

ELIE Y. HAJJ

Professor of Civil Engineering

Program Director of Asphalt, Innovate, Enlighten, Implement (AIEI)

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EDUCATION

- Ph.D. Civil Engineering University of Nevada, Reno 2005.
- M.S.C.E. Civil Engineering University of Nevada, Reno 2003.
- B.S.C.E. Civil Engineering Lebanese University, Lebanon 1999.

PRINCIPAL FIELDS OF INTEREST

Engineered and sustainable paving materials, numerical modeling of asphalt pavement structures, pavement response to heavy loads, full-scale pavement structure testing, computer applications in civil engineering.

PROFESSIONAL EXPERIENCE

- Professor, Civil and Environmental Engineering, University of Nevada, Reno (07/20-present).
- Associate Professor, Civil and Environmental Engineering, University of Nevada, Reno (07/16-06/20).
- Assistant Professor, Civil and Environmental Engineering, University of Nevada, Reno (07/11-06/16).
- Research Assistant Professor, Civil and Environmental Engineering, University of Nevada, Reno (02/06-06/11).
- Nevada Technology Transfer Center, engineer and trainer (02/06-09/11).
- Pavement Services Manager & Lab Supervisor, Terracon Consulting Engineers, NV (05/05-01/06).
- Laboratory Manager, Western Regional Superpave Center (WRSC), University of Nevada, Reno (08/04-04/05).
- Teaching Graduate Assistant, University of Nevada, Reno (08/04-05/05).
- Research Graduate Assistant, University of Nevada, Reno (08/01-04/05).
- Field Site Engineer, Campenon Bernard SGE – France, Cairo, Egypt Branch (1999-2000).

TEACHING

Courses Taught at UNR

- CEE 375 (Undergraduate): Construction Materials I
- CEE 377 (Undergraduate): Construction Materials Engineering and Testing
- CEE 427 (Undergraduate): Capstone Design Project – Pavement Section
- CEE 431/631 (Undergraduate/Graduate): Pavement Design and Analysis
- CEE 732 (Graduate): Bituminous Materials and Mixtures
- CEE 733 (Graduate): Advanced Pavement Design and Management
- CEE 734 (Graduate): Pavement Reconstruction, Rehabilitation, and Maintenance
- CEE 735 (Graduate): Pavement Management Systems
- CEE 737 (Graduate): Advanced Modeling and Analysis of Bituminous Materials
- CEE 771 (Graduate): Special Engineering Problems
- CEE 797 (Graduate): Thesis
- CEE 799 (Graduate) Dissertation

Select Non-Credit Instruction

- “Balanced Mix Design Case Studies Workshop: Moving Forward with Implementation,” Instructor. Delivered 25 workshops to federal, state, and local governments, reaching over 900 attendees (2021–2025).

GRADUATE STUDENT ADVISORY COMMITTEES

List of Graduate Students

- Completed Master's Thesis Committee Chair: 31
- Completed Dissertation Committee Chair: 9
- In Progress Master's Thesis Committee Chair: 5
- In Progress Dissertation Committee Chair: 1

Dissertation Committee Chair

Completed

- Rami, Skaff (Fall 2021 - Fall 2024)
- Nicole, Elias (Summer 2020 - Summer 2024)
- Rami, Chkaiban (Fall 2017 - Summer 2021)
- Jhony, Habbouche (Fall 2015 - Spring 2019)
- Hadi, Nabizadeh (Fall 2013 - Fall 2017)
- Dario, Batioja (Spring 2014 - Fall 2017)
- Mohammad Zia Alavi (Spring 2010 - Fall 2014)
- Alvaro Ulloa Calderon (Spring 2010 - Spring 2013)
- Luis Loria (Spring 2008 - Spring 2011)

In-Progress

- Nourilarimi Fatemehzahra (Spring 2025 - Ongoing)

Master's Thesis Committee Chair

Completed

- Krichikeshan, Indiran (Spring 2023 - Fall 2024)
- Habib, El Hajj (Spring 2022 - Fall 2023)
- Amirhossein, Ostovar (Spring 2022 - Fall 2023)
- Aditya, Singh (Spring 2021 - Fall 2022)
- Julissa, Larios (Summer 2020 - Spring 2022)
- Rafaella, Costa (Spring 2020 - Fall 2021)
- Sitharththan, Arunthavabalan (Spring 2020 - Fall 2021)
- Ghadi, El Sebaaly (Fall 2018 - Spring 2020)
- Sarah, Stolte (Fall 2016 - Spring 2018)
- Lauren, Graham (Spring 2016 - Spring 2018)
- Jeyakaran, Thavathurairaja (Spring 2016 - Fall 2017)
- Sara, Pournoman (Fall 2014 - Spring 2017)
- Mohamed, Nimeri (Fall 2014 - Fall 2016)
- Luis Mariano, Sibaja Vargas (Fall 2014 - Spring 2016)
- Jhony, Habbouche (Fall 2014 - Fall 2015)
- Nicholas, Weitzel (Fall 2013 - Fall 2015)
- Peter, Nabhan (Fall 2013 - Fall 2015)
- Benjamin Faeth (Fall 2011 - Fall 2014)
- Roshan, Suwal (Spring 2012 - Fall 2014)
- Mohammad Reza Pouranian (Fall 2011 - Spring 2014)
- Ahsan Uz Zaman (Fall 2011 - Fall 2013)
- Kevin Morgan (Fall 2011 - Fall 2013)
- Sanjeevan Selvaratnam (Fall 2011 - Fall 2013)
- Teresa Feaster (Fall 2009 - Fall 2012)

- Juan Diego Porras (Spring 2010 - Fall 2011)
- Mathew Barton (Fall 2009 - Fall 2011)
- Noel Vijayaruban Vijayathanan (Fall 2009 - Fall 2011)
- Palasuntharam Thushanthan (Fall 2007 - Fall 2010)
- Alvaro Ulloa Calderon (Fall 2007 - Fall 2009)
- Edward Cortez (Fall 2007 - Fall 2009)
- Kandiah Pratheepan (Fall 2006 - Fall 2008)

In-Progress

- Iftekar Alam (Spring 2023 - Ongoing)
- Hemaprabha Pathmanathan (Spring 2023 - Ongoing)
- Chandrakumaran Thanusikan (Spring 2024 - Ongoing)
- Mahenthiran Buveenthiran (Spring 2024 - Ongoing)
- Bipin Khanal (Spring 2024 - Ongoing)

UNIVERSITY SERVICE

Department

Fall 2017 - Ongoing	Chair, CEE Differential Fees Committee
Fall 2023 - Fall 2024	Member, CEE Undergraduates Committee
Spring 2023	Member, Geotechnical Faculty Search Committee
Fall 2019 - Spring 2023	Member, CEE Administration & Awards Committee
Fall 2021 - Fall 2021	Member, Pavement Engineering & Science Lab Manager Search Committee
Spring 2016 - Fall 2020	Member, CEE Bylaws Committee
Fall 2019 - Spring 2020	Member, Loads Course Task Force
Fall 2019 - Spring 2020	Member, New Engineering Bldg. Space Task Force
Fall 2018 - Fall 2019	Member, CEE Graduate Committee
Spring 2016 - Fall 2017	Member, CEE Differential Fees Committee
Spring 2015 - Fall 2016	Member, Pavement Engineering & Science Faculty Search Committee
Spring 2013 - Fall 2016	Member, CEE Undergraduate Committee
Spring 2013 - Fall 2014	Member, CEE Space Committee

College

Fall 2018 - Ongoing	Chair, College of Engineering Central Differential Fees Committee
Fall 2017 - Ongoing	Member, College of Engineering Central Differential Fees Committee
Fall 2024 - Ongoing	Member, College of Engineering Personnel Committee
Fall 2021 - Fall 2021	Member, Engineering Marketing Specialist Search Committee
Spring 2017 - Fall 2019	Member, New Engineering Building Committee
Fall 2019 - Fall 2019	Member, Engineering Marketing Specialist Search Committee

University

Fall 2019 – Ongoing	Member, Conflict of Interest (COI) Committee, Responsibilities/Brief Description: Review COI disclosures that may involve conflicts of interest, discuss other COI issues that come to the committee through purchasing, sponsored projects, or other ways.
Fall 2018 – Fall 2019	Member, Committee: Salary and Benefits Committee (SBC), Responsibilities/Brief Description: Monitor, review and make recommendations on faculty compensation, benefits, and equity.

Spring 2015 – 2016	Member, Early Career Academic Faculty Committee (ECAFC), Responsibilities/Brief Description: Promote the success of early career academic faculty (i.e., assistant and recently promoted associate professors); conduct studies on university practices, policies and procedures to make recommendations to the senate and the administration on matters that affect the welfare and success of early career faculty.
Spring 2014 – Fall 2016	Member, Campus Affairs Committee (CAC), Responsibilities/Brief Description: Monitor, conduct studies, and make recommendations on a wide range of issues that are of campus concern, such as budgets, work environment, campus safety, and food service.

PROFESSIONAL SERVICE

Current Professional Memberships

- Academy of Pavement Science and Engineering (APSE), founding member (04/17-present).
- American Society of Civil Engineers (ASCE), associate member (2017-present).
- Association of Asphalt Paving Technologists (AAPT), member (04/01/09-present).
- ASTM International, member (1/1/25-present)
- International Society for Asphalt Pavements (ISAP), member (07/10/12-present).
- Transportation Research Board (TRB), member (2006-present).

Current Professional Service

- Advances in Materials and Pavement Performance Prediction (AM3P), Board of Advisors (2018-present).
- Balanced Mix Design Implementation Working Group (BMD IWG), member (Fall 2024-present).
- International Society for Asphalt Pavements (ISAP), Chair (02/25-01/27).
- International Society for Asphalt Pavements (ISAP), Board of Directors (01/20-present).
- Nevada Transportation Conference, Planning Committee, member (2012-present).
- TRB national committee on Production and Use of Asphalt (AKM10), member (4/22-present)
- University of Nevada's TRB Representative (2020-present).
- Utah Asphalt Pavement Association, Planning Committee, member (2012-present).

Select Past Professional Service

- Academy of Pavement Science and Engineering (APSE), Executive Officer (Elected) (04/17-04/20).
- Conference of European Directors of Roads (CEDR) Transnational Road Research project, "ALLBACK2PAVE: Toward a Sustainable 100% Recycling of Reclaimed Asphalt in Road Pavements", The University of Nottingham, United Kingdom, Advisory board. (2013–2015). <http://allback2pave.fehrl.org/>
- Emmon's Award Committee, Association of Asphalt Paving Technologists (AAPT), chair (2015) (member, 2013-2015).
- FHWA DTFH6117D00005, Task Order No. 9, Review of Models for Pavement Related Vehicle Operating Costs (VOCs) & Excess Fuel Consumption (EFC), Technical Review Panel, Subject Matter Expert (2019-2021).
- FHWA Asphalt Mixture and Construction Expert Task Group, Flow Number Task Group, member (2010-2012).
- International Society for Asphalt Pavements (ISAP), Vice Chair (02/23-01/25).
- International Society for Asphalt Pavements (ISAP) Technical Committee Asphalt Pavements & Environment, Work Group (WG) 1–Hot Recycling of RAP, Chair (2013-2017).

- Transportation Research Board (TRB) national committees on:
 - Structural Requirements of Asphalt Mixtures (AFK50), Chair (04/14-04/20).
 - Pavement Structural Testing and Evaluation (AKP40), member (04/20-04/22).
 - Asphalt Materials Selection and Mix Design (AKM30), member (04/20-04/22).
 - Structural Requirements of Asphalt Mixtures (AFK50), member (04/12-04/17).
 - Structural Requirements of Asphalt Mixtures (AFK50), young member (05/11-04/12).
 - Non-Binder Components of Asphalt Mixtures (AFK30), member (04/10-04/16).
 - Pavement Structural Modeling and Evaluation (AFD80), member (04/12-04/18).
 - Pavement Structural Modeling and Evaluation (AFD80), young member (04/06-04/12).
 - Integration of Bituminous Paving Mixture Characteristics with Pavement Structural Design (AFK50(2)), chair (2011-2014).

Journal Editorial Board Service

- International Journal of Pavement Engineering (IJPE), Associate Editor (2015-present).
- International Journal of Road Materials and Pavement Design (RMPD), Special Edition Editor (2024-2025).
- ASCE Geotechnical Special Publication (GSP) 223: Road Materials and New Innovations in Pavement Engineering. Proc. of the 2011 GeoHunan International Conference II: “Emerging Technologies for Design, Construction, Rehabilitation, and Inspections of Transportation Infrastructure,” ISBN 9780784411742, Hunan, China, Jun. 9-11, 2011, Co-editor.

Proposal Reviewer Activities

- METTRANS Transportation Center, Joint partnership of the University of Southern California (USC) and California State University Long Beach (CSULB).
- Ministry of Science and Innovation (MSI), Wellington, New Zealand.
- National Science Foundation (NSF), Gen-4 Engineering Research Centers (ERC).
- National Science Foundation (NSF), Catalyzing New International Collaboration (CNIC) program.
- National Science Foundation (NSF), Materials Engineering and Processing (MEP).
- National Science Foundation (NSF), Structural Materials and Mechanics (SMM) program.
- Research Grants Council (RGC), Honk Kong.

Journal Reviewer Activities

- Advances in Civil Engineering Materials (ACEM), ASTM International Journal.
- Canadian Journal of Civil Engineering, NRC Research Press.
- Construction and Building Materials, ELSEVIER.
- International Journal of Pavement Engineering (IJPE), Taylor & Francis.
- International Journal of Pavement Research and Technology (IJPRT), Springer Nature Singapore.
- International Journal of Road Materials and Pavement Design (RMPD), Taylor & Francis.
- International Union of Laboratories and Experts in Construction Materials, Systems and Structures (RILEM).
- Journal of Materials in Civil Engineering, Materials Engineering Division, American Society of Civil Engineers (ASCE).
- Journal of Performance of Constructed Facilities (ASCE).
- Journal of Testing and Evaluation (JOTE), ASTM International.
- Journal of Transportation Engineering, American Society of Civil Engineers (ASCE).

- Journal of the Association of Asphalt Paving Technologists, Association of Asphalt Paving Technologists (AAPT).
- Journal of the Transportation Research Board, Transportation Research Records (TRR).

Workshops Organized or Facilitated

- Evaluations of Asphalt Mixture Mechanistic Properties from Binders and Mastic Properties, Transportation Research Board Annual Meeting, Washington, D.C., January 17, 2019.
- Incorporating Structural Rehabilitation Techniques into Pavement-ME, Transportation Research Board Annual Meeting, Washington, D.C., January 12, 2017.
- How to Incorporate the Effect of Oxidation Aging on Asphalt Mixture's Properties in ME Design, Transportation Research Board Annual Meeting, Washington, D.C., January 8, 2017.
- Tools and Techniques for Evaluation of Thermal Cracking Properties of Asphalt Mixtures, Transportation Research Board Annual Meeting, Washington, D.C., January 14, 2016.
- Performance Testing to Characterize Fatigue Cracking of Asphalt Mixtures, Transportation Research Board Annual Meeting, Washington, D.C., January 10, 2016.
- Recent Advancements in Mechanistic Evaluations of Flexible Pavements, Transportation Research Board Annual Meeting, Washington, D.C., January 15, 2015.
- A Step Forward Toward A Better Understanding of the Blending Between Recycled and Virgin Asphalts, International Society for Asphalt Pavements (ISAP), Raleigh, North Carolina. (2014).
- RAP Recycling, International Society for Asphalt Pavements (ISAP), Fortaleza, Brazil. (September 30, 2012).

