

Education:

Post-Doctorate, College of Engineering, University of Oklahoma, Norman, 2011-2012
Doctor of Philosophy in Civil Engineering, The University of Oklahoma, Norman, 2011
Master of Science in Computer Science, The University of Oklahoma, Norman, 2000
Master of Science in Civil Engineering, The University of Oklahoma, Norman, 1998
Bachelor of Science in Civil Engineering, Khula Univ. of Eng. and Tech., Bangladesh, 1994

Employment/Appointments:

2022- Present	Director, Graduate Programs in Engineering Arkansas State University, Jonesboro, Arkansas
2022-Present	Professor, Civil Engineering Arkansas State University, Jonesboro, Arkansas
2017-Present	Associate Director, Transportation Consortium of South Central States Louisiana State University, Baton Rouge, Louisiana
2015-Current	Affiliated Faculty, Environmental Science Ph.D. Program Arkansas State University, Jonesboro, Arkansas
2015-Current	Adjunct Faculty, Civil Engineering University of Arkansas, Fayetteville, Arkansas
2020-2022	Co-Director, Civil Engineering Arkansas State University, Jonesboro, Arkansas
2017-2022	Associate Professor, Civil Engineering Arkansas State University, Jonesboro, Arkansas
2013- 2018	Adjunct Faculty of Civil Engineering University of Oklahoma, Norman, Oklahoma
2012-2017	Assistant Professor, Civil Engineering Arkansas State University, Jonesboro, Arkansas
2011-2012	Research Associate, University of Oklahoma Norman, Oklahoma
2005 -2012	Senior Application Developer, Fidelity Information Services Tulsa, Oklahoma
2002 -2005	Data Analyst-II, Fidelity Information Services, Tulsa, Oklahoma
2000 -2002	Client/Server Developer I, Alltel Corporation Atlanta, Georgia
2008-2011	Graduate Research &Teaching Assistant, Univ. of Oklahoma Norman, Oklahoma
1996-2000	Graduate Research &Teaching Assistant, Univ. of Oklahoma Norman, Oklahoma
1994-1996	Instructor, Khulna University of Engineering & Technology Khulna, Bangladesh

Professional Licenses/Affiliations

- ABET Program Evaluator, 2025-Current
- Fellow, American Society of Civil Engineers (ASCE), 2023-Current
- Professional Engineer (PE), Arkansas State Board of Licensure for Professional Engineers and Professional Surveyors (PELS), 2015-Current
- Member, Geo-Institute (GI), 1997-Current
- Member, American Concrete Institute (ACI), 2021-Current
- Lead Examiner, American Concrete Institute (ACI), 2016-Current
- Member, ACI Faculty Network Committee, 2021-Current
- Member, Chi Epsilon Civil Engineering Honor Society, 2017-Current
- Member and Associate Member, ASCE, 2012-2022

- Student Member, ASCE, 1997-2000; 2006-2011
- Member, Arkansas Ready Mix Concrete Association, 2017-2019
- Green Belt, Lean/Six Sigma, University of Oklahoma, Spring 2012
- Yellow Belt, Lean/Six Sigma, University of Oklahoma, Summer 2011
- Member, Association for Computing Machinery (ACM), 1999-2000
- Member, University of Oklahoma Database Group, 1999-2000
- Member, Institute of Engineers, Bangladesh, 1995-1996
- Mentor, KUET Civil Engineering Student Club, Bangladesh, 1995-1996
- Publication Secretary, KUET Civil Engineering Student Club, Bangladesh, 1991-1992

Honors and Awards

- Received the 2026 Chancellor's Medal for Research and Creative Activities
- Received the 2026 CoECS Award for Mentorship
- Nominated for the 2026 A-State Provost Award for Teaching
- Received the 2025 Nathan Deutsch Travel Award
- Received the 2025 Eleanor Lane Faculty Endowment Award
- Nominated for the 2024 A-State "You Made a Difference Advisor" Award
- Finalist for the 2023 Chancellor's Medal for Research and Creative Activities
- Finalist for the 2023 Faculty Award for Teaching
- Elected as an ASCE Fellow in 2023
- Recipient of the 2023 CoECS Faculty Award for Research
- Nominated for the 2023 ASCE Carl L. Monismith Award on Pavement Engineering
- Nominated for the 2022 A-State "You Made a Difference Advisor" Award
- Received the 2022 A-State Faculty Award for Professional Services
- Received (jointly) the 2022 Tran-SET Conference Poster Award, First Place
- Received (jointly) the 2022 Tran-SET Conference Poster Award, Second Place
- Received (jointly) the 2022 Tran-SET Conference Poster Award, Third Place
- Selected to testify in Materials Research at the Arkansas State Legislature, 2022
- Inducted as a Distinguished Fellow of Khulna Univ. of Eng. and Technology (KUET)
- Received the 2021 A-State Champion of Diversity Award
- Received the 2021 Geo-China Conference Best Paper Award
- Received (jointly) the 2021 Tran-SET Conference Poster Award, First Place
- Received (jointly) the 2021 Tran-SET Conference Poster Award, Third Place
- Selected as the 2019 A-State Spring Commencement Speaker
- Received the 2019 A-State Faculty Award for Advising
- Nominated for the 2018 A-State Faculty Award for Teaching
- Nominated for the 2018 A-State Faculty Award for Professional Service
- Nominated for the 2017 Professor-of-the-Month, A-State Office of RTT
- Nominated for the 2017 Outstanding Faculty, Graduate Student Council
- Received the 2016 Eleanor Lane Faculty Endowment Award
- Nominated for the 2016 Professor-of-the-Month, A-State Assessment Office
- Received the 2014 ORAU: Ralph E. Powe Jr. Faculty Enhancement Award
- Received the 2014 Arkansas State University Faculty Award for Scholarship
- Received the 2013 Eleanor Lane Faculty Endowment Award
- Received the 2013 VP Faculty Development Travel Award
- Received the 2011 Student of the Year, US Department of Transportation
- Recipient of 2nd place, the Oklahoma Transportation Center Poster Award, 2010
- Recipient of Graduate Poster Award, the University of Oklahoma, 2008
- Recipient of the NSF GAAN Fellowship, the University of Oklahoma, 1999-1999
- National Dean's List, the University of Oklahoma, 1997-1998
- Trustee of the Chi-Epsilon Civil Engineering Honor Society, 1997-1998

- President's Gold Medalist, Khulna Univ. of Eng. and Tech, Bangladesh, 1994
- Chancellor's List, KUET, Bangladesh, 1989-1993
- Jessore Education Board Scholarship (11th & 12th grades), Bangladesh, 1987-1988
- Talent Pool Scholarship (9th & 10th grades), Bangladesh, 1984-1986
- Talent Pool Scholarship (6th to 8th grades), Bangladesh, 1981-1983

Teaching Training/Certifications:

- Effective Teaching: Starting Strong! Association of Col. and Univ. Educators, Fall 2025
- ABET Program Evaluator, Spring 2025
- Teaching with Artificial Intelligence, Auburn University, 2024
- ACI Faculty Network Symposium, Part 2, Farmington Hills, Michigan, July 2023
- ACI Faculty Network Symposium, Part I, Virtual, July 2023
- Using iPad to Create Digital Course Materials, A-State Summer Institute, Summer 2020
- Engaging Diverse Learners, Summer Institute, A-State Faculty Center, Summer, 2020
- Advanced National Effective Teaching Institute (NETI-2), ASEE, Tampa, FL, 2019
- National Effective Teaching Institute (NETI-1), ASEE, New Orleans, LA, 2014.
- Certification on Export Control for Researchers, 2014, 2019
- Collaborative Institutional Training Initiative (CITI) Program, 2014, 2019.
- Certification on Responsible Conduct of Research for Engineers, 2013

Research Specialties and Interests:

Construction Materials, Material Sustainability, Design and Construction, Asphalt and Concrete Technology, Traffic Safety and Simulation, Constitutive Modeling, Molecular Dynamics Simulation, Recycling Technology, Transportation Geotechnics, Soil Stabilization, Seismic Hazard Analysis, Metal Corrosion, Artificial Intelligence, Machine Learning, Big Data, Data Visualization, Data Mining, and Data Warehousing, Geographic Information System, Lean Construction, Value Engineering, and Nanotechnology.

Teaching Specialties and Interests:

Transportation Engineering, Construction Materials, Sustainable Engineering, Pavement Analysis and Design, Mechanics of Materials, Statics, Surveying, Geotechnical Engineering, Foundation Engineering, Numerical Analysis, Fluid Mechanics, Open Channel Flow, Concepts of Engineering, Software Applications for Engineers, Computer-Aided Design, Capstone Design, Artificial Intelligence, Machine Learning, and Technical Communication.

Advising Records:

Advisee Type	No. of advisees (Semester-person)
Undergraduate Academic Advisees	180
Graduate Academic Advisees	264
Undergraduate Student Researchers	100
Graduate Student Researchers	180
Staff Researchers	10

No. of Graduate Theses/Dissertations Supervised: 50

No. of Undergraduate Student Researchers advised: 35

No. of Undergraduate Senior Design Projects Advised: 17 (58 students)

No. of Engineering students' field trips organized: 60 (No. of participants ≈ 1100)

Research Grant Records:

Google Scholar profile: <https://scholar.google.com/citations?user=Qs4TAykAAAAJ&hl=en>

Citations: 2824; h-index:26; i10-index: 52

RG: https://www.researchgate.net/profile/Zahid_Hossain6

ORCID: <https://orcid.org/0000-0003-3395-564X>

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=26641259700>

No. of Funded Proposals: 70

Total Funds Received: US \$7.0M; (external: \$6.0M; As PI: \$4.5M)

Synergistic Activities and Professional Services:

- Mentor, A-State ASCE Concrete Canoe Team, 2014-2017
- Practitioner Advisor, A-State ASCE Student Chapter, 2015-2017
- Chair, 2021 Tran-SET Conference, Jonesboro, AR, to be held on June 3-4, 2021.
- Lead Volume Editor, the Sixth GeoChina International Conference 2021, Volume XX, to be held in Nanchang, China, July 19-21, 2021.
- Member, Provost General Education Taskforce, Fall 2020-Current
- Chair, A-State General Education Subcommittee #4, Fall 2019-Current
- Member, A-State Faculty Center Search Committee, Fall 2020
- Member, A-State Electrical Engineering Faculty Search Committee, Spring-Fall, 2020
- Member, A-State Diversity and Affirmative Action Committee, Fall 2020-Current.
- Editor, ASTM International Journal of Testing and Materials, 2017-Current
- Editor, International Journal of Pavement Research and Transportation, 2018-Current
- Editor, Journal of Advances in Civil Engineering, 2018-Current
- Member, Transportation Research Board (TRB) Standing Committee on Standing Committee on Asphalt Mixture Evaluation and Performance (AKM40), Transportation Research Board, the National Academy of Sciences, Washington D.C., <https://www.mytrb.org/OnlineDirectory/Committee/Details/5189>, 2020-Current.
- Member, Transportation Research Board (TRB) Standing Committee on Resource Conservation and Recovery (ADC 60), Transportation Research Board, the National Academy of Sciences, Washington D.C., <https://www.trb-adc60.org/>, 2018-2020
- Member, Transportation Research Board (TRB) Standing Committee on Characteristics of Asphalt-Aggregate Combinations to Meet Surface Requirements (AFK 40), Transportation Research Board, the National Academy of Sciences, Washington D.C., <https://www.mytrb.org/CommitteeDetails.aspx?CMTID=1376>, 2014-2020.
- Member, Transportation Research Board Standing Committee on Characteristics of Nonasphalt Components of Asphalt Paving Mixtures (AFK 30), Transportation Research Board, the National Academy of Sciences, Washington, D.C., 2013-2016.
- Chair, 2018 TRB ADC 60 Summer Workshop Social Media Committee, Washington State University, Pullman, WA.
- Member, Transportation Research Board Standing Committee on Mineral Aggregates (AFP 70), Transportation Research Board, the National Academy of Sciences, Washington D.C., 2013-2016.
- Member, Scientific Committee, 15th World Conference on Transport Research (WCTR), Indian Institute of Technology (IIT) at Mumbai, India, May 26-31, 2019.
- Coordinator, Industrial Engineering and Operations Management (IEOM) Society STEM Poster Contest for 7th-12th Grade School Students, Arkansas State University, at Jonesboro, Arkansas, Spring 2017.
- Member at Create@ASTATE Committee, 2016-2017
- Moderator and Judge, Create@ASTATE and Science Fair contests at ASU, 2013-2015
- Vice President and Member, Pre-Engineering and STEM Academy at Jonesboro High School, Arkansas; 2013-present.
- Member, Organizing Committee, 43rd Annual Conference on Deep Foundations, October 2018, Anaheim, California.
- Lead Editor, 2018 GeoChina Conference Proceedings-Volume 13, Civil Infrastructures Confronting Severe Weathers and Climate Changes: From Failure to Sustainability, July 23-25, 2018, Hangzhou, China.
- Member, Technical Advisory Committee, 2018 International Congress of Polymers in Concrete (ICPIC), April 2018, Washington, DC.
- Member, Technical Committee, International Conference on Research & Innovation in Civil Engineering (ICRICE 2018), 12-13 January 2018 in Chittagong, Bangladesh.
- Author, TRB Synthesis Topic on Durability of Asphalt Pavements as part of TRB Committee AFK40, for a project of the National Cooperative Highway Research Program (NCHRP), March 2017.

- Meeting Minute Taker, Transportation Research Board Annual Meeting of the Standing Committee on Characteristics of Asphalts to Meet Surface Requirements (AFK 40), January 2017.
- Member, Technical Committee, 2013 International Road Federation Conference in Riyadh, Saudi Arabia, November 2013.
- Editor, ASCE Geotechnical Special Publication (GSP) on Design, Analysis and Asphalt Material Characterization for Road and Airfield Pavements, Geo-China 2016, ISBN (PDF): 9780784480014, 2016
- Reviewer of Proposals, Arkansas Department of Higher Education, 2016-Current
- Reviewer of Proposals, Mountain Plain Transportation Center, USA, 2017-Current
- Reviewer of Proposals, Mitcas Accelerated Program, Canada, 2019-Current
- Reviewer, ASCE Journal of Materials in Civil Engineering, 2012- present
- Reviewer, Elsevier Journal Construction and Building Materials, 2013-present
- Reviewer, Transportation Research Board (TRB), 2010-present
- Reviewer, International Journal of Pavement Engineering (IJPE), 2009-present
- Reviewer, ASCE Journal of Performance of Constructed Facilities (JPCF), 2009-present
- Reviewer, ASTM International Journal of Testing and Evaluation (JTE), 2010-present
- Reviewer, International Journal of Pavement Research and Technology (IJPRT), 2008-present
- Reviewer, Int. Conf. on Civil Engineering and Sustainable Development (ICCESD), Bangladesh, 2012-present
- Reviewer of Proposals, Southern Plains Transportation Center, 2014-2016
- Reviewer, 2011 ASCE Geo-Frontiers Conference on Advances in Geotechnical Eng., Dallas, TX.
- Reviewer, ASCE 2011 GeoHunan International Conference II: Hunan Province, China.
- Reviewer, Inaugural Int. Conf. of the ASCE Eng. Mechanics Institute, 2008. Minneapolis, MN.
- Reviewer, ASCE Geotechnical Special Pub. (GSP), No. 184, Pav. &Mat.: Modeling, Testing, and Performance, 2008.

Books

1. Zhang, R., Gao, J., **Hossain, Z.**, and You, Z. (Eds.) (2026). Guest Editor, "Special Issue: Advanced Studies in Low-Carbon Building Materials," Under Preparation, MDPI Journal: Buildings (ISSN 2075-5309), https://www.mdpi.com/journal/buildings/special_issues/KQ41JJ5Q4L
2. **Hossain, Z.**, and Diab, A. (Eds.)(2025). Cracking in Asphalt Concrete Pavement-From Materials Characterization to Field Performance, Special Issue, Journal of Pavement Research & Technology, Springer Nature, <https://link.springer.com/collections/jdfahjffji>, November 2025.
3. Rokonzaman, M., Ali, S., **Hossain, Z.**, and Mizan, M. H. (Eds.) (2024). Proceedings of the 7th International Conference on Civil Engineering for Sustainable Development, Atlantis Press, a subsidiary of Springer Nature, Volume 34, ISBN 978-94-6463-478-5, June 2024.
4. **Hossain, Z.**, Zaman, M., and Zhang, J. (Eds.) (2021). Finding Solutions of the 21st Century Transportation Problems Through Research and Innovations, *Springer Nature Switzerland AG*, ISBN 978-3-030-79638-9.
5. **Hossain, Z.**, Hassan, M., and Mohammad, L. (eds.) (2021). 2021 Tran-SET Conference, *ASCE Construction Institute (CI)*. Reston, VA, pgs. 350.
6. **Hossain, Z.**, Liyanapathirana, S., and Chen, D. H. (2019) (eds). *Journal of Testing and Evaluation - Special Issue on Civil Infrastructures Confronting Severe Weather and Climate Changes*, *ASTM International JTE1905-EB*, No. of Papers: 41 papers, 2335 pages.
7. **Hossain, Z.**, Zhang, J., Chen, C. (2018) (eds.). Solving Pavement and Construction Materials Problems with Innovative and Cutting-edge Technologies, *Springer Nature*, ISBN: 978-3-319-95792-0.
8. Khabbaz, H., **Hossain, Z.**, Nam, B. H., and Chen, X. (2016) (eds). Advances in Pavement Engineering and Ground Improvement, *ASCE Geotechnical Special Publication (GSP) 258*, No. of Papers = 18, Book set: *Geo-China 2016*, ISBN (PDF): 9780784480014.
9. Lee, J., **Hossain, Z.**, and Hu, X. (2014) (eds). Design, Analysis, and Asphalt Material Characterization for Road and Airfield Pavements, *ASCE Geotechnical Special Publication (GSP)*, No. 246, No. of Papers = 28, Geo-Hubei 2014, <https://doi.org/10.1061/9780784478462>.

