workshop, Ministry of Infrastructure Development, Dubai Road and GIS Departments, of Infrastructure Development, Dubai, UAE, January 2017.
7. Podium Presentation, "Performance Related Testing of Asphalt Concrete Mixtures", Superpave Workshop, Ministry of Infrastructure Development, Dubai Road and GIS Departments, of Infrastructure Development, Dubai, UAE, January 2017.
8. Podium Presentation "Perpetual Design for Sustainable Asphalt Pavements" Bridge and Road Engineering and Maintenance Conference, Abu-Dhabi, UAE, May, 2016.
9. Podium Presentation "Laboratory Characterization and Structural Design Considerations of Fiber-Reinforced Asphalt Concrete" 4th IRF Middle East Regional Congress Riyadh, Kingdom of Saudi Arabia, December, 2015
10. Podium Presentation "Sustainable Practices of Pavement Engineering". 3rd Towards Sustainable Development International Conference (3rd TSDIC2015), University of Sharjah, Sharjah, UAE, March 2015.
11. Podium Presentation "Endurance Limit for Perpetual Pavement", 2013 Arizona Pavements/Materials Conference, Arizona State University, Tempe, AZ, USA, November, 2012.
12. Guest Lecturer for several classes, Transportation Engineering Class, Pavement Analysis and Design Class, Civil Engineering Materials Class, Pavement Performance and Management Class, Arizona State University, 2009-2013.
13. Poster Presentation, Transportation Research Board Conference, Annual Meeting, Washington, D.C., January 13-17, 2013.
14. Podium Presentation, 2012 Arizona Pavements/Materials Conference, Arizona State University, Tempe, AZ, USA, November, 2012.
15. Podium Presentation, Transportation Research Board Conference, Annual Meeting, Washington, D.C., January 2012.

16. Poster Presentation, 2011 Arizona Pavements/Materials Conference, Student Presentation, Arizona State University, Tempe, AZ, USA, November, 2011.
17. Poster Presentation, first Annual SSEBE (Sustainable Engineering and the Built Environment) Graduate Research Symposium, Arizona State University, March, 2011.
18. Poster Presentation, Transportation Research Board Conference, Annual Meeting, Washington, D.C., January 23-27, 2011.
19. Podium Presentation, Asphalt Rubber Conference, Nanjing, China, 2-4 November 2009.
20. Poster Presentation, Transportation Research Board Conference, Annual Meeting, Washington, D.C., January 11-15, 2009.

RESEARCH PROJECTS

1. “Effect of Polymer and Warm Mix Additives on the Performance of Asphalt Binders in UAE” (External Research grant, ANOC, 500,000 AED) (Under Preparation).
2. “Climate Change Impact on Materials Selection and Asphalt Pavement Performance in UAE, (External Research grant, Ministry of Infrastructure Development, 200,000 AED) (Under Review)
3. “Development of Asphalt Binder, Aggregate, Asphalt Mix Design Specifications for Future Superior Performing Roadways in UAE” (Collaborative Research Grant with SRA and ASU, 2,937,200 AED) (Under Review)
4. “Advanced Characterization and Testing of Asphalt Mixes Containing Steel Slag Aggregates” (External Research Grant, Abu Dhabi Municipality, and Tube City IMS, 54,800 AED (Under Review)
5. “Investigating the Effect of Paving Materials on Urban Heat Island Effect in Sharjah” (Collaborative Research Grant with SRA and ASU, 450,000 AED) (Under Review)
6. “Effect of Bio-Oils Extracted from Local Date Seeds on Rheological Properties of Modified Asphalt Binder” (Competitive Research Grant, 79,000 AED) (Under Review)
7. “Producing Sustainable Modified Asphalt Binders Using Dates Seeds Filler” (Seed Fund Proposal, 40,000 AED) (Under Review)
8. “Advanced Characterization of Dynamic Soils Properties in UAE for Enhanced Civil Infrastructures Design, University of Sharjah”. (Targeted research grant, Granted-196,000 AED), 2019-2021.
9. “The Effect of Nano-materials on Asphalt Mixture in Sharjah Using Multiscale Modelling Approach” (Targeted research grant, 200,000 AED), 2018-2020.
10. “Using Enzyme Induced Calcite Precipitation (EICP) to Control Dust in UAE” (Collaborative Research Grant with SRA and ASU, 120,000 AED), 2018-2020.
11. “Using Sodium Alginate Biopolymer as Soil Reinforcement Technique” (Seed fund proposal, 40,000AED), 2018-2020.
12. “Management of Load Transfer to Underground Structures by Using Geocell Soil Reinforcement, University of Sharjah”. (Competitive research grant, Granted-80,000 AED), 2017-2019.
13. “Evaluation of the Roads and Parking Design to Improve Traffic Safety and Operation in the University City of Sharjah” (Seed fund proposal, Granted-40,000AED), 2016-2018.
14. “Decision Support System for Condition Assessment of Transportation Infrastructure in the UAE”. University of Sharjah. (Seed fund proposal, Granted- 20,000 AED), 2016-2018.

15. "Development of Weather, Soil, Traffic Database for the Implementation of Mechanistic-Empirical Pavement Design in Sharjah". University of Sharjah, (Seed fund proposal, Granted-20,000 AED), 2015-2017.
16. "Long-Lasting Rehabilitation Treatment Using Life Cycle Cost Analysis and Present Serviceability Rating", Oklahoma Department of Transportation and Texas A&M University (\$190,000). (February, 2014-2016)
17. "Optimization of Fiber Introduction Parameters for Poly-Aramid Blends", FORTA Incorporation (11/2013 to 11/2014)
18. "Validating An Endurance Limit for HMA Pavements: Laboratory Experiment and Algorithm Development", (\$950,000), NCHRP 09-44A, 2009-2012.
19. "Laboratory Pavement Performance Evaluation of Swedish Asphalt Concrete Mixtures", Swedish Road Administration, Göteborg, Sweden (2009).
20. "Laboratory Pavement Performance Evaluation of Swedish Gap Graded Asphalt Concrete Mixtures – Malmo E-06 Highway", Swedish Road Administration, Göteborg, Sweden (2008).
21. "Asphalt Rubber Mixtures Susceptibility to Moisture Damage", (Jan 08), ADOT
22. "Special Testing of Topock – Kingman I-40 Pavement Preservation Project – Lake Havasu TI-MP 21, WB". (2008), ADOT
23. "Special Testing of I-19 Pavement Preservation Asphalt Mixtures – JCT. B-19 – Palo Parado (Dec 07), ADOT
24. "Special Testing of ADOT Asphalt Rubber Mixtures", Antelope Wash, (Jan 07)
25. "Special Testing of ADOT Asphalt Rubber Mixtures", Burrow Creek, (Jan 06), ADOT
26. "Evaluation of FORTA Reinforced Asphalt Mixtures Using Advanced Material Characterization Tests", FORTA Corporation, Grove City, PA (June 06)

COMPUTING SKILLS

- Operating Systems: Windows 95/98/NT/2000/XP /Vista/7.
- Packages: MS Office, Microstation, InRoads, AutoCAD, Mathematica, Statistica, Mechanistic-Empirical Pavement Design Guide (MEPDG).