GRANTS

Summary of Awards at UNR (2006–2025)

Role	Total Funding	Number of Awards	Average Funds per Award	Average Awards per Year
Principal Investigator (PI)	\$14,069,337	37	\$380,252	2
Co-Principal Investigator (Co-PI)	\$8,985,123	48	\$187,190	2.5
Sum	\$23,054,460	85	\$271,229	4.5

PI Award Details

Project Title	Funding Agency	Funding Level (\$)	Beginning Date	End Date	Role
Field Evaluation of Long Term Cracking Performance of High RAM Asphalt Mixtures	Consortium for Asphalt Pavement Research and Implementation	53,018	Oct-24	Apr-27	PI
NCHRP Project 09-70 Guidelines for Incorporating Aging Effects on Balanced Mix Design for Quality Assurance	National Cooperative Highway Research Program	220,000	Jan-25	Mar-28	PI
PES-UNR Program 2025 (EA&E)	Ergon Asphalt & Emulsions	40,000	Jan-25	Mar-26	PI
FY23 Development and Deployment of Innovative Asphalt Pavement Technologies	U.S. DOT/FHWA	5,000,000	Sep-23	Sep-28	PI
Maintenance and Asset Management	Nevada DOT	240,000	Apr-23	Aug-25	PI
Lithium Mining Tailing Clay	Lithium Americas	80,000	Nov-23	Nov-24	PI
Developing Long-term Aging Protocols for Cracking Performance Evaluation of Asphalt Mixtures in Virginia	Virginia DOT	310,152	Jul-22	Nov-24	PI
Balanced Mix Design – Rutting	U.S. DOT/FAA-NAPA	500,000	Jul-22	Nov-24	PI
Pilot Case Studies of Pavement Structural and Risk Assessments of Superheavy load Movements on Highway Routes	U.S. DOT/FHWA	190,201	Jul-21	Dec-23	PI
Maintenance and Asset Management	Nevada DOT	200,000	May-21	May-23	PI

Project Title	Funding Agency	Funding Level (\$)	Beginning Date	End Date	Role
Effect of Raveling on the Performance of Hot Mix Asphalt under Arid Climatic Conditions: Case Study in Kuwait (Phase II & Phase III)	Kuwait Foundation for the Advancement of sciences	40,000	Apr-21	Apr-23	PI
Screening Survey for 6PPD & 6PPD-QUINONE in Leachate of Rubberized Asphalt Concrete (Phase I).	Granite Construction Inc.	32,125	Apr-21	Mar-22	PI
Investigation of the rheological and adhesive/cohesive characteristics of crumb rubber modified asphalt binders mixed with warm mix asphalt additive and antistripping agent	Kuwait Foundation for the Advancement of sciences	17,160	Apr-19	May-20	PI
Effect of Raveling on the Performance of Hot Mix Asphalt under Arid Climatic Conditions: Case Study in Kuwait (Phase I)	Kuwait Foundation for the Advancement of sciences	20,265	Jan-19	Dec-19	PI
Development and Deployment of Innovative Asphalt Pavement Technologies	U.S. DOT/FHWA	3,000,000	Sep-18	Mar-24	PI
Pavement Technology (Carson City) 18-20	Carson City Public Works	80,000	Aug-18	Aug-20	PI
Structural Coefficient for High Polymer Modified Asphalt Mixes	Florida DOT	249,796	Mar-17	Jun-19	PI
Pavement Technology (DCPW) 16-18	Douglas County Public Works	90,000	Sep-16	Aug-18	PI
FAA Pavement Evaluation and Design Model	U.S. DOT/FAA	100,000	Sep-16	Mar-18	PI
Evaluation of Soil Water Characteristic Curves (SWCC) in Pavement ME for Nevada's Unbound Materials	Nevada DOT/FHWA	155,079	Aug-16	Sep-18	PI
Pavement Technology (Carson City) 16-18	Carson City Public Works	80,000	Jul-16	Jun-18	PI
Microsurfacing, Slurry Seals, Chip Seal, and Thin Lift Asphalt Overlay Quality Assurance Best Practices Tech Briefs	Nevada DOT/FHWA	185,000	Jan-16	Mar-18	PI
Mechanistic Evaluation of TechniSoil G5®	TechniSoil	26,000	May-15	Dec-16	PI
Laboratory Evaluation of Thin Asphalt Overlays for Pavement Preservation in Nevada	U.S. DOT/UTC/SOLARIS	68,378	Nov-14	Jan-16	PI
Enhanced Predictions of Vehicle Fuel Economy and Other Vehicle Operating Costs	U.S. DOT/FHWA	1,548,658	Sep-14	Sep-19	PI
Influence of Gilsonite on HMA	American Gilsonite Company	42,800	Sep-14	Jun-16	PI
Pavement Technology (Carson City) 14-16	Carson City Public Works	90,000	Jul-14	Jun-16	PI
Pavement Technology (DCPW) 14-16	Douglas County Public Works	90,000	Jun-14	Aug-16	PI
NCHRP Project 09-58 The Effects of Recycling Agents on Asphalt Mixtures with High RAS and RAP Binder Ratios	National Cooperative Highway Research Program	300,000	May-14	Mar-19	PI
Evaluation of HMA Mixture for Kern County Intersections	Kern County Roads Department	35,000	Apr-14	Feb-15	PI
Mechanistic-Based Pavement Damage and Associated Cost from OS/OW Vehicles in NV	Nevada DOT/FHWA	193,411	Jan-14	Sep-17	PI
Pavement Assessment: Topic 2: Analysis Procedures for Evaluating Superheavy Load Movement on Flexible Pavements	U.S. DOT/FHWA	299,772	Aug-13	Jul-18	PI
Development of Specifications for Engineered Cementitious Composites for Use in Bridge Deck Overlays	Nevada DOT/FHWA	150,747	Mar-13	Oct-15	PI
Evaluation of Long Life Asphalt Mixtures For I-5 Weed Project in California	CGi Technical Services, Inc.	23,400	Feb-12	Dec-12	PI
NCHRP Project 01:50 Quantifying the Influence of Geosynthetics on Pavement Performance	National Cooperative Highway Research Program	188,375	Sep-11	Sep-15	PI
Evaluation of the Cecabase RT® Warm-Mix Additive	CECA, ARKEMA Group	30,000	Jan-11	May-11	PI
Evaluating the Impact of Lime on Pavement Performance	National Lime Association	100,000	Jul-07	Jun-09	PI
TOTAL	37	\$14,069,337	2007	2025	PI

Co-PI Award Details

Project Title	Funding Agency	Funding Level (\$)	Beginning Date	End Date	Role
Design of Surface Treatments with Reclaimed Asphalt Pavement Aggregates	Nevada DOT	255,781	Dec-24	Aug-27	Co-PI
Pavement Technology (RTC) 24-26	RTC-Washoe Co.	250,000	Jun-24	Jun-26	Co-PI
Optimizing the use of Recycled Plastics in Asphalt Mixtures	Granite Construction Inc.	55,000	Jul-24	Jul-25	Co-PI
NCHRP Project 10-116 Quantifying Variability in Quality Characteristics of Pavements	National Cooperative Highway Research Program	106,178	Mar-24	Sep-26	Co-PI
NCHRP Project 10-123 Incorporating Quality Assurance into Green Public Procurement Practices	National Cooperative Highway Research Program	70,469	Mar-24	Feb-25	Co-PI
Pavement Design and Materials 24-26	Nevada DOT	250,000	Mar-24	Dec-26	Co-PI
A Complete Strategy for Pavements Contaminated with PFAS: Rapid On-Site Analysis, Desorption Kinetics, In-situ Stabilization, and Reusability	DoD	625,000	Sep-23	Sep-26	Co-PI
INCORPORATION OF RAP IN P-401 ASPHALT MIXTURES	U.S. DOT/FAA-NAPA	400,000	Oct-23	Apr-25	Co-PI
P-401 MIXTURES: AGGREGATE GRADATION BANDS	U.S. DOT/FAA-NAPA	300,000	Apr-23	Mar-25	Co-PI
Validation of Gyration Level for Superpave Gyratory Compactor (SGC) for Mix Design and Control of Airport Asphalt Mixtures	U.S. DOT/FAA-NAPA	125,033	Jan-23	Jun-25	Co-PI
Feasibility of Cold Central Plant Recycling (CCPR) Asphalt Mixtures for Airports	U.S. DOT/FAA-NAPA	60,000	Oct-22	Jun-25	Co-PI
NCHRP Project 09-69 Verifying Quantities of Materials Used in Asphalt Mixtures at Production Facilities	National Cooperative Highway Research Program	350,000	Jun-22	Oct-24	Co-PI
Pavement Technology (RTC) 23-24	RTC-Washoe Co.	200,000	Jul-22	Jun-24	Co-PI
Pavement Design and Materials 23-24	Nevada DOT	150,000	Mar-22	Dec-23	Co-PI
Evaluation of Sustainable low carbon Asphalt Mixtures	Granite Construction Inc.	55,000	Mar-22	Feb-24	Co-PI
Develop a Study of Geosynthetic Materials for Use in Reducing Pavement Section Thickness	Nevada DOT/FHWA	104,000	May-21	Dec-22	Co-PI
Pavement Technology (RTC) 21-22	RTC-Washoe Co.	150,000	Sep-20	Jun-22	Co-PI
Update Backcalculation Software (BAKFAA)	U.S. DOT/FAA	300,000	Aug-20	Jul-23	Co-PI
Characterization of Unbound Materials for Mechanistic-Empirical Pavement Design (District 2 and 3)	Nevada DOT/FHWA	180,521	Aug-20	Jul-22	Co-PI
NCHRP Project 09-64 Developing Lab Methods & Specs for Tack Coat Materials	National Cooperative Highway Research Program	500,000	Apr-20	Jan-23	Co-PI
Pavement Design and Materials 20-21	Nevada DOT	150,000	Feb-20	Dec-21	Co-PI
ASMG Cooperative Program R&D	All States Materials Group	105,000	Nov-18	Jul-20	Co-PI
Pavement Technology (RTC) 19-20	RTC-Washoe Co.	150,000	Oct-18	Jun-20	Co-PI
Pavement Design and Materials 18-19	Nevada DOT	150,000	Jan-18	Jun-20	Co-PI
RAP Reset-Responsibly Optimizing RAP Use in HMA and Pavement Performance Life	Washington DOT	100,000	Nov-17	Dec-20	Co-PI
Technical Agreement for Pavement Preservation	Nevada DOT	150,000	Aug-17	Dec-21	Co-PI
NCHRP Project 10-100: Procedures and Guidelines for Validating Contractor Test Data	National Cooperative Highway Research Program	300,000	Jul-17	Jul-19	Co-PI
PES-UNR Program	Ergon Asphalt & Emulsions	335,000	Jul-16	Jun-24	Co-PI
Characterization of Unbound Materials (Soils/Aggregates) for Mechanistic-Empirical Pavement Design (District 1)	Nevada DOT/FHWA	147,936	Jul-16	Dec-17	Co-PI
Pavement Technology (RTC) 16-18	RTC-Washoe Co.	150,000	Jun-16	Jun-18	Co-PI
Development of In-place Density Method for Cold In-Place Recycling	U.S. DOT/UTC/SOLARIS	101,272	Mar-16	Sep-18	Co-PI
Resilient Modulus Prediction Models of Unbound Materials for Nevada	U.S. DOT/UTC/SOLARIS	94,331	Mar-16	Sep-18	Co-PI
Development of Mix Design and Structural Design Procedures for Cold In-Place Recycling	Nevada DOT/FHWA	150,136	Mar-16	Jun-18	Co-PI
Development of Training Curriculum for Caltrans	Caltrans	102,673	Jan-16	Apr-17	Co-PI
Pavement Design and Materials 15-17	Nevada DOT	150,000	Oct-15	Jun-17	Co-PI

Project Title	Funding Agency	Funding Level (\$)	Beginning Date	End Date	Role
Evaluation of Tire-Rubber Modified Asphalt Mixtures for Nevada	U.S. DOT/UTC/SOLARIS	187,809	Nov-14	Sep-15	Co-PI
Pavement Technology (RTC) 13-16	RTC-Washoe Co.	150,000	Dec-13	May-16	Co-PI
Pavement Design and Materials 13-15	Nevada DOT	150,000	Aug-13	Jun-15	Co-PI
Technical Agreement for Pavement Preservation	Nevada DOT	175,000	Dec-11	Jun-14	Co-PI
Pavement Design and Materials 11-13	Nevada DOT	150,000	Dec-11	Jun-13	Co-PI
Pavement Technology (RTC) 11-13	RTC-Washoe Co.	150,000	Sep-11	Jun-13	Co-PI
Develop a PWL System for Dense graded HMA Construction, Including Pay Factors	Nevada DOT/FHWA	298,984	Jul-10	Dec-14	Co-PI
Pavement Design and Materials 09-11	Nevada DOT	150,000	Aug-09	Jun-11	Co-PI
Pavement Technology (RTC) 09-11	RTC-Washoe Co.	100,000	Jun-09	Jun-11	Co-PI
Evaluation of Warm Mix Asphalt Concrete Pavement in South Dakota Conditions	South Dakota DOT	140,000	Oct-08	Feb-15	Co-PI
Pavement Design and Materials 07-09	Nevada DOT	300,000	Jul-07	Jun-09	Co-PI
Pavement Technology (RTC) 07-09	RTC-Washoe Co.	100,000	Jun-07	May-09	Co-PI
Use of Reclaimed Asphalt Pavements (RAP) in Airfields in HMA Pavements	U.S. DOT/FAA-AUBURN	110,000	Jan-07	Jan-18	Co-PI
TOTAL	48	\$8,985,123	2007	2025	Co-PI

INDUSTRY EXPERIENCE

City of Reno Phase II Streets Rehabilitation – Reno, Nevada (Terracon Consulting Engineers and Scientists)

Provided pavement evaluation and pavement design for approximately 3,300 feet of residential streets. Involved in the geotechnical engineering study and laboratory testing including recommendations regarding the design and construction of respective pavement sections.

PAIKI Eastern Sierra Rancherías – Bridgeport, Big Pine, and Benton, California (Terracon Consulting Engineers and Scientists)

Provided flexible pavement evaluation and design for improvements to both existing and new roadways. Involved in the geotechnical engineering study and laboratory testing. Design and construction recommendations made according to Standard Specifications for Construction of Roads and Bridges for Federal Highway Projects, FP-03.

Cashill Boulevard Reconstruction – Reno, Nevada (Terracon Consulting Engineers and Scientists)

Provided oversight and design for complete reconstruction of approximately 7,500 lineal feet of existing roadway. Included pulverization and removal of the existing pavement section, mechanical stabilization of underlying subgrade soils, and replacement of aggregate base and asphalt concrete pavement. Provided field and laboratory testing services related to Cement Amended Recycled Asphalt Base (CARAB) as an alternate form of aggregate base for this project.

Ryland Street Reconstruction – Reno, Nevada (Terracon Consulting Engineers and Scientists)

Provided laboratory testing of Cement Amended Recycled Asphalt Base (CARAB) as an alternate form of aggregate base for this project.

Ames Construction I-580 Freeway – Carson City, Nevada (Terracon Consulting Engineers and Scientists)

Provided laboratory testing and data analysis to resolve freeway base material inconsistencies.

El-Azjar Road Tunnel – Cairo, Egypt (Campenon Bernard SGE)

Worked as a site engineer on this project which consisted of two underground tunnels containing roads, 1.6 miles each, constructed using the Tunnel Boring Machine (TBM). Supervised more than 50 field technicians while working day and night shifts.

PUBLICATIONS

Refereed Journal Papers

1. Elias, N. G., **Hajj, E. Y.**, Hand, A. J. T., Zhou, F., Bennert, T., Decker, C., & Patel, H. (2024). Developing Representative Test Specimen Conditions for Rutting Mechanical Test Methods of Airfield Pavements. *Transportation Research Record*, 0(0). <https://doi.org/10.1177/03611981231225638>
2. Zeiada, W., Al-Khateeb, G., **Hajj, E.**, & Ezzat, H. (2024). Rheological properties of plastic-modified asphalt binders using diverse plastic wastes for enhanced pavement performance in the UAE. *Construction and Building Materials*, 452.
3. Skaff, R., Hajj, E., Siddharthan, R., Garg, N., & Sivaneswaran, N. (2023). Shear Failure Investigation of Unbound Pavement Layers Under Accelerated Heavy Aircraft Loading: A Case Study. *International Journal of Pavement Engineering*.
4. Ahmed, T., Singh, A., **Hajj, E.**, & Saad, A. (2023). Performance Life Using Mechanistic–Empirical Analysis of Asphalt Mixtures in Arid Climatic Conditions—Case of Kuwait. *Engineering Proceedings*, 36(1), 10. <https://doi.org/10.3390/engproc2023036010>
5. Elias, N., **Hajj, E.**, Sebaaly, P. E., Morian, N., & Vrtis, M. (2023). Relationship Between Uniaxial Thermal Stress and Strain Test Parameters and Field Cracking Data of Asphalt Mixtures from the MnROAD Test Experiment. *International Journal of Pavement Engineering*.
6. Lokesh, S., Arunthavabalan, S., Stanton, R., Agua, A., Pirrung, M., **Hajj, E.**, Hitti, E., & Yang, Y. (2023). Investigation of 6PPD-Quinone in Rubberized Asphalt Concrete Mixtures. *ACS Environ. Au*, 336–341.
7. Larios, J., Sebaaly, P. E., **Hajj, E.**, & Hand, A. J. (2023). Impact of Modified Post-Consumer Plastic (MPCP) Toner on Asphalt Binder Properties. *Transportation Research Record*.
8. Hand, A. J., Ragavan, P., Elias, N., **Hajj, E.**, & Sebaaly, P. E. (2022). Evaluation of Low Volume Roads Surfaced with 100% RAP Millings. *Materials*, 15, Article 21.
9. Elwardany, M., Habbouche, J., Andriescu, A., Mensching, D. J., **Hajj, E.**, & Piratheepan, M. (2022). Comprehensive performance evaluation of high polymer-modified asphalt binders beyond linear viscoelastic rheological surrogates. *Construction and Building Materials*, 351.
10. **Hajj, E.**, Aschenbrener, T., & Nener-Plante, D. (2022). Examples of Successful Practices with State Implementation of Balanced Design of Asphalt Mixture. *Transportation Research Record*, 2676, 44–66.
11. Elias, N., Hand, A. J., Sebaaly, P. E., **Hajj, E.**, Piratheepan, M., & Gibson, S. (2022). Local agency transition to balanced mix design. *International Journal of Pavement Engineering*, 23, 4792–4802.
12. Chkaiiban, R., **Hajj, E.**, & Hand, A. J. (2022). Influence of Balanced Mix Design Approaches on Pavement Design Making Through an Illustrative Example. *Transportation Research Record*, 2676, 495–506.
13. Gopinath, A., Lynam, H., Chkaiiban, R., **Hajj, E.**, & Dascalu, S. (2022). Software Interfaces for New Vehicle Operating Cost Models Used in Economic Analysis of Transportation Investments: A User Study. *19th International Conference on Information Technology: New Generations (ITNG 2022); Chapter in Springer Volume, Advances in Intelligent Systems and Computing, Vol. 141, Chapter 38.*, pp. 311–319.
14. Habbouche, J., Piratheepan, M., **Hajj, E. Y.**, Bista, S., and Sebaaly, P. E. (March 1, 2022). "Full-Scale Pavement Testing of a High Polymer-Modified Asphalt Concrete Mixture." *ASTM International. J. Test. Eval.* March 2022; 50(2): 865–888. <https://doi.org/10.1520/JTE20210283>
15. Nabizadeh H., Nimeri M., **Hajj E.Y.**, Siddharthan R.V., Elfass S. (2022) Investigation of Instantaneous Shear Failure in Pavement Subgrade Subjected to Superheavy Load Vehicle. In: Tutumluer E., Nazarian S., Al-Qadi I., Qamhia I.I. (eds) *Advances in Transportation Geotechnics IV. Lecture Notes in Civil Engineering*, vol 164. Springer, Cham. https://doi.org/10.1007/978-3-030-77230-7_14
16. Habbouche, J., Boz, I., **Hajj, E.Y.**, and Morian, N. (In Press). "Influence of aging on rheology- and chemistry-based properties of high polymer-modified asphalt binders," *International Journal of Pavement Engineering*.

