

**1. Name**

Aksel Seitllari

**2. Education – degree, discipline, institution, year**

- Ph.D., Civil Engineering, Michigan State University, MI, 2020
- M.B.A., Entrepreneurship, State University of New York at Oswego
- M.Sc., Transportation Engineering, Epoka University, Tirana, Albania, 2014
- B.Sc., Civil Engineering, Epoka University, Tirana, Albania, 2013

**3. Academic experience – institution, rank, title, when, full time or part time**

- Virginia Military Institute (VMI), Assistant Professor, 2024 – present, full time
- State University of New York at Canton, Assistant Professor, 2021 – 2024, full time
- Michigan State University, Graduate Research and Teaching Assistant, 2016 – 2020, full time
- Erciyes University, Kayseri, Turkey, Lecturer, 2014 – 2016, full time
- Epoka University, Tirana, Albania, Research and Teaching Assistant, 2013 – 2014, full time

**4. Non-academic experience – company or entity, title, brief description of position, when, full time or part time**

- Egis (formerly Beam, Longest and Neff LLC), Roadway Engineer, Prepared pavement and roadway geometric designs, 2020 – 2021, full time

**5. Certifications or professional registrations**

- Professional Engineer, (i) Michigan, No. PE6201313105, 2023, (ii) Indiana, No. PE12400887, 2024

**6. Current membership in professional organizations**

- American Society of Civil Engineers (ASCE) – Associate Member
- Association of Asphalt Paving Technologists (AAPT) – Member

**7. Honors and awards**

- Virginia Transportation Research Council Jack H. Dillard Best Paper Award, "Simple and Practical Tests for Rutting Evaluation of Asphalt Mixtures in the Balanced Mix Design Process" (with I. Boz, S. Diefenderfer and J. Habbouche), 2023
- Awarded for the proposal entitled "AsphaltTestC – A Practical Data Analysis Approach to the ASTM D8458 - Three Point Bending Cylinder Test Protocol for Cracking Evaluation of Asphalt Pavements" (Sponsor: NSF Grant Award (ID 2331572): Collaborative Research: Research Infrastructure: EPIIC: Collaborative Proposal: LIGHT UP – Leveraging Innovation to Grow High Tech and University Partnerships, P.I., Aksel Seitllari
- Awarded for the proposal entitled "Inter-laboratory Study for the Indirect Tensile Test at High Temperature and Rapid Rutting Test – Data Compilation and Analysis" (Sponsor: Virginia Transportation Research Council (VTRC), Project No. 121073, P.I.: Aksel Seitllari
- The Research Foundation for the State University of New York, Office of Research and Sponsored Programs SUNY Canton, 2023

**8. Service activities**

- Innovation Programming Advisory Committee (IPAC), Virginia Military Institute, 2024 – present
- Director to the Roadway Infrastructure Technology and Testing Center, 2021– 2024
- Reviewer for the International Journal of Pavement Engineering
- Reviewer for Transportation Research Record: Journal of the Transportation Research Board
- Reviewer for Road Materials and Pavement Design

**9. Publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentations**

*Test Method and Standard Development*

- ASTM D8458 – 22 “Standard Test Method for Evaluation of Fatigue Performance of Asphalt Mixtures Using the Three-Point Bending Cylinder (3PBC) Test”. Handling committee: ASTM D4.26 Fundamental Mechanistic Tests Subcommittee within ASTM D04, Road and Paving Materials, <https://www.astm.org/d8458-22.html>

*Technical Reports*

- Boz, I., Habbouche, J., Diefenderfer S.D., Ozbulut, O. and Seitllari, A., “Simple and Practical Tests for Rutting Evaluation of Asphalt Mixtures in the Balanced Mix Design Process” Final Report VTRC 23-R11, Virginia Transportation Research Council, February 2023
- Seitllari, A., Hasnat, M. and Kutay, M. E., “Development of Three Point Bending Cylinder (3PBC) Asphalt Mixture Fatigue Test System” National Cooperative Highway Research Program Innovations Deserving Exploratory Analysis (NCHRP IDEA) Final Report for Project 218, Final Report, May 2022.

