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**BACKGROUND**

Dr. Ling is a postdoctoral research associate at the National Concrete Pavement Technology Center at the Institute for Transportation. Over the past four years, he has worked in the concrete material field. His research interests include concrete-related topics, material characterization, mechanical and durability testing, and alkali-activated composites.

**EDUCATION**

- PhD, Civil Engineering, Iowa State University, Ames, IA, 2018
- MS, Materials Science and Engineering, Worcester Polytechnic Institute, Worcester, MA, 2014
- BS, Materials Science and Engineering, Kunming University of Science and Technology, Yunnan, 2012

**PROFESSIONAL EXPERIENCE**

- Postdoctoral Research Associate, Institute for Transportation, Iowa State University, Ames, IA, 2018–present
- Instructor, Department of Civil, Construction, and Environmental Engineering, Iowa State University, Ames, IA, 2018
- Research Assistant, Department of Civil, Construction, and Environmental Engineering, Iowa State University, Ames, IA, 2015–2018
- Teaching Assistant, Department of Civil, Construction, and Environmental Engineering, Iowa State University, Ames, IA, 2015–2018

**SELECTED RESEARCH PROJECTS**

- Researcher, *Investigation into shrinkage of high-performance concrete used for Iowa bridge decks and overlays*, sponsored by Iowa Department of Transportation, 2016–present
- Researcher, *Pervious concrete physical characteristics and effectiveness in stormwater pollution reduction*, sponsored by Midwest Transportation Center and the U.S. Department of Transportation, 2015–2016
- Researcher, *Entrained Air Void System for Durable Highway Concrete*, sponsored by National Cooperative Highway Research Program, 2018– present
- Researcher, *Performance Engineered Mixtures*, sponsored by Federal Highway Administration, 2018– present
- Researcher, *Initial Characterization of Geopolymer Based UHPC Material Properties*, sponsored by Midwest Transportation Center, 2017–2018

- Researcher, *Evaluation of Penetrating Sealers for Concrete*, sponsored by Iowa Department of Transportation, 2019-present

## SELECTED PUBLICATIONS

- Ling, Y., Wang, K., Li, W., Shi, G., and Lu, P. 2019. Effect of slag on the mechanical properties and bond strength of fly ash-based engineered geopolymer composites. *Composites Part B*, Vol. 164, pp. 747–757.
- Ling, Y., Wang, K., and Fu, C. 2019. Shrinkage behavior of fly ash based geopolymer pastes with and without shrinkage reducing admixture. *Cement and Concrete Composites*, Vol. 98, pp. 74–82.
- Ling, Y., Wang, K., Wang, X. 2019. Prediction of strength, setting time and geopolymerization heat of fly ash geopolymer using artificial neural network. *Neural Computing & Applications*, doi:10.1007/s00521-019-04662-3.
- Ling, Y., Wang, K., Wang, X., Hua, S. 2019. Effects of mix design parameters on heat of geopolymerization, set time, and compressive strength of high calcium fly ash geopolymer. *Construction and Building Materials*, Vol. 228.
- Ling, Y., Zhang, P., Wang, J., Chen, Y. 2019. Effect of PVA fiber on mechanical properties of cementitious composite with and without nano-SiO<sub>2</sub>. *Construction and Building Materials*, Vol. 229.
- Ling, Y., Zhang, P., Wang, J., Shi, Y. 2020. Effect of sand size on mechanical performance of cement-based composite containing PVA fibers and nano-SiO<sub>2</sub>. *Materials*, Vol. 13, No. 2, 325 pp.
- Zhang, P., Ling, Y., Wang, J., Shi, Y. 2019. Bending resistance of PVA fiber reinforced cementitious composites containing nano-SiO<sub>2</sub>. *Nanotechnology Reviews*, Vol. 8, No. 1, pp. 690–698.
- Zhao, Y., Sun, X., Cao, P., Ling, Y., Gao, Z., Zhan, Q., Zhou, X., Diao, M. 2019. Mechanical performance and numerical simulation of basalt fiber reinforced concrete (BFRC) using double-K fracture model and virtual crack closure technique (VCCT). *Advances in Civil Engineering*, doi: 10.1155/2019/5630805.
- Sun, X., Gao, Z., Cao, P., Zhou, C., Ling, Y., Wang, X., Zhao, Y. Mushuang Diao. 2019. Fracture performance and numerical simulation of basalt fiber reinforced concrete using three-point bending test on notched beam. *Construction and Building Materials*, Vol. 225, pp. 788-800.
- Zhang, P., Li, Q., Chen, Y., Shi, Y., Ling, Y. 2019. Durability of steel fiber-reinforced concrete containing SiO<sub>2</sub> nano-particles. *Materials*, Vol. 12, No. 13, 2184 pp.
- Liu, T., Zhang, P., Wang, J., Ling, Y. 2020. Compressive strength prediction of PVA fiber-reinforced cementitious composites containing nano-SiO<sub>2</sub> using BP neural network. *Materials*, Vol. 13, No. 3, 521 pp.
- Fu, C., Ling, Y., Ye, H., Jin, X. 2019. Chloride resistance and binding capacity of cementitious materials containing high volumes of fly ash and slag, *Magazine of Concrete Research*, Vol. 0, No. 0:0, pp. 1–14.
- Zhang, P., Li, Q., Wang, J., Shi, Y., Ling, Y. 2019. Effect of PVA fiber on durability of cementitious composite containing nano-SiO<sub>2</sub>. *Nanotechnology Reviews*, Vol. 8, No. 1, pp. 116–127.
- Zhang, P., Li, Q., Wang, J., Shi, Y., Zheng, Y., Ling, Y. 2020. Effect of nano-particle on durability of PVA fiber reinforced cementitious composite. *Science of Advanced Materials*, Vol. 12, pp. 249–262.
- Ong, S., Wang, K., Ling, Y., and Shi, G. 2016. *Pervious Concrete Physical Characteristics and*

*Effectiveness in Stormwater Pollution Reduction*. Institute for Transportation, Iowa State University, Ames, IA.

- Shen, J., Lu, P., Ling, Y., and Faytarouni, M. 2018. *Initial Characterization of Geopolymer-Based UHPC Material Properties*. Institute for Transportation, Iowa State University, Ames, IA.

#### **PROFESSIONAL AFFILIATIONS, HONORS, AND SERVICE**

- Reviewer, *Construction and Building Materials*
- Reviewer, *Materials*
- Reviewer, *Crystals*
- Reviewer, *Applied Sciences*
- Reviewer, *Advances in Civil Engineering*
- Reviewer, *Advances in Civil Engineering Materials*