17. *Carvajal, Mateo E.*, Murugaiyah Piratheepan, Peter E. Sebaaly, **Elie Y. Hajj**, and Adam J. Hand (2021). "Structural Contribution of Cold In-Place Recycling Base Layer" *CivilEng* 2, no. 3: 736-746.
<https://doi.org/10.3390/civileng2030040>
18. *Castillo. C.*, A.J. Hand, P.E. Sebaaly, **E.Y. Hajj**, and M. Piratheepan. (February 2021), "Evaluation of Cracking Resistance of Tire Rubber Modified Asphalt Mixtures," *Journal of Transportation Engineering, Part B: Pavements*, Vol 147, Issue No. 3, American Society of Civil Engineers.
19. *Ayala, F.*, A. Hand, P.E. Sebaaly, **E.Y. Hajj**, and G. Baumgardner. (January 2021), "Performance Characteristics of Cold In-place Recycling Mixtures," *Journal of Materials in Civil Engineering*, Vol. 33, Issue No. 10, American Society of Civil Engineering.
20. Sime, M., Bailey, G., **Hajj, E.**, *Chkaiban, R.* (2021). Impact of Pavement Roughness on Fuel Consumption for a Range of Vehicle Types. *ASCE's Journal of Transportation Engineering, Part B: Pavements*, Vol. 147, Issue No. 3.
21. Ahmed, T., **Hajj, E.Y.**, *Warrag, A.*, Piratheepan, M. (2021). Postmortem evaluation of accelerated rate of raveling of in-service asphalt pavements in arid climatic conditions-case of Kuwait, *Case Studies in Construction Materials*, Vol 14.
22. Ahmed, T.A., **Hajj, E.Y.**, Bahzad, D.S. et al. Investigation of the Rheological and Bonding Characteristics of Crumb Rubber-Modified Asphalt Binders Mixed with Warm Mix Asphalt Additive and Antistrip Agent. *Int. J. Pavement Res. Technol.* (2021). <https://doi.org/10.1007/s42947-021-00033-1>
23. *Chkaiban, R.*, **Hajj, E.**, Sime, M., Bailey, G., Sebaaly, P. E. (2020). Asymmetric Logistic Model for Estimation of Mileage-Related Vehicle Depreciation Function of Roadway Characteristics. *Transportation Research Record: Journal of the Transportation Research Board*.
24. Sime, M., Bailey, G., **Hajj, E.**, *Chkaiban, R.* (2020). Road Load Based Model for Vehicle Repair and Maintenance Cost Estimation. *Transportation Research Record: Journal of the Transportation Research Board*, 2674(11), 490-497.
25. Meneses, J. P. C., Vasconcelos, K., Bernuccic, L., **Hajj, E.** (2020). Compaction Methods of Cold Recycled Asphalt Mixtures and their Effects on Pavement Analysis. *Road Materials and Pavement Design*.
26. *Thavathurairaja, J.*, A.J. Hand, M. Piratheepan, P.E. Sebaaly, and **E.Y. Hajj** (2020). "Method to Estimate Design Resilient Modulus (Mr) of Unbound Materials for Rehabilitation in M-E Design," *Journal of Construction and Building Materials*, 267, Elsevier.
27. *Habbouche, J.*, Hajj, E., Sebaaly, P. E., Piratheepan, M. (2020). Mechanistic-based verification of a structural layer coefficient for high polymer-modified asphalt mixtures. *Road Materials and Pavement Design*, 1-27.
28. *Habbouche, J.*, **E.Y. Hajj**, P.E. Sebaaly, and A.J. Hand, (2020). "Fatigue-Based Structural Layer Coefficient of High Polymer-Modified Asphalt Mixtures," *Transportation Research Record: Journal of the Transportation Research Board*, Volume 2674, Issue: 3, pp 232-247.
29. *Habbouche, J.*, Hajj, E., Piratheepan, M., Sebaaly, P. E. (2020). Impact of high polymer modification on reflective cracking performance life of asphalt concrete overlays. *International Journal of Pavement Research and Technology*, 13, 510-523.
30. *Habbouche, J.*, Hajj, E., Sebaaly, P. E., Piratheepan, M. (2020). A critical review of high polymer-modified asphalt binders and mixtures. *International Journal of Pavement Engineering*, 21(6), 686-702.
31. Martin, A. E., Kaseer, F., Arámbula-Mercado, E., Bajaj, A., Sias, J., Hajj, E., Morian, N., Ogbo, C. (in press). Component Materials Selection Guidelines and Evaluation Tools for Binder Blends and Mixtures with High Recycled Materials Content and Recycling Agents. *Association of Asphalt Paving Technologists*.
32. Habbouche, J., Hajj, E., Piratheepan, M., Sebaaly, P. E. (in press). Impact of High Polymer Modification on the Performance Characteristics of Asphalt Mixtures. *Association of Asphalt Paving Technologists*.
33. Sebaaly, P. E., *Ortiz, J. A.*, Hand, A. J., Hajj, E. (2019). Practical method for in-place density measurement of cold in-place recycling mixtures. *Construction and Building Materials*, 227.

34. *Nimeri, M., Nabizadeh, H., Hajj, E., Siddharthan, R., Elfass, S. A., Piratheepan, M.* (2019). Design, Fabrication, and Instrumentation of a Full-Scale Pavement Testing Box. *American Society of Civil Engineers*, 131-142. <https://ascelibrary.org/doi/abs/10.1061/9780784482452.014>
35. *Kaseer, F., Bajaj, A., Martin, A. E., Arámbula-Mercado, E., Hajj, E.* (2019). Strategies for Producing Asphalt Mixtures with High RAP Content. *Journal of Materials in Civil Engineering, American Society of Civil Engineers*, 31(11). <https://ascelibrary.org/doi/full/10.1061/%28ASCE%29MT.1943-5533.0002910>
36. *Nabizadeh, H., Siddharthan, R., Hajj, E., Nimeri, M., Elfass, S. A.* (2019). Validation of the subgrade shear strength parameters estimation methodology using light weight deflectometer: Numerical simulation and measured testing data. *Transportation Geotechnics*, 21. <https://www.sciencedirect.com/science/article/pii/S2214391218302204>
37. *Habbouche, J., Hajj, E., Piratheepan, M., Sebaaly, P. E., Morian, N.* (2019). Field Performance and Economic Analysis of Rehabilitated Pavement Sections with Engineered Stress Relief Course Interlayers. *Transportation Research Record: Journal of the Transportation Research Board/Transportation Research Board of the National Academies*, 2673(5), 351-364. <https://journals.sagepub.com/doi/full/10.1177/0361198119835801>
38. *Pournoman, S., Hajj, E. Y., Morian, N., & Martin, A. E.* (2018). Impact of Recycled Materials and Recycling Agents on Asphalt Binder Oxidative Aging Predictions. *Transportation Research Record*, 2672(28), 277–289. <https://doi.org/10.1177/0361198118797205>
39. *Batioja-Alvarez, D., Kazemi, S.-F., Hajj, E. Y., Siddharthan, R. V., & Hand, A. J. T.* (2018). Statistical Distributions of Pavement Damage Associated with Overweight Vehicles: Methodology and Case Study. *Transportation Research Record*, 2672(9), 229–241. <https://doi.org/10.1177/0361198118793243>
40. *Habbouche, J., Hajj, E. Y., Sebaaly, P. E., & Morian, N. E.* (2018). Damage Assessment for ME Rehabilitation Design of Modified Asphalt Pavements: Challenges and Findings. *Transportation Research Record*, 2672(40), 228–241. <https://doi.org/10.1177/0361198118777090>
41. *Bazi, G., Hajj, E. Y., Ulloa-Calderon, A., & Ullidtz, P.* (2018). Finite element modelling of the rolling resistance due to pavement deformation. *International Journal of Pavement Engineering*, 1–11. <http://dx.doi.org/10.1080/10298436.2018.1480778>
42. *Garcia Cucalon, L., Kaseer, F., Arámbula-Mercado, E., Epps Martin, A., Morian, N., Pournoman, S., & Hajj, E. Y.* (2018). The crossover temperature: significance and application towards engineering balanced recycled binder blends. *Road Materials and Pavement Design*, 1–22. <http://dx.doi.org/10.1080/14680629.2018.1447504>
43. *Batioja-Alvarez, D. D., Kazemi, S.-F., Hajj, E. Y., Siddharthan, R. V., & Hand, A. J. T.* (2018). Probabilistic Mechanistic-Based Pavement Damage Costs for Multitrip Overweight Vehicles. *Journal of Transportation Engineering, Part B Pavements, ASCE*, 144(2). <https://ascelibrary.org/doi/10.1061/JPEODX.0000033>
44. *Gu, F., Luo, X., Luo, R., Hajj, E. Y., & Lytton, R. L.* (2017). A mechanistic-empirical approach to quantify the influence of geogrid on the performance of flexible pavement structures. *Transportation Geotechnics*, 13, 69–80. <https://doi.org/10.1016/j.trgeo.2017.08.005>
45. *Alavi, M., Hajj, E. Y., & Sebaaly, P. E.* (2017). A comprehensive model for predicting thermal cracking events in asphalt pavements. *International Journal of Pavement Engineering*, 18(9), 871–885. <https://doi.org/10.1080/10298436.2015.1066010>
46. *Sebaaly, P. E., Hajj, E. Y., Sathanathan, T., & Shivakolunbar, S.* (2017). A comprehensive evaluation of moisture damage of asphalt concrete mixtures. *International Journal of Pavement Engineering*, 18(2), 169–182. <https://doi.org/10.1080/10298436.2015.1065404>
47. *Sun, Y., Xu, H., Wu, J., Hajj, E. Y., & Geng, X.* (2017). Data Processing Framework for Development of Driving Cycles with Data from SHRP 2 Naturalistic Driving Study. *Transportation Research Record*, 2645(1), 50–56. <https://doi.org/10.3141/2645-06>

48. Habbouche, J., **Hajj, E. Y.**, Morian, N., Sebaaly, P. E., & Piratheepan, M. (2017). Reflective Cracking Relief Interlayer for Asphalt Pavement Rehabilitation: From Development to Demonstration. *Road Materials and Pavement Design*, 18(sup4), 30–57. <https://doi.org/10.1080/14680629.2017.1389080>
49. **Hajj, E. Y.**, Sanders, D. H., & *Weitzel, N. D.* (2016). Evaluation of Modified Engineered Cementitious Composite with Local Materials. *Transportation Research Record*, 2577(1), 78–87. <https://doi.org/10.3141/2577-10>
50. *Gu, F., Luo, X.*, Luo, R., Lytton, R. L., **Hajj, E. Y.**, & Siddharthan, R. (2016). Numerical Modeling of Geogrid-Reinforced Flexible Pavement and Corresponding Validation using Large-Scale Tank Test. *Construction and Building Materials*, 122, 214–230. <https://doi.org/10.1016/j.conbuildmat.2016.06.081>
51. Habbouche, J., **Hajj, E. Y.**, and P. E., Sebaaly. “Laboratory and Economic Evaluations of Thin Lift Asphalt Overlay for Pavement Preservation,” *Advances in Civil Engineering Materials*, Vol. 5, No. 1, 2016, pp. 303-324, DOI: 10.1520/ACEM20160025, ISSN 2165-3984.
52. **Hajj, E. Y.**, Batioja-Alvarez, D., and R. V., Siddharthan. “Assessment of Pavement Damage from Bus Rapid Transit: Case Study for Nevada,” *Transportation Research Record: Journal of the Transportation Research Board*, No. 2591, Vol. 3, Transportation Research Board of the National Academies, Washington, D.C., 2016, pp. 70–79, DOI: 10.3141/2591-09, ISSN: 0361-1981.
53. Lo Presti, D., Jiménez del Barco Carrión, A., Airey, G., and **E. Y., Hajj**. “Towards 100% recycling of reclaimed asphalt in road surface courses: binder design methodology and case studies,” *Journal of Cleaner Production*, Vol. 131, 2016, pp. 43-51, DOI: 10.1016/j.jclepro.2016.05.093.
54. Siddharthan, R. V., Nassimifar, M., Tan, X., and **E. Y., Hajj**. “Investigation of Impact of Wheel Wander on Pavement Performance,” *International Journal of Road Materials and Pavement Design*, RMPD, Volume 18, Issue 2, 2017, pp. 390-407. DOI:10.1080/14680629.2016.1162730.
55. Morian, N., Zhu, C., and **E. Y., Hajj**. “Rheological Indices: Phenomenological Aspects of Asphalt Binder Aging Evaluations,” *Transportation Research Record: Journal of the Transportation Research Board*, No. 2505, Vol. 1, Transportation Research Board of the National Academies, Washington, D.C., 2015, pp. 32–40, DOI: 10.3141/2505-05, ISSN: 0361-1981.
56. Alavi, M. Z., Morian, N., **Hajj, E. Y.**, and P. E., Sebaaly. “Influence of Asphalt Binder Oxidative Aging on Critical Thermal Cracking Characteristics of Asphalt Mixtures,” *Journal of the Association of Asphalt Paving Technologists*, AAPT, Vol. 84, 2015, p. 28, ISSN: 0270-2932.
57. Sebaaly, P. E., **Hajj, E. Y.**, and M., Piratheepan. “Evaluation of selected warm mix asphalt technologies,” *International Journal of Road Materials and Pavement Design*, RMPD, Vol. 16, No. S1, 2015, pp. 475-486. DOI:10.1080/14680629.2015.1030825.
58. Chamoun, Z., Souliman, M., **Hajj, E. Y.**, and P. E., Sebaaly. “Evaluation of Select Warm-Mix Additives with Polymer and Rubber Modified Asphalt Mixtures,” *Canadian Journal of Civil Engineering*, 42(6), 2015, pp. 377-388, DOI: 10.1139/cjce-2013-0512.
59. Souliman, M., Piratheepan, M., **Hajj, E. Y.**, Sebaaly, P. E., and W., Sequeira. “Impact of Lime on the Mechanical and Mechanistic Performance of Hot Mixed Asphalt Mixtures,” *International Journal of Road Materials and Pavement Design*, RMPD, Vol. 16, Issue No. 2, 2015, pp. 421-444, DOI: 10.1080/14680629.2015.1017520.
60. Alavi, Z., Pouranian, M. R., and **E. Y., Hajj**. “Prediction of Asphalt Pavement Temperature Profile with Finite Control Volume Method,” *Transportation Research Record: Journal of the Transportation Research Board*, No. 2456, Transportation Research Board of the National Academies, Washington, D.C., 2014, pp. 96–106, DOI: 10.3141/2456-10, ISSN: 0361-1981.
61. Sanjeevan, S., Piratheepan, M., **Hajj, E. Y.**, and A., Bush. “Cold-in-place Recycling in Nevada: Field Performance Evaluation over the Past Decade,” *Transportation Research Record: Journal of the Transportation Research Board*, No. 2456, Transportation Research Board of the National Academies, Washington, D.C., 2014, pp. 146–160, DOI: 10.3141/2456-15, ISSN: 0361-1981.

