

## CURRICULUM VITAE

### LIN LI, Ph.D., P.E., F. ASCE

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## EDUCATION

- Ph.D., Civil Engineering, University of Wisconsin-Madison, 2004
- M.Phil., Civil Engineering, University of Hong Kong, China, 1998
- M.S., Civil Engineering, Zhongshan University, Guangzhou, China, 1994
- B.S., Civil Engineering, Zhongshan University, Guangzhou, China, 1991

## REGISTRATION

- Professional Engineer, State of Wisconsin, License No. 37691-006 (continuous since 2005)
- Professional Engineer, State of Mississippi, License No. 17597 (continuous since 2006)

## ACADEMIC EXPERIENCE

### **Jackson State University**

<i>Professor</i> , Department of Civil and Environmental Engineering	2017 to date
<i>Associate Professor</i> , Department of Civil and Environmental Engineering	2011 to 2017
<i>Assistant Professor</i> , Department of Civil and Environmental Engineering	2005 to 2011

### **University of Wisconsin-Madison**

<i>Postdoctoral Research Associate</i> , Geological Engineering Program	2004 to 2005
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### **University of Wisconsin-Madison**

<i>Research Assistant</i> , Department of Civil and Environmental Engineering	1999 to 2004
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### **University of Hong Kong**

<i>Research Assistant</i> , Department of Civil Engineering	1997 to 1999
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### **Chinese Academy of Science**

<i>Research Scientist</i> , South China Sea Institute of Oceanology	1994 to 1997
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### **Zhongshan (Sun Yat Sen) University**

<i>Research/Teaching Assistant</i> , Department of Civil Engineering	1991 to 1994
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## RESEARCH AREAS

- *Geotechnical Engineering for Sustainable and Resilient Infrastructure*: Innovative Materials and Design for Environmental Sustainability, Levee Strengthening and Protection, Recycling Infrastructure Materials, Infrastructure Resilience to Disasters
- *Bio-inspired Soil Modification*: Microbial-Induced Carbonate Precipitation, Bio-beams/bio-bricks
- *Geoenvironmental Engineering*: Subsurface Flow and Contaminant Transport, Waste Utilities Design, Soil Remediation, Reactive Transport Modeling

## RESEARCH GRANTS

1. **Principal Investigator** (Co-PIs: Yin, J., Amini, F., Kwembe, T.), Investigating the Effect of Active Flipped Learning in STEM Education, \$350,000, **National Science Foundation (NSF)**, 2016-2019.
2. **Principal Investigator** (Co-PIs: Amini, F., Hamme, A., Walters, W.), MRI: Acquisition of a Multi-Beam SEM/FIB for Multidisciplinary Materials Study and Training, \$800,014, **NSF**, 2015-2018.
3. **Principal Investigator**, Innovative Bio-Mediated Particulate Materials for Sustainable Maritime Transportation Infrastructure; \$50,000, US Department of Transportation (**USDOT**) Maritime Transportation Research and Education Center (MarTREC), 2015-2017.
4. **Co-PI** (PI: Li, Y.), Exploration of Novel Multifunctional Open Graded Friction Courses (MOGFC) for In-situ Highway Runoff Treatment, \$48,102, **USDOT** MarTREC, 2014-2015.
5. **Principal Investigator**, National Summer Transportation Institute, \$318,000, **FHWA** and Mississippi **DOT**, 2013-2017.
6. **Co-Principal Investigator** (PI: Li, Y.), MRI: Acquisition of an ICP-OES for Multidisciplinary Environmental Studies and Training, \$245,877, **NSF**, 2010-2013.
7. **Co-Principal Investigator** (PI: Amini, F.), High Performance Turf Reinforcement Mat Strengthened Levee under Combined Wave and Storm Surge Turbulent Overtopping Conditions, \$450,000, **US Department of Homeland Security**, 2011-2013.
8. **Co-Principal Investigator** (PI: Amini, F.), Innovative Levee Strengthening and Testing under Full Scale Overtopping Conditions, \$1,000,000, **US Department of Homeland Security**, 2009-2011.
9. **Co-Principal Investigator** (PI: Wang, F.), Assessment of Critical Transportation Infrastructure, \$712,500, **US Department of Transportation**, 2010-2012.
10. **Principal Investigator**, Using WiscLEACH to Estimate Groundwater Impacts from Coal Combustion Products in Structural Fills, \$66,118, **FHWA** Recycled Materials Resource Center, 2010-2011.
11. **Principal Investigator**, Innovative Green Highway Construction Rating System in Mississippi, \$35,000, **Federal Transit Administration** and Institute for Multimodal Transportation, 2010-2011.
12. **Principal Investigator**, Using WiscLEACH to Estimate Groundwater Impacts from Coal Combustion Products in Highway Construction, \$29,533, **FHWA** Recycled Materials Resource Center, 2008-2009.
13. **Co-Principal Investigator** (PI: Amini, F.), Lake Chicot Visitor Center Display, \$12,425, **U.S. Army Corps of Engineer**, 2007-2008.
14. **Principal Investigator**, Enhanced K-12 Outreach for Metropolitan Transportation Education, \$10,159, **Federal Transit Administration** and Institute for Multimodal Transportation, 2007-2008.

**Total Funding Amount = \$4,127,728.00**

## HONORS/AWARDS/RECOGNITION

- State of Mississippi, HEADWAE Award, November 2017
- TRB Minority Student Fellow Advisor Award (Karayan Cole), January 2018.
- Selected as Fellow of ASCE, June 2017.
- High Grant Award Winner, Jackson State University, March 2017.
- Excellence Teaching/Advising Award, Jackson State University, April 2015.
- TRB Minority Student Fellow Advisor Award (Alesha Jackson), January 2015.
- Faculty Excellence Award, Jackson State University, April 2014.

- TRB Minority Student Fellow Advisor Award (Stacy Holton), January 2013.
- Richard S. Ladd D18 Standards Development Award, ASTM Committee D18 on Soil and Rock, June 2012.
- 2<sup>nd</sup> Best Paper Award, 9th National Conference on Access Management, 2010.
- Excellence Research Award, Jackson State University, August 2009.
- Report on Mississippi #1 new website [www.clarionledger.com](http://www.clarionledger.com) for the U.S Department of Homeland Security funded levee project on April 27, 2009.
- Outstanding Achievement Award for Teaching, College of Science, Engineering, and Technology, Jackson State University, December 2008.
- Cover story of *Vadose Zone Journal* on September 2006 (Volume 5, Issue 4)
- Report in *Crops, Soils, Acronomy CSA News* in December 2006 (Volume 51, Issue 12)
- Vilas Fellowship, University of Wisconsin-Madison (2003, 2002)
- Becker Travel Award, University of Wisconsin-Madison (2003)
- Best Paper Award, South China Sea Institute of Oceanology, China (1995)
- Honor of Excellent Graduate Student, Zhongshan University, China (1993)
- Zeng xianzi Award, Guangdong Province, China (1993)
- Graduate School Fellowship, Zhongshan University, China (1992)
- Graduation with Highest Honors, Zhongshan University, China (1991)

## PATENTS

- In situ remediation method for leaking in concrete dam, China Patent No. 2205842
- Leaking remediation method for earthen dam, China Patent No. 2133482
- Innovative sample preparation for bio-inspired soil enhancement, Patent pending