Book Chapters

10. Akid, A. S. M., **Hossain, Z.**, Chowdhury, R., Hassan, M., and Meadors, A. (2022). Effects of Supplementary Cementitious Materials on the Long-Term Durability Properties of Concrete, 2022 Tran-SET Conference, *ASCE Construction Institute*, Reston, VA.

11. Al-Amin, M., and **Hossain, Z.** (2022). Case Study of Modulus of Deformation of Railway Earthworks by Static Plate Load Test, 2022 Tran-SET Conference, *ASCE Construction Institute*, Reston, VA.
12. Oyan, M. and **Hossain, Z.** (2022). Warm Mix Asphalt in Arkansas 2022 Tran-SET Conference, *ASCE Construction Institute*, Reston, VA.
13. Tarhuni, F. and **Hossain, Z.** (2022). Soil Stabilization with Lime and Rice Husk Ash, 2022 Tran-SET Conference, *ASCE Construction Institute*, Reston, VA.
14. Oyan, M. **Hossain, Z.**, and Elsefi, M. (2022). Moisture Resistance in Dense Grade Mixes, 2022 Tran-SET Conference, *ASCE Construction Institute*, Reston, VA.
15. Mahat, R., Hasan, M. A., and **Hossain, Z.** (2022). Liquefaction Analysis of NEA, 2022 Tran-SET Conference, *ASCE Construction Institute*, Reston, VA.
16. Hasan, A., **Hossain, Z.**, and Elsayed, A. (2021). Laboratory and Field Investigation of Subgrade Soil Stabilization in Arkansas, In Hossain, Z., Hassan, M., and Mohammad, L. (eds) 2021 Tran-SET Conference, *ASCE Construction Institute*, Reston, VA.
17. Bagchi, T., and **Hossain, Z.** (2021). Laboratory Screening of Durable Aggregates for Paving Asphalt Mixture, 2021 Tran-SET Conference, *ASCE Construction Institute*, Reston, VA.
18. Oyan, M., and **Hossain, Z.** (2021). Feasibility Study of Warm Mix Asphalt in Arkansas, 2021 Tran-SET Conference, *ASCE Construction Institute*, Reston, VA.
19. Roy, S., and **Hossain, Z.** (2021). Effect of Powder Activated Carbon on Class C Fly Ash Modified Concrete. 2021 Tran-SET Conference, *ASCE Construction Institute*, Reston, VA.
20. Chowdhury, R., **Hossain, Z.**, and Meadors, A. (2021). Influence of Powdered Activated Carbon (PAC) in Fly Ash on Alkali-Silica Reactivity and Scaling Resistance of Concrete. 2021 Tran-SET Conference, *ASCE Construction Institute*, Reston, VA.
21. Islam, R., and **Hossain, Z.** (2021). Estimation of Seismic Site Factors for Selected Locations in Northeast Arkansas. 2021 Tran-SET Conference, *ASCE Construction Institute*, Reston, VA.
22. Subedi, S., Huang, O., Arce, G., Lies, N., Radovic, M., Hassan, M., and **Hossain, Z.** (2021). Evaluation of Alternative Sources of SCMs for Concrete Materials, 2021 Tran-SET Conference, *ASCE Construction Institute*, Reston, VA.
23. **Hossain, Z.**, and Islam, K. T. (2021). Prospects of Rice Husk Ash as a Construction Material. Chapter No. 3, Book Title: Sustainable Concrete Made with Ashes and Dust from Different Sources, Edited by Siddique, R., and Belarbi, R. *Elsevier*, pgs. 31, ISBN 9780128240502.
24. **Hossain Z.**, Bairgi B., Zaman M., O'Rear E. (2021) Viability Assessment of the Use of Ground Tire Rubber (GTR) as a Modifier in Asphalt Binders. *GeoChina 2021. Sustainable Civil Infrastructures. Springer, Cham.* https://doi.org/10.1007/978-3-030-79857-4_6, pp. 89-109.
25. **Hossain Z.**, Bairgi B., Zaman M., Bulut R., Sumpter B. (2021) Evaluation of Stripping Resistance of Organoclay-Modified Asphalt Binder and Aggregate Systems Using an Optical Contact Angle Analyzer. *GeoChina 2021. Sustainable Civil Infrastructures. Springer, Cham.* https://doi.org/10.1007/978-3-030-79647-1_5, pp. 68-82.
26. Islam M.R., **Hossain Z.** (2021) Prediction of Seismic Site Coefficients for Northeast Arkansas (NEA). *GeoChina 2021. Sustainable Civil Infrastructures. Springer, Cham.* https://doi.org/10.1007/978-3-030-79854-3_2, pp. 13-36.
27. Bagchi, T., and **Hossain, Z.** (2021). "Evaluation of Compatibility of Asphalt Binders and Aggregates," Tran-SET 2020, *ASCE Construction Institute*, ISBN (PDF): 9780784483305, pp. 195-204, <https://doi.org/10.1061/9780784483305.020>.
28. Hasan, A., and **Hossain, Z.** (2021). "Life Cycle Cost Analysis of Corrugated Metal Pipes in Arkansas," Tran-SET 2020, *ASCE Construction Institute*, ISBN (PDF): 9780784483305, pp. 324-334, <https://doi.org/10.1061/9780784483305.033>.
29. Roy, S., and **Hossain, Z.** (2021). "Nanoscale Study of the Influence of Short-Term and Long-Term Aging on Asphalt Binders' Properties," Tran-SET 2020, *ASCE Construction Institute*, ISBN (PDF): 9780784483305, pp. 160-172, <https://doi.org/10.1061/9780784483305.017>.
30. Islam, T., and **Hossain, Z.** (2021). "Potential Use of Rice Husk Ash (RHA) in Flowable Fill Concrete," Tran-SET 2020, *ASCE Construction Institute*, ISBN (PDF): 9780784483305, pp. 298-304, <https://doi.org/10.1061/9780784483305.030>.
31. Morshed, M. M. T., and **Hossain, Z.** (2021). "What are the Alternatives of PG Plus Tests for Modified Asphalt Binders?" Tran-SET 2020, *ASCE Construction Institute*, ISBN (PDF): 9780784483305, pp. 215-225, <https://doi.org/10.1061/9780784483305.022>.

32. Hassan, N., and **Hossain, Z.** (2021). "Evaluation of Selected Performance Properties of Nanoclay-Modified Asphalt Binders," *Tran-SET 2020, ASCE Construction Institute*, ISBN (PDF): 9780784483305, pp. 150-159, <https://doi.org/10.1061/9780784483305.016>.
33. Morshed M.M.T. and **Hossain Z.** (2021). Analysis of Rheological Properties and Moisture Resistance of Nanoclay-Modified Asphalt Binders. *Lecture Notes in Civil Engineering*, vol 90, Chapter 26, pp 293-300. Springer, Cham. https://doi.org/10.1007/978-3-030-51354-2_26.
34. Roy S. and **Hossain Z.** (2021). Prediction of Moisture Damage in Asphalt Pavements Using a Nanomechanistic Approach. *Lecture Notes in Civil Engineering*, vol 90. Chapter 8, pp 21-28, Springer, Cham. https://doi.org/10.1007/978-3-030-51354-2_3.
35. Zaman, M., Ghabchi, R., and **Hossain, Z.** (2019). Enhancing Sustainability of Transportation Infrastructure Using Increased Recycled Materials: Prospects for the 21st Century, Chapter, Book Title: US Infrastructure, Edited By Khan, A., and Becker, K., *Taylor & Francis*, ISBN 9781351007023, <https://doi.org/10.4324/9781351007023>.
36. Alam S., **Hossain Z.** (2019) Changes in Chemical Fingerprints of Asphalt Binders Due to Aging. *GeoChina 2018. Sustainable Civil Infrastructures*. Springer, Cham, pp. 44-54.
37. Ahsan M. B., and **Hossain Z.** (2017). Use of Rice Husk Ash (RHA) as a Sustainable Cementitious Material for Concrete Construction. *GeoMEast 2017. Sustainable Civil Infrastructures*. Springer, pp. 197-210.
38. **Hossain, Z.**, Zaman, M., Saha, M., and Hawa, T., Evaluation of Moisture Susceptibility of Nanoclay-Modified Asphalt Binders, Application of Nanotechnology in Pavements, Geological Disasters, and Foundation Settlement Control Technology: Vol.: *Geo-Hubei 2014*, No. GSP 244, July 2014, pp. 1-8.
39. **Hossain, Z.**, Zaman, M., Saha, M. C., and Hawa, T. (2014). Evaluation of Viscosity and Rutting Properties of Nanoclay-Modified Asphalt Binders, *ASCE Geotechnical Special Publication*, 2014 Geo-Congress on Geo-Characterization and Modeling for Geo-sustainability, Geo-Congress 2014 Number: ASCE GSP 234, 10 pgs.
40. Solanki, P., **Hossain, Z.**, Zaman, M., and Adje, D. (2012). "Volumetric and Mechanistic Characteristics of Asphalt Mixes Containing Recycled Asphalt Pavement," in *Proc. of GeoCongress 2012*, March 25-29, 2012, and *ASCE GSP*, No. 225, 2012, Pages 3709-3718.
41. **Hossain, Z.**, Zaman, M., O'Rear E. A., and Chen, D. H. (2011). "Effectiveness of Liquid Anti-stripping Agent on Performance Grade Binder Modified with Warm Mix Additive," in *ASCE GSP*, No. 218, Emerging Technologies for Material, Design, Rehabilitation, and Inspection of Roadway Pavements, pp. 9-16.
42. **Hossain, Z.**, and Zaman, M. (2008) "Rheological Properties of Performance Grade Binders Using a Dynamic Mechanical Analyzer," *ASCE GSP* No. 184, Pavements and Materials: Modeling, Testing, and Performance, 2008, pp. 140-149.

Referred Journal Publications

43. Sadat, K., Akid, A., **Hossain, Z.**, and Arifuzzman, M. (2025). "Physicochemical Assessment of Asphalt Binder and Aggregate Systems," Under Review, Submitted to the *ASCE Journal of Materials in Civil Engineering*.
44. Sadat, K., Tarhuni, F., Mahat, R., and **Hossain, Z.** (2025). "Moisture Susceptibility Assessment of Aggregate and Asphalt Binders Using an Adhesion Tester," Under Review, *J. of Construction and Building Materials*.
45. Roy, S., and **Hossain, Z.** (2025). Evaluation of Essential Fresh and Hardened Concrete Properties of Class C Fly Ash (CFA) Modified Concrete, Under Review, *Journal of Building Construction and Building Materials*.
46. Mahat, R., **Hossain, Z.**, and Islam, R. (2025). "Evaluation of Impact of Northeast Arkansas (NEA) Subsoil on Seismic Site Response." Under Review, *International Journal of Geosciences- Multidisciplinary Digital Publishing Institute (MDPI)*, Manuscript ID: geosciences-2812706.
47. Tarhuni, F., and **Hossain, Z.** (2025). "Stabilization of Soft Clayey Soils with Rice Husk Ash," In Press, *ASTM Journal of Testing and Materials*.
48. Sadat, K., **Hossain, Z.**, Mahat, R., and Tarhuni, F. (2025). "Moisture Susceptibility Assessment of Aggregate and Asphalt Binders." *Int. J. Pavement Res. Technol.* (2025). <https://doi.org/10.1007/s42947-025-00647-9>.
49. Roy, S., **Hossain, Z.**, Baumgardner, G., and Zaman, M. (2025) Micro-mechanistic and Spectroscopic Analysis of RAP-Blended Asphalt Binders Rejuvenated with Waste Oils. *Int. J. Pavement Res. Technol.* 18, 858–875 (2025). <https://doi.org/10.1007/s42947-023-00384-x>
50. Ali, S. A., Arevalo, P. C., Zaman, M., Floyd, E. W., **Hossain, Z.**, and Rojas-Pchyla, J. (2025). "Durability of Recycled Concrete Aggregate as a Pavement Base Material Including Drainage: A Laboratory and Simulation Study," *Journal of Sustainability*, Volume 17, Issue 13, 6050, <https://doi.org/10.3390/su17136050>.

51. Tarhuni, F., Uddin, M. S., **Hossain, Z.** (2024). "Improvement of Poor Subgrade Soils and Embankments Using Rice Husk Ash and Hydrated Lime as Stabilizing Agents," *Wiley Journal of Advances in Civil Engineering*, <https://doi.org/10.1155/2024/8205679>.
52. Hassan, M. N., **Hossain, Z.**, You, Z., and Baumgardner, G. (2024). Fourier Investigation of Modified Asphalt Binders through Fourier Transformation Infrared Spectroscopic Analysis, *Journal of Transportation Engineering, Part B: Pavements*, Volume 151, Issue 1, <https://doi.org/10.1061/JPEODX.PVENG-1058>
53. Sarkar, M. T. A., Elsefi, M., and **Hossain, Z.** (2024). "Effects of Warm-Mix Additives, Anti Stripping Agent, and Graphene Nanoplatelet on the Cracking Resistance, Moisture Susceptibility, and Cost Effectiveness of Stone Mastic Asphalt," *Journal of Construction and Building Materials*, Volume 438, 9 August 2024, 137250, Elsevier, <https://doi.org/10.1016/j.conbuildmat.2024.137250>.
54. Oyan, M. and **Hossain, Z.** (2024). "Feasibility of Warm Mix Asphalt in Arkansas," Under Review, *International Journal of Pavement Research and Technology*, Springer, <https://doi.org/10.1007/s42947-024-00463-7>
55. Tarhuni, F., Uddin, M.S., and **Hossain, Z.** (2024). "Sustainable Soil Stabilization Approach Utilizing Rice Husk Ash and Hydrated Lime for Enhancing Poor Subgrade Soil in Arkansas." *International Journal of Advances in Civil Engineering*, Wiley, DOI: 10.1155/2024/8205679.
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104. Das, A., and **Hossain, Z.** (2025). "Comprehensive Rheological Evaluation of Asphalt Binder Modified with High RAP and Varying Dosages of Bio-Based and Petroleum-Based Additives," Submitted, 2026 ASCE T& DI Transportation Conference, Detroit, MI, June 2026.

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158. **Hossain, Z.**, Zaman, M., Doiron, C., and Solanki, P. "Evaluation of Mechanistic-Empirical Design Guide Input Parameters for Resilient Modulus of Stabilized Subgrade Soils," ICSDEC 2012/ASCE Texas Section Conference/CI Summit, November 7-9, 2012.
159. Pranshoo, S., P., **Hossain, Z.**, Adje, D., and Zaman, M. "Effect of Recycled Asphalt Pavement on Thermal Cracking Resistance of Hot Mix Asphalt," 2nd International Symposium on Constitutive Modeling of Geomaterials: Advances and New Applications, Beijing, China, October 15-16, 2012.
160. **Hossain, Z.**, Buddhalla, A., O'Rear, A. O., Zaman, M., Laguros, J. L., and Lewis, S., "Recycled Asphalt Pavement in new Asphalt Mixtures: State of the Practice," in the 2nd International symposium on Asphalt Pavement and Environment, October 1-3, 2012, Fortaleza, Brazil.
161. **Hossain, Z.**, Buddhalla, A., O'Rear, A. O., Zaman, M., Laguros, J. L., and Lewis, S., "Recycled Asphalt Pavement in new Asphalt Mixtures: State of the Practice," in the 2nd International symposium on Asphalt Pavement and Environment, to be held on October 1-3, 2012, Fortaleza, Brazil.
162. **Hossain, Z.**, Solanki, P., Zaman, M., "Mechanistic Evaluation of Recovered Materials from Recycled Asphalt Pavement," in Proc. of GeoCongress 2012, March 25-29, 2012.
163. **Hossain, Z.**, M. Zaman, E. O'Rear, and Chen, D. "Laboratory Evaluation of Water-bearing Additive for Warm Mix Asphalt," in the 90th Transportation Research Board Annual Meeting DVD-ROM Compendium Paper, Transportation Research Board (TRB), Washington, DC, 2011.
164. **Hossain, Z.**, Zaman, M., Doiron, C., and Solanki, P. "Characterization of Subgrade Resilient Modulus for Oklahoma Soils for Pavement Design," in *GeoFrontiers 2011*, 13-16 March, Dallas.

165. **Hossain, Z.**, and M. Zaman, "Energy Efficient Paving: Prospects and Concerns," *US-China Workshop on Energy and Environment in the Development of Sustainable Asphalt Pavements*, Chang'an University, Xian, China, June 6 to June 8, 2010.
166. **Hossain, Z.**, and Zaman, M., "Dynamic Mechanical Analysis of Performance Grade Asphalt Binder," *12th International Conference of International Association for Computer Methods and Advances in Geomechanics (IACMAG)*, October 1-6, 2008, Goa, India.
167. **Hossain, Z.**, and Zaman, M., "Rheological Properties of Performance Grade Binders Using A Dynamic Mechanical Analyzer," *Proceedings of the Symposium on Pavement Mechanics and Materials at the Inaugural International Conference of the Engineering Mechanics Institute (EM)*, May18-21, 2008. Minneapolis, MN.
168. **Hossain, Z.**, and A. Ali, "Association Rule Descriptive Language in Data Mining, in the *Proceedings of the 12th Industrial Engineering Research Conference (IERC 2003)*, Portland, May 18 - 20, 2003.
169. **Hossain, Z.**, and A. Ali, "Indexing for Efficient Valuation of Queries in Data Warehouse," in the *Proceedings of the 3rd International Conference of Mechanical Engineers and 8th paper meet on e-Manufacturing*, pp. 317-326, Dhaka, March 20-22, 2003.
170. **Hossain, Z.**, and A. Ali, "Association Rule Descriptive Language," in the *Proceedings of the 3rd International Conference on Data Mining Methods and Databases for Engineering, Finance and Other Fields*, vol. 6, pp. 917-926, Bologna, Italy, September 25 – 27, 2002.
171. **Hossain, Z.**, and A. Ali, "Unified Descriptive Language for Association Rules in Data Mining," in the *Proceedings of the 2nd International Workshop on Intelligent Systems Design and Applications (ISDA 2002)*, Atlanta, August 7 – 8, 2002.
172. Zaman, M, and **Hossain, Z.** "Interface Strength of Thin Bonded Overlay on Rigid Pavements," *Computer Methods and Advances in Geomechanics- Proceedings of the 10th International Conference on Computer Methods and Advances in Geomechanics*, Tucson, Arizona, USA, 7-12 January 2001, pp. 1355-1368.