62. Morian, N., Alavi, Z. M., **Hajj, E. Y.**, and P. E., Sebaaly. "Evolution of Thermo-viscoelastic Properties of Asphalt Mixtures with Oxidative Aging," Accepted for publication in the Transportation Research Record: *Journal of the Transportation Research Board*, No. 2447, Vol. 4, Transportation Research Board of the National Academies, Washington, D.C., 2014, pp. 1–12, DOI: 10.3141/2447-01, ISSN: 0361-1981.
63. Souliman, M., Suwal, R., and **E. Y., Hajj**. "General Guidelines to Highway Agencies to Enhance their Local Pavement Rating Systems: A Case Study of Nevada's Pavement Rating System," *International Journal of Pavement Research and Technology*, IJPRT, Vol. 7, No. 5, 2014, pp. 305-316, ISSN 1997-1400.
64. Souliman, M., **Hajj, E. Y.**, and P. E., Sebaaly. "Impact of Antistrip Additives on the Long-Term Aging Rheological Properties of Asphalt Binders," *Journal of Materials in Civil Engineering*, ASCE, July 16, 2014, DOI: 10.1061/(ASCE)MT.1943-5533.0001111.
65. Mensching, D. J., Daniel, J. S., Bennert, T., Medeiros Jr., M.S., Elwardany, M. D., Mogawer, W., **Hajj, E. Y.**, and M. Z. Alavi. "Low Temperature Properties of Plant-Produced RAP Mixtures in the Northeast." *International Journal of Road Materials and Pavement Design*, RMPD, Vol. 15, Supplement 1, Special Issue: Papers from the 89th AAPT, 2014, pp. 1-27. DOI: 10.1080/14680629.2014.926617.
66. **Hajj, E. Y.**, Souliman, M. I., and E., Cortez. "Influence of Warm-Mix Additive on Mechanistic, Economical, and Environmental Attributes of a Polymer-Modified Asphalt Mixture." *Advances in Civil Engineering Materials*, ASTM, Vol. 3, No. 1, 2014, DOI: 10.1520/ACEM20130099.
67. Ulloa, A., **Hajj, E. Y.**, and P. E., Sebaaly. "Mechanistic-Based Approach to Evaluate Rutting Susceptibility of Hot-Mix Asphalt Mixtures Using Dynamic Triaxial Testing." Transportation Research Record: *Journal of the Transportation Research Board*, No. 2373, Vol. 4, Transportation Research Board of the National Academies, Washington, D.C., 2013, pp. 121–133, DOI: 10.3141/2373-13, ISSN: 0361-1981.
68. Alavi, M. Z., **Hajj, E. Y.**, and N., Morian. "Approach for Quantifying Effect of Binder Oxidative Aging on Viscoelastic Properties of Asphalt Mixtures." Transportation Research Record: *Journal of the Transportation Research Board*, No. 2373, Vol. 4, Transportation Research Board of the National Academies, Washington, D.C., 2013, pp. 109–120, DOI: 10.3141/2373-12, ISSN: 0361-1981.
69. **Hajj, E. Y.**, Souliman, M. I., Alavi, M. Z., and L., Loria. "Influence of BituTech RAP Bioasphalt on Viscoelastic Properties of Reclaimed Asphalt Mixtures." Transportation Research Record: *Journal of the Transportation Research Board*, No. 2371, Vol. 2, Transportation Research Board of the National Academies, Washington, D.C., 2013, pp. 13–22, DOI: 10.3141/2371-02, ISSN: 0361-1981.
70. Morian, N., **Hajj, E. Y.**, and P. E., Sebaaly. "Significance of Mixture Parameters on Binder Aging in Hot-Mix Asphalt Mixtures." Transportation Research Record: *Journal of the Transportation Research Board*, No. 2370, Transportation Research Board of the National Academies, Washington, D.C., 2013, pp. 116–127, DOI: 10.3141/2370-15, ISSN: 0361-1981.
71. **Hajj, E. Y.**, Souliman, M. I., Sebaaly, P. E., and M., Barton. "Influence of Laboratory Mixing Procedures on Volumetric and Mechanical Properties of RAP Mixtures." *Advances in Civil Engineering Materials*, ASTM, Vol. 2, No. 1, September 13, 2013, DOI: 10.1520/ACEM20120049.
72. Ulloa, A., **Hajj, E. Y.**, Siddharthan, R. V., and P. E., Sebaaly. "Equivalent Loading Frequencies for Dynamic Analysis of Asphalt Pavements." *Journal of Materials in Civil Engineering*, ASCE, Vol. 25, No. 9, September 1, 2013, pp. 1162-1170, DOI: 10.1061/(ASCE)MT.1943-5533.0000662.
73. Ahmad, T. A., **Hajj, E. Y.**, Sebaaly, P. E., and N., Majerus. "Influence of Aggregate Source and Warm-Mix Technologies on the Mechanical Properties of Asphalt Mixtures." *Advances in Civil Engineering Materials*, ASTM, Vol. 2, No. 1, August 15, 2013, pp. , DOI: 10.1520/ACEM20130072.
74. **Hajj, E. Y.**, Alavi, M. Z., Morian, N. E., and P. E., Sebaaly. "Effect of Select warm-mix Additives on Thermo-Viscoelastic Properties of Asphalt Mixtures," *International Journal of Road Materials and Pavement Design*, RMPD, Vol. 14, No. S1, 2013, pp. 175-186. DOI:10.1080/14680629.2013.774754.

75. Farrar, M. J., **Hajj, E. Y.**, Planche, J-P, and M. Z., Alavi. "A Method to Estimate the Thermal Stress Build-up in an Asphalt Mixture from a Single Cooling Event," *International Journal of Road Materials and Pavement Design*, RMPD, Vol. 14, No. S1, 2013, pp. 201-211. DOI:10.1080/14680629.2013.774756.
76. **Hajj, E. Y.**, Loria, L. G., Sebaaly, P. E., Cortez, E., and S. Gibson. "Effective Timing for Two Sequential Applications of Slurry Seal on Asphalt Pavement." *Journal of Transportation Engineering*, ASCE, Vol. 139, No. 5, May 2013, pp. 476-484, DOI: 10.1061/(ASCE)TE.1943-5436.0000521.
77. **Hajj, E. Y.**, Sebaaly, P. E., Sathanathan, T., and S. Shivakolunthar. "Impact of Antistrip Additives on Pavement Performance Using Mechanistic-Empirical Pavement Design Guide." *Journal of Materials in Civil Engineering*, ASCE, Vol. 25, No. 3, March 1, 2013, pp. 308-317, DOI: 10.1061/(ASCE)MT.1943-5533.0000582.
78. **Hajj, E. Y.**, Thushanthan, P., Sebaaly, P. E., and R. V., Siddharthan. "Influence of Tire-pavement Stress Distribution, Shape and Braking on Asphalt Pavement Performance Predictions." Transportation Research Record: *Journal of the Transportation Research Board*, No. 2306, Transportation Research Board of the National Academies, Washington, D.C., 2012, pp. 73–85, DOI: 10.3141/2306-09, ISSN: 0361-1981.
79. Alavi, M. Z., **Hajj, E. Y.**, Hanz, A., and H., Bahia. "Evaluating Adhesion Properties and Moisture Damage Susceptibility of Warm Mix Asphalts: Bitumen Bond Strength (BBS) and Dynamic Modulus Ratio (ESR) Tests." Transportation Research Record: *Journal of the Transportation Research Board*, No. 2295, Vol. 3, Transportation Research Board of the National Academies, Washington, D.C., 2012, pp. 44–53, ISSN: 0361-1981.
80. Porras, J., **Hajj, E. Y.**, Sebaaly, P. E., Kass, S., and T., Liske. "Performance Evaluation of Field-Produced Warm-Mix Asphalt Mixtures in Manitoba, Canada." Transportation Research Record: *Journal of the Transportation Research Board*, No. 2294, Vol. 2, Transportation Research Board of the National Academies, Washington, D.C., 2012, pp. 64–73, ISSN: 0361-1981.
81. **Hajj, E. Y.**, Loria, L., and P. E., Sebaaly. "Methodologies for Estimating Effective Performance Grade of Asphalt Binders in Mixtures with High Recycled Asphalt Pavement Content: Case Study." Transportation Research Record: *Journal of the Transportation Research Board*, No. 2294, Vol. 2, Transportation Research Board of the National Academies, Washington, D.C., 2012, pp. 53–63, ISSN: 0361-1981. (Nominated for the K. B. Woods Award).
82. Sebaaly, P. E., **Hajj, E. Y.**, Sathanathan, T., and S. Shivakolunthar. "Impact of Lime and Liquid Additives on Life-Cycle Cost of Asphalt Pavements," Lime: Building on the 100-Year Legacy of ASTM Committee C07 on June 28, 2012 in San Diego, CA; STP 1557, M. Thomson and J. Brisch, Guest Editors, pp. 1–21, DOI:10.1520/STP104321, ASTM International, West Conshohocken, PA 2012.
83. **Hajj, E. Y.**, Sebaaly, P. E., West, R., Morian, N., and L., Loria. "Recommendations for the Characterization of RAP Aggregate Properties Using Traditional Testing and Mixture Volumetrics," *International Journal of Road Materials and Pavement Design*, RMPD, Vol. 13, Supplement 1: AAPT, 2012, pp. 209-233. DOI:10.1080/14680629.2012.657072.
84. Kasozi, A., **Hajj, E. Y.**, Sebaaly, P. E., and J. C., Elkins. "Evaluation of Foamed Warm-Mix Asphalt Incorporating Recycled Asphalt Pavement for Volumetric and Mechanical Properties." *International Journal of Pavement Research and Technology*, IJPRT, Vol. 5, No. 2, 2012, pp. 75-83, ISSN 1997-1400.
85. Sebaaly, P.E., and **E. Y., Hajj**. "Comparative Life Cycle Cost Analyses of Asphalt Pavements Treated with Anti-stripping Additives," 2011 Conference and Exhibition of the Transportation Association of Canada - Transportation Successes: Let's Build on Them, Transportation Association of Canada, 2011, 19p.
86. **Hajj, E. Y.**, Loria, L., Sebaaly, P. E., Borroel, C. M., and P. Leiva. "Optimum Time for Application of Slurry Seal to Asphalt Concrete Pavements," Transportation Research Record: *Journal of the Transportation Research Board*, No. 2235, Transportation Research Board of the National Academies, Washington, D.C., 2011, pp. 66–81, ISSN: 0361-1981.

87. **Hajj, E. Y.**, Sebaaly, P. E., Hitti, E., and C. Borroel. "Performance Evaluation of Terminal Blend Tire Rubber Asphalt Mixtures – Case Studies," *Journal of the Association of Asphalt Paving Technologists*, AAPT, Vol. 80, 2011, pp. 665-696, ISSN: 0270-2932.
88. **Hajj, E. Y.**, Ullao, A., Sebaaly, P. E., and G. Bazi. "Impact of Rich-Bottom Design in Asphalt Pavements," *International Journal of Pavement Research and Technology*, IJPRT, Vol. 4, No. 6, 2011, pp. 313-323, ISSN 1997-1400.
89. Morian, N., **Hajj, E. Y.**, Glover, C. J., and P. E. Sebaaly. "Oxidative Aging of Asphalt Binders in Hot-Mix Asphalt Mixtures," Transportation Research Record: *Journal of the Transportation Research Board*, No. 2207, Vol. 1, Transportation Research Board of the National Academies, Washington, D.C., 2011, pp. 107–116, ISSN: 0361-1981.
90. Loria, L., **Hajj, E. Y.**, Sebaaly, P. E., Barton, M., Kass, S., and T. Liske. "Performance Evaluation of Asphalt Mixtures with High Recycled Asphalt Pavement Content," Transportation Research Record: *Journal of the Transportation Research Board*, No. 2208, Vol. 2, Transportation Research Board of the National Academies, Washington, D.C., 2011, pp. 72–81, ISSN: 0361-1981.
91. **Hajj, E. Y.**, Tannoury, G., and P. E. Sebaaly. "Evaluation of Rut Resistant Asphalt Mixtures for Intersection," *International Journal of Road Materials and Pavements Design*, RMPD, Vol. 12, Issue 2, 2011, pp. 263-292, doi: 10.1080/14680629.2011.9695246.
92. **Hajj, E. Y.**, Morian, N., El Tannoury, G., Manoharan, S., and P. E. Sebaaly. "Impact of Lime Application Method on Raveling and Moisture Sensitivity in HMA Mixtures," *International Journal of Pavement Engineering*, IJPE, Vol. 12, Issue 2, 2011, pp. 149-160, ISSN 1029-8436.
93. Kvasnak, A., West, R., Michael, J., Loria, L., **Hajj, E. Y.**, and N. Tram. "Bulk Specific Gravity of Reclaimed Asphalt Pavement Aggregate: Evaluation the Effect on Voids in Mineral Aggregate," Transportation Research Record: *Journal of the Transportation Research Board*, No. 2180, Vol. 2, TRB, Washington, D.C., 2010, pp. 30-35, ISSN: 0361-1981.
94. **Hajj, E. Y.**, Ullao, A., Siddharthan, R., and P. E. Sebaaly. "Estimation of Stress Conditions for the Flow Number Simple Performance Test," Transportation Research Record: *Journal of the Transportation Research Board*, No. 2181, Vol. 3, Transportation Research Board of the National Academies, Washington, D.C., 2010, pp. 67-78, ISSN: 0361-1981.
95. **Hajj, E. Y.**, Ullao, A., Siddharthan, R., and P. E. Sebaaly. "Characteristics of the Loading Pulse for the Flow Number Performance Test," *Journal of the Association of Asphalt Paving Technologists*, AAPT, Vol. 79, 2010, pp. 253-294, ISSN: 0270-2932.
96. Ma, T., Bahia, H., Mahmoud, E., and **E. Y., Hajj**. "Estimating Allowable RAP in Asphalt Mixes to Meet Target Low Temperature PG Requirements," *Journal of the Association of Asphalt Paving Technologists*, AAPT, Vol. 79, 2010, pp. 473-496, ISSN: 0270-2932.
97. **Hajj, E. Y.**, Loria, L., and P. E. Sebaaly. "Performance Evaluation of Asphalt Pavement Preservation Activities," Transportation Research Record: *Journal of the Transportation Research Board*, No. 2150, Transportation Research Board of the National Academies, Washington, D.C., 2010, pp. 36-46, ISSN: 0361-1981.
98. **Hajj, E. Y.**, Sebaaly, P. E., and P. Kandiah. "Evaluation of the Use of Reclaimed Asphalt Pavement in Airfields HMA Pavements," *Journal of Transportation Engineering*, ASCE, Vol. 136, No. 3, March, 2010, pp. 181-189, DOI: 10.1061/(ASCE)TE.1943-5436.0000090.
99. **Hajj, E. Y.**, Sebaaly, P. E., and R. Shresta. "Laboratory Evaluation of Mixes Containing Recycled Asphalt Pavement (RAP)," *International Journal of Road Materials and Pavements Design*, RMPD, Vol. 10, Issue 3, 2009, pp. 495-518, ISSN: 1468-0629.
100. Sebaaly, H. K., **Hajj, E. Y.**, Sebaaly, P. E., Weitzel, D., and E. Hitti. "Laboratory Evaluation of HMA Mixes Using Tire Modified Binders," *International Journal of Pavements*, Vol. 7, #1-2-3, 2008, pp. 64-75, ISSN: 1676-2797.

101. Loria, L., Sebaaly, P. E., and **E. Y. Hajj**. “Long-Term Performance of Reflective Cracking Mitigation Techniques in Nevada.” Transportation Research Record: *Journal of the Transportation Research Board*, No. 2044, Transportation Research Board of the National Academies, Washington, D.C., 2008, pp. 86-95, ISSN: 0361-1981.
102. **Hajj, E. Y.**, Siddharthan, R. V., Sebaaly, P. E., and D. Weitzel. “Laboratory-based Unified Permanent Deformation Model for Hot-Mix Asphalt Mixtures.” *Journal of Testing and Evaluation*, ASTM, Vol. 35, No. 3, May 2007, pp. 272-280, ISSN: 1945-7553.
103. **Hajj, E. Y.**, Siddharthan, R. V., Sebaaly, P. E., and D. Weitzel. “Hot Mix Asphalt Mixtures for Nevada’s Intersections.” Transportation Research Record: *Journal of the Transportation Research Board*, No. 2001, Transportation Research Board of the National Academies, Washington, D.C., 2007, pp. 73-83, ISSN: 0361-1981.
104. Sebaaly, P. E., Little, D., **Hajj, E. Y.**, and E. Berger. “Impact of Lime and Liquid Antistrip on the Properties of an Idaho Mixture.” Transportation Research Record: *Journal of the Transportation Research Board*, No. 1998, Transportation Research Board of the National Academies, Washington, D.C., 2007, pp. 65-74, ISSN: 0361-1981.
105. **Hajj, E. Y.**, Sebaaly, P. E., and R. V. Siddharthan. “Response of Asphalt Pavement Mixture Under a Slow Moving Truck.” Asphalt Concrete: Simulation, Modeling, and Experimental Characterization, *Geotechnical Special Publication* No. 146, ASCE, 2006, DOI: 10.1061/40825(185)14.
106. Bazi, G. M., **Hajj, E. Y.**, and A. M. Itani. “Analysis of R/C decks in multi-cell box girder bridges under rational wheel load distributions.” *Bridge Structures: Assessment, Design and Construction*, Vol. 1, No. 2, June 2005, pp. 69-80, ISSN: 1573-2487.
107. **Hajj, E. Y.**, Sebaaly, P. E., and D. Weitzel. “Fatigue Characteristics of Superpave and Hveem Mixtures.” *Journal of Transportation Engineering*, ASCE, Vol. 131, March/April, 2005, pp. 302-310, DOI: 10.1061/(ASCE)0733-947X(2005)131:4(302)
108. Tohme, P., Sebaaly, P. E., **Hajj, E. Y.**, and D. Johnston. “Effectiveness of Antistrip Additives for Bituminous Mixtures.” *International Journal of Pavements*, Vol. 3, #1-2, 2004, pp. 50-62, ISSN: 1676-2797.