## PUBLICATIONS

**Peer Reviewed Journal Articles** (\*: student supervised; underline: corresponding author; IF: 2017 impact factor)

1. Wen, K.\*, Bu, C. \*, Liu, S. \*, Li, Y., and Li, L., (Submitted in 10/2017), Experimental Investigation of Flexure Resistance Performance of Bio-Beams Reinforced with Discrete Randomly Distributed Fiber and Bamboo, *Construction and Building Materials*, submitted for review.
2. Wen, K.\*, Li, L., Li, Y., Bu, C., Li, C., and Amini, F., (Submitted in 8/2017), Effects of Multiple MICP Treatment on Sandy Soil with Lower Cementation Media Concentration, *Geotechnical and Geological Engineering*, submitted for review.
3. Li, C.\*, Li, H., Zhou, T., Liu, S.\*, and Li, L., (Submitted in 7/2017), An Improved Rotating Soak Method for MICP-treated Fine Sand in Specimen Preparation, *Geotechnical Testing Journal*, revised and resubmitted.
4. Wen, K.\*, Li, Y., Liu, S., Bu, C., and Li, L., (Submitted in 7/2017), Evaluation of Microbial Induced Calcite Precipitation Treatment Efficiency with pH change in Urea Hydrolyzed Process, *Geomicrobiology Journal*, revised and resubmitted.
5. Bu, C. \*, Wen, K.\*, Liu, S. \*, and Li, L., (Submitted in 7/2017), Development of Bio-Beams and Bio-Bricks through Microbial Induced Calcite Precipitation, *Materials and Structures*, submitted for review.
6. Bu, C. \*, Wen, K.\*, Liu, S. \*, Ogbannaya, U. \*, Li, L. and Amini, F., (Submitted in 4/2017), Development of a Rigid Full Contact Mold for Preparing Bio-Beams through Microbial Induced Calcite Precipitation, *Geotechnical Testing Method*, ASTM, submitted for review.

7. Li, C.\*, Yao, D., Liu, S.\*, Zhou, T., Bai, S., Gao, Y., and **Li, L.**, 2017, Improvement of Geomechanical Properties of Bio-remediated Aeolian Sand, *Geomicrobiology Journal*, DOI: 10.1080/01490451.2017.1338798.
8. Xu, Y.\*, Li, J., Fan, H., Chen, L., Zhao, Y., and **Li, L.**, 2017, Stability Analysis of Clastic Rock Slope with Mudstone Interlayer under Rainfall Infiltration, *Journal of Geotechnical and Geological Engineering*, 35(4): 1871-1883.
9. Li, M.\*, Wen, K. \*, **Li, L.** and Tian, A., 2017, Mechanical Properties of Expanded Polystyrene Beads Stabilized Lightweight Soil, *Journal of Geomechanics and Geoengineering*, 13(3): 459-474.
10. Bao, R., Li, J., **Li, L.**, Cutright, T.J., Chen, L, Zhu, J. and Tao, J., 2017, Effect of Microbial Induced Calcite Precipitation on Surface Erosion of Granular Soils: Proof of Concept, *Journal of Transportation Research Board* (IF=0.556), accepted, In Print.
11. Li, C.\*, Yao, D., Wang, Z., Liu, C., Wuliji, N., Yang, L., **Li, L.**, and Amini, F., 2016, Model Test on Rainfall-induced Loess–mudstone Interfacial Landslides in Qingshuihe, China, *Environmental Earth Sciences* (IF=1.059), 75(9): 835, doi:10.1007/s12665-016-5658-6.
12. Li, C.\*, Zhu, W., **Li, L.**, Lu, B, Yao, D., and Amini, F., 2016, A Study on Dynamic Initiation Mechanism of Debris Flows through Geotechnical Tests, *Journal of Mountain Science* (IF=1.015), 26(13): 581-592.
13. Pan, Y.\*, **Li, L.**, Amini, F., Kuang, C.P., and Chen, Y. 2016, New Understanding on the Distribution of Individual Wave Overtopping Volumes over a Levee under Negative Freeboard, *Journal of Coastal Research* (IF=1.017), 75: 1207-1211.
14. Li, M.\*, **Li, L.**, Ogbonnaya, U.\*, Wen, K.\*, Tian, A., and Amini, F., 2015, Impacts of Randomly Distributed Discrete Fiber on Geomechanical Properties of MICP-treated Sand, *Journal of Materials in Civil Engineering*, ASCE (IF=1.43), 28(4): DOI: 10.1061/(ASCE)MT.1943-5533.0001442.
15. Yuan, S.\*, Tang, H., **Li, L.**, Amini, F., 2015, Combined Wave and Surge Overtopping Erosion Failure Model of HPTRM Levees: Accounting for Grass-Mat Strength, *Ocean Engineering* (IF=1.488), 109, 256-269.
16. Pan, Y.\*, Kuang, C.P., **Li, L.**, and Amini, F., 2015, Full-scale Laboratory Study on Distribution of Individual Wave Overtopping Volumes over a Levee under Negative Freeboard, *Coastal Engineering* (IF=2.841), 97: 11-20.
17. **Li, L.**, Shao, W.\*, Cetin, B., and Li, Y., 2015, Effects of Climatic Factors on Mechanical Properties of Cement and Fiber Reinforced Clays, *Journal of Geotechnical and Geological Engineering* (IF=1.254), 33, 537-548.
18. **Li, L.**, Rao, X.\*, Amini, F., and Tang, H., 2015, SPH Modeling of Hydraulics and Erosion of HPTRM Levee, *Journal of Advanced Research in Ocean Engineering*, 1 (1), 1-13.
19. **Li, L.**, Yuan, S.\*, Amini, F., Tang, H., 2015, Numerical Study of Combined Wave Overtopping and Storm Surge Overflow of HPTRM Strengthened Levee, *Ocean Engineering* (IF=1.488), 97, 1-11.
20. Pan, Y.\*, **Li, L.**, Amini, F., and Kuang, C.P., 2015, Overtopping Erosion and Failure Mechanics of Earthen Levees Strengthened by Vegetated HPTRM system, *Ocean Engineering* (IF=1.488), 96, 139-148.
21. Li, C.\*, Huang, H., **Li, L.**, Gao, Y., Ma, Y., and Amini, F., 2015, Geotechnical Hazards Assessment on Wind-eroded Desert Embankment in Inner Mongolia Autonomous Region, North China, *Natural Hazards* (IF=1.746), 76 (1), 235-257.
22. **Li, L.**, Amini, F., and Wu, J.\*, 2015, Turbulence and Seepage Effect on the Slope Stability of Earthen Levee Strengthened by High Performance Turf Reinforcement Mat, *Journal of Geotechnical and Geological Engineering* (IF=1.254), 33 (1), 1-13.
23. Yuan, S.\*, **Li, L.**, Amini, F., Tang, H., 2014, Sensitivity of Combined Turbulent Wave Overtopping and Storm Surge Overflow Response to Variations in Levee Geometry, *Journal of Coastal Research* (IF=1.017), 31 (3), 702-713.