Technical Presentations

1. Rahman, N., and **Hossain, Z.** (2026). "Utilization of Steel Slag as Cementitious Material in Concrete: Improving Early Strength and Sustainability," Accepted, Poster, 2026 ASCE T& DI Transportation Conference, Detroit, MI, June 2026.
2. Das, A., and **Hossain, Z.** (2026). "Comprehensive Rheological Evaluation of Asphalt Binder Modified with High RAP and Varying Dosages of Bio-Based and Petroleum-Based Additives," Accepted, Poster, 2026 ASCE T& DI Transportation Conference, Detroit, MI, June 2026.
3. Rahman, N., and **Hossain, Z.** (2026). "Utilization of Steel Slag as Cementitious Material in Producing Durable Concrete," Accepted, 17th International Symposium on Fiber-Reinforced Polymer (FRP) Reinforcement for Concrete Structures, Girona, Spain, July 6 to 8, 2026.
4. Sazzad, Q. S., and **Hossain, Z.** (2026). Comparative Analysis of Machine Learning Techniques for Pavement Performance Forecasting, 2026 A-State Create@State Symposium, April 2026. Jonesboro, Arkansas.
5. Das, A., and **Hossain, Z.** (2026). Rheological Performance Characterization of High-RAP Asphalt Binder Modified with Bio-Based and Petroleum-Derived Rejuvenating Additives, 2026 A-State Create@State Symposium, April 2026, Jonesboro, Arkansas.
6. Rahaman, N., and **Hossain Z.** (2026). Utilization of steel slag as cementitious material in concrete: improving early strength and sustainability, 2026 A-State Create@State Symposium, April 2026, Jonesboro, Arkansas.
7. Aftab, R., and **Hossain, Z.** (2026). Enhancing Concrete Sustainability: A Circular Economy Approach Using CO₂ Curing, 2026 A-State Create@State Symposium, April 2026, Jonesboro, Arkansas.
8. Sadique, A. and **Hossain, Z.** (2026). Utilization of Rice Husk Ash for Sustainable Stabilization of Expansive Subgrade Soils, 2026 A-State Create@State Symposium, April 2026, Jonesboro, Arkansas.
9. Subedi, A., and **Hossain, Z.** (2026). Effect of a Bio-based Forestry Byproduct on the Workability of Aged Binder, 2026 A-State Create@State Symposium, April, 2026, Jonesboro, Arkansas.
10. Sazzad, Q. S., and **Hossain, Z.** (2026). Comparative Analysis of Machine Learning Techniques for Pavement Performance Forecasting, 2026 Arkansas Academy of Science Conference, April 2026, Magnolia, Arkansas.

11. Das, A., and **Hossain, Z.** (2026). Rheological Performance Characterization of High-RAP Asphalt Binder Modified with Bio-Based and Petroleum-Derived Rejuvenating Additives, 2026 Arkansas Academy of Science Conference, April 2026, Magnolia, Arkansas.
12. Rahaman, N., and **Hossain Z.** (2026). Utilization of steel slag as cementitious material in concrete: improving early strength and sustainability, 2026 Arkansas Academy of Science Conference, April 2026, Magnolia, Arkansas.
13. Aftab, R., and **Hossain, Z.** (2026). Enhancing Concrete Sustainability: A Circular Economy Approach Using CO₂ Curing, 2026 Arkansas Academy of Science Conference, April 2026, Magnolia, Arkansas.
14. Sadique, A. and **Hossain, Z.** (2026). Utilization of Rice Husk Ash for Sustainable Stabilization of Expansive Subgrade Soils, 2026 Arkansas Academy of Science Conference, April 2026, Magnolia, Arkansas.
15. Subedi, A., and **Hossain, Z.** (2026). Effect of a Bio-based Forestry Byproduct on the Workability of Aged Binder, 2026 Arkansas Academy of Science Conference, April 2026, Magnolia, Arkansas.
16. **Hossain, Z.** (2026). "Physicochemical and Rheological Properties of Asphalt: Linking Material Science to Pavement Performance," Keynote Lecture (Invited), 8th International Conference on Civil Engineering for Sustainable Development (ICCESD 2026) to be held on February 5-7, 2026, Khulna, Bangladesh.
17. Islam, T., Sadat, K. S., and **Hossain, Z.** (2025). "Physico-Mechanical and Surface Chemical Analysis of Micronized Rubber Modified Binders for Predicting Moisture Resistance," Accepted, Poster, 2026 TRB Annual Meeting, January 2026.
18. **Hossain, Z.** (2025). TRRDWGP Project: Sustainable Use of Rice Husk and Scrap Tires as Construction Materials of Transportation Infrastructures, Invited Podium Presentation, Inaugural Arkansas Transportation Summit, Jonesboro, Arkansas, October 2025.
19. Mallick, O. and **Hossain, Z.** (2025). "Soil Stabilization Using Industrial and Agricultural Waste." Poster, Inaugural Arkansas Transportation Summit, Jonesboro, Arkansas, October 2025.
20. Basel, S., and **Hossain, Z.** (2025). "Predictive Analysis of Crash Severity and Modeling of 85th Percentile Speed using Artificial Intelligence (AI)," Poster, Inaugural Arkansas Transportation Summit, Jonesboro, Arkansas, October 2025.
21. Islam, T., and **Hossain, Z.** (2025). "Investigation of Micronized Rubber Powder as an Alternative to Polymer Modifier in Asphalt Pavement," Poster, Inaugural Arkansas Transportation Summit, Jonesboro, Arkansas, October 2025.
22. Das, A., and **Hossain, Z.** (2025). "Performance Assessment of RAP-Modified Asphalt Binders with Bio-Based vs. Petroleum-Based Additives," Poster, Inaugural Arkansas Transportation Summit, Jonesboro, Arkansas, October 2025.
23. Rahman, N., and **Hossain, Z.** (2025). "Performance Evaluation of steel slag-Based concrete as a Cementitious Material Replacement," Poster, Inaugural Arkansas Transportation Summit, Jonesboro, Arkansas, October 2025.
24. Das, A., and **Hossain, Z.** (2025). "Performance Bio-Based Additives in Binders with High RAP," Poster, Oklahoma Transportation Research Day, Edmond, Oklahoma, October 2025.
25. Rahman, N., and **Hossain, Z.** (2025). "Use of Steel Slag as a Cementitious Material in Concrete," Poster, Oklahoma Transportation Research Day, Edmond, Oklahoma, October 2025.
26. Sanikomm, A. and **Hossain, Z.** (2025). "Midpoint Environmental Impact Assessments of Selected Microgrid Systems," Poster Presented at the 10th North American Conference of the Industrial Engineering and Operations Management, Orlando, Florida. June 16-19, 2025.
27. Rahman, N., Das, A., and **Hossain, Z.** (2025). "Evaluating the Use of Steel Slag and Rice Husk Ash as Replacements of Aggregate in Concrete: A Sustainable Next-Gen Concrete," Poster Presented at 10th North American Conference of the Industrial Engineering and Operations Management, Orlando, Florida. June 16-19, 2025.
28. Das, A., Rahman, N., and **Hossain, Z.** (2025). "Sustainability Assessments of Hot and Warm Mix Asphalt Paving Technologies," Poster Presented at 10th North American Conference of the Industrial Engineering and Operations Management, Orlando, Florida. June 16-19, 2025.
29. Morris, K., and **Hossain, Z.** (2025). "Using Commercial Waste as a Rejuvenator," 2025 Create@State Annual Symposium, April 24, 2025, Arkansas State University, Jonesboro, Arkansas.
30. Basel, S., and **Hossain, Z.** (2025). "Predictive Analysis of Crash Severity And Modeling of 85th Percentile Speed Using Artificial Neural Network," 2025 Create@State Annual Symposium, April 24, 2025, Arkansas State University, Jonesboro, Arkansas.

31. Mallick, O., and **Hossain, Z.** (2025). "Comparative Analysis of Rice Husk Ash, Reclaimed Fly Ash, And Hydrated Lime For Enhancing Subgrade Soil Performance," 2025 Create@State Annual Symposium, April 24, 2025, Arkansas State University, Jonesboro, Arkansas.
32. Das, A., and **Hossain, Z.** (2025). "Effectiveness of Bio-Based Binder- State Of Practice And Laboratory Assessment," 2025 Create@State Annual Symposium, April 24, 2025, Arkansas State University, Jonesboro, Arkansas.
33. Islam, T., and **Hossain, Z.** (2025). "Performance of Waste Automobile Tires in Asphalt Concrete Pavements," 2025 Create@State Annual Symposium, April 24, 2025, Arkansas State University, Jonesboro, Arkansas.
34. Akid, A., Islam, T., and **Hossain, Z.** (2025). "Ground Tire Rubber as an Alternative of Fine Aggregates in Producing Concrete," 2025 Arkansas Ready Mix Concrete Association Annual Convention, April 11, 2025, Hot Springs, Arkansas.
35. Rahman, N., and **Hossain, Z.** (2025). "Use of Steel Slag in Preparing Concrete," 2025 Arkansas Academy of Science Conference, April 4, 2025, Lyon College, Batesville, Arkansas.
36. Das, A., and **Hossain, Z.** (2025). "Evaluating The Effectiveness of Bio-Based Binder: Practices And Laboratory Insights," 2025 Arkansas Academy of Science Conference, April 4, 2025, Lyon College, Batesville, Arkansas.
37. Sagun, B., and **Hossain, Z.** (2025). "Prediction of 85th Percentile Speeds for Rural Highways," 2025 Arkansas Academy of Science Conference, April 4, 2025, Lyon College, Batesville, Arkansas.
38. Mallick, O., and **Hossain, Z.** (2025). "Effectiveness of Rice Husk Ash as a Stabilizing Agent," 2025 Arkansas Academy of Science Conference, April 4, 2025, Lyon College, Batesville, Arkansas.
39. Islam, T., and **Hossain, Z.** (2025). "Use of Micronized Rubber Powder as an Alternative of Polymer in Asphalt Binders," 2025 Arkansas Academy of Science Conference, April 4, 2025, Batesville, Arkansas.
40. Islam, T., and **Hossain, Z.** (2025). "Comparison of Micronized Rubber Powder (MRP) modified asphalt with polymer modified based on rheological and chemical properties," Accepted for Presentation at the 2025 Transportation Research Board Annual Meeting, January 5-9, 2025, Washington, D.C.
41. Sadat, S., **Hossain, Z.**, Akid, A., and Oyan, M. (2025). "Multiscale evaluation of moisture effects of polymeric asphalt binder," Accepted for Presentation at the 2025 Transportation Research Board Annual Meeting, January 5-9, 2025, Washington, D.C.
42. Mahat, R., and **Hossain, Z.** (2024). "Liquefaction Hazard Analysis of Northeast Arkansas," 5th International Conference on Transportation Geotechnics, November 20-24, 2024, Sydney, Australia.
43. Tarhuni, F., and **Hossain, Z.** (2024). "Use of Rice Husk Ash as a Stabilizing Agent," 5th International Conference on Transportation Geotechnics, November 28, 2024, Sydney, Australia.
44. Al-Amin, M., and **Hossain, Z.** (2024). "Manufacturing of Concrete with Recycled Iron as a Partial Replacement of Fine Aggregate," 2024 Industrial Engineering and Operations Management World Congress, Detroit, Michigan, USA, October 9-11, 2024
45. Sadat, K., and **Hossain, Z.** (2024). "Moisture Susceptibility Assessment of Aggregate and Asphalt Binders," Presented at the 2024 ASCE International Conference on Transportation and Development, June 15-18, 2023, Atlanta, GA.
46. **Hossain, Z.** (2024). "Sustainable Use of GTR in Concrete," Poster, 2024 ARDOT TRC Annual Conference, May 2024, Hot Springs, Arkansas.
47. **Hossain, Z.** (2024). "Use of Waste Products as Construction Materials," Poster, 2024 ARDOT TRC Annual Conference, May 2024, Hot Springs, Arkansas.
48. Uddin, S., and **Hossain, Z.** (2024). Air Content Issues in Concrete Pavements, poster, presented at the 2024 Creat@State Conference, Jonesboro, AR.
49. Sadat, K., and **Hossain, Z.** (2024). Moisture Damage Prediction in Asphalt Concrete, poster, presented at the 2024 Creat@State Conference, Jonesboro, AR.
50. Islam, T., and **Hossain, Z.** (2024). Use of Recycled Brick in Concrete, poster, presented at the 2024 Creat@State Conference, Jonesboro, AR.
51. Bennett, C., and **Hossain, Z.** (2024). Roadway Safety Assessment in Jonesboro, AR, poster, presented at the 2024 Creat@State Conference, Jonesboro, AR.
52. Mahat, R., and **Hossain, Z.** (2024). "Cone Penetration Test-Based Liquefaction Analysis of Northeast Arkansas," Podium Presentation at the 2024 Transportation Research Board Annual Meeting, January 7-12, 2024, Washington D.C.

53. Akid, A. and **Hossain, Z.** (2024). "Feasibility Assessment of Utilization of Used Automobile Tire in Concrete," Poster Presentation at the 2024 Transportation Research Board Annual Meeting, January 7-12, 2024, Washington D.C.
54. Mahat, R., **Hossain, Z.**, and Islam, R. (2023). "Evaluation of Impact of Northeast Arkansas (NEA) Subsoil on Seismic Site Response," 2023 TranSET Summit, November 28, Jonesboro, Arkansas.
55. Sadat, K., and **Hossain, Z.** (2023). "Physicochemical Assessment of Asphalt Binder and Aggregate Systems," 2023 TranSET Summit, November 28, 2023, Jonesboro, Arkansas.
56. Tarhuni, F., Uddin, M. S., **Hossain, Z.**, Dakheel, H., and Bulut, R. (2023). "Improvement of Poor Subgrade Soils and Embankments Using Rice Husk Ash and Hydrated Lime as Stabilizing Agents," 2023 TranSET Summit, November 28, 2023, Jonesboro, Arkansas.
57. Sadat, K., Tarhuni, F., Mahat, R., and **Hossain, Z.** (2023). "Moisture Susceptibility Assessment of Aggregate and Asphalt Binders Using an Adhesion Tester," 2023 TranSET Summit, November 28, 2023, Jonesboro, Arkansas.
58. Akid, A. S. M. and **Hossain, Z.** (2023). Use of Reclaimed Fly Ash and Ground Tire Rubber in Concrete, Poster Presented at the 2023 TranSET Summit, November 28, 2023, Jonesboro, Arkansas.
59. **Hossain, Z.** (2023). "Highlights of Recent Trans-SET Research at A-State," Podium Presentation at the 2023 TranSET Summit, November 28, 2023, Jonesboro, Arkansas.
60. Akid, A. S. M. and **Hossain, Z.** (2023). Use of Environmentally Friendly Ground Tire Rubber in Concrete, 2023 ARDOT Annual TRC Conference, May 2023, Invited Presentation, Hot Springs, Arkansas.
61. **Hossain, Z.**, and Braham, A. (2023). TRC 2102-Compatibility Analysis of Aggregates and Binders in Arkansas, 2023 ARDOT Annual TRC Conference, May 2023, Invited Presentation, Hot Springs, Arkansas.
62. Mahat, R., Hasan, M. A., and **Hossain, Z.** (2023). Liquefaction Analysis of NEA, 2023 Create@State Symposium, April 2023, Jonesboro, Arkansas.
63. Akid, A. S. M. and **Hossain, Z.** (2022). GTR in Concrete. 2013 Create@State Symposium, April 2023, Jonesboro, Arkansas.
64. Sadat, K. S., Akid, A., Oran, M., and **Hossain, Z.** (2023). Compatibility of Aggregate and Binder Systems in Arkansas, 2013 Create@State Symposium, April 2023, Jonesboro, Arkansas.
65. Tarhuni, F., and **Hossain, Z.** (2023). Stabilization of Poor Subgrade Soils with RHA and Hydrated Lime, 2023 Create@State Symposium, April 2023, Jonesboro, Arkansas.
66. Pasha, O., Tarhuni, F., and **Hossain, Z.** (2023). Stabilization of Poor Gravelly Clay Soils Used in Low Volume Roads, 2023 Create@State Symposium, April 2023, Jonesboro, Arkansas.
67. Venna, S., and **Hossain, Z.** (2023). Roadway Safety Assessment of Jonesboro, 2023 Create@State Symposium, April 2023, Jonesboro, Arkansas.
68. Akid, A. S. M. and **Hossain, Z.** (2023). Use of Ground Tire Rubber in Concrete, 2023 Arkansas Ready Mix Concrete Association Annual Convention, March 2023, Invited Presentation, Hot Springs, Arkansas.
69. Akid, A. S. M. and **Hossain, Z.** (2023). Use of Ground Tire Rubber in Concrete, 2023 Arkansas Ready Mix Concrete Association Annual Convention, March 2023, Invited Presentation, Hot Springs, Arkansas.
70. Tarhuni, F. and **Hossain, Z.** (2023). Use of RHA as a Stabilizer for Poor Subgrade Soils, 2023 Arkansas Soil & Conservation Expo, February 2023, Jonesboro, Arkansas.
71. Mahat, R., and **Hossain, Z.** (2023). Liquefaction Analysis for NEA, 2023 Arkansas Soil & Conservation Expo, February 2023, Jonesboro, Arkansas.
72. Mahat, R., Hasan, A., and **Hossain, Z.** (2023). "Liquefaction Hazard Analysis of Northeast Arkansas Using Cone Penetration Test Data," 2023 Transportation Research Board Annual Meeting, National Academy of Sciences, January 8-13, 2023, Washington D.C.
73. Akid, A. S. M., **Hossain, Z.**, Hassan, M., and Meadors, A. (2023). "Evaluation of the Drying Shrinkage and Alkali-Silica Reaction of Concrete Containing Supplementary Cementitious Materials," 2023 Transportation Research Board Annual Meeting, National Academy of Sciences, January 8-13, 2023, Washington D.C.
74. Oyan, M. and **Hossain, Z.** (2023). Warm Mix Asphalt in Arkansas, 2023 Quality Asphalt Conference, Arkansas Asphalt Pavement Association, January 2023, Little Rock, Arkansas.
75. Tarhuni, F. and **Hossain, Z.** (2023). Soil Stabilization with Lime and Rice Husk Ash, 2023 Quality Asphalt Conference, Arkansas Asphalt Pavement Association, January 2023, Little Rock, Arkansas.
76. Oyan, M. and **Hossain, Z.** (2023). Moisture Resistance in Dense Grade Mixes, 2023 Quality Asphalt Conference, Arkansas Asphalt Pavement Association, January 2023, Little Rock, Arkansas.
77. Mahat, R., and **Hossain, Z.** (2023). Liquefaction Analysis of NEA, 2023 Quality Asphalt Conference, Arkansas Asphalt Pavement Association, January 2023, Little Rock, Arkansas.