Peer-Reviewed Conference Papers

1. Sebaaly, P. E., Arunthavabalan, S., **Hajj, E.**, & Hand, A. J. (2023, November 14–17). Recycling Plastics into Asphalt Materials. *Proceedings of the International Road Federation Conference*.
2. Ahmed, T., Singh, A., **Hajj, E.**, & Saad, A. (2023). Modification of Mix Design Characteristics to Improve Performance of In-Service Raveled Pavements in Arid Climatic Regions: Case of Kuwait. *Airfield and Highway Pavements 2023*.
3. Ahmed, T., Singh, A., **Hajj, E.**, & Saad, A. (2023). Performance Life using Mechanistic-empirical Analysis of Asphalt Mixtures in Arid Climatic Conditions-Case of Kuwait. *Engineering Proceedings*.
4. Albijani, A., Piratheepan, M., Hand, A. J., Sebaaly, P. E., & **Hajj, E.** (2022, July 7–10). Effectiveness of Microsurfacing Treatments on Asphalt Pavements. *11th International Conference on Managing Pavement Assets*.
5. Sebaaly, P. E., Khalil, S., **Hajj, E.**, & Hand, A. J. (2022, June 26–30). Pushing the Limit on Recycling Old Tires in Asphalt Mixtures. *Asphalt Rubber Conference*.
6. Gopinath, A., Lynam, H., Chkaiban, R., **Hajj, E.**, & Dascalu, S. (2022). Software Interfaces for New Vehicle Operating Cost Models Used in Economic Analysis of Transportation Investments: A User Study. *19th International Conference on Information Technology: New Generations (ITNG 2022); Chapter in Springer Volume, Advances in Intelligent Systems and Computing, Vol. 141, Chapter 38.*, pp. 311–319.
7. Nabizadeh, H., Nimeri, M., **Hajj, E.**, Siddharthan, R., & Elfass, S. A. (2021). *Investigation of Instantaneous Shear Failure in Pavement Subgrade Subjected to Superheavy Load Vehicle*.

8. Nabizadeh, H., Nimeri, M., **Hajj, E.**, Siddharthan, R., & Elfass, S. A. (2021). *Investigation of Instantaneous Shear Failure in Pavement Subgrade Subjected to Superheavy Load Vehicle*.
9. Ahmed, T., **Hajj, E.**, Warrag, A., & Piratheepan, M. (2020). *Evaluation of in-service raveled asphalt pavements in Kuwait*.
10. Habbouche, J., **Hajj, E.**, Sebaaly, P. E. (2020). In Kumar Anupam, Tom Papagiannakis, Amit Bhasin, Dallas Little (Ed.), Assessment of reflective cracking performance life for high polymer-modified asphalt overlays. San Antonio, TX: Advances in Materials and Pavement Performance Prediction II: Contributions to the 2nd International Conference on Advances in Materials and Pavement Performance Prediction (AM3P 2020).
11. Ahmed, T., **Hajj, E.**, Warrag, A., Piratheepan, M. (2020). In Kumar Anupam, Tom Papagiannakis, Amit Bhasin, Dallas Little (Ed.), Evaluation of in-service raveled asphalt pavements in Kuwait. San Antonio, TX: Advances in Materials and Pavement Performance Prediction II: Contributions to the 2nd International Conference on Advances in Materials and Pavement Performance Prediction (AM3P 2020).
12. Nabizadeh, H., Elfass, S. A., **Hajj, E.**, Siddharthan, R., Nimeri, M. (2020). In Kumar Anupam, Tom Papagiannakis, Amit Bhasin, Dallas Little (Ed.), Experimental performance of buried concrete utility under flexible pavements subjected to heavy dynamic loads. San Antonio, TX: Advances in Materials and Pavement Performance Prediction II: Contributions to the 2nd International Conference on Advances in Materials and Pavement Performance Prediction (AM3P 2020).
13. Sebaaly, P. E., **Hajj, E.**, Piratheepan, M. (2020). In Sam Enmon II (Ed.), Fatigue Characteristics of Tire Rubber Modified Asphalt Mixtures (pp. 135-143). International Road Federation.
14. Chkaiban, R., **Hajj, E.**, Bailey, G., Sime, M., Xu, H., Sebaaly, P. E. (2020). In John Harvey, Imad L. Al-Qadi, Hasan Ozer, and Gerardo Flintsch (Ed.), Fuel and non-fuel vehicle operating costs comparison of select vehicle types and fuel sources: A parametric study. Sacramento, CA: Pavement, Roadway, and Bridge Life Cycle Assessment 2020: Proceedings of the International Symposium on Pavement, Roadway, and Bridge Life Cycle Assessment 2020.
15. Nabizadeh, H. E., **Hajj, E.**, Siddharthan, R., Nimeri, M., Elfass, S. A. (2019). Bearing Capacity Analysis of Soft Subgrade Pavement Layers Under Superheavy Load Vehicle Movements. *Geostructural Aspects of Pavements, Railways, and Airfields 2019*.
16. Sebaaly, P. E., Thavathurairaja, J., **Hajj, E.**, Stolte, S. (2019). DETERMINATION OF RESILIENT MODULUS FOR MECHANISTIC-EMPIRICAL NEW FLEXIBLE PAVEMENT DESIGN. *Geostructural Aspects of Pavements, Railways, and Airfields 2019*.
17. Nabizadeh, H. E., Siddharthan, R., Hajj, E., Nimeri, M., Elfass, S. A. (2019). Investigation of the Influence of Sloped Shoulder on Pavement Responses Using Full-Scale Experiments. *Geostructural Aspects of Pavements, Railways, and Airfields 2019*.
18. Batioja-Alvarez, D., Kazemi, S. F., **Hajj, E. Y.**, Hand, A. J., & Siddharthan, R. (2018). Case study for overweight vehicle pavement damage associated costs. In: Masad E., Bhasin A., Scarpas T., Menapace I., Kumar A. (eds) *Advances in Materials and Pavement Performance Prediction (AM3P)*. Taylor & Francis Group, London, pp. 15–20.
19. Nimeri, M., Nabizadeh, H., **Hajj, E. Y.**, Siddharthan, R., & Elfass, S. A. (2018). Nucleus approach for pavement analysis under superheavy load. In: Masad E., Bhasin A., Scarpas T., Menapace I., Kumar A. (eds) *Advances in Materials and Pavement Performance Prediction (AM3P)*. Taylor & Francis Group, London, pp. 527–530.
20. Siddharthan, R. V., Hajj, E. Y., & Nasimifar, M. (2018). Moving deflectometer devices to predict critical pavement responses. In: Masad E., Bhasin A., Scarpas T., Menapace I., Kumar A. (eds) *Advances in Materials and Pavement Performance Prediction (AM3P)*. Taylor & Francis Group, London, pp. 75–78.
21. **Hajj, E. Y.**, Piratheepan, M., and P. E., Sebaaly. “Performance Evaluation of a Polymer Binder Stabilized Aggregate Mixture: A Pilot Study,” International Conference on Highway Pavements & Airfield Technology, ASCE T&DI, August 27-30, Philadelphia, PA, Submitted December 19, 2016.

22. Kazemi, S. F., Hand, A. J. T., **Hajj, E. Y.**, Sebaaly, P. E., and R. V., Siddharthan. “Modeling Interface Debonding Between Asphalt Layers under Dynamic Aircraft Loading,” International Conference on Highway Pavements & Airfield Technology, ASCE T&DI, August 27-30, Philadelphia, PA, Submitted December 19, 2016.
23. **Hajj, E. Y.**, Piratheepan, M., & Sebaaly, P. E. (2017). Performance evaluation of a 100% recycled asphalt pavement mixture using a polymer binder: A pilot study. In: Loizos A., Al-Qadi I., Scarpas T. (eds) Bearing Capacity of Roads, Railways and Airfields: Proceedings of the 10th International Conference on the Bearing Capacity of Roads, Railways and Airfields (BCRRA 2017). CRC Press.
24. Nabizadeh, H., **Hajj, E. Y.**, Siddharthan, R., Elfass, S. A., & Nimeri, M. (2017). Application of Falling Weight Deflectometer for the Estimation of In-Situ Shear Strength Parameters of Subgrade Layer. In: Loizos A., Al-Qadi I., Scarpas T. (eds) Bearing Capacity of Roads, Railways and Airfields: Proceedings of the 10th International Conference on the Bearing Capacity of Roads, Railways and Airfields (BCRRA 2017). CRC Press.
25. Kazami, S. F., Sebaaly, P. E., Siddharthan, R., Hajj, E. Y., Hand, A. J. T., & Ahsanuzzaman, M. (2017). Dynamic Pavement Response Coefficient to Estimate the Impact of Variation in Dynamic Vehicle Loading. In: Loizos A., Al-Qadi I., Scarpas T. (eds) Bearing Capacity of Roads, Railways and Airfields: Proceedings of the 10th International Conference on the Bearing Capacity of Roads, Railways and Airfields (BCRRA 2017). CRC Press.
26. Nasimifar, M., Siddharthan, R. S., **Hajj, E. Y.**, Motamed, R. (2016). Investigation of 3D-Move Responses Under Traffic Speed Deflection Devices (TSDDs). In: Aguiar-Moya J., Vargas-Nordbeck A., Leiva-Villacorta F., Loria-Salazar L. (eds) The Roles of Accelerated Pavement Testing in Pavement Sustainability. Springer, Cham, pp. 161–176. https://doi.org/10.1007/978-3-319-42797-3_11
27. Nabizadeh, H., **Hajj, E. Y.**, Siddharthan, R. V., Elfass, S., & Sebaaly, P. E. (2016). Estimation of In-Situ Shear Strength Parameters for Subgrade Layer Using Non-destructive Testing. In: Aguiar-Moya J., Vargas-Nordbeck A., Leiva-Villacorta F., Loria-Salazar L. (eds) The Roles of Accelerated Pavement Testing in Pavement Sustainability. Springer, Cham, pp. 525–538. https://doi.org/10.1007/978-3-319-42797-3_34
28. Sebaaly, P. E., **Hajj, E. Y.**, and M., Piratheepan. “Impact of Gilsonite on the Performance of Un-Modified and Polymer-Modified Asphalt Mixtures,” Proc. of the ISAP Symposium on “From Molecules to Innovative Pavements,” July 18-21, 2016, Yellowstone and Jackson Hole.
29. Alavi, M. Z., **Hajj, E. Y.**, and P. E., Sebaaly. “Significance of Oxidative Aging on the Thermal Cracking Predictions in Asphalt Concrete Pavements,” 8th RILEM International Conference on Mechanisms of Cracking and Debonding in Pavements, Vol. 13, Jun. 7-9, 2016, pp. 127-132, DOI: 10.1007/978-94-024-0867-6, ISBN: 978-94-024-0866-9.
30. Sebaaly, P. E., and **E. Y., Hajj**. “Impact of Additives on the Cracking Resistance of Asphalt Mixtures,” 8th RILEM International Conference on Mechanisms of Cracking and Debonding in Pavements, Vol. 13, Jun. 7-9, 2016, pp. 299-306, DOI: 10.1007/978-94-024-0867-6, ISBN: 978-94-024-0866-9.
31. Sebaaly, P.E. and **E. Y., Hajj**. “Effectiveness of Preventive Maintenance of Asphalt Pavements”, 6th Euroasphalt and Eurobitumen Congress, June 1-3, 2016, Prague, Czech Republic, DOI: [dx.doi.org/10.14311/EE.2016.019](https://doi.org/10.14311/EE.2016.019).
32. Perraton, D., Tebaldi, G., Dave, E., Bilodeau, F., Giacomello, G., Grilli, A., Graziani, A., Bocci, M., Grenfell, J., Muraya, P., Pasetto, M., Kuna, K., Apeageyi, A., Lo Presti, D., Airey, G., Jenkins, K., **Hajj, E.**, Hugener, M., and P., Marsac. “Tests Campaign Analysis to Evaluate the Capability of Fragmentation Test to Characterize Recycled Asphalt Pavement (RAP) Material,” 8th RILEM International Symposium on Testing and Characterization of Sustainable and Innovative Bituminous Materials, Vol. 11, 2015, pp. 965-976, DOI: 10.1007/978-94-017-7342-3.

33. Alavi, M. Z., and **E. Y., Hajj**. “Effect of Cooling Rate on the Thermo-Volumetric, Thermo-Viscoelastic, and Fracture Properties of Asphalt Mixtures.” *Asphalt Pavements – Volume 1, Proc. of the 12th ISAP Conference on Asphalt Pavements, Raleigh, North Carolina, Jun. 1-5, 2014*, pp. 405-416, ISBN (print): 978-1-138-02712-1.
34. Alavi, M. Z., **Hajj, E. Y.**, Morian, N., and P. E., Sebaaly. “Low Temperature Characterization of Asphalt Mixtures by Measuring Visco-Elastic Properties under Thermal Loading.” *ISCORD 2013: Planning for Sustainable Cold Regions, ASCE, 2013*, pp. 404-415, DOI: 10.1061/9780784412978.040, ISBN (print): 978-0-7844-1297-8.
35. Sebaaly, P. E., **Hajj, E. Y.**, Porras, J. D., and J., Corrales. “Laboratory Evaluation of HMA Mixtures for Reflective Cracking Interlayer,” *Proc. of the European Asphalt Technology Association (EATA) conference, Braunschweig, June 2013*.
36. Piratheepan, M., Sebaaly, P. E., and **E. Y., Hajj**. “Mix Design of Cold In-Place Recycling,” *Proc. of the 2nd Int. ISAP Symposium on Asphalt Pavements and Environment, Fortaleza, Brazil, Oct. 1-3, 2012*, p. 12.
37. **Hajj, E. Y.**, Sebaaly, P. E., Morian, N., and M., Piratheepan. “Performance of Hot and Warm Asphalts with Reclaimed Asphalt Pavements in Nevada,” *Proc. of the 2nd Int. ISAP Symposium on Asphalt Pavements and Environment, Fortaleza, Brazil, Oct. 1-3, 2012*, p. 12.
38. Sebaaly, P. E., **E. Y., Hajj**, and E., Hitti. “Performance of Recycled Rubber Modified Binders in Warm Mix Asphalt Mixtures,” *Proc. of Asphalt Rubber Conf., Munich, Germany, Oct. 23-26, 2012*, p. 22.
39. Saadeh, S., Eljairi, O., Kramer, B. and **E. Y., Hajj**. “Development of quality control test procedure for characterizing fracture properties of asphalt mixtures,” *Proc. of the Four-point Bending conference, Taylor & Francis Group, London, UK, 2012*, pp. 223-238.
40. Sebaaly, P. E., **E. Y. Hajj**, and E., Hitti. “Mechanistic Properties of Warm Mix Asphalt Mixtures,” Submitted to 5th Eurasphalt and Eurobitume Congress, Istanbul, Turkey, Jun. 13-15, 2012.
41. **Hajj, E. Y.**, Chia, C., Sebaaly, P.E., Kasozi, A. M., and S., Gibson. “Properties of Foamed Warm-Mix Asphalt Incorporating Recycled Asphalt Pavement from Two Field Projects – Case Studies,” *Proc. of the 2nd International Conference on Warm-mix Asphalt, St. Louis, Missouri, Oct. 11-13, 2011*.
42. Loria, L., **Hajj, E. Y.**, and P. E., Sebaaly. “Assessment of Reflective Cracking Models for Asphalt Pavements,” *ASCE Conf. Proc., Road Pavement and Material Characterization, Modeling, and Maintenance (GSP 213), Proc. of the 2011 GeoHunan International Conference, Hunan, China, Jun. 9-11, 2011*.
43. Sebaaly, P. E., and **E. Y., Hajj**. “Performance Characteristics of Liquid and Lime-treated Asphalt Mixtures,” *Proc. of the 11th Int. Conf. on Asphalt Pavements, Int. Society for Asphalt Pavements, Nagoya, Japan, Aug. 1-6, 2010*.
44. Loria, L., Navas, A., Sebaaly, P. E., and **E. Y., Hajj**. “Evaluation of the Design Methods for Asphalt Overlay Reflective Cracking,” *Proc. of the XV Iberoamerican Conf. of Asphalt, CILA, Portugal, 2009*, pp. 765-773.
45. Sebaaly, P. E., Sebaaly, H. K., and **E. Y., Hajj**. “Properties of HMA Mixtures Produced with Polymer-Modified and Tire Rubber-Modified Asphalt Binders,” *Proc. of Asphalt Rubber Conf., Nanjing, China, Nov. 2-9, 2009*, pp. 831-846.
46. Loria, L., Sebaaly, P. E., and **E. Y., Hajj**. “Performance Models for Maintenance Activities in Nevada,” *Proc. of the Sixth Int. Conf. on Maintenance and Rehabilitation of Pavements and Technological Control, MAIRE PAV6, Italy, Jul. 8-10, 2009*, pp. 1201-1209.
47. Sebaaly, P. E., and **E. Y., Hajj**. “Designing Asphalt Mixtures to Withstand Slow Loading,” *Proc. of the 4th Int. Gulf Conf. on Roads: Efficient Transportation and Pavement Systems, Doha, Qatar, Nov. 11-13, 2008*.
48. Sebaaly, P. E., and **E. Y., Hajj**. “Evaluation of AASHTO T-283 Moisture Sensitivity Test,” *Proc. of the Int. ISAP Symposium on Asphalt Pavements and Environment, Zurich, Switzerland, Aug. 18-20, 2008*, pp. 473-484.
49. Morian, N., **Hajj, E. Y.**, and P. E., Sebaaly. “Mitigating Reflective Cracking under Nevada’s Conditions,” *Proc. of the 6th RILEM Int. Conf. on Cracking in Pavements, Chicago, USA, Jun. 16-18, 2008*, pp. 821-831.