24. Li, Y., **Li, L.**, Cordero-Zayas, S.\*, Santo, F.\*, and Yaeger, J. H.\*, 2014, Environmental Impact of Fly Ash Utilization in Roadway Embankments, *Journal of Material Cycles and Waste Management* (IF=1.422), 16, 591-596.
25. Shao, W.\*, **Li, L.**, Cetin, B., and Li, Y., 2014, Experimental Investigation of Mechanical Properties of Sands Reinforced with Discrete Randomly Distributed Fiber, *Journal of Geotechnical and Geological Engineering* (IF=1.254), 32(4): 901-910.
26. Zhao, Q.\*, **Li, L.**, Li, C., Zhang, H., and Amini, F., 2014, A Full Contact Flexible Mold for Preparing Samples Based on Microbial Induced Calcite Precipitation Technology, *Geotechnical Testing Journal* (IF=0.663), 37(5), DOI: 10.1520/GTJ20130090.
27. Yuan, S.\*, **Li, L.**, Amini, F., and Tang, H., 2014, Numerical Study of Turbulence and Erosion of an HPTRM Strengthened Levee under Combined Storm Surge Overflow and Wave Overtopping, *Journal of Coastal Research* (IF=1.017), 30(1): 142-157.
28. Zhao, Q.\*, **Li, L.**, Li, C., Li, M., Zhang, H., and Amini, F., 2014, Factors Effecting Improvement of Engineering Properties of MICP-treated Soil Catalyzed by Bacteria and Urease, *Journal of Materials in Civil Engineering*, ASCE (IF=1.43), 26 (12), 04014094.
29. Yuan, S.\*, **Li, L.**, Amini, F., Tang, H., 2014, Turbulence Measurement of Combined Wave and Surge Overtopping over a Full Scale HPTRM Strengthened Levee, *Journal of Waterways, Coastal and Ocean Engineering*, ASCE (IF=1.53), 140(4): 04014014.
30. **Li, L.**, Amini, F., Pan, Y.\*, Kuang, C.P., and Briaud, J., 2014, Erosion Resistance of HPTRM Strengthened Levee from Combined Wave and Surge Overtopping, *Journal of Geotechnical and Geological Engineering* (IF=1.254), 32(4):847-857.
31. **Li, L.**, Amini, F., Rao, X.\*, and Tang, H., 2013, SPH Study of Surge Overflow and Hydraulic Erosion of Earthen Levee Armored by Articulated Concrete Blocks, *Current Development in Oceanography* (IF=0.675), 6(2): 61-80.
32. Cetin, B.\*, Adyilek, A. H., and **Li, L.**, 2013, Trace Metal Leaching from Embankment Soils Amended with High Carbon Fly Ash, *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE (IF=1.696), 140(1): 1-13.
33. Cetin, B.\*, Adyilek, A. H., and **Li, L.**, 2013, Leaching Behavior of Aluminum, Arsenic, and Chromium from Highway Structural Fills Amended with High-Carbon Fly Ash, *Journal of Transportation Research Board* (IF=0.556), 2349:72-80.
34. Amini, F., **Li, L.**, and Xu, Y.\*, 2013, Two-Dimensional Slope Stability Analysis of Earthen Levee Strengthened by Articulated Concrete Block System under Hurricane Overtopping Flow Conditions, *International Journal of Geotechnical Engineering* (IF=0.77), 7(2):178-186.
35. Pan, Y.\*, **Li, L.**, Amini, F., and Kuang, C.P., 2013, Comparison of the Hydraulic Performances of Three Levee-Strengthening Systems and Hydraulic Equivalency Analysis between Steady and Intermittent Overtopping, *Journal of Waterways, Coastal and Ocean Engineering*, ASCE (IF=1.53), 139(4): 256-266.
36. Pan, Y.\*, **Li, L.**, Amini, F., and Kuang, C.P., 2013, Full Scale HPTRM Strengthened Levee Testing under Combined Wave and Surge Overtopping Conditions: Overtopping Hydraulics, Shear Stress and Erosion Analysis, *Journal of Coastal Research* (IF=1.017), 29(1): 182-200.
37. **Li, L.**, Amini, F., Rao, X.\*, and Tang, H., 2012, SPH Modeling of Surge Overflow over RCC Strengthened Levee, *International Journal of Oceans Systems Engineering*, 2(4): 200-208.
38. **Li, L.**, Pan, Y.\*, Kuang, C.P., and Amini, F., 2012, Full Scale Laboratory Study of Combined Wave and Surge Overtopping of a Levee with RCC Strengthening System, *Ocean Engineering* (IF=1.488), 54(1): 70-86.
39. Xu, Y.\*, **Li, L.**, and Amini, F., 2012, Slope Stability Analysis of Earthen Levee Strengthened by Roller-Compacted Concrete under Hurricane Overtopping Flow Conditions, *Geomechanics and Geoengineering* (IF=0.87), 8(2): 76-85.
40. Xu, Y.\*, **Li, L.**, and Amini, F., 2012, Slope Stability Analysis of Earthen Levee Strengthened by High Performance Turf Reinforcement Mat under Hurricane Overtopping Flow Conditions, *Journal of Geotechnical and Geological Engineering* (IF=1.254), 30: 893-905.

41. Rao, X.\*, **Li, L.**, Amini, F., and Tang, H., 2012, Smoothed Particle Hydrodynamics Modeling of Combined Wave and Surge Overtopping and Hydraulic Erosion of an Articulated Concrete Block-Strengthened Levee System, *Journal of Coastal Research* (IF=1.017), 28(6):1500-1511.
42. Rao, X.\*, **Li, L.**, Amini, F., and Tang, H., 2012, Numerical Study of Combined Wave and Surge Overtopping over RCC Strengthened Levee System using Smoothed Particle Hydrodynamics Method, *Ocean Engineering* (IF=1.488), 54: 101-109.
43. Cetin, B.\*, Adyilek, A. H., and **Li, L.**, 2012, Experimental and Numerical Analysis of Metal Leaching from Fly Ash-amended Highway Bases, *Waste Management* (IF=3.22), 32(5): 965-978.
44. **Li, L.**, Peng, B.\*, Santos, F.\*, Li, Y., and Amini, F., 2011, Groundwater Impacts from Leaching of Coal Combustion Products in Roadways Embankment Constructions, *Journal of ASTM International* (IF=0.423), 8(8): 1-12.
45. **Li, L.**, and Benson, C.H., 2010, Evaluation of Five Strategies to Limit the Impact of Fouling in Permeable Reactive Barriers, *Journal of Hazardous Materials* (IF=4.679), 181: 170-180.
46. **Li, L.**, Benson, C.H., and Edil, T.B., 2009, Mechanical Performance of Pavement Geomaterials Stabilized with Fly Ash in Field Applications, *Coal Combustion and Gasification Products*, 1: 43-49.
47. Li, Y., Richardson, J.B.\*, Niu, X.\*, Yang, H., **Li, L.**, Bricka, R.M., Jackson, O.J., Jimenez, A., and Laster, J.D., 2009, Leaching of Heavy Metals from E-waste in Simulated Landfill Columns, *Waste Management* (IF=3.22), 29: 2147-2150.
48. **Li, L.**, Benson, C.H., Edil, T. B., and Hatipoglu, B., 2008, Sustainable Construction Case History: Fly Ash Stabilization of Recycled Asphalt Pavement Material, *Journal of Geotechnical and Geological Engineering* (IF=1.254), 26: 177-187.
49. **Li, L.**, Benson, C.H., Edil, T. B., and Hatipoglu, B., 2006, Groundwater Impact from Coal Ash in Highways, *Waste and Resource Management* (IF=0.79), 159(4): 151-162.
50. **Li, L.**, Benson, C.H., and Lawson, E.A., 2006, Modeling Porosity Reductions Caused by Mineral Fouling in Continuous-Wall Permeable Reactive Barriers, *Journal of Contaminant Hydrology* (IF=2.204), 83(1-2): 89-121.
51. **Li, L.**, Benson, C.H., and Lawson, E.A., 2005, Impact of Mineral Fouling on Hydraulic Behavior of Permeable Reactive Barriers, *Ground Water* (IF=1.947), 43(4): 582-596.
52. Eykholt, G.R. and **Li, L.**, 2000, Fate and Transport of Species in a Linear Reaction Networks with Different Retardation Coefficients, *Journal of Contaminant Hydrology* (IF=2.204), 46:163-185.
53. Lee, J., **Li, L.** and Cheung, V., 1999, Semianalytical Self-Similar Solution of Bent-Over Jet in Cross-Flow, *Journal of Engineering Mechanics*, ASCE (IF=1.173), 125 (7): 733-746.
54. Zhang, D., **Li, L.** and Huang, H., 1999, Stability of Multiple Equilibria in Thermohaline Double-Diffusive System, *Acta Mechanica Sinica* (IF=0.832), 31 (1): 21-28. (In Chinese)
55. **Li, L.**, Huang, X., and Wen, W., 1997, Application of the Seawater Carbonate Buffer Model in the Prediction of Water Quality, *Tropic Oceanology*, 16 (3): 1-7. (In Chinese)
56. Huang, H., Zhang, D., and **Li, L.**, 1997, The Second Order Nonlinear Periodic Convection & Its Stability Analysis of Thermohaline Double-Diffusive System, *Journal of Hydrodynamics, Ser. B.* (IF=1.475), 1: 24-33.
57. Huang, H., **Li, L.** and Zhang, D., 1996, FDM-FEM Operator-Splitting Method with High Order Accuracy for Convection-Diffusion Equation, *ACTA Scientiarum Naturalium Universitatis Sunyatseni*, 35 (2): 10-17. (In Chinese)
58. Zhang, D., **Li, L.** and Huang, H., 1996, Stability Analysis of Linear and Nonlinear Periodic Convection in Thermohaline Double-Diffusive Systems, *Applied Mathematics and Mechanics* (IF=0.922), 17 (9): 869-877.
59. Zhang, D., Chen, H., and **Li, L.**, 1995, Penalty Upwind Finite Element Method for Diffusive Convection Problem in Double-Diffusive System, *Journal of Hydrodynamic, Ser. B.* (IF=1.475), 4: 63-71.