78. Oyan, M., **Hossain, Z.**, Islam, M. R., Braham, A., and Chun, S. (2023). "Relative Compatibility Analysis of Aggregate-Binder Systems Against Stripping in Arkansas," 2023 Transportation Research Board Annual Meeting, National Academy of Sciences, January 8-13, 2023, Washington D.C.
79. Tarhuni, F. and **Hossain, Z.** (2022). Use of RHA as a Stabilizer for Poor Subgrade Soils, 2022 Arkansas Engineering Forum Conference, September 2022, Little Rock, Arkansas.
80. Mahat, R., and **Hossain, Z.** (2022). Seismic Hazard Analysis for NEA, 2022 Arkansas Engineering Forum Conference, September 2022, Little Rock, Arkansas.
81. Akid, A. S. M., **Hossain, Z.**, Chowdhury, R., Hassan, M., and Meadors, A. (2022). Effects of Supplementary Cementitious Materials on the Long-Term Durability Properties of Concrete, 2022 Tran-SET Conference, August 31-September 2, 2022, Austin, Texas.
82. Al-Amin, M., and **Hossain, Z.** (2022). Case Study of Modulus of Deformation of Railway Earthworks by Static Plate Load Test, 2022 Tran-SET Conference, August 31-September 2, 2022, Austin, Texas.
83. Oyan, M. and **Hossain, Z.** (2022). Warm Mix Asphalt in Arkansas, 2022 Tran-SET Conference, August 31-September 2, 2022, Austin, Texas.
84. Tarhuni, F. and **Hossain, Z.** (2022). Soil Stabilization with Lime and Rice Husk Ash, 2022 Tran-SET Conference, August 31-September 2, 2022, Austin, Texas.
85. Oyan, M. and **Hossain, Z.**, and Al-Sefi, M. (2022). Moisture Resistance in Dense Grade Mixes, 2022 Tran-SET Conference, August 31-September 2, 2022, Austin, Texas.
86. Mahat, R., Hasan, M. A., and **Hossain, Z.** (2022). Liquefaction Analysis of NEA, 2022 Tran-SET Conference, August 31-September 2, 2022, Austin, Texas.
87. **Hossain, Z.** (2022). Transportation Materials Research at A-State, Testified to the joint session of the Arkansas State Legislature (senate and congress), June 2022.
88. Akid, A. S. M. and **Hossain, Z.** (2022) Using Reclaimed Fly Ash as Supplementary Cementitious Material in Concrete, 2022 Arkansas Academy of Science Conference, April 2022, Arkadelphia, Arkansas.
89. Tarhuni, F. and **Hossain, Z.** (2022). Stabilizing Poor Subgrade and Embankment Soils with Rice Husk Ash, 2022 Arkansas Academy of Science Conference, April 2022, Arkadelphia, Arkansas.
90. Akid, A. S. M. and **Hossain, Z.** (2022) Using Harvested Fly Ash as Supplementary Cementitious Material in Concrete, 2022 Create@State Symposium, April 2022, Jonesboro, Arkansas.
91. Oyan, M., and **Hossain, Z.** (2021). "Rheological Study of Warm Mix Asphalt in Arkansas," presented at the 2021 TriDurLE Symposium on Transportation Infrastructure Innovations for Durability and Resilience, December 6-7, 2021, Pullman, Washington.
92. Roy, S., and **Hossain, Z.** (2021). Effectiveness of Waste Oils for Improvement of Properties of Hot-Mix Asphalt (HMA) Mixes with High RAP Contents, presented at the 2021 TriDurLE Symposium on Transportation Infrastructure Innovations for Durability and Resilience, December 6-7, 2021, Pullman, Washington.
93. Chowdhury, R., and **Hossain, Z.** (2021). "Influence Of Supplementary Cementitious Material (SCM) on Concrete Durability (Drying Shrinkage And Alkali-Silica Reactivity)," presented (poster) at the 2021 TriDurLE Symposium on Transportation Infrastructure Innovations for Durability and Resilience, December 6-7, 2021, Pullman, Washington.
94. **Hossain Z.**, Bairgi B., Zaman M., O'Rear E. (2021). "Viability Assessment of the Use of Ground Tire Rubber (GTR) as a Modifier in Asphalt Binders," 6th GeoChina International Conference on Sustainable Civil Infrastructures, September 18-19, 2021, NanChang, China.
95. **Hossain Z.**, Bairgi B., Zaman M., Bulut R., Sumpter B. (2021), "Evaluation of Stripping Resistance of Organoclay-Modified Asphalt Binder and Aggregate Systems Using an Optical Contact Angle Analyzer," 6th GeoChina International Conference on Sustainable Civil Infrastructures, September 18-19, 2021, NanChang, China.
96. Islam M.R., **Hossain Z.** (2021). "Prediction of Seismic Site Coefficients for Northeast Arkansas (NEA)," 6th GeoChina International Conference on Sustainable Civil Infrastructures, September 18-19, 2021, NanChang, China.
97. Hasan, A., **Hossain, Z.**, and Elsayed, A. (2021). Laboratory and Field Investigation of Subgrade Soil Stabilization in Arkansas, presented at the 2021 Tran-SET Conference, June 3-4, 2021, Jonesboro, AR.
98. Bagchi, T., and **Hossain, Z.** (2021). Laboratory Screening of Durable Aggregates for Paving Asphalt Mixture, presented at the 2021 Tran-SET Conference, June 3-4, 2021, Jonesboro, AR.
99. Oyan, M., and **Hossain, Z.** (2021). Feasibility Study of Warm Mix Asphalt in Arkansas, presented at the 2021 Tran-SET Conference, June 3-4, 2021, Jonesboro, AR.

100. Roy, S., and **Hossain, Z.** (2021). Effect of Powder Activated Carbon on Class C Fly Ash Modified Concrete. Presented at the 2021 Tran-SET Conference, June 3-4, 2021, in Jonesboro, AR.
101. Chowdhury, R., **Hossain, Z.**, and Meadors, A. (2021). Influence of Powdered Activated Carbon (PAC) in Fly Ash on Alkali-Silica Reactivity and Scaling Resistance of Concrete. Presented at the 2021 Tran-SET Conference, June 3-4, 2021, in Jonesboro, AR.
102. Islam, R., and **Hossain, Z.** (2021). Estimation of Seismic Site Factors for Selected Locations in Northeast Arkansas. Presented at the 2021 Tran-SET Conference, June 3-4, 2021, in Jonesboro, AR.
103. Subedi, S., Huang, O., Arce, G., Lies, N., Radovic, M., Hassan, M., and **Hossain, Z.** (2021). Evaluation of Alternative Sources of SCMs for Concrete Materials, presented at the 2021 Tran-SET Conference, June 3-4, 2021, Jonesboro, AR.
104. Oyan, M., and **Hossain, Z.** (2021). "A Study on Feasibility of Warm Mix Asphalt in Arkansas, Oral Presentation, Arkansas Academy of Science 104th Annual Meeting, April 9-10, 2021, University of Arkansas, Fort Smith, AR.
105. Islam, M., and **Hossain, Z.** (2021). Seismic Site Response Analysis In Perspective View of North-East Arkansas (NEA)," Oral Presentation, Arkansas Academy of Science 104th Annual Meeting, April 9-10, 2021, the University of Arkansas, Fort Smith, AR.
106. Roy, S., and **Hossain, Z.** (2021). "Effect of Powder Activated Carbon (PAC) on Class C Fly Ash Modified Concrete Properties, Oral Presentation, Arkansas Academy of Science 104th Annual Meeting, April 9-10, 2021, University of Arkansas, Fort Smith, AR.
107. Chowdhury, R., and **Hossain, Z.** (2021). "Effect of Powdered Activated Carbon (PAC) in Fly Ash on Alkali-Silica Reactivity and Scaling Resistance of Concrete," Oral Presentation, Arkansas Academy of Science 104th Annual Meeting, April 9-10, 2021, University of Arkansas, Fort Smith, AR.
108. Oyan, M., and **Hossain, Z.** (2021). "Laboratory Evaluation of Mixing and Compaction Temperatures of Warm Mix Additives Modified Asphalt Binders," presented at the 2021 Create@State Symposium, April 19-21, 2021, Arkansas State University, Jonesboro, AR.
109. Roy, S., and **Hossain, Z.** (2021). "Evaluation of Fresh Concrete Properties of Mixes Modified With Powder Activated Carbon in Class C Fly Ash," presented at the 2021 Create@State Symposium, April 19-21, 2021, Arkansas State University, Jonesboro, AR.
110. Chowdhury, R., and **Hossain, Z.** (2021). "The Role of Powdered Activated Carbon (PAC) in Fly Ash on Alkali-Silica Reactivity and Scaling Resistance of Concrete," presented at the 2021 Create@State Symposium, April 19-21, 2021, Arkansas State University, Jonesboro, AR.
111. Islam, M. R., and **Hossain, Z.** (2021). "Performing Site Specific Ground Motion Response Analysis (SSGMRA) in Perspective View of Northeast Arkansas (NEA)," presented at the 2021 Create@State Symposium, April 19-21, 2021, Arkansas State University, Jonesboro, AR.
112. Roy, S., and **Hossain, Z.** (2021). "Influence of Powder Activated Carbon (PAC) on Class C Fly Ash Modified Fresh and Hard Concrete Properties," 6th Annual LSU Regional Student Scholars Forum, Shreveport, LA, March 20, 2021.
113. Islam, M. R., and **Hossain, Z.** (2021). "Seismic Hazard Analysis In Perspective View of North-East Arkansas (NEA)," 6th Annual LSU Regional Student Scholars Forum, Shreveport, LA, March 20, 2021.
114. Bagchi, T., and **Hossain, Z.** (2020). "Compatibility Analysis of Aggregates and Binders," The 2020 Oklahoma Transportation Research Day, October 2020, Oklahoma City, OK.
115. Roy, S., and **Hossain, Z.** (2020). "Effects of PAC on Air Content and Strength Properties of Concrete," The 2020 Oklahoma Transportation Research Day, October 2020, Oklahoma City, OK.
116. Hasan, A., and **Hossain, Z.** (2020). "Seismic Site Factor Analysis for Northeast Arkansas (NEA)," The 2020 Oklahoma Transportation Research Day, October 2020, Oklahoma City, OK.
117. Hasan, A., and **Hossain, Z.** (2020). "Evaluation of Seismic Site Factor in Northeast Arkansas (NEA)," 2020 Tran-SET Annual Conference, September 1-3, 2020, Albuquerque, NM.
118. Bagchi, T., and **Hossain, Z.** (2020). "Compatibility Analysis of Aggregates and Binders," The 2020 Tran-SET Annual Conference, September 1-3, 2020, Albuquerque, NM.
119. Roy, S., and **Hossain, Z.** (2020). "Nanoscale Quantification of Moisture Susceptibility of Paving Asphalts," The 2020 Tran-SET Annual Conference, September 1-3, 2020, Albuquerque, NM.
120. Islam, T., and **Hossain, Z.** (2020). "Use of Rice Husk Ash (RHA) as a Supplementary Cementitious Material in Producing Normal Concrete," 2020 Tran-SET Conference, September 1-3, 2020, Albuquerque, NM.
121. Islam, T., and **Hossain, Z.** (2020). "Potential Use of Rice Husk Ash (RHA) in Flowable Fill Concrete," 2020 Tran-SET Conference, September 1-3, 2020, Albuquerque, NM.

122. Morshed, M. M. T., and **Hossain, Z.** (2020). "What are the Alternatives of PG Plus Tests for Modified Asphalt Binders?" 2020 Tran-SET Conference, September 1-3, 2020, Albuquerque, NM.
123. Hassan, N., and **Hossain, Z.** (2020). "Evaluation of Selected Performance Properties of Nanoclay-Modified Asphalt Binders," 2020 Tran-SET Conference, September 1-3, 2020, Albuquerque, NM.
124. **Hossain, Z.** (2020). "Assessment of Project-Based Effective Learning in Transportation Engineering," the 5th NA International Conference on Industrial Engineering and Operations Management, Detroit, Michigan, USA, August 10 - 14, 2020.
125. Roy, S., and **Hossain, Z.** (2020). "Multiscale Evaluation of Paving Asphalt Binders Under Different Aging Environments," the 5th NA International Conference on Industrial Engineering and Operations Management, Detroit, Michigan, USA, August 10 - 14, 2020.
126. Hasan, A., **Hossain, Z.**, and Kher, S. (2020). Neural Network Based Soil Resistivity Prediction in Alluvial Soil of Northeast Arkansas, the 2020 International Conference on Robotics and Artificial Intelligence (ICRAI 2020), June 2020, in Osaka, Japan.
127. Roy, S., and **Hossain, Z.** (2020). "Multiscale Investigation of Aging Effects on Paving Asphalt Binders," 5th Annual LSU Regional Student Scholars Forum, Shreveport, LA, March 20, 2020.
128. Bagchi, T., and **Hossain, Z.** (2020). "Use of Optical Contact Angle Device for Determination of Compatibility between Asphalt Binders and Aggregates," 5th Annual LSU Regional Student Scholars Forum, Shreveport, LA, March 20, 2020.
129. Chowdhury, R., and **Hossain, Z.** (2020). "Feasibility Study Of Using A Super Air Meter in Measuring Air Void System to Evaluate the Durability of Fresh Concrete," 2020 Create@State Annual Symposium, Jonesboro, AR, April 2020.
130. Roy, S., and **Hossain, Z.** (2020). "Multiscale Evaluation of Paving Asphalt Binders Under Different Aging Environments," 2020 Create@State Annual Symposium, Jonesboro, AR, April 2020.
131. Hasan, A., and **Hossain, Z.** (2020). "Liquefaction Potential Analysis And Mapping of North-East Arkansas," 2020 Create@State Annual Symposium, Jonesboro, AR, April 2020.
132. Bagchi, T., and **Hossain, Z.** (2020). "Determination Of Compatibility Analysis Between Asphalt Binders And Aggregates by Using Surface Free Energy Techniques," 2020 Create@State Annual Symposium, Jonesboro, AR, April 2020.
133. Islam, R., and **Hossain, Z.** (2020). "Estimation Of Seismic Site Coefficients by Ground Response Analysis for North-East Arkansas," 2020 Create@State Annual Symposium, Jonesboro, AR, April 2020.
134. Hasan, A., and **Hossain, Z.** (2020). "Prediction of Corrosion of Metal Pipes in Agriculture and Irrigation," Presented (Poster) at the 2nd Arkansas Soil & Water Education Conference Expo, January 30, 2020, Jonesboro, Arkansas.
135. Islam, R., Hasan, A., and **Hossain, Z.** (2020). "Seismic Hazard Analysis in North-East Arkansas." Presented (Poster) at the 2nd Arkansas Soil & Water Education Conference Expo, January 30, 2020, in Jonesboro, Arkansas.
136. Islam, K. T., **Hossain, Z.**, and Meadors, A. (2020). Use of Rice Husk Ash (RHA) in Flowable Fill Concrete, *2020 Transportation Research Board Annual Meeting*, Washington D.C.
137. Morshed, M. M, **Hossain, Z.**, Chen, D. H., and Baumgardner, G. (2020). Exploration of Alternatives of Elastic Recovery and Conventional Fatigue Analysis Tests of Modified Binders, *2020 Transportation Research Board Annual Meeting*, Washington D.C.
138. **Hossain, Z.** (2019). Rice Hush Ash in Flowable Fill Concrete, Invited Presentation at the *2019 Oklahoma Transportation Research Day*, November 5, 2019, in Midwest City, Oklahoma.
139. Hasan, A., and **Hossain, Z.** (2019). Life Cycle Analysis of Metal Culverts, Poster Presentation at the *2019 Oklahoma Transportation Research Day*, November 5, 2019, Midwest City, Oklahoma.
140. Morshed, T., and **Hossain, Z.** (2019). Performance Grade Plus Test of Polymer-modified Asphalt, Poster Presentation at the *2019 Oklahoma Transportation Research Day*, November 5, 2019, Midwest City, Oklahoma.
141. **Hossain, Z.**, and Islam, K. (2019). "Viability Assessment of the Use of Rice Husk Ash in Flowable Fill Concrete." Presented (oral) at the *2019 Southeast Symposium of Contemporary Topics (SSCET)*, on September 13, 2019, in New Orleans, LA.
142. Hasan, M., and **Hossain, Z.** (2019). "Metal Cross-drains Corrosion Risk Mapping in Arkansas." Presented (oral) at the *2019 Southeast Symposium of Contemporary Topics (SSCET)*, on September 13, 2019, in New Orleans, LA.

