



# Mena Souliman, Ph.D.

## Assistant Professor Civil Engineering

### The University of Texas at Tyler



#### Education:

- Ph.D. Civil, Environmental, and Sustainable Engineering, Arizona State University, 2012
- M.S. Civil and Environmental Engineering, Arizona State University, 2009
- B.S. Civil Engineering, Hashemite University, Jordan 20070

#### Honors and Awards:

- International Road Federation (IRF) Lifetime Fellow (2009)

#### Professional Associations

- Panel Member, NCHRP 09-59 Project: Relating Asphalt Binder Fatigue Properties to Asphalt Mixture Fatigue Performance
- Subcommittee Chair, Flexible Pavement Design Young Members Subcommittee (AFD60), TRB

#### Research Interests:

Dr. Souliman has more than 8 years of experience in pavement analysis, design and characterization. His research interests are focused on pavement materials design, fatigue endurance limit, airfield pavement design, analysis of Superheavy load movement on flexible pavements, advanced pavement laboratory characterization, field performance evaluation, maintenance and rehabilitation techniques, pavement management systems, cement treated bases, statistical analyses, modeling, and computer applications in civil engineering. Dr. Souliman has participated in several national research projects such as the FHWA Project titled “*Analysis Procedures for Evaluating Superheavy Load Movement on Flexible Pavements*” as well Asphalt Research Consortium (ARC) Projects including “*Design System for HMA Containing a High Percentage of RAP Material*”. Dr. Souliman had also worked at Arizona State University NCHRP 9-44A project entitled “*Validating an Endurance Limit for HMA Pavements: Laboratory Experiment and Algorithm Development*”. Dr. Souliman has more than 50 technical publications, conference papers and reports in the field of pavement and aggregate testing and characterization.

# Areas of Research Interests

## Endurance Limit for Fatigue Resistant Asphalt Materials:

- Determine fatigue life of WMA, AR, fiber-reinforced asphalt mixtures
- Develop healing model to predict endurance limit for such mixtures



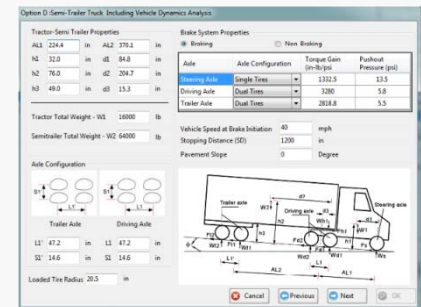
## Tyler Bike Lane Project:

- Develop an engineered criteria on selecting potential roads for bike lanes
- Develop a hub-and-spoke bike lane map for the city of Tyler to be implemented in Texas



## Mechanistic and Economical Characteristics of Sustainable Asphalt Mixtures :

- Perform mechanistic analysis of different asphalt mixtures using finite element pavement software packages
- Perform life cycle cost assessments of such mixtures compared to conventional HMA



## Select Publications:

- **Souliman, M. I.**, Eifert, A., “Mechanistic and Economical Characteristics of Asphalt Rubber Mixtures” *Advances in Civil Engineering*, Volume 2016 (2016), Article ID 8647801, <http://dx.doi.org/10.1155/2016/8647801>. pp. 1-6.
- **Souliman, M. I.**, Zeiada, W. A., Mamlouk, M. S., and Kaloush, K. E., “Laboratory Validation of Healing-Based Fatigue Endurance Limit for HMA” *Transportation Research Record No. 2373*, 2013, p.1-10.
- **Souliman, M. I.**, Zeiada, W. A., Mamlouk, M. S., and Kaloush, K. E., “Fatigue Endurance Limit for HMA Based on Healing” *Association of Asphalt Paving Technologists*, Denver, CO, 2013, Vol. 82, pp 503-531
- Mamlouk, M. S., **Souliman, M. I.**, “Reducing Inconsistency of HMA Flexure Fatigue Testing” *ASCE Journal of Materials in Civil Engineering*, 2015, Volume 28, Issue 2, pp. 04015131,1-8.
- Mamlouk, M. S., **Souliman, M. I.**, Zeiada, W. A., and Kaloush, K. E., “Refining of Fatigue Testing of Hot Mix Asphalt” *Advances in Civil Engineering Materials ASTM Journal*, Volume 1, Issue 1, 2012, pp. 218-230.