60. Zhang, D., **Li, L.**, and Huang, H., 1994, An Analytic Solution of Thermohaline Double-Diffusive System, *Journal of South China University of Technology (Nature Science)*, 22: 84-90. (In Chinese)

#### Chapters (Books)

61. **Li, L.** and Benson, C.H., 2005, Reactive Transport in the Saturated Zone: Case Histories for Permeable Reactive Barriers, *Water Encyclopedia, Volume I - Ground Water*, Jay Lehr and Jack Keeley, eds, John Wiley and Sons Inc., 518-524.
62. Cetin, B., and **Li, L.**, 2017, Waste Minimization and Reuse Technologies, *Handbook of Environmental Engineering*, Myer Kutz eds, John Wiley and Sons Inc., in Print.

#### Standards

63. **Li, L.**, Edil, T.B., and Benson, C.H., 2012, Standard Guide for Laboratory Mix Design for Stabilization of Soil and Soil-like Materials with Fly Ash, Annual Book of Standards, ASTM International, ASTM D7762-11, ISBN# 978-1-6220-4272-2.

#### Referred Conference Papers (\*: student supervised; underline: corresponding author)

64. **Li, L.**, Wen, K., Li, C., and Amini, F., 2017, FIB/SEM Imaging of Microbial Induced Calcite Precipitation in Sandy Soil, Microscopy & Microanalysis Proceedings 23(Suppl 1), 310-311, doi: 10.1017/S1431927617002239.
65. **Li, L.**, and Amini, F., 2017, Concept of the Active Flipped Learning in Engineering Mechanics, International Scholarly and Scientific Research & Innovation, 4(7), 1999.36/75040.
66. Zhou, B., Anderson, C., Wang, F., and **Li, L.**, 2017, Perceptions and Preferences of High School Students in STEM: A Case Study in Connecticut and Mississippi, Proceedings of The 11<sup>th</sup> International Multi-Conference on Society, Cybernetics and Informatics (IMSCI), 175-180.
67. **Li, L.**, Li, M.\*, Ogbonnaya, U., Wen, K.\*, Xu, Y., and Amini, F., 2017, Study of a Discrete Randomly Distributed Fiber on the Tensile Strength Improvement of Microbial-Induced Soil Stabilization, Geotechnical Special Publication, No. 280: 12-19, ASCE.
68. **Li, L.**, Li, M.\*, Ogbonnaya, U., Wen, K.\*, Li, C.\*, and Amini, F., 2016, Experimental Investigation of the Mechanical Properties of MICP-Treated Sands Reinforced with Discrete Randomly Distributed Fiber, Geotechnical Special Publication, No. 269: 52-61, ASCE.
69. Akimana, R.M., Seo, Y., **Li, L.**, Howard, L.J., Dewoolkar, M.M., and Bu, L.B., 2016, Exploring X-Ray Computed Tomography Characterization and Reactive Transport Modelling of Microbially-Induced Calcite Precipitation in Sandy Soils, Geotechnical Special Publication, No. 269: 62-71, ASCE.
70. Chen, J., Soleimanbeigi, A., Zhang, Y., Edil, T.B., and **Li, L.**, 2016, Leaching Characteristics of Recycled Asphalt Shingle Mixed with Industrial Byproducts as Structural Fills, Geotechnical Special Publication, No. 269: 62-71, ASCE.
71. Amini, F., and **Li, L.**, 2015, Slope Stability of an Earthen Levee Strengthened by HPTRM under Turbulent Overtopping Conditions, International Journal of Environmental, Ecological, Geological and Geophysical Engineering, 9(5), 269-272.
72. Pan, Y.\* Amini, F., and **Li, L.**, 2015, Failure Mechanism of Earthen Levee Strengthened by Vegetated HPTRM System and Design Guideline for Hurricane Overtopping Conditions, Geotechnical Special Publication, No. 256: 2452-2461, ASCE.
73. **Li, L.**, Amini, F., Zhao, Q.\*, Li, C.\*, Wen, K.\*, Li, M.\*, and Ogbonnaya, U.\*, 2015, Development of a Flexible Mold for Bio-Mediated Soil Materials, Geotechnical Special Publication, No. 256: 2339-2348, ASCE.
74. **Li, L.**, Zhao, Q.\*, Li, C.\*, and Amini, F. 2015, Development of Full Contact Flexible Mold for Bio-Mediated Soil Improvement, GeoSynthetics 2015, Portland, OR, February 15-18, 2015, Industrial Fabrics Association International, Roseville, MN, pp. 230-235.