*Articles in Refereed Journals*

- Boz, I., Habbouche, J., Diefenderfer S.D., Coffey, G., Seitllari, A. and Ozbulut, O., (2023) “Evaluating the Rutting Potential of Asphalt Mixtures with Simple and Practical Tests”, Transportation Research Record: Journal of the Transportation Research Board, <https://doi.org/10.1177/03611981231207089>
- Seitllari, A. Boz, I. Habbouche, J. and Diefenderfer S.D., (2023) “Using Mechanistic–Empirical Based Analysis to Evaluate Rutting Performance Thresholds for Balanced Mix Design Tests”, Journal of Construction and Building Materials, <https://doi.org/10.1016/j.conbuildmat.2023.132762>
- Seitllari, A. and Kutay M. E., (2023) “Investigation of the Fatigue Life Relationship Among Different Geometry Combinations of the 3-Point Bending Cylinder (3PBC) Fatigue Test for Asphalt Concrete”, International Journal of Pavement Engineering, <https://doi.org/10.1080/10298436.2022.2159402>
- Seitllari, A. and Kutay M. E., (2022) “Effect of sample geometry and air voids on the 3-Point Bend Cylinder (3PBC) fatigue test for asphalt concrete”, Road Materials and Pavement Design, <https://doi.org/10.1080/14680629.2022.2107947>
- Seitllari, A. Boz, I. Habbouche, J. and Diefenderfer S.D., (2022) “Assessment of Cracking Performance Indices of Asphalt Mixtures at Intermediate Temperatures”, International Journal of Pavement Engineering, <https://doi.org/10.1080/10298436.2020.1730838>
- Seitllari, A. Lanotte, M. and Kutay M. E., (2021) “Recommended Calibration Procedure of MEPDG Asphalt Rutting Model using Repeated Load Permanent Deformation and Confined/Unconfined Dynamic Modulus Data”, Journal of Transportation Engineering, Part B, DOI: 10.1061/JPEODX.0000234
- Nair, H. Seitllari, A. and McGhee K., (2021) “Laboratory Cracking Performance Evaluation of SM-4.75 Asphalt Mixtures”, International Journal of Pavement Research and Technology, <https://doi.org/10.1007/s42947-020-0164-3>
- Seitllari, A. Lanotte, M. and Kutay M. E., (2020) “Effect of aggregate selection and design gyrations on the performance of polymer and devulcanized rubber modified mixtures”, International Journal of Pavement Research and Technology, <https://doi.org/10.1007/s42947-020-0065-5>
- Seitllari, A. and Kutay, M. E., (2019) “Development of 3-Point Bending Beam Fatigue Test System and Implementation of Viscoelastic Continuum Damage (VECD) Theory”, Journal of

the Association of Asphalt Paving Technologists, Vol. 88, 783-810

- Seitllari, A. and Naser M. Z., (2019) “Leveraging artificial intelligence to assess explosive spalling in fire- exposed R.C. columns”, *Computers and Concrete An International Journal*, Vol. 24 (3), pp. 271-282, DOI: <https://doi.org/10.12989/cac.2019.24.3.271>
- Seitllari, A. Kumbarger, Y. Boz, I and Biligiri, K. P., (2019) “A Soft Computing Approach to Predict and Evaluate Asphalt Mixture Aging Characteristics using Asphaltene as a Performance Indicator”, *Materials and Structures*, Vol. 52 (100), <https://doi.org/10.1617/s11527-019-1402-5>
- Naser, MZ. and Seitllari, A., (2019) “Concrete under fire: an assessment through intelligent pattern recognition”, *Engineering with Computers*, <https://doi.org/10.1007/s00366-019-00805-1>
- Seitllari, A. and Kutay M. E., (2018) “Use of Soft Computing Tools to Predict Progression of Percent Embedment of Aggregates in Chip Seals”, *Transportation Research Record: Journal of the Transportation Research Board*, <https://doi.org/10.1177/0361198118756868>