143. **Hossain, Z.**, and Islam, K. (2019). "Use of Rice Husk Ash (RHA) in Flowable Fill Concrete." Presented (poster) at the *2019 ARDOT Transportation Research Conference*, August 14-16, 2019, in Hot Springs, AR.
144. **Hossain, Z.**, and Hasan, M. (2019). "Metal Cross-drains Corrosion Risk Mapping in Arkansas." Presented (poster) at the *2019 ARDOT Transportation Research Conference*, August 14-16, 2019, in Hot Springs, AR.
145. **Hossain, Z.**, Morshed, M.M., and Hassan, M. N. (2019). "Alternative Test Methods of PG Plus Tests." Presented (poster) at the *2019 ARDOT Transportation Research Conference*, August 14-16, 2019, Hot Springs, AR.
146. Islam, K., and **Hossain, Z.** (2019). "Concrete Properties Evaluation of Rice Husk Ash (RHA) Modified Concrete." Presented (poster) at *2nd International Conference on Environmental Geotechnology, Recycled Waste Materials, and Sustainable Engineering*, UIC, Chicago, June 2019.
147. Hasan, A., and **Hossain, Z.** (2019). "Neural Network Based Soil Resistivity Prediction for Arkansas," 2019 Create@State Symposium, Jonesboro, AR, April 15-17, 2019.
148. Hassan, M. N. H., and **Hossain, Z.** (2019). "Evaluation of Aggregate-Binder Compatibility Using Surface Free Energy Theory," 2019 Create@State Symposium, Jonesboro, AR, April 15-17, 2019.
149. Morshed, MM T., and **Hossain, Z.** (2019). "Replacement of Conventional Elastic Recovery (ER) Test by Dynamic Shear Rheometer (DSR) Based Tests," 2019 Create@State Symposium, Jonesboro, AR, April 15-17, 2019.
150. Islam, K. T., and **Hossain, Z.** (2019). "Potential Use of Rice Husk Ash (RHA) in Asphalt Modification," 2019 Create@State Symposium, Jonesboro, AR, April 15-17, 2019.
151. Roy, S., and **Hossain, Z.** (2019). "Investigation of Moisture Damage of Asphalt Bidders Using the Atomic Force Microscopy (AFM) Techniques," 2019 Create@State Symposium, Jonesboro, AR, April 15-17, 2019.
152. Islam, K., and **Hossain, Z.** (2019). "Application of Rice Husk Ash (RHA) as a Sustainable Construction Material." Presented (Poster) at the *2019 Tran-SET Annual Conference*, San Antonio, TX. April 11-12, 2019.
153. Islam, K., and **Hossain, Z.** (2019). "Potential Use of Rice Husk Ash (RHA) in Flowable Fill Concrete." Presented (Poster) at the *2019 Tran-SET Annual Conference*, San Antonio, TX. April 11-12, 2019.
154. Hasan, A., and **Hossain, Z.** (2019). "An Overview of Corrosion Risk of Metal Culverts in Arkansas," Presented (Oral) at the *2019 Tran-SET Annual Conference*, San Antonio, TX, April 11-12, 2019.
155. Morshed, MM, **Hossain, Z.** (2019). "What are the Alternatives of PG Plus Tests for Modified Asphalt Binders?" Presented (Oral) at the *2019 Tran-SET Annual Conference*, San Antonio, TX, April 11-12, 2019.
156. Hasan, A., Morshed, M.M., and **Hossain, Z.** (2019). "Evaluation of Selected Performance Properties of Nanoclay-Modified Asphalt Binders." Presented (Oral) at the *2019 Tran-SET Annual Conference*, San Antonio, TX, April 11-12, 2019.
157. **Hossain, Z.**, and Islam, K. (2019). "Application of Rice Husk Ash (RHA) as a Sustainable Construction Material." Presented (Oral) at the *2019 Tran-SET Annual Conference*, San Antonio, TX, April 11-12, 2019.
158. **Hossain, Z.**, and Islam, K. (2019). "Potential Use of Rice Husk Ash (RHA) in Flowable Fill Concrete." Presented (Oral) at the *2019 Tran-SET Annual Conference*, San Antonio, TX, April 11-12, 2019.
159. Roy, S., and **Hossain, Z.** (2019). "Evaluation of Moisture Damage on the Properties of Asphalt Binders: A Microscopic Approach." Presented (Poster) at the *2019 Tran-SET Annual Conference*, San Antonio, TX, April 11-12, 2019.
160. **Hossain, Z.** and Hasan, A. Efficacy of Project-Based Learning for Engineering Students, 2019 Learn@stAte Symposium, March 14, 2019, Arkansas State University, AR
161. Hasan, A., and Hossain, Z. (2019). "Neural Network-Based Modeling of Soil Corrosion Potential in North-East Arkansas." Presented (Poster) at the Arkansas Soil & Water Education Conference Expo, January 30, Jonesboro, Arkansas.
162. Hasan, M., and Hossain, Z. (2018). "Metal Cross-drains Corrosion Risk Mapping in Arkansas." Presented (Poster) at the *2018 Oklahoma Transportation Research Day (OTRD)*, 2018, Oklahoma City, OK, October 23, 2018.
163. Islam, K., and **Hossain, Z.** (2018). "Influence of rice husk ash (RHA) on concrete durability." Presented (Poster) at the *2018 Oklahoma Transportation Research Day*, Oklahoma City, OK. October 23, 2018.
164. Morshed, M. M. T., and **Hossain, Z.** (2018). "Evaluation of Multiscale Viscoelastic Properties of Nanoclay-Modified Asphalt Binders." Poster presentation, the *2018 Oklahoma Transportation Research Day*, Oklahoma City, OK, October 23, 2018.
165. Roy, S., and **Hossain, Z.** (2018). "Microscopic Evaluation of Moisture Damage of Asphalt Binders." Poster presented at *2018 Oklahoma Transportation Research Day*, Oklahoma City, OK, October 23, 2018.

166. Islam, K., and Hossain, Z. (2018). "Influence of rice husk ash (RHA) on concrete durability," Video Presentation at 2018 Oklahoma Transportation Research Day, Oklahoma City, OK. October 23, 2018.
167. Hassan, M., and **Hossain, Z.** (2018). Impact of nanoclay on chemical compositions and mechanical properties of asphalt binder and aggregate systems, Poster presentation, 2018 Oklahoma Transportation Research Day, Oklahoma City, 23rd October 2018.
168. Mason, K, Roy, S., Hassan, M., and **Hossain, Z.** (2018), Feasibility Study of Warm Mix Asphalt in Arkansas, Oral and poster presentation, Summer Research Symposium, Arkansas State University, 7th August 2018
169. Islam, K., and **Hossain, Z.** (2018). "Use of Rice Hull Ash (RHA) as a Sustainable Source of Construction Materials," Poster Presented at Southeast Symposium on Contemporary Engineering Topics (SSCET), Huntsville, AL. August 3, 2018.
170. Morshed, M. M. T., and **Hossain, Z.** (2018). "Use of Nanoclays as Alternatives of Polymers toward Improving Performance of Asphalt Binders." Oral Presentation, Southeast Symposium on Contemporary Engineering Topics (SSCET), The University of Alabama, Huntsville, AL, August 3, 2018.
171. Alam S., **Hossain Z.** (2018). Changes in Chemical Fingerprints of Asphalt Binders Due to Aging," Oral Presentation, GeoChina 2018. Sustainable Civil Infrastructures. July 23-25, 2018, Hangzhou, China.
172. Morshed, M. M. T., Hassan, M. N., and **Hossain, Z.** (2018). "Use of Nanoclays as Alternatives of Polymers toward Improving Performance of Asphalt Binders." Poster presentation, 106th ARDOT Transportation Engineering Conference (TRC), Hot Springs, AR, May 15-17, 2018.
173. Roy, S., and **Hossain, Z.** (2018). "Evaluation of Effects of Moisture on Asphalt Pavements." Presentation (Poster + Oral) at 106th TRC Transportation Engineering Conference, Hot Springs, AR, May 15-17, 2018.
174. Islam, K., and **Hossain, Z.** (2018). "Scaling Resistance of Industry Waste Modified Concrete Exposed to Deicing Chemicals." Poster Presented at Arkansas Academy of Science 102nd Annual Meeting, Arkansas State University, Jonesboro, AR. April 6-7, 2018.
175. Hasan, M., and **Hossain, Z.** (2018). System-reliability concepts in bridge pier design: inclusion of scouring and soil variability effects, Poster, Create@State, Jonesboro, AR, April 15-17, 2018.
176. Islam, K., and **Hossain, Z.** (2018). "Performance Evaluation of Silica Fume (SF) Modified Concrete." Poster presented at 2018 Create@State: A Symposium of Research, Scholarship, and Creativity, Arkansas State University, Jonesboro, AR. April 16-18, 2018.
177. Morshed, M. M. T., and **Hossain, Z.** (2018). "Viscosity Temperature Susceptibility Analysis for Nanoclay-Modified Asphalt Binders." Poster presentation, Create@State: A Symposium of Research, Scholarship, and Creativity, Arkansas State University, Jonesboro, AR, April 16-18, 2018.
178. Roy, S., and **Hossain, Z.** (2018). "Applications of Nanotechnology to Predict the Moisture Sensitivity of Asphalt Binders." Poster, Presented at 2018 Create@State: A Symposium of Research, Scholarship, and Creativity, Arkansas State University, Jonesboro, AR, April 16-18, 2018.
179. Hassan, M., Alam, S., and **Hossain, Z.** (2018). Characterization of Paving Asphalt Binders-A Chemistry Perspective, Poster presentation, Create@State 2018, Arkansas State University, 17th April 2018.
180. Roy, S., and **Hossain, Z.** (2018). "Characterization of Asphalt Binder Resistance to Moisture Damage using the Microscopy Technique." Poster presented at 2018 Create@State: A Symposium of Research, Scholarship, and Creativity, Arkansas State University, Jonesboro, AR, April 16-18, 2018.
181. Morshed, M. M. T., and **Hossain, Z.** (2018). "Prospects of Nanoclay as a Pavement Construction Material." Oral Presentation, Arkansas Academy of Science 102nd Annual Meeting, Arkansas State University, Jonesboro, AR, April 6-7, 2018.
182. Roy, S., and **Hossain, Z.** (2018). "Quantification of Moisture Effects on Adhesion and Modulus Properties of Paving Asphalts." Poster Presented at Arkansas Academy of Science 102nd Annual Meeting at Arkansas State University, Jonesboro, AR, April 6-7, 2018.
183. Hassan, M., and **Hossain, Z.** (2018). Effects of Zeolite on Chemical Elementals and Glass Transition Temperature of Asphalts, Oral presentation, Arkansas Academy of Science 102nd Annual Meeting, Arkansas State University, 6-7 April 2018.
184. Islam, K., Ahsan, M., and **Hossain, Z.** (2018). "Use of Rice Hull Ash (RHA) as a Sustainable Source of Construction Materials," Oral Presentation at 2018 Tran-SET conference, New Orleans, LA. April 3-4.
185. Islam, K., and **Hossain, Z.** (2018). "Use of Rice Hull Ash (RHA) as a Sustainable Source of Construction Materials," Poster Presented at 2018 Tran-SET Conference, April 3-4, 2018, New Orleans, LA.

186. Morshed, M. M. T., Hassan, M. N., and **Hossain, Z.** (2018). "Use of Nanoclays as Alternatives of Polymers toward Improving Performance of Asphalt Binders." Poster presentation, Tran-SET Conference 2018, New Orleans, LA, April 3-4, 2018.
187. Roy, S., and **Hossain, Z.** (2018). "Evaluation of Effects of Moisture on Asphalt Pavements." Poster and Oral at the 2018 Tran-SET Conference, New Orleans, LA, April 3-4, 2018.
188. **Hossain, Z.** and Hasan, A. Efficacy of Project-Based Learning for Engineering Students, 2018 Learn@stAte Symposium, March 15, 2018, Arkansas State University, AR
189. **Hossain, Z.**, Braham, A., and Aschenbrener, T. (2018). Evaluating Performance of Asphalt Pavements in Arkansas, Oral Presentation in the Transportation Research Board 96th Annual Meeting, January 7-11, 2018, Washington, D.C.
190. **Hossain, Z.**, Rashid, F., and Roy, S. (2018). Multiscale Evaluation of Rejuvenated Asphalt Binders with A High RAP Content. In the Transportation Research Board 97th Annual Meeting Compendium, January 2018, Washington, D.C.
191. Ahsan, M. B., and **Hossain, Z.** (2018). Study of Potential Use of Rice Husk Ash (RHA) as a Supplementary Cementitious Material in Concrete Industry, In the Transportation Research Board 97th Annual Meeting Compendium, January 2018, Washington, D.C.
192. Alam, S. and **Hossain, Z.** (2018) Linking Chemical Compositions and Rheological Properties of Asphalt Binders. In the Transportation Research Board 97th Annual Meeting Compendium, January 2018, Washington, D.C.
193. Roy, S., Ahsan, B., and **Hossain, Z.** Use of High Contents of Reclaimed Asphalt (RAP) in Hot Mix Asphalt (HMA) Pavements. Poster presented at the 2017 TRB Summer Workshop: Natural Resources, Sustainability, and their Intermodal Connections, July 18-21, 2017, Duluth, MN.
194. Ahsan, B., and **Hossain, Z.** Performance Study of Rice Husk Ash (RHA) as Sustainable Construction Material in Concrete Pavement. Poster presented at the 2017 TRB Summer Workshop: Natural Resources, Sustainability, and their Intermodal Connections, July 18-21, 2017, Duluth, MN.
195. **Hossain, Z.**, and. Ahsan, M. B. Performance Study of Rice Husk Ash (RHA) as Sustainable Construction Material in Concrete Pavement. Oral Presentation at the 2017 TRB Summer Workshop: Natural Resources, Sustainability, and their Intermodal Connections, July 18-21, 2017, Duluth, MN.
196. Roy, S., Ahsan, B., and **Hossain, Z.**, Use of High Contents of Reclaimed Asphalt (RAP) in Hot Mix Asphalt (HMA) Pavements. Oral Presentation at the 2017 TRB Summer Workshop: Natural Resources, Sustainability, and their Intermodal Connections, July 18-21, 2017, Duluth, MN.
197. Ahsan, M.B., Roy, S., and **Hossain, Z.** Sensitivity Analysis of Asphalt Pavement with RAP Using MEPDG Tool. Poster presented at the 104th TRC Meeting, May 16-17, 2017, Hot Springs Convention Center, AR.
198. Rahaman, M. Z., and **Hossain, Z.** Creep and Recovery Behavior of Polymer-Modified Asphalts in Arkansas. Poster presented at the 104th TRC Meeting, May 16-17, 2017, Hot Springs Convention Center, AR.
199. Mahmud, I., Alam, S., Morales, A., Baumgardner, G., **Hossain, Z.**, and Braham, A., Performance of Asphalts Modified with Polyphosphoric Acid (PPA). Poster presented at the 104th TRC Meeting, May 16-17, 2017, Hot Springs Convention Center, AR.
200. Rashid, F., and **Hossain, Z.** Multiscale Characterization of RAP-Modified Asphalt Binders. Poster presented at the 104th TRC Meeting, May 16-17, 2017, Hot Springs Convention Center, AR.
201. Ahsan, M. B., and **Hossain, Z.** Effect of Rice Husk Ash as a Supplementary Construction Material in Concrete. Poster presented at the 7th Annual Create@State: A Symposium of Research, Scholarship & Creativity, April 20-21, 2017, Arkansas State University, AR.
202. Alam, S., and **Hossain, Z.** Effect of Chemical Modification of Asphalt Binder, and Sustainable Usage of Reclaimed Asphalt Pavement (RAP). Poster presented at the 7th Annual Create@State: A Symposium of Research, Scholarship & Creativity, April 20-21, 2017, Arkansas State University, AR.
203. Darrington, R. (Mentor: Zahid Hossain), Recipient, 1st Place, Undergraduate Level Oral, 2017 Create@State Symposium, Arkansas State University, Jonesboro, Arkansas.
204. **Hossain, Z.** and Alam, S. Effectiveness of Project-Based Learning in Transportation Engineering, Learn@stAte Symposium 2017, March 16, 2017, Arkansas State University, AR
205. Rahaman, M.Z., **Hossain, Z.** and Zaman, M. Non-recoverable Compliance and Recovery Behavior of Polymer-modified and Reclaimed Asphalt Pavement-blended Binders in Arkansas, Poster, Presented in the Transportation Research Board 96th Annual Meeting, January 8-12, 2017, Washington D.C.