75. **Li, L.**, Amini, F., Pan, Y.\* and Li, C.\*, 2014, Stability Monitoring of Articulated Concrete Block Strengthened Levee in Combined Wave and Surge Overtopping Conditions, Geotechnical Special Publication, No. 234: 262-271, ASCE.
76. **Li, L.**, Amini, F., Yuan, S.\*, and Li, C.\*, 2014, Modeling Study of Erosion of HPTRM Strengthened Levee in Turbulent Overtopping Flow Conditions, Geotechnical Special Publication, No. 234: 1052-1061, ASCE.
77. Li, Y., **Li, L.**, Cordero-Zaya, S.\*, Santos, F.\*, and Yaeger, J. H.\*, 2013, Environmental Impact of Fly Ash Utilization in Roadway Embankments, Proceedings of 8th International Conference on Waste Management and Technology, Shanghai, China, Oct. 22-25, 2013.
78. **Li L.**, Amini, F., and Pan, Y.\*, 2013, Design of Earthen Levee Strengthening with HPTRM for Hurricane Overtopping Conditions, Proceeding of Geosynthetics 2013, Long Beach, CA, April 1-4, 2013, Industrial Fabrics Association International, Roseville, MN, pp. 230-234.
79. Pan, Y., Kuang, C., **Li L.**, and Amini, F., Discussion of the Failure Mechanics of Levees under Combined Wave and Surge Overtopping, Proceeding of 2013 IAHR World Congress, Chengdu, China, September 8-13, 2013, Tsinghua University Press, Beijing, pp. 1-7.
80. Amini, F., **Li, L.**, Yuan, S.\*, 2013, Overtopping Turbulent Flow over a Full Scale HPTRM Strengthened Levee, Proceedings of 23<sup>rd</sup> International Offshore and Polar Engineering, pg. 1217-1222.
81. **Li L.**, Amini, F., and Pan, Y.\*, 2013, Design of Earthen Levee Strengthening with HPTRM for Hurricane Overtopping Conditions, Stability and Performance of Slopes and Embankment III, Geotechnical Special Publication, No. 231: 1892-1901, ASCE.
82. Amini, F., **Li, L.**, and Xu, Y.\*, 2013, Slope Stability Analysis of Three Innovative Earthen Levee Strengthening Systems under Hurricane Overtopping Flow Conditions, Stability and Performance of Slopes and Embankment III, Geotechnical Special Publication, No. 231: 1882-1891, ASCE.
83. **Li, L.**, Amini, F., and Pan, Y.\*, 2013, Erosion Resistance of Earthen Levee Strengthened by HPTRM System under Combined Wave and Surge Overtopping Conditions, Geotechnical Special Publication, No. 231: 1885-1894, ASCE.
84. Amini, F. and **Li, L.**, 2013, Performance of RCC Strengthened Levee in Full-Scale Overtopping Tests, USSD 33rd Annual Meeting and Conference, Phoenix, AZ, February 11-15, 2013.
85. Amini, F., **Li, L.**, and Pan, Y.\*, 2012, Performance of HPTRM Strengthened Levee in Full-Scale Overtopping Tests, 5<sup>th</sup> Annual National Dam Security Forum, Denver, CO, September 16-20, 2012.
86. **Li, L.**, Santos, F.\*, Wei, S.\*, Qian, Z.\*, and Amini, F., 2012, Evaluation of Fly Ash and Soil Mixtures for Use in Highway Embankments, Geotechnical Special Publication, No. 225, pg. 3672-3680.
87. Cetin, B., Aydilek, A., and **Li, L.**, 2012, Manganese and Chromium Leaching from High Carbon Fly Ash Amended Embankments, Geotechnical Special Publication, No. 225: 3756-3764, ASCE.
88. Santos, F\*, **Li, L.**, Li, Y.\*, and Amini, F., 2011, Geotechnical Properties of Fly Ash and Soil Mixtures for Use in Highway Embankments, 2011 World of Coal Ash (WOCA) Conference, May 9-12, 2011 in Denver, CO, USA, <http://www.flyash.info/>, pg. 1-10, ISBN 1946-0198.
89. Cetin, B., Aydilek, A., and **Li, L.**, 2011, Leaching of Chromium Metal from High Carbon Fly Ash Stabilized Highway Base Layers, Geotechnical Special Publication, No. 211:1066-1074, ASCE.
90. Rao, X.\*, **Li, L.**, and Amini, F., 2010, Modeling of Surge Overtopping and Hydraulic Erosion of an Earthen Levee Using Smoothed Particle Hydrodynamics, Environmental Geotechnics for Sustainable Development, 1695-1698, Tata McGraw Hill.
91. Rao, X.\*, **Li, L.**, and Amini, F., 2010, Numerical Simulation of Wave Overtopping and Erosion of Levee, 2010 CSCE Annual General Meeting and Conference "Engineering a Sustainable World"-2<sup>nd</sup> Specialty Conference on Disaster Mitigation, Winnipeg, Canada, June 9-12, 2010: DM-09-1-DM-09-5.



92. Rao, X.\*, **Li, L.**, and Amini, F., 2009, Numerical Simulation of Surge Overflow at a Levee using Shallow water SPH Method, *World Academy of Science, Engineering and Technology*, 60: 331-334.
93. **Li, L.**, Edil, T.B., and Benson, C.H., 2009, Properties of Pavement Geomaterials Stabilized with Fly Ash, 2009 World of Coal Ash (WOCA) Conference, May 4-7, 2009 in Lexington, KY, USA, <http://www.flyash.info/>.
94. **Li, L.**, Tastan, O, Benson, C.H., and Edil, T.B., 2009, Field Evaluation of Fly Ash Stabilized Subgrade in US 12 Highway, *Geotechnical Special Publication*, No. 187: 385-392, ASCE.
95. **Li, L.** and Benson, C.H., 2008, Evaluation of Two Strategies to Enhance the Long-Term Hydraulic Performance of Permeable Reactive Barriers, *Geotechnical Special Publication*, No. 177: 587-594, ASCE.
96. **Li, L.**, 2008, Perspective of the state of geoenvironmental engineering, *Proceedings of the U.S.-Japan Geoenvironmental Workshop*, J. L. Hanson, N. Yesiller, T. Katsumi (Eds), page 70-73.
97. **Li, L.**, Benson, C.H., Edil, T. B., Hatipoglu, B., and Tastan, O., 2007, Evaluation of Recycled Asphalt Pavement Material Stabilized with Fly Ash, *Geotechnical Special Publication*, No. 169:1-10, ASCE.
98. **Li, L.**, Benson, C.H., Edil, T. B., and Hatipoglu, B., 2006, WiscLEACH: A Model for Predicting Ground Water Impacts from Fly-Ash Stabilized Layers in Roadways, *Geotechnical Special Publication*, No. 187: 1-8, ASCE.
99. **Li, L.** and Benson, C.H., 2005, Impact of Fouling on the Long-Term Performance of Permeable Reactive Barriers, *Permeable Reactive Barrier*, Boshoff, G. A., and Bone, B. D. (Eds), *International Association of Hydrological Science*, Oxfordshire, UK, Publication 298: 23-31.
100. **Li, L.**, Mergener, E.A., and Benson, C.H., 2003, Reactive Transport Modeling of Mineral Fouling in Permeable Reactive Barriers, *MODFLOW and More 2003: Understanding Through Modeling*, Poeter, D., Zheng, C., Hill, M., Doherty, H. (Eds), *International Ground Water Modeling Center*, 300-304.
101. **Li, L.** and Benson, C.H., 2003, Impact of Mineral Fouling on the Long-Term Performance of Permeable Reactive Barriers, *Eos Trans. AGU*, 84(46), Fall Meeting Suppl.
102. **Li, L.** and Benson, C.H., 2003, Fouling Impact on the Long-Term Performance of Permeable Reactive Barriers, *Proceedings of RTDF PRB Action Team Meeting*, CD-ROM, US. EPA.
103. **Li, L.**, Mergener, E.A., and Benson, C.H., 2002, Assessment of Mineral Precipitation in Permeable Reactive Barriers Using a Geochemical Model, *Eos Trans. AGU*, 83(47), Fall Meeting Suppl.
104. **Li, L.**, Eykholt, G.R., and Benson, C.H., 2001, Reactive Transport From Path3D: A Stream Tube Approach for Heterogeneous Aquifers, *Eos Trans. AGU*, 82(36), Spring Meeting Suppl.
105. **Li, L.**, Lee, J., and Cheung, V, 1999, A Semi-Analytical Self-Similar Solution of a Bent Over Jet in CrossFlow, *Environmental Hydraulics*, Lee, J., Jayawardena, A., Wang, Z. (Eds), *Balkema, Rotterdam*, 123-128.

### Professional Reports

106. **Li, L.**, 2017, Innovative Bio-Mediated Particulate Materials for Sustainable Maritime Transportation Infrastructure, *Maritime Transportation Research and Education Center*, U.S. Department of Transportation, August 15, 2017.
107. Amini, F., and **Li, L.**, 2012, High Performance Turf Reinforcement Mat Strengthened Levee under Combined Wave and Storm Surge Turbulent Overtopping Conditions, *U.S. Department of Homeland Security*, September 30, 2012.
108. Amini, F., and **Li, L.**, 2012, Full-Scale Overtopping Tests on Three Innovative Levee Strengthening Systems, *U.S. Department of Homeland Security*, August 30, 2012.