50. **Hajj, E. Y.**, Sebaaly, P. E., Siddharthan, R. V., and D., Weitzel. "Investigation & Analysis of Hot Mix Asphalt Mixtures at Nevada's intersections," Proc. of the Int. Conf. on Advanced Characterization of Pavement and Soil Engineering Materials, Athens, Greece, Taylor & Francis Group, London, Vol. 2, 2007, pp. 1679-1689.
51. Sebaaly, P. E., **Hajj, E. Y.**, and E., Berger. "Impact of lime and liquid antistrip on moisture sensitivity of HMA mixtures," Proc. of the Int. Conf. on Advanced Characterization of Pavement and Soil Engineering Materials, Athens, Greece, Taylor & Francis Group, London, Vol. 1, 2007, pp. 651-661.
52. Sebaaly, P. E., **Hajj, E. Y.**, and D., Weitzel. "A Superpave Volumetric Mix Design for Nevada's Conditions." Proc. of the 10th Int. Conf. on Asphalt Pavements, Int. Society for Asphalt Pavements, Canada, Quebec, Aug. 12-17, 2006.

Proceedings Conference Papers CD-ROM

1. Siddharthan, R.V., **Hajj, E. Y.**, and N. Rasanayagam. "Response and Performance of Layered Systems under 3D Contact Stress Distribution," Proc. of the 44th Symposium on Engineering Geology and Geotechnical Engineering, Reno, Nevada, March 2012.
2. Morian, N., **Hajj, E. Y.**, Glover, C., and P.E. Sebaaly. "Influence of Aggregate Type on Binder Aging in HMA Mixtures," Proc. of the 44th Symposium on Engineering Geology and Geotechnical Engineering, Reno, Nevada, March 2012.
3. Alavi, M. Z., **Hajj, E. Y.**, Hanz, A., and H. Bahia. "Influence of Aggregate, Binder, and Warm-Mix Additive Interaction on Moisture Resistance of Asphalt Mixtures," Proc. of the 44th Symposium on Engineering Geology and Geotechnical Engineering, Reno, Nevada, March 2012.
4. **Hajj, E. Y.**, P. E., Sebaaly, L., Loria, S., Kass, and T. Liske. "Impact of High RAP Content on the Performance Characteristics of Asphalt Mixtures in Manitoba," Proc. of the Annual Conference of the Transportation Association of Canada, Edmonton, Alberta, Sep. 11-14, 2011, in CD-ROM.
5. Saadeh, S., Eljairi, O., Kramer, B., and **E. Y. Hajj**. "Development of Quality Control Test Procedure for Characterizing Fracture Properties of Asphalt Mixtures." Proc. of the Engineering Mechanics Institute, EMI, Boston, USA, 2011, in CD-ROM, pp. 199-216.
6. Sebaaly, P. E., Thushanthan, P., and **E. Y. Hajj**. "Estimating HMA Pavement Performance Under Non-Standard Stress Distributions." Proc. of the Engineering Mechanics Institute, EMI, Boston, USA, 2011, in CD-ROM, pp. 217-231.
7. Loria, L., Navas, A., Sebaaly, P., and **E. Y. Hajj**. "Review and Improvement of Performance Prediction Models for Flexible Pavements Using Statistical Techniques," Proc. of the XV Iberoamerican Conf. of Asphalt, CILA, Portugal, 2009, in CD-ROM, Paper 1039.
8. Loria, L., Navas, A., Sebaaly, P., and **E. Hajj**. "Long-Term Performance of Reflective Cracking Mitigation Techniques in the State of Nevada," Proc. of the XV Iberoamerican Conf. of Asphalt, CILA, Portugal, 2009, in CD-ROM, Paper 1043.

Articles, Magazines, Broadcasts, and Multimedia Productions

1. *Increased Life Cycles And Improved Performance Are Driving Today's Pavement Innovation*. Engineering News-Record (ENR), April 29–May 6, 2019.
http://digital.bnpmedia.com/publication/?i=585024&article_id=3371761&view=articleBrowser&ver=html5#%22issue_id%22:585024,%22view%22:%22articleBrowser%22,%22article_id%22:%223371761%22.
2. Live radio interview, 9:30 am PDT, October 30, 2018. Spoke with anchors Stan Burger and Holly Quan, KCBS Radio in San Francisco.
3. *Where does your recycled plastic go? Perhaps into future highways*. Ashley Halsey III, The Washington Post, published 3:00 pm PDT, Sunday, October 28, 2018.
<https://www.washingtonpost.com/local/trafficandcommuting/where-does-your-recycled-plastic-go-perhaps-i>

- https://www.washingtonpost.com/archive/local/2018/10/28/2aa3f5c4-d157-11e8-8c22-fa2ef74bd6d6_story.html?utm_term=.c5e27ec3ad64. <http://thewashingtonpost.newspaperdirect.com/epaper/viewer.aspx>.
4. **Hajj, E. Y.**, Asphalt Academia, Asphalt: the Magazine of the Asphalt Institute, October 22, 2015.
 5. **Hajj, E. Y.**, Loria, L., and P. E. Sebaaly. "Wait Before First Slurry Seal Application," Pavement Preservation Journal, FP² Inc., Winter 2013, Vol. 6, Issue No. 4
(<http://tsp2pavement.pavementpreservation.org/2014/01/03/835/>)
 6. **Hajj, E. Y.**, Loria, L., and P. E. Sebaaly. "Optimum Time for Slurry Seal Depends on Original Build Date," Pavement Preservation Journal, FP² Inc., Spring 2013, Vol. 6, Issue No. 1
(<http://www.nxtbook.com/naylor/FPPQ/FPPQ0113/index.php?startid=38>).
 7. **Hajj, E. Y.**, Loria, L., and P. E. Sebaaly. "Performance Evaluation of Asphalt Pavement Preservation Activities," Texas Pavement Preservation Center, TxDOT,
<http://www.utexas.edu/research/tppc/news/TPPCnewsletter18.pdf>, Issue 18, Spring 2010.
 8. **Hajj, E. Y.**, and P. E. Sebaaly. "Runaway Talent Show: Reclaimed Asphalt Pavement Has Gained a Sure-Footed Hold on the Airfield Market," Roads & Bridges, Article 10752,
<http://www.roadsbridges.com/Runway-talent-show-article10752>, May 2009.

Select Technical and Research Reports

Published

1. **Hajj, Elie Y**; Skaff, Rami; Sebaaly, Peter E.; Ma, Xiaoxiang; Qin, Heyang; Yan, Feng (2024). Enhancing Pavement Assessment with Dynamic Backcalculation: A Dynamic Finite Element Approach. Report Number DOT/FAA/TC-24/13, United States. Department of Transportation. Federal Aviation Administration. <https://rosap.ntl.bts.gov/view/dot/76965>
2. Rodriguez, J. L., **Hajj, E.**, Hand, A. J., Weitzel, N., & Van Dam, T. (2023). Develop a Study for Geosynthetic Materials for Use in Reducing Pavement Section Thickness. In *Nevada Department of Transportation* (Vols. WRSC-TR-22-21, p. 83).
3. Hand, A. J., Nasr, R., **Hajj, E.**, Sebaaly, P. E., De Jesus Moura, G., Daranga, C., Baumgardner, G., & Cowley, S. (2023). *Developing Laboratory Methods and Specification Language to Test Tack Coat Materials: Vol. WOD 381* (p. 176). National Academy of Sciences, Engineering and Medicine, Transportation Research Board, NCHRP.
4. Von Quintus, H., Nabizadeh, H., Hand, A. J., & **Hajj, E.** (2023). *A Practice for including Intelligent Construction Equipment in Quality Assurance Programs* (p. 37). U.S. Department of Transportation; Federal Highway Administration.
5. Hand, A. J., Nimeri, M., **Hajj, E.**, Sebaaly, P. E., West, R., Heitzman, M. A., Yin, F., Hughes, C. S., Tayabji, S. (2020). Procedures and Guidelines for Validating Contractor Test Data (946th ed.). Transportation Research Board. <http://www.trb.org/Main/Blurbs/180709.aspx>
6. **Hajj, E.**, El Sebaaly, G., Piratheepan, M., Hand, A. J., Sebaaly, P. E. (2020). Calibration of the New AC Reflection Cracking Model in AASHTOWare Pavement ME Design for Nevada's Conditions (vol. WRSC-TR-20-06, pp. 62). Carson City, NV: Nevada Department of Transportation.
7. **Hajj, E.**, Hand, A. J., Chkaiban, R., Aschenbrener, T. B. (2019). Index-Based Tests for Performance Engineered Mixture Designs for Asphalt Pavements (FHWA-HIF-19-103 ed., pp. 27). Washington, DC: U.S. Department of Transportation; Federal Highway Administration.
<https://www.fhwa.dot.gov/pavement/asphalt/pubs/hif19103.pdf>
8. Habbouche, J., **Hajj, E.**, Sebaaly, P. E. (2019). STRUCTURAL COEFFICIENT FOR HIGH POLYMER MODIFIED ASPHALT MIXES IN FLORIDA (pp. 434). Tallahassee, FL: Florida Department of Transportation, Research Center, 605 Suwannee Street.
<https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/research/reports/fdot-be321-rpt.pdf>

9. **Hajj, E. Y.**, Siddharthan, R. V., *Nabizadeh, H.*, Elfass, S., *Nimeri, M.*, *Kazemi, S. F.*, *Batioja-Alvarez, D. D.*, & Piratheepan, M. (2018). [Analysis Procedures for Evaluating Superheavy Load Movement on Flexible Pavements, Volume I: Final Report](#), Report No. FHWA-HRT-18-049, Federal Highway Administration, Washington, DC, pp. 117. (Section 508 Compliant).
10. *Nimeri, M.*, *Nabizadeh, H.*, **Hajj, E. Y.**, Siddharthan, R. V., Elfass, S., & Piratheepan, M. (2018). [Analysis Procedures for Evaluating Superheavy Load Movement on Flexible Pavements, Volume II: Appendix A, Experimental Program](#), Report No. FHWA-HRT-18-050, Federal Highway Administration, Washington, DC, pp. 110. (Section 508 Compliant).
11. *Nimeri, M.*, *Nabizadeh, H.*, **Hajj, E. Y.**, Siddharthan, R. V., & Elfass, S. (2018). [Analysis Procedures for Evaluating Superheavy Load Movement on Flexible Pavements, Volume III: Appendix B, Superheavy Load Configurations and Nucleus of Analysis Vehicle](#), Report No. FHWA-HRT-18-051, Federal Highway Administration, Washington, DC, pp. 90. (Section 508 Compliant).
12. *Nabizadeh, H.*, **Hajj, E. Y.**, Siddharthan, R. V., & Elfass, S. (2018). [Analysis Procedures for Evaluating Superheavy Load Movement on Flexible Pavements, Volume IV: Appendix C, Material Characterization for Superheavy Load Movement Analysis](#), Report No. FHWA-HRT-18-052, Federal Highway Administration, Washington, DC, pp. 34. (Section 508 Compliant).
13. *Nabizadeh, H.*, **Hajj, E. Y.**, Siddharthan, R. V., *Nimeri, M.*, Elfass, S., & Piratheepan, M. (2018). [Analysis Procedures for Evaluating Superheavy Load Movement on Flexible Pavements, Volume V: Appendix D, Estimation of Subgrade Shear Strength Parameters Using Falling Weigh Deflectometer](#), FHWA-HRT-18-053, Federal Highway Administration, Washington, DC, pp. 47. (Section 508 Compliant).
14. *Nabizadeh, H.*, *Nimeri, M.*, **Hajj, E. Y.**, Siddharthan, R. V., Elfass, S., & Piratheepan, M. (*In Press*). Analysis Procedures for Evaluating Superheavy Load Movement on Flexible Pavements, Volume VI: Appendix E, Ultimate and Service Limit Analyses, Report No. FHWA-HRT-18-054, Federal Highway Administration, Washington, DC. (Section 508 Compliant).
15. *Nabizadeh, H.*, Siddharthan, R. V., Elfass, S., & **Hajj, E. Y.** (2018). [Analysis Procedures for Evaluating Superheavy Load Movement on Flexible Pavements, Volume VII: Appendix F, Failure Analysis of Sloped Pavement Shoulders](#), Report No. FHWA-HRT-18-055, Federal Highway Administration, Washington, DC, pp. 51. (Section 508 Compliant).
16. *Nabizadeh, H.*, Elfass, S., **Hajj, E. Y.**, Siddharthan, R. V., *Nimeri, M.*, & Piratheepan, M. (*In Press*). Analysis Procedures for Evaluating Superheavy Load Movement on Flexible Pavements, Volume VIII: Appendix G, Risk Analysis of Buried Utilities Under Superheavy Load Vehicle Movements, Report No. FHWA-HRT-18-056, Federal Highway Administration, Washington, DC. (Section 508 Compliant).
17. *Batioja-Alvarez, D. D.*, **Hajj, E. Y.**, & Siddharthan, R. V. (2018). [Analysis Procedures for Evaluating Superheavy Load Movement on Flexible Pavements, Volume IX: Appendix H, Analysis of Cost Allocation Associated with Pavement Damage Under a Superheavy Load Vehicle Movement](#), Report No. FHWA-HRT-18-057, Federal Highway Administration, Washington, DC, pp. 52. (Section 508 Compliant).
18. *Kazemi, S. F.*, *Nabizadeh, H.*, *Nimeri, M.*, *Batioja-Alvarez, D. D.*, **Hajj, E. Y.**, Siddharthan, R. V., & Hand, A. J. T. (2018). [Analysis Procedures for Evaluating Superheavy Load Movement on Flexible Pavements, Volume X: Appendix I, Analysis Package for Superheavy Load Vehicle Movement on Flexible Pavement \(SuperPACK\)](#), Report No. FHWA-HRT-18-058, Federal Highway Administration, Washington, DC, pp. 47. (Section 508 Compliant).
19. **Hajj, E. Y.**, Xu, H., Bailey, G., Sime, M., *Chkaiban, R.*, *Kazemi, S. F.*, & Sebaaly, P. E. (*In Press*). Enhanced Prediction of Vehicle Fuel Economy and other Operating Costs, Phase I: Modeling the Relationship between Vehicle Speed and Fuel, Technical Report, Federal Highway Administration, Washington, DC, pp. 135.
20. **Hajj, E. Y.**, Sime, M., *Chkaiban, R.*, Bailey, G., Xu, H., & Sebaaly, P. E. (*In Press*). Enhanced Prediction of Vehicle Fuel Economy and other Operating Costs, Phase II: Modeling the Relationship between Pavement

- Roughness, Speed, Roadway Characteristics and Vehicle Operating Costs, Technical Report, Federal Highway Administration, Washington, DC, pp. 255.
21. **Hajj, E. Y.**, Graham, L., Heitzman, M. A., Hand, A. J. T., Weitzel, D., & Tran, N. H. (2018). Chip Seal Quality Construction: State-of-the-Practice, Technical Brief, Nevada Department of Transportation Maintenance Division, 1263 S. Stewart St. Carson City, NV 89712.
<https://www.nevadadot.com/home/showdocument?id=14562>
22. **Hajj, E. Y.**, Graham, L., Heitzman, M. A., Hand, A. J. T., Weitzel, D., & Tran, N. H. (2018). Slurry Seal Quality Construction: State-of-the-Practice, Technical Brief, Nevada Department of Transportation Maintenance Division, 1263 S. Stewart St. Carson City, NV 89712.
<https://www.nevadadot.com/home/showdocument?id=14566>
23. **Hajj, E. Y.**, Graham, L., Heitzman, M. A., Hand, A. J. T., Weitzel, D., & Tran, N. H. (2018). Micro Surfacing Quality Construction: State-of-the-Practice, Technical Brief, Nevada Department of Transportation Maintenance Division, 1263 S. Stewart St. Carson City, NV 89712.
<https://www.nevadadot.com/home/showdocument?id=14564>
24. **Hajj, E. Y.**, Graham, L., Heitzman, M. A., Hand, A. J. T., Weitzel, D., & Tran, N. H. (2018). Thin Loft Asphalt Overlay Quality Construction: State-of-the-Practice, Technical Brief, Nevada Department of Transportation Maintenance Division, 1263 S. Stewart St. Carson City, NV 89712.
25. Sebaaly, P. E., **Hajj, E. Y.**, Faeth, B., Diaz, C., Pandey, S., Piratheepan, M. (2016). Washoe RTC Pavement Technology Research: New Technologies, Cold In-Place Recycling, and Warm Mix Asphalt. Final Report, Washoe County Regional Transportation Commission (RTC), p. 77.
26. **Hajj, E. Y.**, Piratheepan, M. (2016). Evaluation of TechniSoil G5® Stabilized Aggregate Mixture. Final Report, TechniSoil Global Inc., p. 26.
27. Von Quintus, H., Hall, K. D., Fee, F., Coleri, E., Heitzman, M., May, R., Morian, N., **Hajj, E. Y.** (2016). Integrating Asphalt Mixture Design, Structural Design, and Construction Quality Control. Transportation Research Circular, Issue No. E-C209, Transportation Research Board, p. 36, DOI: 10.17226/23572, ISSN: 0097-8515.
28. Xu, H., Zong, T., **Hajj, E. Y.**, Sebaaly, P. E. (2016). Enhanced Prediction of Vehicle Fuel Economy and Other Vehicle Operating Costs: Task 2a - b: Driving Cycle Development-Partial/No Access Facility. Final Report, Federal Highway Administration (FHWA) Project DTFH61-14-C-00044, p. 406.
29. Xu, H., Zong, T., **Hajj, E. Y.**, Sebaaly, P. E. (2016). Enhanced Prediction of Vehicle Fuel Economy and Other Vehicle Operating Costs: Task 1c - d: Driving Cycle Development for the Controlled Access Facilities. Final Report, Federal Highway Administration (FHWA) Project DTFH61-14-C-00044, p. 228.
30. **Hajj, E. Y.**, Sebaaly, P. E., Habbouche, J. (2016). Laboratory Evaluation of Thin Asphalt Concrete Overlays for Pavement Preservation. Final Report, SOLARIS Consortium, Tier 1 University Transportation Center, p. 60.
31. Sebaaly, P. E., **Hajj, E. Y.**, Weitzel, D., Belancio, G. (2016). Effectiveness of Cape Seal Pavement Preservation Technique in Northern Nevada. Final Report, SOLARIS Consortium, Tier 1 University Transportation Center, p. 88.
32. **Hajj, E. Y.**, Sebaaly, P. E., Nabhan, P. (2015). Manual for Designing Flexible Pavements in Nevada Using AASHTOWare Pavement-ME Design. Final Report, Nevada DOT, p. 107.
33. Sebaaly, P. E., **Hajj, E. Y.** (2016). Evaluation of Gilsonite-Modified Asphalt Mixtures. Final Report, American Gilsonite Company, p. 53.
34. **Hajj, E. Y.**, Sibaja, L. M. (2015). Evaluation of the Rutting Resistance of Asphalt Mixtures from Kern County. Final Report, Kern County Roads Department, p. 26.
35. Sebaaly, P. E., **Hajj, E. Y.**, Souliman, M. (2015). Evaluation of Warm Mix Asphalt Concrete Pavement in South Dakota Conditions. Final Report, South Dakota DOT, p. 218.