206. Rashid, F., **Hossain, Z.**, and Bhasin, A. Investigation of Nanomechanistic Properties of Reclaimed Asphalt Pavement Modified Asphalt Binders by Using an Atomic Force Microscope, Poster, Presented in the Transportation Research Board 96th Annual Meeting, January 8-12, 2017, Washington D.C.
207. **Hossain, Z.** Efficacy of Project-Based Effective Learning, The 2016 Teaching & Learning Symposium, Arkansas State University, November 20, 2016, Jonesboro, Arkansas.
208. **Hossain, Z.** and Rashid, F. Morphological and Nanomechanical Analyses of Ground Tire Rubber Modified Asphalts, Presented (Lectern) at 2016 Oklahoma Transportation Research Day, October 18, 2016, Oklahoma City, OK.
209. Alam, S., and **Hossain, Z.** Chemical Modification and Subsequent Changes in the Asphalt Chemistry, 2016 Oklahoma Transportation Research Day, October 18, 2016. Oklahoma City, Oklahoma.
210. Ahsan, B., and **Hossain, Z.** Feasibility Study of Rice Husk Ash as a Supplementary Construction Material in Concrete Industry, Poster presented at 2016 Oklahoma Transportation Research Day, October 18, 2016, Oklahoma City, OK.
211. Mahmud, I., and **Hossain, Z.** Performance of Asphalts Modified with Polyphosphoric Acid, Poster presented at 2016 Oklahoma Transportation Research Day, October 18, 2016, Oklahoma City, OK.
212. **Hossain, Z.** and Rashid, F. An Atomic Force Microscope-based Nanomechanistic Properties of Reclaimed Automobile Tires Modified Asphaltic Pavements, Poster, presented at 2016 Oklahoma Transportation Research Day, October 18, 2016, Oklahoma City, OK.
213. **Hossain, Z.**, Ahsan, B. A., and Alam, S. (2016). Sustainable Use of Recycled Materials-Rice Husk Ash (RHA) and Reclaimed Asphalt Pavement (RAP), Presentation, Little Rock-AR, October 6, 2016.
214. **Hossain, Z.**, Ahsan, M. B., Alam, S., and Rashid, F., Rice Husk Ash Modified Concrete, ASCE Arkansas Annual Conference-2016, October 6, 2016, North Little Rock, AR.
215. **Hossain, Z.** and Rashid, F. Investigation of Morphological and Nanomechanistic Properties of Reclaimed Asphalt Pavement (RAP) Modified Binders, Presentation at Southeast Symposium on Contemporary Engineering Topics (SSCET), August 26, 2016, Jackson, MS.
216. Baigri, B., Zaman, M., and Bulut, R. Prediction of the Stripping Resistance of Nanoclay-Modified Asphalts Using Their Surface Chemistries. Geo-Chicago August 7-9, 2016, Chicago, IL
217. Rashid, F. and **Hossain, Z.** Analyses of Nanoscopic Level Morphology and Mechanistic Properties of Waste Automobile Tires Modified Asphalt Binders, Presentation at 2016 Summer Workshop: Committees on Resource Conservation and Recovery (ADC60) and Geo-Environmental Processes (AFP40), July 26-29, 2016, Asheville, NC.
218. **Hossain, Z.** and Rashid, A.M.F., Morphological and Nanomechanical Analyses of Ground Tire Rubber Modified Asphalts, Presentation at Fourth GeoChina International Conference, July 25-27, 2016, Shandong, China.
219. Mahmud, I., **Hossain, Z.** and Baumgardner, G. Effects of Polyphosphoric Acid (PPA) Modification of Asphalts, Presentation at International Society for Asphalt Pavements (ISAP) 2016 Symposium, July 18-21, 2016, Jackson, Wyoming.
220. **Hossain, Z.** and Alam, S. Effectiveness of Active Learning through a Project-Based Learning Approach, First Learn@stAte Symposium 2016, March 9, 2016, Arkansas State University, AR
221. **Hossain, Z.**, and Ahsan, M.B., Evaluation of Rice Husk Ash (RHA) as Alternative Cementitious material in Concrete, Presentation in a meeting with Riceland Foods, Inc., May 24, 2016, Stuttgart, Arkansas.
222. Rahaman, M. Z., Rashid, F., and **Hossain, Z.**, Realistic and Effective Characterization of Polymeric and Reclaimed Asphalt Binders Subjected to Extreme Weather Events, Presented at the 102nd ARDOT Transportation Research Committee Meeting, Little Rock, AR, April 5-6, 2016.
223. Mahmud, I., **Hossain, Z.**, Braham, A., and Baumgardner, G. L., TRC 1501: Performance of Asphalts Modified with Polyphosphoric Acid, Poster presented at Transportation Research Committee (TRC) 2016 Spring Conference, April 5-6, 2016, Little Rock, AR.
224. Alam, S. and **Hossain, Z.**, Achievement of Sustainability through Greening of Concrete, Poster presented at Create@State: A Symposium of Research, Scholarship, and Creativity, April 7, 2016, Arkansas State University, AR
225. Rashid, F. (Mentor: **Hossain, Z.**), Characterization of Agricultural and Industrial Waste-Modified Asphalt Binders Using an Atomic Force Microscope, Poster presented at Create@State: A Symposium of Research, Scholarship, and Creativity, April 7, 2016, Arkansas State University, AR.

226. Ahsan, M.B. (Mentor: **Hossain, Z.**), Carbon Dioxide Gas Reduction by the Sustainable Use of Warm Mix Asphalt (WMA) in Pavement Industry, Poster presented at Create@State: A Symposium of Research, Scholarship, and Creativity, April 7, 2016, Arkansas State University, AR.
227. Rahaman, M. Z.,(Mentor: **Hossain, Z.**), Predication of Creep and Recovery Behavior of Recycled and Polymeric Asphalt Binders in Arkansas, Poster presented at Create @State, Arkansas State University, Jonesboro, AR, April 7, 2016.
228. Mahmud, I., (Mentor: **Hossain, Z.**), Feasibilities of Harvesting Rainwater in Jonesboro, Presentation at Create A-state: A Symposium of Research, Scholarship, and Creativity, April 7, 2016, Arkansas State University, AR.
229. **Hossain, Z.**, Rashid, F., Properties of High RAP Contents in Hot Mix Asphalts, ASCE Arkansas Annual Conference, October 2015, North Little Rock, AR.
230. Rashid, A.M.F., **Hossain, Z.** and Bhasin, A., Resistance of Asphalt Mixes with Recycled Materials to Withstand Extreme Low Temperatures, Poster presented at 2015 Oklahoma Transportation Research Day, October 20, 2015, Oklahoma City, OK
231. Rahaman, M. Z., and **Hossain, Z.**, Multiple Stress Creep Recovery Analysis of Modified Binders in the SPTC Region, Presented at Oklahoma Transportation Research Day, October 20, 2015, Oklahoma City, OK.
232. **Hossain, Z.**, Chowdhury, N., and Braham, A. Forensic Evolution Premature Failure of Arkansas Highway Systems, Presented at Oklahoma Transportation Research Day, October 20, 2015, Oklahoma City, OK.
233. **Hossain, Z.**, Bairgi, B., and Belshe, M. Moisture Susceptibility of Ground Tire Rubber Modified Asphalt Binder, Rubberized Asphalt Rubber 2015 (RAR2015), October 4-7, 2015, Las Vegas, NV.
234. **Hossain, Z.**, Rahaman, M. Z., Zaman, M., Ghosh, D., Hobson, K., Investigation of Multiple Stress and Creep Recovery Properties of Polymer Modified Asphalt Binders, Presented at International Airfield and Highway Pavements Conference, June 8-11, 2015, Miami, Florida.
235. Rashid, A.M.F. (Faculty Mentor: **Hossain, Z.**), Investigation of Low-Temperature Cracking and Fatigue Resistance of Asphalt Concretes With Reclaimed Asphalt Pavement (RAP), Presentation at Create@State: A Symposium of Research, Scholarship, and Creativity, Arkansas State University, April 7, 2015, Jonesboro, AR.
236. Rahaman, M. Z.,(Mentor: **Hossain, Z.**), Characterization of binders in the region using Multiple Stress Creep Recovery Test, presented at Create@State, Arkansas State University, April 7, 2015, Jonesboro, AR.
237. Mahmud, I., (Mentor: **Hossain, Z.**), Effects of Polyphosphoric Acid (PPA) modifications of Asphalts, presented at Create@State: A Symposium of Research, Scholarship, and Creativity, April 7, 2015, Arkansas State University, AR.
238. Bairgi, B. (Mentor: **Hossain, Z.**), Scrap Tires in Paving Materials: An Innovative Way to Eliminate Moisture Damage of Pavement, Poster presented at Create@State: A Symposium of Research, Scholarship, and Creativity, April 7, 2015, Arkansas State University, AR
239. Mahmud, I., **Hossain, Z.**, Braham, A., and Hardee, J., TRC 1501: Performance of Asphalts Modified with Polyphosphoric Acid, Poster presented at Transportation Research Committee (TRC) 2015 Spring Conference, May 20-21, 2015, Little Rock, Arkansas.
240. **Hossain, Z.**, Bairgi, B., and Belshe, M., Evaluation of Moisture Susceptibility of Ground Tire Rubber (GTR) Modified Asphalt Binder by Sessile Drop Method, Presented (Poster) at the 94th TRB Annual Meeting, January 11-15, 2015, Washington D.C.
241. **Hossain, Z.**, Zaman, M., Ghosh, D., and Hobson, K., Guidelines for Implementing the Multiple Stress Creep Recovery (MSCR) Test Method, Presented (Poster) at the 94th TRB Annual Meeting, January 11-15, 2015, Washington D.C.
242. **Hossain, Z.**, and Bairgi, B. (2014). Evaluation of Performance Properties of Ground Tire Rubber (GTR) Modified Asphalt Binder, Presented (Oral) at the ASCE Arkansas Annual Conference, October 2014, North Little Rock, AR.
243. Biswajit, B. and **Hossain, Z.**, Sustainable Use of Scrap Tire in Pavement, Presented (Oral) at the 2014 Create@State, April 10, 2014, Jonesboro, AR.
244. Chowdhury, N., **Hossain, Z.**, Forensic Investigations of Poor Performing Pavements in Arkansas, Presented (Poster) at the 2014 Create@State, April 10, 2014, Jonesboro, AR.
245. Wilson, L., Darrington, R., and **Hossain, Z.**, Evaluation of Interfacial Bond Strength of Carbon Nanotubes and Polymers, Presented (Poster) at the 2014 Create@State, April 10, 2014, Jonesboro, AR.

246. **Hossain, Z.**, Zaman, M., Saha, M., and Hawa, T., Evaluation of Viscosity and Rutting Properties of Nanoclay-Modified Asphalt Binders, Presented (Oral) at the *2014 Geo-Congress on Geo-Characterization and Modeling for Geo-sustainability*, February 23-26, 2014, Atlanta, GA
247. Diab, A., You, Z., **Hossain, Z.**, and Zaman, M., Moisture Susceptibility Evaluation of Nano-sized Hydrated Lime-Modified Asphalt-Aggregate Systems Based on Surface Free Energy Concept, Presented (Oral) at the *93rd TRB Annual Meeting*, January 12-16, 2014, Washington D.C
248. D. Dustin, D., Hawa, T., Saha, M., Zaman, and **Hossain, Z.**, Modeling Nanoclay Modified Asphalt Binder Through Molecular Dynamics, Presented (Oral) at the *33rd American Institute of Aeronautics and Astronautics (AIAA)/American Society of Mechanical Engineers (ASME) Oklahoma Symposium*, March 30, 2013, Tulsa, Oklahoma
249. **Hossain, Z.**, Zaman, M., and Solanki, P., State-of-the-Practice and Mechanistic Evaluation of New Asphalt Mixes with High Reclaimed Asphalt, Presented (Poster) at the *2013 Summer Workshop TRB ADC60 Committee for Waste Management and Resource Efficiency in Transportation*, July 14-17, 2013, Pittsburgh, Pennsylvania.
250. **Hossain, Z.**, Zaman, M., and Saha, M., Evaluation of Rutting and Moisture Susceptibility of Nanoclay-Modified Asphalt Binders, Presented (Oral) at the *17th International Road Federation World Meeting & Exhibition*, November 10-14, 2013, Riyadh, Saudi Arabia.
251. **Hossain, Z.**, Zaman, M., and Solanki, P., Viscoelastic Properties of Asphalt Binders Recovered from Reclaimed Asphalt Pavement, Presented (Oral) at the *17th International Road Federation World Meeting & Exhibition*, November 10-14, 2013, Riyadh, Saudi Arabia
252. **Hossain, Z.**, Zaman, M., and Solanki, P. Prediction of Dynamic Modulus of Asphalt Mixes with Reclaimed Asphalt Pavement, Presented (Oral) at the *2013 Conference of the ASCE Engineering Mechanics Institute*, August 4 – 7, 2013, Northwestern University, Evanston, IL.
253. **Hossain, Z.**, Zaman, M., and Solanki, P., State-of-the-Practice and Mechanistic Evaluation of New Asphalt Mixes with High Reclaimed Asphalt in Oklahoma, presented (Poster) at the *2013 Summer Workshop TRB Committee ADC60 Committee for Waste Management and Resource Efficiency in Transportation*, July 14-17, 2013, Pittsburgh, PA.
254. **Hossain, Z.**, Zaman, M., and Doiron, C., Mechanistic-Empirical Pavement Design Guide Input Parameters for Unbound Aggregates in Oklahoma, Presented (Oral) at the *2nd IACGE International Conference on Geotechnical and Earthquake Engineering (IACGE 2013)*, October 25-27, 2013.
255. **Hossain, Z.**, Zaman, M., Doiron, C., and Solanki, P., Evaluation of Mechanistic-Empirical Design Guide Input Parameters for Resilient Modulus of Stabilized Subgrade Soils, Presented (Oral) at the *ICSDEC 2012/ASCE Texas Section Conference/CI Summit*, November 7-9, 2012.
256. **Hossain, Z.**, Zaman, M., Saha, M., and Hawa, T. Preparation and Evaluation of Nanoclay-Modified Asphalt Binders, Presented at the *2012 ODOT-OTC Research Day*, Oklahoma City, October 4, 2012.
257. Zaman, M., **Hossain, Z.**, Solanki, P., Ghabchi, R., Singh, D., and Lewis, S. Mechanistic Evaluation Reclaimed Asphalt Pavement (RAP) for New Mixes, Presented (Oral) at the *ODOT-OTC Research Day*, Oklahoma City, October 4, 2012.
258. Pranshoo, S., P., **Hossain, Z.**, Adje, D., Ghabchi, R., Singh, D., and Zaman, M., Effect of Recycled Asphalt Pavement on Mechanistic Properties of Hot Mix Asphalt, Presented (Oral) at the *2012 OkTC-ODOT Research Day*, October 4, 2012, Oklahoma City, OK.
259. Yue, E., Amer, O., Soltani, H., **Hossain, Z.**, Bulut, R., Muralee, K., and Zaman, M. Evaluation of the Enhanced Integrated Climatic Model for Modulus-Based Construction Specifications for Oklahoma Pavements, Presented (Oral) at the *ODOT-OTC Research Day*, Oklahoma City, October 4, 2012.
260. **Hossain, Z.**, Solanki, P., Zaman, M., "Mechanistic Evaluation of Recovered Materials from Recycled Asphalt Pavement," Presented at *GeoCongress 2012*, March 25-29, 2012.
261. **Hossain, Z.**, M. Zaman, E. O'Rear, and Chen, D. "Laboratory Evaluation of Water-bearing Additive for Warm Mix Asphalt," Presented (Poster) at the *90th Transportation Research Board Annual Meeting*, Washington, DC, 2011.
262. **Hossain, Z.**, Zaman, M., Doiron, C., and Solanki, P. "Characterization of Subgrade Resilient Modulus for Oklahoma Soils for Pavement Design," Presented (Oral) at the *2011 GeoFrontiers*, 13-16, March, Dallas.
263. **Hossain, Z.**, and M. Zaman, "Energy Efficient Paving: Prospects and Concerns," Presented (Oral) at the *US-China Workshop on Energy and Environment in the Development of Sustainable Asphalt Pavements*, Chang'an University, Xian, China, June 6 - 8, 2010.

264. **Hossain, Z.**, and Zaman, M., "Dynamic Mechanical Analysis of Performance Grade Asphalt Binder," Presented (Oral) at the *12th International Conference of International Association for Computer Methods and Advances in Geomechanics (IACMAG)*, October 1-6, 2008, Goa, India.
265. **Hossain, Z.**, and Zaman, M., "Rheological Properties of Performance Grade Binders Using A Dynamic Mechanical Analyzer," Presented (Oral) at the *Symposium on Pavement Mechanics and Materials at the Inaugural International Conference of the Engineering Mechanics Institute (EM)*, May18-21, 2008. Minneapolis, MN.
266. **Hossain, Z.**, and A. Ali, "Association Rule Descriptive Language in Data Mining, Presented (Oral) at the *12th Industrial Engineering Research Conference (IERC 2003)*, Portland, May 18 - 20, 2003.
267. **Hossain, Z.**, and A. Ali, "Indexing for Efficient Valuation of Queries in Data Warehouse," Presented (Oral) at the *3rd International Conference of Mechanical Engineers and 8th paper meet on e-Manufacturing*, pp. 317-326, Dhaka, March 20-22, 2003.
268. **Hossain, Z.**, and A. Ali, "Association Rule Descriptive Language," Presented (Oral) at the *3rd International Conference on Data Mining Methods and Databases for Engineering, Finance and Other Fields*, vol. 6, pp. 917-926, Bologna, Italy, September 25 – 27, 2002.
269. **Hossain, Z.**, and A. Ali, "Unified Descriptive Language for Association Rules in Data Mining," Presented (Oral) at the *2nd International Workshop on Intelligent Systems Design and Applications (ISDA 2002)*, Atlanta, August 7 – 8, 2002.