109. **Li, L.**, Forster, P., and Amini, F., 2011, Mississippi Greenway Rating System: Moving the Concept of Sustainability Forward, Institute for Multimodal Transportation, Jackson State University, September 14, 2011.
110. **Li, L.**, and Benson, C.H., 2009, Assessment of the Roadway Module in IWEM Version 2 (Beta), RMRC Report 09-03, Recycled Materials Resource Center, University of Wisconsin-Madison, Madison, Wisconsin, October 7, 2009, [www.recycledmaterials.org](http://www.recycledmaterials.org).
111. Benson, C. H., Edil, T. B., Ebrahimi, A., Kootstra, B. , **Li, L.**, and Bloom, P, 2009, Use of Fly Ash for Reconstruction of Bituminous Roads, Minnesota Department of Transportation , Report No. MN/RC 2009-27.
112. Edil, T.B., Benson, C.H., **Li, L.**, Mickelson, D., Camargo, F. F., 2009, Comparison of Basic Laboratory Test Results with More Sophisticated Laboratory and In-situ Tests Methods on Soils in Southeastern Wisconsin, Wisconsin Highway Research Program #0092-06-05, Submitted to Wisconsin Department of Transportation, March 21, 2009.
113. **Li, L.**, Edil, T.B., and Benson, C.H., 2008, Soil Test Data Analysis for Marquette Interchange Project, Geo Engineering Report, Department of Civil and Environmental Engineering, University of Wisconsin-Madison.
114. **Li, L.**, Edil, T.B., Benson, C.H., and Hatipoglu, B., 2008, Use of Fly Ash for Reconstruction of Bituminous Roads: Monitoring a Fly-Ash Stabilized pavement material in Waseca, Minnesota, Geo Engineering Report, Department of Civil and Environmental Engineering, University of Wisconsin-Madison.
115. **Li, L.** and Benson, C.H., 2007, Maximum Leachate Flux Estimation for American Landfill, Geo Engineering Report, Department of Civil and Environmental Engineering, University of Wisconsin-Madison.
116. **Li, L.**, Tastan, O., Benson, C.H., Edil, T.B., and Hatipoglu, B., 2006, Monitoring and Field Evaluation of Fly Ash Stabilization of Roadway Subgrade in US 12 Between Cambridge and Fort Atkinson, Wisconsin, Geo Engineering Report, Department of Civil and Environmental Engineering, University of Wisconsin-Madison, Madison, Wisconsin.
117. **Li, L.**, Benson, C.H., and Edil, T.B., 2005, Assessment Groundwater Impact from Coal Combustion Products Used in Highways, Geo Engineering Report, No. 05-22, Department of Civil and Environmental Engineering, University of Wisconsin-Madison.
118. **Li, L.**, Edil, T.B., and Benson, C.H., 2005, Fly ash Stabilization of Recycled Asphalt Pavement Material: Experience in Waseca, Minnesota, Geo Engineering Report, Department of Civil and Environmental Engineering, University of Wisconsin-Madison.
119. **Li, L.** and Benson, C.H., 2005, Total PCB Mass Estimation in a Paper Sludge Landfill, Geo Engineering Report, Department of Civil and Environmental Engineering, University of Wisconsin-Madison.
120. **Li, L.**, Eykholt, G.R., and Benson, C.H., 2001, Groundwater Modeling: Semi-Analytical Approaches for Heterogeneity and Reaction Networks, *Groundwater Research Report WRI GRR 01-10*, Water Resource Institute, University of Wisconsin-Madison.
121. Siebke, A. **Li, L.**, and Eykholt, G.R., 1999, A Diffusive-Source Aquitard and Electrokinetic Remediation, Technical Report, Department of Civil and Environmental Engineering, University of Wisconsin-Madison.

## COURSE TAUGHT AT JACKSON STATE UNIVERSITY

### *Undergraduate courses*

- CIV 222: Engineering Mechanics I (3 credits, Fall 2005, 2005, 2006, 2007, 2013, 2017)
- CIV 240: Strength of Materials (3 credits, Spring 2006 – current)
- CIV 380: Introduction to Geotechnical Engineering (3 credits, Spring 2006 – current)
- CIV 430: Foundation Engineering (3 credits, Fall 2005 – current)

**Graduate courses**

- CIV 571: Principles of Geoenvironmental Engineering (3 credits, Fall 2008, 2010, 2011, 2013)
- CIV 672: Advanced Geomechanics (3 credits, Fall 2013, 2016)
- CIV 673: Advanced Foundation Engineering (3 credits, Fall 2015, 2017)
- CIV 674: Soil Dynamics (3 credits, Spring 2014)
- CIV 680: Unsaturated Soil Mechanics (3 credits, Spring 2009, Fall 2012, Fall 2014)

**GRADUATE STUDENTS/POSTDOC SUPERVISED**

1. Ubani Ogbonnaya (PhD student, 01/2013-current, topic: *Bio-modified Soil Behavior*).
2. Shihui Liu (PhD student, 01/2016-current, topic: *Durability properties of MICP-treated soil*).
3. Juneke Zhang (PhD student, 01/2017-current, topic: *Leaching properties of MICP-treated CCBs*).
4. Dr. Kejun Wen (PhD student, 08/2013-12/2017, topic: *Enhancement of Microbial Induced Calcite Precipitation Treatment and Applications in Bio-inspired Constructional Materials Development*).
5. Dr. Liang Fan (Visiting Professor from Chongqing Jiaotong University, 07/2016-07/2017).
6. Dr. Changming Bu (Visiting Professor from Chongqing University of Science & Technology, 09/2015-12/2016, topic: *Bending and Tension Performance Evaluation of MICP-modified Soil*).
7. Dr. Qian Dong (Visiting Professor from Chongqing University of Science & Technology, 7/2015-8/2016).
8. Charles McKenzie (MS student, 01/2014-05/2016, topic: *Measuring Bottom Sediment Erosion with Varying Bed Roughness*).
9. Stacy Holton (MS student, 01/2013- 12/2015, topic: *Bonding of Coated and Uncoated Steel Fiber Reinforcement in Portland Cement Mortar and Geopolymer-based Composite Materials*).
10. Dr. Zhengfang Wang (Visiting Professor from Zibo Vocational Institute, 9/2013-4/2014).
11. Dr. Mingdong Li (Visiting Professor from Huihai Institute of Technology, 11/2012-11/2013, topic: *Bio-Medicated Soil Improvement*).
12. Dr. Chi Li (Visiting Professor from Inner Mongolia Institute of Technology, 04/2012-04/2013, topic: *Dynamic Properties of Bio-Modified Sandy Soil*).
13. Dr. Qian Zhao (PhD student, 09/2011-12/2014, topic: *Bio-Medicated Soil Improvement*), co-advised with Amini, F.
14. Jianhua Wu (MS student, 01/2011-12/2012, topic: *Slope Stability of HPTRM Strengthened Levee under Turbulent Overtopping*), co-advised with Amini, F.
15. Vernon German (MS student, 09/2011-05/2013, topic: *Freeze-Thaw Effect on the Mechanical Properties of Cemented and Fiber Reinforced Clay Soils*).
16. Dr. Saiyu Yuan (PhD student, 02/2011-12/2014, topic: *Numerical Simulation of HPTRM Strengthened Levee in Turbulent Overtopping Conditions*), co-advised with Amini, F.
17. Shariana Cordero Zayas (MS student, 08/2010-05/2013, topic: *Leaching of Fly Ash in Highway Embankments*), co-advised with Li, Y.
18. Dr. Yingzi Xu (Visiting Professor, 08/2009-08/2011, topic: *Slope Stability Analysis of Levee Strengthening Systems*), co-advised with Amini, F.
19. Dr. Xin Rao (PhD student, 05/2009-10/2013, topic: *Numerical Simulation of Levee Strengthening Systems in Combined Surge and Wave Overtopping Conditions*), co-advised with Amini, F.
20. Dr. Yi Pan (PhD student, 07/2009-08/2012, topic: *Physical and Numerical Hydraulic Testing of Three Innovative Levee Strengthening Systems in Overtopping Conditions*), co-advised with Amini, F.
21. Wei Shao (MS student, 01/2011-12/2012, topic: *Effects of Freeze-Thaw Cycles on Mechanical Properties of Cement and Fiber Reinforced Clay Soils*).
22. Fabio Santos (MS student, 01/2010-12/2011, topic: *Optimization of Fly Ash-Soil Mixture for Highway Embankment*), co-advised with Li, Y.