*Peer-Reviewed Conference Proceedings and Poster Presentations*

- Seitllari, A., “Assessing the Impact of Asphalt Mixture Characteristics on the Fatigue Life of Aged Asphalt Pavements”, 8th International Conference, Bituminous Mixtures and Pavements, Thessaloniki, Greece, June 2024
- Upton, N., Murphy, G., Golden, L., and Seitllari, A., “Cracking Performance Assessment and Fatigue Characterization of Modified Asphalt Mixtures: A Comparative Study of Polymer and Crumb Rubber Modifications”, National Center for Transportation Infrastructure Durability & Life – Extension (TriDurLE), Annual Symposium, College Station, TX, February 2024
- Boz, I., Habbouche, J., Diefenderfer S.D., Coffey, G., Seitllari, A. and Ozbulut, O., “Comparative Analysis of Empirical and Fundamental Tests for Rutting Evaluation of Asphalt Mixtures”, Transportation Research Board of the National Academies, 103rd Annual Meeting, Washington D.C., January 2024
- Seitllari, A. Boz, I. Habbouche, J. and Diefenderfer S.D., “Employing Mechanistic–Empirical Based Analysis for Assessing Rutting Performance Thresholds Using Balanced Mix Design Tests”, International Airfield & Highway Pavements Conference, Austin, Texas, June 2023
- Morrow, B., and Seitllari, A., “Evaluation of Cracking Performance of Asphalt Mixtures at Intermediate Temperatures Using Fundamental and Screening Test Methods”, The 9th SUNY Undergraduate Research Conference (SURC) Annual Conference, SUNY Maritime, New York, April 2023
- Boz, I. Habbouche, J., Diefenderfer S.D., and Seitllari, A. “Ruggedness Evaluation and Precision Estimates Development for Simple and Practical Rutting Tests”, International Airfield & Highway Pavements Conference, Austin, Texas, June 2023
- Sarwar, M.G., Hossain, S.M., Seitllari, A., and Roman, K. “A vision-based system for road crack detection using hybrid deep learning architecture”, International Airfield & Highway Pavements Conference, Austin, Texas, June 2023
- Kocak, S., Seitllari, A., and Boz, I. “Exploiting Artificial Intelligence for Modeling of Influencing Parameters on Tire–Pavement Interaction Sound Pressure Level”, International Airfield & Highway Pavements Conference, Austin, Texas, June 2023
- Boz, I., Coffey, G., Habbouche, J., Diefenderfer S.D., Seitllari, A. and Ozbulut, O., (2023) “The Use of Monotonic Loading Tests to Evaluate the Rutting Potential of Asphalt Mixtures”, Transportation Research Board of the National Academies, 102nd Annual Meeting, Washington D.C., January 2023
- Seitllari, A. Boz, I. Habbouche, J. and Diefenderfer S.D., “Evaluating Rutting Performance

Thresholds for Balanced 1 Mix Design Tests Using Mechanistic–Empirical Based Analysis”, Transportation Research Board of the National Academies, 102nd Annual Meeting, Washington D.C., January 2023