Major Technical Reports

1. **Hossain, Z.** (2025). Feasibility Assessment of Reclaimed Fly Ash (RFA) and Ground Tire Rubber (GTR) Modified Concrete, 2021 TRRGP, Final Report, Arkansas Department of Transportation, Little Rock, Arkansas.
2. **Hossain, Z.** (2025). Sustainable Use of Rice Husk and Scrap Tires as Construction Materials of Transportation Infrastructures, 2023 TRRDWGP, Annual Report, Arkansas Department of Transportation, Little Rock, Arkansas.
3. **Hossain, Z.** (2024). Feasibility Assessment of Reclaimed Fly Ash (RFA) and Ground Tire Rubber (GTR) Modified Concrete, 2021 TRRGP, Annual Report, Arkansas Department of Transportation, Little Rock, Arkansas.
4. **Hossain, Z.**, and Braham, A. (2023). TRC 2102 Effect of Aggregate Binder Compatibility on Performance of Asphalts in Arkansas, Final Report, Submitted to the Arkansas Department of Transportation, Little Rock, AR, October 2023.
5. **Hossain, Z.**, Elsayed, A., and Sadat, S. (2023). Prediction of Moisture Resistance of Polymeric Asphalt Binders Through the Atomic Force Microscopy (AFM) Technique, Final Report, Tran-SET, Project No. 22BASU02, LSU, Baton Rouge, LA, September 2023.
6. **Hossain, Z.**, and Akid, A. S. (2023). Environmental Friendly Applications of Ground Tire Rubber (GTR) In Producing Concrete, Final Report, Tran-SET, Project No. 22CASU01, LSU, Baton Rouge, LA, September 2023.
7. Elseifi, M., and **Hossain, Z.** (2023). Moisture Resistance of Dense-graded Mix, Tran-SET, Final Report, Project No. 21LSU20, LSU, Baton Rouge, LA, January 2023.
8. **Hossain, Z.**, Bulut, R., Tarhuni, F., and Al-Dakheel, H. (2022). Stabilization of Poor Subgrade Soils and Embankments with Rice Husk Ash. Final Report, Tran-SET, Project No. 21GTSU01, LSU, Baton Rouge, LA, September 2022.
9. **Hossain, Z.**, Elsayed, A., and Mahat, R. (2022). Liquefaction Analysis of Northeast Arkansas. Final Report, Tran-SET, Project No. 21GTSU02, LSU, Baton Rouge, LA, September 2022.
10. **Hossain, Z.**, Elsayed, A., and Oyan, M. (2021). "Feasibility Assessment of Warm Mix Asphalt in Arkansas," Tran-SET, Project No. 20BASU083, LSU, Baton Rouge, LA, October 2021.
11. Acres, G., Hassan, M., Radovic, M., and **Hossain, Z.** (2021). "Evaluation of Alternative Sources of Supplementary Cementitious Materials (SCMs) for Concrete Materials in Transportation Infrastructure," Project No. 20CLSU07, LSU, Baton Rouge, LA, September 2021.
12. **Hossain, Z.**, Elsayed, A., and Roy, S. (2021). "Effectiveness of Softening Agents for Enhancing Properties of Asphalt Mixes with High RAP Contents.," Project No. 20BASU044, LSU, Baton Rouge, LA, August 2021.
13. **Hossain, Z.**, Elsayed, A., and Roy, S. (2020). "Influence of Powder Activated Carbon (PAC) in Fly Ash on the Properties of Concrete," Tran-SET, Project No. 19CASU03, LSU, Baton Rouge, LA, October 2020.
14. **Hossain, Z.**, Elsayed, A., and Hasan, A. (2020) "Site-specific Ground Motion Response Analysis in North-

- east Arkansas," Tran-SET, Project No. 19GTASU01, LSU, Baton Rouge, LA, August 2020.
15. **Hossain, Z.**, Elsayed, A., and Bagchi, T. (2020) "Effect of Aggregate Binder Compatibility on Performance of Asphalts in Arkansas," Tran-SET, Project No. 19BASU02, LSU, Baton Rouge, LA, August 2020.
 16. **Hossain, Z.**, Elsayed, A., and Hasan, A. (2019) "Development of Metals Corrosion Maps of Arkansas and Maintenance of Cross-drains," Tran-SET, Project No. 18GTASU01, LSU, Baton Rouge, LA, September 2019, 45 pages.
 17. **Hossain, Z.**, Elsayed, A., Hassan, M. N., and Morshed, M.M. (2019) "Elimination of Empirical, Ineffective and Expensive PG Plus Tests to Characterize Modified Binders," Tran-SET, Project No. 18CASU02, New Orleans, LA, September 2019, 46 pages.
 18. **Hossain, Z.**, and Islam, K. T. (2019) "Use of Rice Husk Ash (RHA) in Flowable Fill Concrete Mix Material," Tran-SET, Project No. 17CASU02, LSU, Baton Rouge, LA, September 2019, 41 pages.
 19. **Hossain, Z.**, and Elsayed, A., Islam, K. T. (2018) "Use of Rice Hull Ash (RHA) as a Sustainable Source of Construction Material". Tran-SET, Project No. 17CASU02, LSU, Baton Rouge, LA, Published on 10-2018, 55 pages.
 20. **Hossain, Z.**, and Roy, S. (2018). "Impacts of Moisture on Asphalt Properties." Final Research Report, 17BASU03, USDOT through Tran-SET (Transportation Consortium of South-Central States), June 2018, 154 pages.
 21. **Hossain, Z.**, Elsayed, A., Hassan, M., and Morshed, M. M. (2018). "Use of Nanoclays as Alternatives of Polymers Toward Improving Performance of Asphalt Binders." Final Research Report, 17BASU01, USDOT through Tran-SET (Transportation Consortium of South-Central States), Baton Rouge, LA 70803, October 2018, 90 pages.
 22. **Hossain, Z.**, Braham, A., and Baumgardner, G. Performance of Asphalts Modified with Polyphosphoric Acid, Final Report, Project No. ARDOT TRC # 1501, Submitted to the Arkansas Department of Transportation (ARDOT), December 2017, Little Rock, Arkansas.
 23. Rodriguez, R., Bhasin, A., **Hossain, Z.** and Rashid, F. Resistance of Asphalt Composites with Recycled Materials to Withstand Extreme Temperatures, The Southern Plains Transportation Center (SPTC), Final Report, Project No. SPTC14.1-30, August 2017
 24. **Hossain, Z.**, and Rahaman, Z. Characterization of Asphalt Binders Exposed to Extreme Temperatures Through Simple and Effective Test Methods, Submitted to the Southern Plains Transportation Center (SPTC), Through Louisiana Technological University, Project No. Final Report, Project No. SPTC14.1-80, August 2017.
 25. **Hossain, Z.**, Kemp, B., Jeong, K., Kher, S., Seok, I., Ali, H., and Engelken, R. Acquisition of an Atomic Force Microscope (AFM) to Support Cross-Disciplinary Research of Evaluating Nano-scale Properties of Materials at Arkansas State University, Final Report, NSF: MRI Award No. 1429690, May 2017, Washington D.C.
 26. Braham, A., **Hossain, Z.**, Yang, S., and Chowdhury, N. Evaluating Performance of Asphalt Pavement Based on Data Collected During IRB, Arkansas Department of Transportation (ARDOT), Final Report No. ARDOT TRC 1404, 2015, Little Rock, Arkansas.
 27. **Hossain, Z.**, Zaman, M., and Ghosh, D. Creep Compliance and Percent Recovery of Oklahoma Certified Binder Using the Multiple Stress Recovery (MSCR) Method, Report No. FHWA-OK-14–19. Federal Highway Administration, Oklahoma Department of Transportation, 2015, Oklahoma City, Oklahoma.
 28. **Hossain, Z.**, Zaman, M., Solanki, P., Ghabchi, R., Singh, D., and Lewis, S. Mechanistic Evaluation Reclaimed Asphalt Pavement (RAP) for New Mixes, Final Report, Oklahoma Transportation Center Project (OkTC), OTCRESOS10.1-45, December 2012, 149 pgs.
 29. **Hossain, Z.**, Solanki, P., Zaman, M., Laguros, M., and Lewis, S., Test Methods For Use of Recycled Asphalt Pavement In Asphalt Mixes, Final Report, March 2012, ODOT SPR No. 2223, Oklahoma Department of Transportation, Oklahoma City, 149 pages.
 30. **Hossain, Z.**, Zaman, M., and Doiron, C., Development of Flexible Pavement Database for Local Calibration of MEPDG, Final Report, January 2011, ODOT SPR No. 2209, Oklahoma Department of Transportation, Oklahoma City, 150 pages.
 31. **Hossain, Z.**, Buddhala, A., Zaman, M., O'Rear, E., Lewis, S. and Cross, S. Evaluation of the Use of Warm Mix Asphalt as a Viable Paving Material in the United States, Final Report for Cooperative Agreement: DTFH61-06-H-00044: Task 3, Turner-Fairbank Highway Research Center, Federal Highway Administration (FHWA), Mclean, VA, USA, 2009, 139 pages.
 32. **Hossain, Z.**, Zaman, M., and White, L., Behavior of Thin Bonded Overlay on Rigid Pavements, Final Report, Submitted to Oklahoma Department of Transportation, Oklahoma City, 1999, 142 pages.

33. **Hossain, Z.**, Ahsanuzzaman, A. N., Bong, C. T., Zaman, M., and Mooney, M. "Effects of Heavy Loaded Trucks of Deterioration of Highway Infrastructure." *Oklahoma Department of Transportation*, Oklahoma City, 1997, 127 pages.

Non-Referred Publications/Invited Presentations

1. **Hossain, Z.** (2025). A-State Students' Activity with Concrete Work, Arkansas Ready Mix Concrete Association Directory, Invited Article, September 2025.
2. **Hossain, Z.** (2025). Reclaimed Fly Ash Modified Concrete, 2025 Arkansas Ready Mix Concrete Association Annual Convention, Invited Presentation, Hot Springs, Arkansas, March 2025.
3. **Hossain, Z.** (2024). A-State Students' Activity with Concrete Work, Arkansas Ready Mix Concrete Association Directory, Invited Article, November 2024.
4. **Hossain, Z.** (2024). GTR-Modified Concrete, 2024 Arkansas Ready Mix Concrete Association Annual Convention, Invited Presentation, Hot Springs, Arkansas, March 2024.
5. **Hossain, Z.** (2023). A-State Students' Activity with Concrete Work, Arkansas Ready Mix Concrete Association Directory, Invited Article, December 2023.
6. **Hossain, Z.** (2023). Variation of Air Content at Different Stages of Concrete, 2023 Arkansas Ready Mix Concrete Association Annual Convention, Invited Presentation, Hot Springs, Arkansas, March 2023.
7. **Hossain, Z.** (2023). Prediction of Moisture Resistance of Polymeric Asphalt Binders Through the Atomic Force Microscopy (AFM) Technique, Presented to Project Review Committee, Jonesboro, AR, Dec. 2023
8. **Hossain, Z.** (2023). Environmental Friendly Applications of Ground Tire Rubber (GTR) In Producing Concrete, Presented to Project Review Committee, Tran-SET, LSU, Baton Rouge, LA, December 2023.
9. **Hossain, Z.** (2023). Prediction of Moisture Resistance of Polymeric Asphalt Binders Through the Atomic Force Microscopy (AFM) Technique, Project Highlights, TranSET, LSU, Baton Rouge, LA, December 2023
10. **Hossain, Z.** (2023). Environmental Friendly Applications of Ground Tire Rubber (GTR) In Producing Concrete, Project Highlights, Submitted to TranSET, LSU, Baton Rouge, LA, December 2023
11. **Hossain, Z.** (2023). Implementation Report of Prediction of Moisture Resistance of Polymeric Asphalt Binders Through the Atomic Force Microscopy (AFM) Technique, Tran-SET, LSU, LA, November 2023.
12. **Hossain, Z.** (2023). Implementation Report of Environmental Friendly Applications of Ground Tire Rubber (GTR) in Producing Concrete, Submitted to Tran-SET, LSU, Baton Rouge, LA, November 2023.
13. **Hossain, Z.**, and Braham, A. (2023). TRC 2102 Project, Effect of Aggregate Binder Compatibility on Performance of Asphalts in Arkansas, Implementation Report, Arkansas DOT, Little Rock, AR, May 2023.
14. Elseifi, M., and **Hossain, Z.** (2023). Moisture Resistance of Dense-graded Mix, Tran-SET, Presented to Project Review Committee, Tran-SET, LSU, Baton Rouge, LA, January 2023.
15. Elseifi, M., and **Hossain, Z.** (2023). Moisture Resistance of Dense-graded Mix, Tran-SET, Project Highlights, Submitted to Tran-SET, LSU, Baton Rouge, LA, January 2023.
16. Elseifi, M., and **Hossain, Z.** (2022). Implementation Report on Moisture Resistance of Dense-graded Mix, Tran-SET, Submitted to Tran-SET, LSU, Baton Rouge, LA, August 2022.
17. **Hossain, Z.** (2022). A-State Students' Activity with Concrete Work, Arkansas Ready Mix Concrete Association Directory, Invited Article, Invited Article, October 2022.
18. **Hossain, Z.** (2022). Stabilization of Poor Subgrade Soils and Embankments with Rice Husk Ash. Presented to Project Review Committee, Tran-SET, LSU, Baton Rouge, LA, September 2022.
19. **Hossain, Z.**, (2022). Liquefaction Analysis of Northeast Arkansas. Presented to Project Review Committee, Tran-SET, LSU, Baton Rouge, LA, September 2022.
20. **Hossain, Z.** (2022). Stabilization of Poor Subgrade Soils and Embankments with Rice Husk Ash. Project Highlights, Submitted to Tran-SET, LSU, Baton Rouge, LA, September 2022.
21. **Hossain, Z.**, (2022). Liquefaction Analysis of Northeast Arkansas. Project Highlights, Submitted to Tran-SET, LSU, Baton Rouge, LA, September 2022.
22. **Hossain, Z.** (2022). Stabilization of Poor Subgrade Soils and Embankments with Rice Husk Ash. Implementation Report, Submitted to Tran-SET, LSU, Baton Rouge, LA, August 2022.
23. **Hossain, Z.**, (2022). Liquefaction Analysis of Northeast Arkansas. Implementation Report, Submitted to Tran-SET, LSU, Baton Rouge, LA, August 2022.
24. **Hossain, Z.** (2021). A-State Students' Activity with Concrete Work, Arkansas Ready Mix Concrete Association Directory, Invited Article, October 2021.
25. **Hossain, Z.** (2021). "Feasibility Assessment of Warm Mix Asphalt in Arkansas," Presented to Project Review Committee, Tran-SET, LSU, Baton Rouge, LA, September 2021.

26. Acres, G., Radovic, M., and **Hossain, Z.** (2021). "Evaluation of Alternative Sources of Supplementary Cementitious Materials (SCMs) for Concrete Materials in Transportation Infrastructure," Presented to Project Review Committee, Tran-SET, LSU, Baton Rouge, LA, September 2021.
27. **Hossain, Z.** (2021). "Effectiveness of Softening Agents for Enhancing Properties of Asphalt Mixes with High RAP Contents.," Presented to Project Review Committee, Tran-SET, LSU, LA, September 2021.
28. **Hossain, Z.** (2021). "Feasibility Assessment of Warm Mix Asphalt in Arkansas," Project Highlights, Submitted to Tran-SET, LSU, Baton Rouge, LA, September 2021.
29. Acres, G., Radovic, M., and **Hossain, Z.** (2021). "Evaluation of Alternative Sources of Supplementary Cementitious Materials (SCMs) for Concrete Materials in Transportation Infrastructure," Project Highlights, Submitted to Tran-SET, LSU, Baton Rouge, LA, September 2021.
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31. **Hossain, Z.** (2021). "Feasibility Assessment of Warm Mix Asphalt in Arkansas," Implementation Report Submitted to Tran-SET, LSU, Baton Rouge, LA, August 2021.
32. Acres, G., Radovic, M., and **Hossain, Z.** (2021). "Evaluation of Alternative Sources of Supplementary Cementitious Materials (SCMs) for Concrete Materials in Transportation Infrastructure," Implementation Report Submitted to Tran-SET, LSU, Baton Rouge, LA, August 2021.
33. **Hossain, Z.** (2021). "Effectiveness of Softening Agents for Enhancing Properties of Asphalt Mixes with High RAP Contents.," Implementation Report Submitted to Tran-SET, LSU, Baton Rouge, LA, August 2021.
34. **Hossain, Z.** (2020). A-State Students' Activity with Concrete Work, Arkansas Ready Mix Concrete Association Directory, Invited Article, October 2020.
35. **Hossain, Z.** (2020). "Influence of Powder Activated Carbon (PAC) in Fly Ash on the Properties of Concrete," Presented to Project Review Committee, Tran-SET, LSU, Baton Rouge, LA, September 2020.
36. **Hossain, Z.** (2020) "Site-specific Ground Motion Response Analysis in North-east Arkansas," Presented to Project Review Committee, Tran-SET, LSU, Baton Rouge, LA, September 2020.
37. **Hossain, Z.** (2020) "Effect of Aggregate Binder Compatibility on Performance of Asphalts in Arkansas," Presented to Project Review Committee, Tran-SET, LSU, Baton Rouge, LA, September 2020.
38. **Hossain, Z.** (2020). "Influence of Powder Activated Carbon (PAC) in Fly Ash on the Properties of Concrete," Project Highlights, Submitted to Tran-SET, LSU, Baton Rouge, LA, September 2020.
39. **Hossain, Z.** (2020) "Site-specific Ground Motion Response Analysis in North-east Arkansas," Project Highlights, Submitted to Tran-SET, LSU, Baton Rouge, LA, September 2020.
40. **Hossain, Z.** (2020) "Effect of Aggregate Binder Compatibility on Performance of Asphalts in Arkansas," Project Highlights, Submitted to Tran-SET, LSU, Baton Rouge, LA, September 2020.
41. **Hossain, Z.** (2020). "Influence of Powder Activated Carbon (PAC) in Fly Ash on the Properties of Concrete," Implementation Report Submitted to TranSET, Tran-SET, LSU, Baton Rouge, LA, August 2020.
42. **Hossain, Z.** (2020) "Site-specific Ground Motion Response Analysis in North-east Arkansas," Implementation Report Submitted to TranSET, Tran-SET, LSU, Baton Rouge, LA, August 2020.
43. **Hossain, Z.** (2020) "Effect of Aggregate Binder Compatibility on Performance of Asphalts in Arkansas," Implementation Report Submitted to TranSET, Tran-SET, LSU, Baton Rouge, LA, August 2020.
44. **Hossain, Z.** (2020). "Effectiveness of Project-Based Collaborative Learning in Engineering," Abstract (Invited), in the *2020 Southeast Symposium of Contemporary Topics*, September 2020, Little Rock, AR.
45. **Hossain, Z.** (2020). "Powdered Active Carbon in Fly Ash and its Impact on Concrete Properties," Abstract (Invited), in the *2020 Southeast Symposium of Contemporary Topics*, September 2020, Little Rock, AR.
46. Hasan, A., and **Hossain, Z.** (2020). "Seismic Hazard Analysis for Northeast Arkansas," Abstract (Invited), Accepted, in the *2020 Southeast Symposium of Contemporary Topics*, September 2020, Little Rock, AR.
47. Bagchi, T., and **Hossain, Z.** (2020). "Compatibility Analysis of Common Aggregates and Binders Used in Arkansas Highways," Abstract (Invited), Accepted, in the *2020 Southeast Symposium of Contemporary Topics*, September 2020, Little Rock, AR.
48. Hasan, A., and **Hossain, Z.** (2020). "Viability Assessment of the Use of Rice Husk Ash in Flowable Fill Concrete." Abstract (Invited), Accepted, in the *2020 Southeast Symposium of Contemporary Topics (SSCET)*, September 2020, Little Rock, AR.
49. **Hossain, Z.** (2019). "Rice Husk Ash in Flowable Fill Concrete," Presented (Invited) in the *2019 ACI Structural Lightweight Concrete Seminar*, December 13, 2019, Jonesboro, AR.
50. **Hossain, Z.** (2019). A-State Student's Activity with Concrete Work, Arkansas Ready Mix Concrete Association Directory, October 2019.