23. Clifton Hulitt (MS student, 08/2008-08/2010, topic: *Full-Scale Testing of Three Innovative Levee Strengthening Systems under Overtopping Condition*).
24. Li Jin (MS student, 01/2008-02/2010, topic: *Assessment of the Roadway Module in IWEM*), co-advised with Li, Y.

### **SELECTED UNDERGRADUATE STUDENTS MENTORED IN PROJECTS**

- Karayan Cole (07/2016-03/2018); DeBorah Luckett (04/2017-07/2017); Katia LeLe Lagmago (04/2017-07/2017); Astride Tchakoua (04/2017-07/2017); Mason Gregory (04/2017-07/2017); Inez Williams (03/2016-08/2016); Alesha Jackson (09/2014-08/2016); Jasmine Douglas (04/2014-09/2015); Clemence Tchuisseu (03/2015-08/2015); Kenneth Washington (03/2015-08/2015); Mireille Tchuisseu (03/2014-08/2014); Ryan Swanier (07/2016-05/2017); Jonathan Malone (07/2016-05/2017); Amir Muhammad (01/2016-05/2016); Timothy Manyfield (08/2015-08/2016); Charles Davis (01/2014-05/2015, *LSMAMP assistant*); Benjamin Douglas (09/2014-08/2015); Ayanna Hardy-Fuller (09/2014-08/2015); Paul Forster (06/2010-05/2011); Abenezer Nida (07/2010-12/2010); Justin Roberts (02/2009-05/2010); William McCleave (02/2009-05/2010); Nathan Kebede (01/2008-01/2009); DeAnna Dixon (01/2009-06/2009); Clayton LeLand (04/2011-09/2011)

### **CONSULTING ENGINEERING EXPERIENCE**

- Evaluation of EPA model IWEM 3 (for Industrial Economics, Inc., May to June, 2014).
- Numerical Study of Honeywell Baltimore Works Sites (for Civil Engineering, Madison, WI 53706, March to August, 2013).
- Comparison of Conventional Liner and Alternative Liner for a new MSW landfill using Analytical Solution (for Civil Engineering, Madison, WI 53706, September 1-10, 2007).
- Numerical Analysis of Leachate Flux Generation for American Landfill and Expansion, Waynesburg, Ohio (for Waste Management, August to October, 2007).
- Estimation of Total PCB Mass in Arrowhead Park Landfill, Neenah, Wisconsin using Geostatistics Approach (for Craig H. Benson, February to June 2004).
- Analysis of Failure of Clay Caps for Sunrise Mountain Landfill, Clark County, Nevada (for Craig H. Benson, October to November 2004).
- Development of Windows Interface for WiscLEACH 2.0 Software (for RMRC, October to December 2011).

### **INVITED PRESENTATIONS**

1. Invited seminar on “Modeling Mineral Precipitations in Granular Iron Permeable Reactive Barriers”, for the Department of Geohydrology Sandia National Laboratory, February 2003.
2. Invited seminar on “Metals Leaching and Ground Water Impact from Fly Ash Stabilized Soils in Highways”, for the Department of Civil and Environmental Engineering, Auburn University, April 2006.
3. Invited seminar on “Full-Scale Overtopping Testing for Levee Strengthening Systems”, for the O. H. Hinsdale Wave Research Laboratory, Oregon State University, November 2009.
4. Invited seminar on “Properties of Pavement Geomaterials Stabilized with Fly Ash”, for the AFP 40 Committee, 90<sup>th</sup> Annual Meeting of TRB, Washington DC, January 26, 2011.
5. Invited seminar on “High Performance Turf Reinforcement Mat Strengthened Levee under Combined Wave and Storm Surge Turbulent Overtopping Conditions”, for the O. H. Hinsdale Wave Research Laboratory, Oregon State University, October 2011.

6. Invited seminar on “Effects of Freeze–Thaw Cycles on Mechanical Properties of Cement and Fiber Reinforced Clay Soils”, for the AFP 40 Committee, 91<sup>th</sup> Annual Meeting of TRB, Washington DC, January 23, 2012.
7. Invited seminar on “Overtopping Hydraulics and Erosion of HPTRM Strengthened Levee in Turbulent Overtopping Flow Conditions”, for the Department of Hydraulic Engineering, Tongji University, China, June 2013.
8. Invited seminar on “Overtopping Hydraulics and Erosion of Three Levee Strengthening Systems under Full-Scale Overtopping Testing”, for the State Key Laboratory of Hydrology-Water Resources and Hydraulic Engineering, Hohai University, China, June 2013.
9. Invited seminar on “Overtopping Hydraulics and Erosion of HPTRM Strengthened Levee in Turbulent Overtopping Flow Conditions”, for the School of Engineering, Zhongshan University, China, December 2014.
10. Invited seminar on “Erosion Resistance of Earthen Levee Strengthened by HPTRM System under Turbulent Wave and Surge Overtopping Condition”, for the College of Civil Engineering, Guangxi University, China, December 2014.
11. Invited seminar on “Experimental Investigation of Mechanical Properties of MICP-Treated Sands Reinforced with Discrete Randomly Distributed Fiber”, for the College of Civil Engineering, Inner Mongolia Institute of Technology, China, July 2016.

## **SOCIETY MEMBERSHIPS**

- Geo-Institute, American Society of Civil Engineers (ASCE), Member
- American Society for Testing and Materials (ASTM), Member
- International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), Member
- United States Universities Council on Geotechnical Education and Research (USUCGER), University representative
- National Society of Professional Engineers, Member

## **PROFESSIONAL ACTIVITIES AND SERVICE**

### **Professional Service**

- Editor Board Member, Journal of Geotechnical and Geological Engineering, 2017- current
- Editor Board Member, Journal of ASTM International, 2011- 2011
- Committee member/vice chair, Physicochemical and biological processes in soils committee AFP40, Transportation Research Board, 2009- current
- Committee member, Committee on Waste Management and Resource Efficiency in Transportation ADC60, Transportation Research Board, 2012- 2015
- Committee Member, ASCE Geo-Institute, pavement committee, 2009- 2011
- Committee Member, Geotechnics of sustainable construction committee, ASTM 18.14, 2008- 2011.
- Committee chairman, task group of coal combustion products in the Geotechnics of sustainable construction committee, ASTM 18.14, 2008-2011.
- Session moderator, session of Permeable Reactive Barrier at the ASCE GeoCongress 2008 Conference, New Orleans, Louisiana, March 9-12, 2008.
- Session chair, session of Characterization and Re-use of waste materials at the ASCE Geo-Frontiers 2011 Conference, Dallas, Texas, March 13-16, 2011.
- Session chair, session of Beneficial Reuse of Waste and Recycled Materials in Sustainable Geotechnical Construction at the ASCE GeoCongress 2012 Conference, Oakland, CA, March 25-29, 2012.

- Session chair, session of Innovative Levee Strengthening with GeoSynthetics in Dams and Levees at the GeoSynthetics 2013 Conference, Long Beach, CA, April 1-4, 2013.
- Session chair, session of Environmental Suitability of Recycled Materials for Transportation Applications in 92<sup>nd</sup> Annual Meeting of TRB, Washington DC, January 13–17, 2013.
- Session chair, session of Dams and Levees at the GeoSynthetics 2015 Conference, Portland, OR, February 15-18, 2015.
- Session chair, session of Bio-Mediated Soil at the ASCE GeoChicago 2016 Conference, Chicago, IL, August 14-16, 2016.
- Session chair, session of Bio-Mediated Soil Properties at the ASCE GeoShanghai 2018 Conference, Shanghai, China, May 27-30, 2018.

