



Kai-Weir (Victor) Liu

Position: Instructor of Engineering / Program Coordinator

Phone: 409-944-1328

Office: N-320

Email: kliu@gc.edu

[Search for Classes](#)

INSTITUTIONS ATTENDED

Texas A&M University

Doctorate- Civil Engineering

May 2015

Texas A&M University

Master- Civil Engineering

December 2009

National Chen Kung University

Master- Civil Engineering

June 2004

POSITIONS HELD

Visiting Assistant Professor

Texas A&M University- Corpus Christi

September 2020- August 2021

Assistant Research Scientist and Lab Manager

Texas A&M Transportation Institute

February 2020- August 2020

Assistant Transportation Researcher and Lab Manager

Texas A&M Transportation Institute

September 2019- January 2020

Assistant Transportation Researcher

Texas A&M Transportation Institute

November 2016- August 2019

Post-Doctoral Research Associate

Texas A&M Transportation Institute

June 2015- October 2016

Civil Engineer
Lee Ming Construction CO., LTD
March 2007- June 2007

Corporal Engineer
Republic of China Army
October 2004- January 2006

CERTIFICATION

Texas Board of Professional Engineers and Land Surveyors
Engineer-In-Training
2015-2023

SELECTED PUBLICATION

Seal Coat Binder Rate Adjustments using LiDAR Data. Technical Report FHWA/TX-21/5-6963-01-R1, Texas Department of Transportation and Texas A&M Transportation Institute, 2021.

Determine Proper Selection of Ride Quality Pay Adjustment Schedule and Re-evaluation of Current Bonus/Penalty Structure. Technical Report FHWA/TX-21/0-6986-R1, Texas Department of Transportation and Texas A&M Transportation Institute, 2020.

α -Periodicity is spontaneously phased in an acicular sulfuric-recrystallized precipitate of copper phthalocyanine. European Journal of Applied Sciences 8(6): 81-92, 2020.

Management of chip seal through binder rate adjustments predicted by LiDAR reflectivity data. Management 3(5): 30-39, 2020.

Direct determination of cement composition by x-ray diffraction. Technical Report FHWA/TX-19/0-6941-R1, Texas Department of Transportation and Texas A&M Transportation Institute, 2019.

An evaluation of the reduction of heat loss enabled by halloysite modification of oilwell cement. Engineering Research Express 1(2): 025028, 2019.

An innovative approach to fly ash characterization and evaluation to prevent alkali-silica reaction. ACI Materials Journals 116(4): 173-181, 2019.

An innovative self-weld framework of microscale copper phthalocyanine. SCIREA Journal of Materials 4(1): 1-13, 2019.

Chemical approaches to prevent alkali-silica reaction in concrete – A review. Engineering Solid Mechanics 6(3): 201-208, 2018.

Further validation of ASR testing and approach for formulating ASR-resistant mix. Technical Report FHWA/TX-18/0-6656-01-R1, Texas Department of Transportation and Federal Highway Administration, 2018.

The use of chemical admixtures to prevent delayed ettringite formation in concrete. American Research Journal of Civil and Structural Engineering 2(1): 1-6, 2018.

Mix design formulation and evaluation of Portland cement concrete paving mixtures containing reclaimed asphalt pavement. Construction and Building Materials 151: 756-768, 2017.

Application of nanotechnology to control ASR in Portland cement concrete. In Nanotechnology in Construction. Springer International Publishing, pp. 465-471, 2015.

Accelerated concrete-cylinder test for alkali-silica reaction. *ASTM Journal of Testing and Evaluation* 44(3): 1-10, 2015.

A kinetic-based ASR aggregate classification system. *Construction and Building Materials* 68: 525-534, 2014.

Alkali-silica reaction in a form of chemical shrinkage. *Civil Engineering and Architecture* 2(6): 235-244, 2014.

ASR testing: a new approach to aggregate classification and mix design verification. Technical Report FHWA/TX-14/0-6656-1, Texas Department of Transportation and Federal Highway Administration, 2014.

Synthesis of current research on permeable friction courses performance, design, construction, and maintenance. Technical Report FHWA/TX-10/0-5836-1, Texas Department of Transportation and Federal Highway Administration, 2010.