51. **Hossain, Z.** (2019) "Development of Metals Corrosion Maps of Arkansas and Maintenance of Cross-drains," Presented to Project Review Committee, Tran-SET, LSU, Baton Rouge, LA, September 2019.
52. **Hossain, Z.** (2019) " Elimination of Empirical, Ineffective and Expensive PG Plus Tests to Characterize Modified Binders," Presented to Project Review Committee, Tran-SET, LSU, Baton Rouge, LA, September 2019.
53. **Hossain, Z.** (2019) " Use of Rice Husk Ash (RHA) in Flowable Fill Concrete Mix Material," Presented to Project Review Committee, Tran-SET, LSU, Baton Rouge, LA, September 2019.
54. **Hossain, Z.** (2019) "Development of Metals Corrosion Maps of Arkansas and Maintenance of Cross-drains," Project Highlights, Submitted to Tran-SET, LSU, Baton Rouge, LA, September 2019.
55. **Hossain, Z.** (2019) " Elimination of Empirical, Ineffective and Expensive PG Plus Tests to Characterize Modified Binders," Project Highlights, Submitted to Tran-SET, LSU, Baton Rouge, LA, September 2019.
56. **Hossain, Z.** (2019) " Use of Rice Husk Ash (RHA) in Flowable Fill Concrete Mix Material," Project Highlights, Submitted to Tran-SET, LSU, Baton Rouge, LA, September 2019.
57. **Hossain, Z., and Islam, K.** (2019). "Viability Assessment of the Use of Rice Husk Ash in Flowable Fill Concrete." Abstract (Invited), in the *2019 Southeast Symposium of Contemporary Topics (SSCET)*, September 13, 2019, New Orleans, LA.
58. **Hasan, M., and Hossain, Z.,** (2019), "Metal Cross-drains Corrosion Risk Mapping in Arkansas." Abstract ((Invited), in the *2019 Southeast Symposium of Contemporary Topics (SSCET)*, September 13, 2019, New Orleans, LA.
59. **Hossain, Z.** (2019) "Development of Metals Corrosion Maps of Arkansas and Maintenance of Cross-drains," Implementation Report, Submitted to Tran-SET, LSU, Baton Rouge, LA, August 2019.
60. **Hossain, Z.** (2019) " Elimination of Empirical, Ineffective and Expensive PG Plus Tests to Characterize Modified Binders," Implementation Report, Submitted to Tran-SET, LSU, Baton Rouge, LA, August 2019.
61. **Hossain, Z.** (2019) " Use of Rice Husk Ash (RHA) in Flowable Fill Concrete Mix Material," Implementation Report, Submitted to Tran-SET, LSU, Baton Rouge, LA, August 2019.
62. **Roy, S., and Hossain, Z.** (2019). "Moisture Effects on the Properties of Asphalt Binders." Abstract, the *2nd International Conference on Environmental Geotechnology, Recycled Waste Materials, and Sustainable Engineering*, UIC, Chicago, June 2019, 12.
63. **Hassan, M.N., Hossain, Z., and Baumgardner, G.,** (2019). "Quantification of Effects of Nanoclays on Chemical Compositions and Selected Mechanical Properties of Asphalt Binder and Aggregate Systems" Extended Abstract, *Transportation Research Board 98th Annual Meeting*, Washington D.C.
64. **Hossain, Z.** (2018). A-State Student's Activity with Concrete Work, Arkansas Ready Mix Concrete Association Directory, October 2018.
65. **Hossain, Z.** (2018) "Use of Rice Hull Ash (RHA) as a Sustainable Source of Construction Material," Presented to Project Review Committee, Tran-SET, LSU, Baton Rouge, LA, September 2018.
66. **Hossain, Z.** (2018). "Impacts of Moisture on Asphalt Properties." Final Research Report, Presented to Project Review Committee, Tran-SET, LSU, Baton Rouge, LA, September 2018.
67. **Hossain, Z.** (2018). "Use of Nanoclays as Alternatives of Polymers Toward Improving Performance of Asphalt Binders," Presented to Project Review Committee, Tran-SET, LSU, Baton Rouge, LA, September 2018.
68. **Hossain, Z.** (2018) "Use of Rice Hull Ash (RHA) as a Sustainable Source of Construction Material," Project Highlights, Submitted to Tran-SET, LSU, Baton Rouge, LA, September 2018.
69. **Hossain, Z.** (2018). "Impacts of Moisture on Asphalt Properties." Final Research Report, Project Highlights, Submitted to Tran-SET, LSU, Baton Rouge, LA, September 2018.
70. **Hossain, Z.** (2018). "Use of Nanoclays as Alternatives of Polymers Toward Improving Performance of Asphalt Binders," Project Highlights, Submitted to Tran-SET, LSU, Baton Rouge, LA, September 2018.
71. **Hossain, Z.** (2018) "Use of Rice Hull Ash (RHA) as a Sustainable Source of Construction Material," Implementation Report, Submitted to Tran-SET, LSU, Baton Rouge, LA, August 2018.
72. **Hossain, Z.** (2018). "Impacts of Moisture on Asphalt Properties." Final Research Report, Implementation Report, Submitted to Tran-SET, LSU, Baton Rouge, LA, August 2018.
73. **Hossain, Z.** (2018). "Use of Nanoclays as Alternatives of Polymers Toward Improving Performance of Asphalt Binders," Implementation Report, Submitted to Tran-SET, LSU, Baton Rouge, LA, August 2018.
74. **Hossain, Z.** (2017). A-State Student's Activity with Concrete Work, Arkansas Ready Mix Concrete Association Directory, October 2017.
75. **Rashid, F., and Hossain, Z.** (2017). "Use of Open-Graded Friction Course in Pavement Construction: A

- Sustainable way to Balance Technology and Nature.” *5th International Conference on Solid Waste Management in South Asian Countries*, February 2017, Khulna, Bangladesh.
76. **Hossain, Z.** (2016). A-State Student’s Activity with Concrete Work, Arkansas Ready Mix Concrete Association Directory, October 2016.
 77. **Hossain, Z.** (2015). A-State Student’s Activity with Concrete Work, Arkansas Ready Mix Concrete Association Directory, October 2015.
 78. **Hossain, Z.**, Bairgi, B., and Belshe, M. (2015). “Moisture Susceptibility of Ground Tire Rubber Modified Asphalt Binder.” *Rubberized Asphalt Rubber 2015 Conference*, October 4-7, 2015, Las Vegas, NV.
 79. Baker, D., Hawa, T., **Hossain, Z.**, Saha, M., and Zaman, M. (2014). “Measurements of Thermal and Healing Properties of Nanoclay Modified Asphalt Binders Using Molecular Dynamics Simulations.” *Bulletin of the American Physical Society*, March 5, 2014, Denver, Colorado
 80. **Hossain, Z.**, Zaman, M., and Solanki, P. “Prediction of Dynamic Modulus of Asphalt Mixes with Reclaimed Asphalt Pavement.” *2013 Conference of the ASCE Engineering Mechanics Institute*, August 4-7, 2013, Northwestern University, Evanston, IL.
 81. **Hossain, Z.**, Zaman, M., and Solanki, P. “State-of-the-Practice and Mechanistic Evaluation of New Asphalt Mixes with High Reclaimed Asphalt.” *2013 Summer Workshop of the TRB Committee ADC60 on Sustainable Best Management Practices in Transportation*, July 14-17, 2013, Pittsburgh, PA.
 82. Pranshoo, S., P., **Hossain, Z.**, Adje, D., Ghabchi, R., Singh, D., and Zaman, M. “Effect of Recycled Asphalt Pavement on Mechanistic Properties of Hot Mix Asphalt.” *OKTC-ODOT Research Day*, October 4, 2012.
 83. **Hossain, Z.**, Solanki, P., Zaman, M., Lewis, S., and Hobson, K., “Influence of Recovery Processes on Properties of Binders and Aggregates Recovered from Recycled Asphalt Pavement.” *In the International Symposium on Testing and Specifications of Recycled Materials for Sustainable Geotechnical Construction*, February 2-4, 2011, Baltimore, Maryland.
 84. **Hossain, Z.**, Ghabchi, R., Zaman, M., and Solanki, P. “Implementation of MEPDG for Asphalt Pavements with RAP.” Annual Report for FY 2011, OTCRESOS10.1-45, *Oklahoma Transportation Center (OKTC)*, Oklahoma City, Oklahoma, 38 pages.
 85. **Hossain, Z.**, M. Zaman, C. Doiron, J. Autrey, A. Gupta, J. Laguros, “Influences of Recovery Methods on Properties of Binders and Aggregates Recovered from Recycled Asphalt Pavement.” *47th Petersen Asphalt Research Conference (PARC)*, Western Research Institute, July 12-15, 2010, Laramie, Wyoming.
 86. **Hossain, Z.**, Zaman, M., “Evaluating the Effects of Sasobit® and Advera® on Asphalt Binder by Conducting DMA-based Sweep Tests.” *In the Ph. D. Research Workshop in Bituminous Materials and Mixtures, Transportation Research Board, 88th Annual Meeting*, January 11-15, 2009, Washington, D.C.
 87. **Hossain, Z.**, and Zaman, M. “Development of Flexible Pavement Database for Local Calibration of MEPDG.” Annual Report for FY 2009, ODOT SPR No. 2209, *Oklahoma Department of Transportation*, Oklahoma City, 17 pages.
 88. **Hossain, Z.**, Singh, D., Bhudhala, A., Zaman, M., and O’Rear, E. “Rheological Properties of WMA Additives And Anti-stripping Agent Modified Performance Grade Binder.” at the *45th Petersen Asphalt Research Conference (PARC)*, Western Research Institute, July 14-18, 2008, Laramie, WY.
 89. Dunham, M., Xia, Y., Gruenwald, L., and **Hossain, Z.** “A Survey of Association Rules.” 65 Pages, Retrieved January 5 (2001): 2008

Radio Podcasts/Testimonies

1. **Hossain, Z.**, Research and Grant Initiatives in Using Steel Slug in Concrete, Interviewed the Chief of Communication Officer of A-State, Spring 2024.
2. **Hossain, Z.** Ep. Created@State Features New MSCE, MSEE, and MSME Programs at A-State, Summer 2023.
3. **Hossain, Z.** Testified on Pavement Materials Research at the Joint Legislative Session, Little Rock, Arkansas, Summer 2022
4. **Hossain** et al. Ep 63 Create@State Features Transportation Research Part 2, KASU Radio Podcast (21.14 mins), <https://www.kasu.org/podcast/create-state/2019-11-28/ep-63-create-state-features-transportation-research-part-2>, November 28, 2019.
5. **Hossain** et al. Ep 63 Create@State Features Transportation Research Part 1, KASU Radio Podcast (21.27 mins), <https://www.kasu.org/podcast/create-state/2019-11-21/ep-62-create-state-podcast-features-transportation-research-part-1>, November 21, 2019.

6. **Hossain et al.** Create@State Podcast Features Transportation Materials Research, KASU Radio Podcast (about 21.38 mins), <https://www.kasu.org/podcast/create-state/2019-05-02/create-state-podcast-features-transportation-materials-research>, May 2, 2019.

Workshops/Webinars Conducted/Coordinated

7. **Hossain, Z.**, 2025, ACI Technician Certification Test Workshop on Unit Weight and Yield, Jonesboro, AR, October 2025, No. of Participants=12.
8. **Hossain, Z.** 2025, Concrete Manufacturing – OSHA Training (Local Host), Jonesboro, Arkansas, February 2026, No. of Participants=40.
9. **Hossain, Z.**, 2024, TRC2102 Aggregate-Binder Compatibility Issues, 2024 ARDOT TRC Workshop, May 2024, No. of PDH hrs=one; No. of Participants=100.
10. **Hossain, Z.**, 2024, ACI Technician Certification Test Workshop on Unit Weight and Yield, Jonesboro, AR, October 2024, No. of Participants=8.
11. **Hossain, Z.** 2024, Concrete Manufacturing – OSHA Training (Local Host), Jonesboro, Arkansas, February 2025, No. of Participants=32.
12. **Hossain, Z.**, 2023, Tran-SET Summit on Materials Durability, Jonesboro, AR, November 2023, No. of PDH hrs.=6; No. of Participants = 93.
13. **Hossain, Z.**, 2022 Tran-SET Summit on Materials Durability, Little Rock, AR, November 2022, No. of PDH hrs.=5.5; No. of Participants = 90.
14. **Hossain, Z.** 2021 TranSET Conference, Jonesboro, AR, June 2021, No. of PDH hrs.=5.5; No. of Participants = 110.
15. **Hossain, Z.** Rice Husk Ash in Concrete, Workshop, ACI Structural Lightweight Concrete Seminar, December 13, 2019; No. of PDH hrs.=1; No. of Participants=20.
16. **Hossain, Z.** Metal Pipe Corrosion Maps for Arkansas, Webinar, Organized by Tran-SET, June 2019, No. of PDH hrs.=1; No. of Participants=150.
17. **Hossain, Z.** Use of Rice Husk Ash in Flowable Fill Concrete, Webinar, Organized by Tran-SET, June 2019, No. of PDH hrs.=1; No. of Participants=150.
18. **Hossain, Z.** Elimination of PG Plus Tests for Characterizing Polymer Modified Binders, Webinar, Organized by Tran-SET, March 28, 2018, No. of PDH hrs.=1; No. of Participants=150.
19. **Hossain, Z.**, and Islam, K. Rice Hull Ash Flowable Fill Presentation, Lunch and Field demonstration at Razorback Concrete, Jonesboro, AR, November 27, 2018. No. of PDH hrs.= 1; No. of Participants=40.
20. **Hossain, Z.**, Ghabchi, R., and Zaman, M. MEPDG Input Parameters for Asphalt Containing RAP, Workshop Organized by Oklahoma Transportation Center, Oklahoma City, OK, September 2012, No. of PDH hrs.= 2; No. of Participants=50.

Other Community Engagements

- Proposal Review Panel Board Member, ADHE SURF Award, 2015-Current
- Judge, Vex Robotics Contests, Jonesboro High School STEM Academy, 2018-Current
- Judge, Annual Northeast Arkansas Regional Science Fair, 2014-Current
- Exhibitor, Annual Summer TinkerFest/STEM Event, A-State Museum, 2016-Current
- Head Judge, ASCE Sustainable Design Contest, Mid-South Region, 2024
- Head Judge, ASCE Sustainable Design Contest, Mid-South Region, 2022.
- Mentor, High School Students' Project Challenge, Organized by Arkansas State University, 2022
- Faculty Mentor, STEM Summer Experience Through NSF's Bridging the Divide program, Summer 2018
- Coordinator, IEOM STEM Poster Competition - For High School and Middle School Students, Arkansas State University, 2017
- Judge, Science Fair Poster Contest, Valley View School, Jonesboro, AR, Various
- Guest Speaker, A-State Faculty Center, 2015
- Exhibitor, Jonesboro High School Career Fair, 2014-Current
- Guest Teacher, STEM Education Demo, Jonesboro Hispanic Center, Jonesboro, AR, Summer 2018
- Guest Teacher, STEM Research Demo, Nettleton STEAM, Jonesboro, AR, 2016-2019.