36. Xu, H., Tian, Z., **Hajj, E. Y.**, Sebaaly, P. E. (2014). Task 1a-b: Interim Progress Report on Proposed Driving Cycles and Data Sources. Enhanced Prediction of Vehicle Fuel Economy and Other Vehicle Operating Costs, U.S. Department of Transportation, FHWA, p. 43.
37. Piratheepan, M., Sebaaly, P. E., **Hajj, E. Y.**, Selvaratnam, S. (2014). Evaluation of Long-Term Performance of Cold In-Place Recycling Pavements in Nevada. Final Report, Nevada DOT, p. 48.
38. Sebaaly, P. E., Schlierkamp, R., Diaz, C., **Hajj, E. Y.**, Souliman, M. (2014). Develop a PWL System for Dense Graded Hot Mix Asphalt Construction Including Pay Factors. Final Report, Nevada DOT, p. 49.
39. Souliman, M. I., **Hajj, E. Y.**, Sebaaly, P. E., Nabhan, P. (2013). Implementation of Pavement-ME for Nevada's Conditions. Final Interim Report, Nevada DOT, p. 184.
40. Souliman, M., **Hajj, E. Y.**, Sebaaly, P. E. (2012). Effectiveness of Single and Sequential Applications of Slurry Seals on Asphalt Pavements in the Truckee Meadows Region. Final Report, Washoe Regional Transportation Commission, p. 34.
41. **Hajj, E. Y.**, Ulloa, A., Sebaaly, P. E. (2012). Flow Number Experiment: Asphalt Mixtures Critical Temperatures for Rutting Evaluation. Final Report, FHWA Asphalt Mixture and Construction Expert Task Group, p. 45.
42. **Hajj, E. Y.**, Cortez, E. (2012). Evaluation of the Cecabase™ RT Warm-Mix Additive. Final Report, CECA Arkema Group, p. 36.
43. **Hajj, E. Y.**, Sebaaly, P. E., Schlierkamp, R., Cortez, E. (2011). Laboratory Evaluation of HMA Mixes Manufactured with PG64-28NV and PG64-28PM Polymer-Modified Asphalt Binders. Final Report, Washoe Regional Transportation Commission, p. 27.
44. **Hajj, E. Y.**, Sebaaly, P. E., Porras, J. D., Azofeifa, J. P. C. (2011). Reflective Cracking of Flexible Pavements, Phase III: Laboratory Evaluation. Final Report, Nevada DOT, p. 30.
45. Sebaaly, P. E., **Hajj, E. Y.**, Little, D., Shivakolunthar, S., Sathanathan, T., Vasconcelos, K. (2010). Evaluating the Impact of Lime on Pavement Performance. Final Report, National Lime Association, p. 135.
46. **Hajj, E. Y.**, Sebaaly, P. E., Kasozi, A. (2009). Laboratory Evaluation of WMA Mixture on Chism Street in Reno Nevada. Final Report, City of Reno.
47. **Hajj, E. Y.**, Sebaaly, P. E., Borroel, C. (2009). "Pavement Design and Materials Research: 2007-2009 Activities," Final Report, Materials Division, Nevada DOT, p. 111.
48. **Hajj, E. Y.**, Loria, L., Sebaaly, P. E. (2009). Performance Evaluation of NDOT Pavement Maintenance Activities. Final Report, Nevada DOT, p. 76.
49. **Hajj, E. Y.**, Sebaaly, P. E., Kasozi, A. (2009). Evaluation of Warm Mix Asphalt Concrete Pavement in South Dakota Conditions: Summary of Literature Review. Final Report, SD2008-03, South Dakota DOT, Pierre, SD, p. 47.
50. **Hajj, E. Y.**, Sebaaly, P. E., Kandiah, P. (2008). Use of Reclaimed Asphalt Pavement (RAP) in Airfield HMA Pavements. Final Report, Airfield Asphalt Pavement Technology Program, AAPTP, p. 127.
51. **Hajj, E. Y.**, Sebaaly, P. E., Loria, L. (2008). Reflective Cracking of Flexible Pavements Phase II: Review of Analysis Models and Evaluation Tests. Final Report, Nevada DOT, p. 87.
52. **Hajj, E. Y.**, Sebaaly, P. E., Loria, L. (2007). Pavement Maintenance Activity Documentation. Final Report, Nevada DOT, p. 32.
53. **Hajj, E. Y.**, Sebaaly, P. E., Loria, L., Morian, N. (2007). Reflective Cracking of Flexible Pavements Phase I: Review of Literature and the Performance of the Various Techniques in Nevada. Final Report, Nevada DOT, p. 166.
54. Sebaaly, P. E., El. Tannoury, G., **Hajj, E. Y.** (2007). Laboratory Evaluation of HMA for Nevada's Intersections – Phase II Study. Final Report, Nevada DOT.
55. **Hajj, E. Y.**, Sebaaly, P. E., Shresta, R. (2007). A Laboratory Evaluation on the Use of Recycled Asphalt Pavements in HMA Mixtures. Final Report, Washoe Regional Transportation Commission, p. 81.

56. **Hajj, E. Y.**, Sebaaly, P. E., Tannoury, G. (2007). Variability of the Moisture Sensitivity of Field HMA Mixes. Final Report, Washoe Regional Transportation Commission, p. 17.
57. Sebaaly, P. E., **Hajj, E. Y.**, Bazi, G., Perez, J. (2005). Pavement Design and Materials Research. Final Report 2003-2005, Nevada DOT, p. 58.
58. Sebaaly, P. E., Wacker, B., **Hajj, E. Y.**, Dunn, M. (2005). Implementation of Superpave Mix Design and Analysis Procedures for the State of Nevada. Final Report No. 1393-7, Vol. 5, Nevada DOT, p. 44.
59. **E. Y. Hajj**. "Hot Mix Asphalt Mixtures for Nevada's Intersections," Ph.D. Dissertation, Department of Civil and Environmental Engineering, University of Nevada, Reno, 2005.
60. **E. Y. Hajj**. "Fatigue Resistance of Nevada's Hot Mix Asphalt Mixtures," Master of Science Thesis, Department of Civil and Environmental Engineering, University of Nevada, Reno, 2003.

PROFESSIONAL PRESENTATIONS

Professional Meetings

1. Hajj, E. (Presenter & Author), 17th Meeting of the Sustainable Pavements Technical Working Group, Non-Academic, "100% RAP Recycling with Synthetic Binder", Invited, Reno, Nevada. (May 8, 2019).
2. Hajj, E. (Presenter & Author), Sebaaly, P. E. (Author Only), *Habbouche, J.*, Pacific Coast Conference on Asphalt Specifications (PCCAS), Non-Academic, "Structural Coefficient for High Polymer Modified Asphalt Mixes (Agreement No. BE321)", Invited, Reno, Nevada. (April 25, 2018).
3. Hajj, E. (Presenter & Author), Morian, N. (Author Only), *Pournoman, S., Habbouche, J., Batioja-Alvarez, D.*, Pacific Coast Conference on Asphalt Specifications (PCCAS), Non-Academic, "Low Temperature Behavior of Asphalt Binders, Mortars, & Mixtures with High Recycled Materials Content", Invited, Reno, Nevada. (April 24, 2018).
4. Hajj, E. (Presenter & Author), Rocky Mountain West Pavement Preservation Partnership Annual Meeting (RMWPPP), Non-Academic, "Timing of Preservation Treatments", Invited, Seattle, Washington. (October 25, 2017).
5. Hajj, E. (Presenter & Author), Eurovia Company Annual Meeting, Non-Academic, Other, "PES Program Overview & Update on Select Research Topics", Invited, Reno, Nevada. (May 11, 2017).
6. Hajj, E. (Presenter & Author), Pavement Preservation Expert Task Group (PPETG), Non-Academic, "Pavement Preservation Construction Quality Assurance Best Practices", Invited, Reno, Nevada. (March 7, 2017).
7. Hajj, E. Y. (Presenter & Author), Sebaaly, P. E. (Author Only), Invited Speaker, "Pavement Design and Materials Research Update", Asphalt Institute Summer Meeting, Invited, North Lake Tahoe, Nevada. (August 20, 2015).
8. Hajj, E. (Presenter & Author), Bituminous Materials Committee (BMC), ASCE, "Pavement Temperature Profile Prediction: Temperature Estimate Model for Pavement Structures – TEMPS", Invited, Washington DC. (January 10, 2015).
9. Hajj, E. Y. (Presenter & Author), Guest Speaker, "Research Updates at UNR – Concrete Pavements and Materials", Sierra Nevada Concrete Association (SNCA), Invited, Reno, Nevada. (October 28, 2014).
10. Hajj, E. (Presenter & Author), Alavi, M. Z. (Author Only), Sebaaly, P. E. (Author Only), Kazemi, S. F. (Author Only), FHWA Asphalt Binder Expert Task Group, Non-Academic, Panel, "Pavement Temperature Profile Prediction Model", Invited, Baton Rouge, Louisiana. (September 17, 2014).
11. Hajj, E. Y. (Presenter & Author), Alavi, M. Z. (Author Only), Morian, N. (Author Only), Sebaaly, P. E. (Author Only), Kazemi, S. F. (Author Only), FHWA Asphalt Mixture and Construction Expert Task Group, Non-Academic, Panel, "Thermal Cracking Analysis Model and Pavement Temperature Profile Prediction Model", Invited, Baton Rouge, Louisiana. (September 18, 2014).

12. Hajj, E. Y. (Presenter & Author), Luncheon Speaker, “Program and Research Update – Western Regional Superpave Center – UNR”, American Public Works Association (APWA) Northern Nevada Branch, Invited, Reno, Nevada. (February 20, 2014).
13. Hajj, E. Y. (Presenter & Author), FHWA Asphalt Mixture and Construction Expert Task Group, Academic, Panel, "Determining Thermal Cracking Properties of Asphalt Mixtures Through Thermally Induced Stress and Strain", Invited, Fall River, Massachusetts. (September 20, 2013).
14. Hajj, E. Y. (Presenter & Author), FHWA Asphalt Mixture and Construction Expert Task Group, Academic, Panel, "Prediction of Asphalt Pavement Temperature Profile Using the Finite Control Volume Method (FCVM)", Invited, Fall River, Massachusetts. (September 20, 2013).
15. Hajj, E. Y. (Presenter & Author), FHWA Asphalt Mixture and Construction Expert Task Group, Non-Academic, "Validation of the Mechanistic-Based Approach to Evaluate Critical Conditions of Hot Mix Asphalt Mixtures", Invited, Fall River, Massachusetts. (September 19, 2013).
16. Hajj, E. Y. (Presenter & Author), FHWA Asphalt Mixture and Construction Expert Task Group, Non-Academic, "Determining Thermal Visco-elastic Properties of Asphalt Mixtures Using Uniaxial Thermal Stress and Strain Test (UTSST)", Invited, Minneapolis, Minnesota. (September 26, 2012).
17. Hajj, E. Y. (Presenter & Author), The 2012 Pavement Performance Symposium, Non-Academic, Symposium, "Effect of Aggregate, Binder, and Warm-Mix Additive Interaction on the Durability of Asphalt Mixtures", Invited, Laramie, Wyoming. (July 12, 2012).
18. Hajj, E. Y. (Presenter & Author), FHWA Fundamental Properties and Advanced Models Expert Task Group, Non-Academic, Other, "3D-Move Status: Standalone Deliverable, Workshop, Access, Documentation", Invited, Baton Rouge, Louisiana. (March 23, 2012).
19. Hajj, E. Y. (Presenter & Author), FHWA Fundamental Properties and Advanced Models Expert Task Group, Non-Academic, Other, "ARC Database: Database Structure, Demonstration, Near/Long Term Access", Invited, Baton Rouge, Louisiana. (March 23, 2012).
20. Hajj, E. Y. (Presenter & Author), FHWA Asphalt Mixture and Construction Expert Task Group, Non-Academic, Other, "Results and Findings of FN Test Experiment", Invited, Baton Rouge, Louisiana. (March 20, 2012).
21. Hajj, E. Y. (Presenter & Author), Ekedahl, M. V. (Author Only), FHWA Asphalt Binder Expert Task Group, Non-Academic, "ARC Database Status Report and Presentation", Invited, Fall River, Massachusetts. (September 23, 2011).
22. Hajj, E. Y. (Presenter & Author), FHWA Fundamental Properties and Advanced Models Expert Task Group, Non-Academic, "3D-Move Analysis Software Status", Invited, Fall River, Massachusetts. (September 20, 2011).
23. Hajj, E. Y. (Presenter & Author), Ekedahl, M. V. (Author Only), FHWA Fundamental Properties and Advanced Models Expert Task Group, Non-Academic, "ARC Database Status Report and Presentation", Invited, Fall River, Massachusetts. (September 20, 2011).
24. Hajj, E. Y. (Presenter & Author), FHWA Asphalt Mixture and Construction Expert Task Group, Non-Academic, "Equivalent Loading Frequencies to Simulate Asphalt Layer Pavement Responses under Dynamic Traffic Loading", Invited, Phoenix, Arizona. (March 18, 2011).
25. Hajj, E. Y. (Presenter & Author), FHWA Asphalt Binder Expert Task Group, Non-Academic, "ARC Database: Overview and Updates", Invited, Phoenix, Arizona. (March 16, 2011).
26. Hajj, E. Y. (Presenter & Author), FHWA Fundamental Properties and Advanced Models Expert Task Group, Non-Academic, "Vehicle-Pavement Interaction: ARC Year 5 Plan Overview", Invited, Phoenix, Arizona. (March 15, 2011).
27. Hajj, E. Y. (Presenter & Author), Ulloa, A. (Author Only), AFD80 Technical Committee Annual Meeting, Non-Academic, "Loading Frequencies for the Asphalt Layer to Simulate the AC Critical Pavement Responses under Dynamic Loading", Invited, Washington D.C. (January 25, 2011).