#### **Proposal Reviewer**

- Center for Environmentally Sustainable Transportation in Cold Climates (CESTiCC) at Montana State University (reviewed one proposal in May 2014).
- Mountain-Plains Consortium (reviewed one proposal in February 2013).
- Kentucky Science and Engineering Foundation R& D Excellence Award program (reviewed one proposal in June 2010).
- NSF CMMI – Geoenvironmental Engineering & Geohazard Mitigation program (reviewed one proposal in June 2008).

#### **Paper Reviewer for Journals/Conference Proceedings**

- *ASCE: Journal of ASTM International; Journal of Geotechnical and Geoenvironmental Engineering; Journal of Hazardous, Toxic, and Radioactive Waste Management; Journal of Materials in Civil Engineering; Journal of Environmental Engineering; Journal of Waterway, Port, Coastal, and Ocean Engineering*
- *Geotechnical and Geological Engineering; Geotechnical Testing Journal; Engineering Geology; Journal of Coastal Research; Environmental Science and Technology; Canadian Geotechnical Journal;; Resources, Conservation & Recycling; Journal of Hazardous Materials; Journal of Ground Water; Journal of Hydrodynamics; Transport in Porous Media; Construction Material; Waste and Resource Management; Fresenius Environmental Bulletin; Journal of Oceanography; FUEL; Water, Air, & Soil Pollution; Environmental Geotechnics*
- *Conferences: TRB; International Symposium on Systematic Approaches to Environmental Sustainability in Transportation; ASCE Geo-Frontiers; GeoChicago, GeoCongress; Global Waste Management Symposium*

#### **Book Reviewer**

- John Scheirs (2007), *Guide to Geosynthetic Materials (A Practical Approach)*, John Wiley & Sons Ltd.
- P. Kumar (2016), *Mechanics of Material Through Dialoguing*, CRC Press - Taylor & Francis Group.

#### **Thesis Committee Participation**

- Committee member, for MS student *Li Jin* from 2008.1 to 2009.12. Thesis title: Environmental Release of Mercury from Compact Fluorescent Light Bulbs. Advisor: Dr. Yadong Li.
- Committee Chair, for MS student *Jianhua Wu* from 2011.01-2012.12 Thesis title: Slope Stability of HPTRM Strengthened Levee under Turbulent Overtopping. Advisor: Dr. Lin Li
- Committee Chair, for MS student *Vernon Germon* from 2011.09-2013.05 Thesis title: Freeze-Thaw Effect on the Mechanical Properties of Cemented and Fiber Reinforced Clay Soils. Advisor: Dr. Lin Li.

- Committee co-Chair, for MS student *Fabio Santos* from 2009.02-2011.12 Thesis title: Mechanical Properties of Fly Ash Used in Embankment Constructions and Its Environmental Impact. Advisors: Dr. Lin Li and Dr. Y. Li.
- Committee Chair, for MS student *Clifton Hulitt* from 2008.06-2010.07 Thesis title: Full-Scale Testing of Three Innovative Levee Strengthening Systems under Overtopping Condition. Advisor: Dr. Lin Li.
- Committee member, for MS student *Andrew Hooker* from 2011.08 to 2013.08. Thesis title: Typhoon Surge Modeling with Advanced Numerical Models. Advisor: Dr. Das.
- Committee member, for MS student *Shariana Cordero Zayas* from 2010.08 to 2013.03. Thesis title: Leaching of Fly Ash in Highway Embankments. Advisor: Dr. Yadong Li.
- Committee member, for MS student *Divya Sinha* from 2015.01 to 2016.05. Thesis title: Removal of Heavy Metals from Highway Runoff through Modified Pervious Cement Pavement. Advisor: Dr. Yadong Li.
- Committee member, for MS student *Neha Sinha* from 2015.01 to 2016.12. Thesis title: An Efficient Data Oriented Method to Calculate Operational Storm Surge. Advisor: Dr. Himangshu Das.
- Committee member, for PhD student *Zhen Fan* from 2011.08 to 2014.05. Dissertation title: Theranostic Magnetic-Plasmonic Nanoshell for Detection, Isolation and Photothermal Destruction of Cancer Tumor Cells and Multi Drug Resistant Bacteria. Advisor: Dr. Ray.
- Committee Chair, for MS student *Stacy Holton* from 2013.01-2015.12 Thesis title: Bonding of Coated and Uncoated Steel Fiber Reinforcement in Portland Cement Mortar and Geopolymer-based Composite Materials. Advisor: Dr. Lin Li.
- Committee member, for PhD student *Yunfeng Lin* from 2014.08 to 2016.09. Dissertation topic: A Base Research on Full Spectrum Ultra-thin Silicon Membrane Solar Cells. Advisors: Dr. Hamme.
- Committee Chair, for MS student *Charles McKenzie* from 2014.01-2016.06 Thesis title: Measuring Bottom Sediment Erosion with Varying Bed Roughness. Advisor: Dr. Lin Li.
- Committee member, for PhD student *Suhas Reddy* from 2014.11 to 2016.06. Dissertation title: Fluorescent Graphene Oxide for Label-free Imaging and Selective Killing of Cancer Cells and Bacteria. Advisors: Dr. Ray.
- Committee member, for MS student *Ruipeng Dong* from 2014.12 to 2015.12. Thesis title: Adsorption Study of Cesium, Strontium, and Cobalt on Iron and Manganese Oxides under various Biogeochemical Conditions. Advisor: Dr. Han.
- Committee member, for PhD student *Rajashekhar Kanchanapally*, from 2013.08 to 2015.09. Dissertation title: Developing Multifunctional Hybrid Graphene Oxide for Chemical and Biological Sensing. Advisor: Dr. Ray.
- Committee member, for PhD student *Bhanu Priya Viraka Nellore*, from 2013.12 to 2016.08. Dissertation title: Developing Hybrid Carbon Nanomaterial based Membranes for Biological and Environmental Applications. Advisors: Dr. Ray and Dr. Hamme.
- Committee member, for PhD student *Stacy Jones*, from 2014.12 to 2017.06. Dissertation title: Surface-enhanced Raman Probes for the Detection of Metal and Biological Targets. Advisor: Dr. Ray.
- Committee Chair, for PhD student *Kejun Wen* from 2013.08-2017.12 Dissertation title: Enhancement of Microbial Induced Calcite Precipitation Treatment and Applications in Bio-inspired Constructional Materials Development. Advisor: Dr. Lin Li.
- Committee member, for MS student *Carrie Sweet*, from 2017.1 to 2017.12. Thesis title: Two-Photon Fluorescent Molybdenum Disulfide Dots for Targeted Prostate Cancer Cell Imaging in the Biological II Window. Advisor: Dr. Ray.

## **UNIVERSITY SERVICE AT JSU**

- University Graduate Curriculum Committee, 2016 to present.
- University Research Advising Committee, 2015 to 2017.
- University Graduate Council Committee, Aug. 2016 to present.
- Global Board of Advisors, 2016 to 2017.
- University Undergraduate Curriculum Committee, 2007 to 2009.
- Associate Vice Provost Search Committee, 2014 to 2014.
- College Undergraduate Curriculum Committee, 2007 to 2009.
- College Graduate Curriculum Committee, 2006 to 2007.
- College Graduate Engineering Coordinator, 2016 to present.
- College Performance-Based Compensation, 2009 to present.
- College Scientific Review Committee for Mississippi Science & Engineering Fair, 2006.
- Department Coordinator for FE exam review courses, 2005 to 2012.
- Department ABET Committee, 2005 to present
- Faculty Search Committee Member for Transportation Engineering, 2007.
- Faculty Search Committee Member for Water Resources Engineering, 2008
- Faculty Search Committee Chair for Geotechnical Engineering, 2015

## **General Student Advising**

- Curriculum Advising – from 15 to 25 students per semester, 2005 to present
- Mississippi Engineering Society JSU Student Chapter faculty advisor, 2009-present
- ASCE student chapter activity advising, 2006 to 2009
- Senior capstone design project advising, 2005 to present