- Hasnat, M., Seitllari, A. and Kutay M. E., “Ruggedness Evaluation of the Three-Point Bending Cylinder (3PBC) Test – 2022 TRB Doctoral Student Research Forum”, Transportation Research Board of the National Academies, 101st Annual Meeting, Washington D.C., January 2022
- Hasnat, M., Ghazavi, M., Farina, Seitllari, A. and Kutay M. E., “Effects of Polymer-Coated Rubber Technologies with Mechanistic-Empirical Performance Analysis”, ASCE International Conference on Transportation and Development (ICTD2022), Seattle, June 2022
- Hasnat, M., Ghazavi, M., Farina, Seitllari, A. and Kutay M. E., “Laboratory Evaluation and Mechanistic-Empirical Performance Analysis of Polymer-Coated Rubber (PCR) Mixtures”, Transportation Research Board of the National Academies, 100th Annual Meeting, Washington D.C., January 2021
- Seitllari, A. Ghazavi, M. and Kutay M. E., “Effects of binder modification on rutting performance of asphalt binders”, 9th International Conference on Maintenance and Rehabilitation of Pavements (MAIREPAV9), Zurich, 1 - 3 July 2020
- Ghazavi, M. Seitllari, A. and Kutay M. E., “Fatigue Performance Evaluation of Pilot Long-Life Project US-131 Using the Mechanistic-Empirical Asphalt Pavement Analysis (MEAPA) Web Application”, 9th International Conference on Maintenance and Rehabilitation of Pavements (MAIREPAV9), Zurich, 1 - 3 July 2020
- Seitllari, A. and Kutay M. E., “Effect of load eccentricity on uniaxial fatigue test results for asphalt concrete mixtures using F.E. modeling”, Advances in Materials and Pavement Performance Prediction, San Antonio, Texas, May 27-29, 2020
- Seitllari, A. Lanotte, M. and Kutay M. E., “Effect of compaction energy and aggregate selection on the performance of polymer and rubber modified mixtures”, Transportation Research Board of the National Academies, 99th Annual Meeting, Washington D.C., January 2020
- Seitllari, A., Boz, I., Habbouche, J., and Diefenderfer S.D., “Evaluation of Cracking Indices of Asphalt Mixtures at Intermediate Temperatures”, Transportation Research Board of the National Academies, 99th Annual Meeting, Washington D.C., January 2020
- Nair, H., Seitllari, A. and McGhee K., “Laboratory Cracking Performance Evaluation of SM-4.75 Asphalt Mixtures”, Transportation Research Board of the National Academies, 99th Annual Meeting, Washington D.C., January 2020
- Seitllari, A., and Kutay, M. E., “Use of uniaxial tension-compression fatigue test and VECD approach to evaluating SCB test performance indicators in the balanced mix design procedure”, 7th International Conference, Bituminous Mixtures and Pavements, Thessaloniki, Greece, June 2019
- Seitllari, A. and Kutay M. E., “3-Point Bending Cylinder Test for Characterization of Fatigue Performance in Asphalt Pavements”, Michigan State University Graduate Research Symposium, East Lansing, Michigan, March 2019
- Seitllari, A. Lanotte, M. and Kutay M. E., “Challenges on Calibration of the MEPDG Rutting Model in Asphalt Pavements”, Michigan State University Graduate Research Symposium, East Lansing, Michigan, March 2019
- Seitllari, A. and Kutay M. E., “A Novel Approach Toward Fatigue Characterization and Implementation of Viscoelastic Continuum Damage (VECD) Theory”, Transportation

Research Board of the National Academies, 98th Annual Meeting, Washington D.C., January 2019

- Seitllari, A. Lanotte, M. and Kutay M. E., “Calibration of the MEPDG Rutting Model: Issues and Consequences on Rutting Prediction”, Transportation Research Board of the National Academies, 98th Annual Meeting, Washington D.C., January 2019

**10. Most recent professional development activities**

- SUNY Startup Summer School, S4 Class, July – August 2023
- National Science Foundation NSF I-Corps Regional Course, July – August 2023
- Seitllari, A., “The Use of Monotonic Loading Tests to Evaluate the Rutting Potential of Asphalt Mixtures”, Invited Speaker, New York Construction Materials Association, 2024 Annual Asphalt Paving Conference, Hudson Valley Community College, Troy, NY, March 2024
- Seitllari, A., “Evaluation of Fatigue Performance of Asphalt Mixtures Using the Three-Point Bending Cylinder (3PBC) Test”, Invited Speaker, Civil and Environmental Engineering Seminar, Clarkson University, Potsdam, NY, February 2024
- Seitllari, A., “Center of Pavement Technology, Research and Education”, Invited Speaker, New York Construction Materials Fall Conference, Saratoga Springs, NY, November 2023
- Boz, I., Coffey, G., Habbouche, J., Diefenderfer S.D., Ozbulut, O. and Seitllari, A., “Mechanistic empirical Analysis to Evaluate BMD Mixtures: Rutting Evaluation”, Invited Speaker, AKM30(1) Subcommittee Meeting, the 102nd Transportation Research Board (TRB) Annual Meeting, Washington DC, January 2023