28. Hajj, E. Y. (Presenter & Author), FHWA Warm Mix Asphalt Technical Working Group, Non-Academic, "Impact of WMA Additives on Modified Asphalt Mixtures", Invited, Oklahoma, City, Oklahoma. (October 28, 2010).
29. Hajj, E. Y. (Presenter & Author), FHWA Recycled Asphalt Pavement Expert Task Group, Non-Academic, "Updates on Laboratory Testing of RAP Mixtures from Manitoba Test Sections", Invited, Oklahoma, City, Oklahoma. (October 27, 2010).
30. Hajj, E. Y. (Presenter & Author), FHWA Asphalt Mixture and Construction Expert Task Group, Non-Academic, "Updates on ARC Work Element E2d: Thermal Cracking Testing of Asphalt Mixtures", Invited, Wisconsin, Madison. (September 21, 2010).
31. Hajj, E. Y. (Presenter & Author), FHWA Recycled Asphalt Pavement Expert Task Group, Non-Academic, "Impact of Extraction Techniques on Aggregate Physical Properties", Invited, Auburn, Alabama. (May 19, 2010).
32. Hajj, E. Y. (Presenter & Author), FHWA Fundamental Properties and Advanced Models Expert Task Group, Non-Academic, "Pavement Response Model to Dynamic Loads", Invited, Irvine, California. (February 26, 2010).
33. Hajj, E. Y. (Presenter & Author), FHWA Warm Mix Asphalt Technical Working Group, Non-Academic, "Evaluation of the WMA Foaming Technique with 15% RAP", Invited, Seattle, Washington. (December 15, 2009).
34. Hajj, E. Y. (Presenter & Author), FHWA Recycled Asphalt Pavement Expert Task Group, Non-Academic, "Impact of Extraction Techniques on Aggregate Physical Properties", Invited, Manchester, New Hampshire. (April 22, 2009).
35. Hajj, E. Y. (Presenter & Author), FHWA Asphalt Mixture and Construction Expert Task Group, Non-Academic, "ARC Updates: Critically Designed Mixtures", Invited, Irvine, California. (February 27, 2009).
36. Hajj, E. Y. (Presenter & Author), FHWA Fundamental Properties and Advanced Models Expert Task Group, Non-Academic, "ARC Updates: Validation", Invited, Irvine, California. (February 24, 2009).
37. Hajj, E. Y. (Presenter & Author), AFK30 Technical Committee Annual Meeting, Non-Academic, "Laboratory Evaluation of Nevada's HMA Mixtures Using Tire Rubber Modified Binders", Invited, Washington D.C. (January 16, 2008).

Seminar

1. Hajj, E. (Presenter & Author), Institute of Transportation Studies at UC Davis (ITS-Davis) Seminar, "New Relationship Models between Vehicle Speed Profile, Roadway Characteristics, Pavement Roughness, and Vehicle Operating Costs", Invited, Davis, California. (April 26, 2019).
<https://its.ucdavis.edu/seminar/april-26-2019/>
2. Hajj, E. (Presenter & Author), Seminar, Centre for Pavement and Transportation Technology, University of Waterloo, "Thermal Cracking Resistance Index Threshold for Assessing Asphalt Mixture Brittleness with Field Validation", Invited, Waterloo, Canada. (April 17, 2019).
3. Hajj, E. (Presenter & Author), Kent Seminar Series, Illinois Center for Transportation, University of Illinois, Non-Academic, Seminar, "Analysis Procedures for Evaluating Superheavy Load Movement on Flexible Pavements: SuperPACK", Invited, Urbana-Champaign, Illinois. (March 29, 2018).
<https://www.youtube.com/watch?v=OnkPf4clKM>
4. Hajj, E. Y. (Presenter & Author), École National des Travaux Public de l'État (ENTPE), Academic, Seminar, "Approach for Quantifying the Effect of Binder Oxidative Aging on the Viscoelastic Properties of Asphalt Mixtures", Invited, Lyon, France. (April 12, 2013).

Conferences and Workshops

Lectern/Podium Presentations

1. Habbouche, J. (Presenter & Author), Sebaaly, P. E. (Author Only), Hajj, E. (Author Only), Piratheepan, M. (Author Only), RILEM INTERNATIONAL SYMPOSIUM ON BITUMINOUS MATERIALS - ISBM LYON 2020, Non-Academic, Conference, "Full-Scale Pavement Testing of a High Polymer Modified Asphalt Concrete Mixture", Accepted, The International Union of Laboratories and Experts in Construction Materials, Systems and Structures (RILEM). (December 15, 2020).
2. Hajj, E. (Presenter & Author), FHWA Asphalt Pavement & Materials Technical Feedback Group, Non-Academic, Workshop, "Case Studies for Implementation of Balanced Mix Design (BMD): Overview of Positive Practices", Invited, FHWA. (October 20, 2020).
3. Hajj, E. (Presenter & Author), TOMNET Webinar Series, Academic, Seminar, "Updated Vehicle Operating Cost (VOC) Models Function of Roadway Characteristics for an Array of Vehicle Classes & Technologies", Invited, Arizona State University (ASU). (October 14, 2020).
4. Hajj, E. (Presenter & Author), Hand, A. J. (Author Only), FHWA's Role in Researching, Educating, and Supporting the Advancement of Asphalt Pavement Performance, Non-Academic, Workshop, "Index-Based Tests for Performance Engineered Mixture Designs (PEMDs) for Asphalt Pavements (HIF-19-103)", Invited, FHWA. (August 11, 2020).
5. Hajj, E. (Presenter & Author), 19th Meeting of the Sustainable Pavements Technical Working Group, Non-Academic, Other, "Estimating Vehicle Operating Costs Calculator (Beta Version)", Invited, FHWA. (June 3, 2020).
6. Habbouche, J. (Presenter & Author), Hajj, E. (Author Only), Sebaaly, P. E. (Author Only), Hand, A. J. (Author Only), 99th TRB Annual Meeting, Non-Academic, Conference, "Fatigue-Based Structural Layer Coefficient of High Polymer-Modified Asphalt Mixtures", Accepted, The National Academies of Sciences, Engineering, and Medicine. (January 14, 2020).
7. Thavathurairaja, J. (Author Only), Hand, A. J. (Author Only), Piratheepan, M. (Presenter & Author), Sebaaly, P. E. (Author Only), Hajj, E. (Author Only), 99th TRB Annual Meeting, Non-Academic, Conference, "Determination of Design Resilient Modulus of Unbound Materials for Rehabilitation in M-E Design", Accepted, The National Academies of Sciences, Engineering, and Medicine. (January 13, 2020).
8. Hajj, E. (Presenter & Author), 17th Meeting of the Sustainable Pavements Technical Working Group, Non-Academic, Other, "100% RAP Recycling with Synthetic Binder", Invited, FHWA. (May 8, 2019).
9. Hajj, E. (Presenter & Author), Institute of Transportation Studies at UC Davis, Academic, Seminar, "New Relationship Models between Vehicle Speed Profile, Roadway Characteristics, Pavement Roughness, and Vehicle Operating Costs", Invited, ITS-Davis. (April 26, 2019).
10. Hajj, E. (Presenter & Author), Nabizadeh, H. (Presenter & Author), Kazemi, s.-F. (Presenter & Author), TRB Webinar, Non-Academic, Other, "Evaluation of Superheavy Load Movement on Flexible Pavements", Accepted, The National Academies of Sciences, Engineering, and Medicine. (April 23, 2019).
11. Hajj, E. (Presenter & Author), Centre for Pavement and Transportation Technology, Academic, Seminar, "Thermal Cracking Resistance Index Threshold for Assessing Asphalt Mixture Brittleness with Field Validation", Invited, University of Waterloo. (April 17, 2019).
12. Martin, A. E. (Presenter & Author), Kaseer, F. (Author Only), Arámbula-Mercado, E. (Author Only), Bajaj, A. (Author Only), Daniel, J. S. (Author Only), Hajj, E. (Author Only), Morian, N. (Author Only), Ogbo, C. (Author Only), 94th AAPT Annual Meeting and Technical Sessions, Non-Academic, Conference, "Component Materials Selection Guidelines and Evaluation Tools for Binder Blends and Mixtures with High Recycled Materials Content and Recycling Agents", Accepted, Association of Asphalt Paving Technologists. (March 6, 2019).
13. Habbouche, J. (Presenter & Author), Hajj, E. (Author Only), Piratheepan, M. (Author Only), Sebaaly, P. E. (Author Only), 94th AAPT Annual Meeting and Technical Sessions, Non-Academic, Conference, "Impact

- of High Polymer Modification on the Performance Characteristics of Asphalt Mixtures", Accepted, Association of Asphalt Paving Technologists. (March 6, 2019).
14. Carvajal, M. (Author Only), Hajj, E. (Presenter & Author), Morian, N. (Presenter & Author), Martin, A. E. (Author Only), 98th TRB Annual Meeting, Non-Academic, Conference, "Development of a Cracking Resistance Index Threshold for Assessing Low-Temperature Thermal Cracking with Field Validation", Accepted, The National Academies of Sciences, Engineering, and Medicine. (January 15, 2019).
 15. Kaseer, F. (Presenter & Author), Bajaj, A. (Author Only), Martin, A. E. (Author Only), Arámbula-Mercado, E. (Author Only), Hajj, E. (Author Only), 98th TRB Annual Meeting, Non-Academic, Conference, "Strategies for Incorporating High Reclaimed Asphalt Pavement Contents in Asphalt Mixtures", Accepted, The National Academies of Sciences, Engineering, and Medicine. (January 15, 2019).
 16. Hajj, E. (Presenter Only), 2018 WRAPP Pavement Preservation Workshop, Non-Academic, Workshop, "Education & the Future of Pavement Preservation Round Table: PES Program at UNR", Invited, Concord, California. (February 7, 2018).
 17. Hajj, E., Hands-on Workshop on Modeling Tools to Evaluate Low Temperature Cracking in Asphalt Mixtures, Academic, Workshop, "UTSST Test, Theory, and Data Analysis", Invited, Reno, Nevada. (April 6, 2017).
 18. *Nabizadeh, H. (Presenter & Author)*, Hajj, E. (Presenter & Author), Siddharthan, R. (Author Only), *Nimeri, M. (Author Only)*, Elfass, S. (Author Only), The 2019 TRB Annual Meeting, Non-Academic, Conference, "Modified Wedge Method for the Investigation of Side Slope Failure in Flexible Pavements Subjected to Heavy Vehicle Loads", Accepted. (January 14, 2019).
 19. *Nimeri, M. (Presenter & Author)*, Hajj, E. (Presenter & Author), *Nabizadeh, H. (Author Only)*, Siddharthan, R. (Author Only), Elfass, S. (Author Only), The 2019 TRB Annual Meeting, Non-Academic, Conference, "Load Nucleus Approach for Flexible Pavement Responses Under Complex Vehicles Moves", Accepted. (January 14, 2019).
 20. *Chkaiban, R. (Presenter & Author)*, Hajj, E. (Presenter & Author), Bailey, G. (Author Only), Sime, M. (Author Only), Xu, H. (Author Only), *Kazemi, S.-F. (Author Only)*, Sebaaly, P. E. (Author Only), The 2019 TRB Annual Meeting, Non-Academic, Conference, "Effect of Road Level of Service on Compact Car Fuel Economy", Accepted. (January 15, 2019).
 21. *Kaseer, F. (Presenter & Author)*, Bajaj, A. (Author Only), Martin, A. E. (Author Only), Mercado, E. M. (Author Only), Hajj, E. Y. (Author Only), The 2019 TRB Annual Meeting, Non-Academic, Conference, "Strategies for Incorporating High Reclaimed Asphalt Pavement Contents in Asphalt Mixtures", Accepted. (January 15, 2019).
 22. *Habbouche, J. (Presenter & Author)*, Hajj, E. (Presenter & Author), Piratheepan, M. (Author Only), Sebaaly, P. E. (Author Only), Morian, N. (Author Only), The 2019 TRB Annual Meeting, Non-Academic, Conference, "Field Performance and Economic Analysis of Rehabilitated Pavement Sections with Engineered Stress Relief Course Interlayers", Accepted. (January 15, 2019).
 23. *Carvajal, M. E. (Author Only)*, Hajj, E. (Presenter & Author), Morian, N. (Author Only), Martin, A. E. (Author Only), The 2019 TRB Annual Meeting, Non-Academic, Conference, "Development of a Cracking Resistance Index Threshold for Assessing Low-Temperature Thermal Cracking with Field Validation", Accepted. (January 15, 2019).
 24. *Nimeri, M. (Author Only)*, Hajj, E. (Presenter & Author), *Nabizadeh, H. (Author Only)*, Siddharthan, R. (Author Only), Elfass, S. A. (Author Only), AM3P conference, Non-Academic, Conference, "Nucleus Approach for Pavement Analysis under Superheavy Load (SHL)", Accepted. (April 18, 2018).
 25. Siddharthan, R. (Author Only), Hajj, E. (Presenter & Author), *Nasimifar, M. (Author Only)*, AM3P conference, Non-Academic, Conference, "Moving Deflectometer Devices to Predict Critical Pavement Responses", Accepted. (April 16, 2018).

26. *Batioja-Alvarez, D. (Author Only), Kazemi, S.-F. (Author Only), Hajj, E. (Presenter & Author), Hand, A. J. (Author Only), Siddharthan, R. (Author Only), AM3P conference, Non-Academic, Conference, "Case study for overweight vehicle pavement damage associated costs", Accepted. (April 16, 2018).*
27. *Hajj, E. (Presenter & Author), Morian, N. (Author Only), Pournoman, S. (Author Only), Habbouche, J. (Author Only), Batioja-Alvarez, D., 93rd AAPT Annual Meeting and Technical Sessions, Non-Academic, Conference, "Low Temperature Behavior of Asphalt Binders, Mortars, & Mixtures with High Recycled Materials Content", Accepted. (March 21, 2018).*
28. *Hajj, E. (Presenter & Author), 2018 Utah Asphalt Conference, Non-Academic, Conference, "Achieving Construction Quality For Chip Seals, Slurry Seals, & Thin Lift Asphalt Concrete Overlays", Invited. (February 22, 2018).*
29. *Batioja, D. (Author Only), Kazemi, S.-F. (Presenter & Author), Hajj, E. (Author Only), Siddharthan, R. (Author Only), Hand, A. J. (Author Only), The 2018 TRB Annual Meeting, Non-Academic, Conference, "Statistical Distributions of Pavement Damage Associated with Overweight Vehicles: Methodology and Case Study", Accepted. (January 9, 2018).*
30. *Pournoman, S. (Presenter & Author), Hajj, E. (Presenter & Author), Morian, N. (Author Only), Epps Martin, A. (Author Only), The 2018 TRB Annual Meeting, Non-Academic, Conference, "Impact of Recycled Materials and Recycling Agents on Asphalt Binder Oxidative Aging Predictions", Accepted. (January 9, 2018).*
31. *Nabizadeh, H. (Presenter & Author), Hajj, E. (Author Only), Siddharthan, R. (Author Only), Nimeri, M. (Author Only), Elfass, S. A. (Author Only), The 2018 TRB Annual Meeting, Non-Academic, Conference, "Application of Light Weight Deflectometer to Estimate the Strength Parameters of Subgrade with Softening Behavior", Accepted. (January 9, 2018).*
32. *Habbouche, J. (Presenter & Author), Hajj, E. (Presenter & Author), Sebaaly, P. E. (Author Only), Morian, N. (Author Only), The 2018 TRB Annual Meeting, Non-Academic, Conference, "Damage Assessment for M-E Rehabilitation Design of Modified Asphalt Pavements: Challenges and Findings", Accepted. (January 8, 2018).*
33. *Hajj, E. (Presenter & Author), Rocky Mountain Asphalt User Producer Group (RMAU/PG) 26th Annual Conference, Non-academic, Conference, "UNR Superpave Center Update – Exciting New Projects and Research", Invited. (October 19, 2017)*
34. *Hajj, E. (Presenter & Author), Sebaaly, P. E. (Author Only), Piratheepan, M. (Author Only), 10th International Conference on the Bearing Capacity of Roads, Railways & Airfields, Non-Academic, Conference, "Performance Evaluation of a 100% Recycled Asphalt Pavement Mixture using a Polymer Binder: A Pilot Study", Accepted. (June 29, 2017).*
35. *Nabizadeh, H. (Author Only), Hajj, E. (Presenter & Author), Siddharthan, R. (Author Only), Elfass, S. A. (Author Only), Nimeri, M., 10th International Conference on the Bearing Capacity of Roads, Railways & Airfields, Non-Academic, Conference, "Application of Falling Weight Deflectometer for the Estimation of In-situ Shear Strength Parameters of Subgrade Layer", Accepted. (June 29, 2017).*
36. *Habbouche, J. (Presenter & Author), Hajj, E. (Author Only), Morian, N. (Author Only), Sebaaly, P. E. (Author Only), Piratheepan, M. (Author Only), Association of Asphalt Paving Technologists Annual Meeting, Non-Academic, Conference, "Reflective cracking relief interlayer for asphalt pavement rehabilitation: from development to demonstration", Accepted. (March 20, 2017).*
37. *Sebaaly, P. E. (Author Only), Hajj, E. (Presenter & Author), Weitzel, D. (Author Only), Belancio, G. (Author Only), Gibson, S. (Author Only), 96th Annual Meeting of the Transportation Research Board, Non-Academic, Conference, "Effectiveness of Cape Seal Pavement Preservation Technique Using Long-Term Performance Data", Accepted. (January 11, 2017).*
38. *Bazi, G. (Presenter & Author), Hajj, E. (Author Only), Ulloa Calderon, A. (Author Only), Ulidtz, P. (Author Only), 96th Annual Meeting of the Transportation Research Board, Non-Academic, Conference, "Finite Element Modeling of Rolling Resistance due to Pavement Deformation", Accepted. (January 10, 2017).*

39. Morian, N. (Presenter & Author), *Pournoman, S. (Presenter & Author)*, Hajj, E. (Presenter & Author), Sebaaly, P. E. (Author Only), 96th Annual Meeting of the Transportation Research Board, Non-Academic, Conference, "Assessment of Asphalt Binder Cracking Indicators: Pilot Study", Accepted. (January 10, 2017).
40. *Sun, Y. (Presenter & Author)*, Xu, H. (Author Only), Wu, J. (Author Only), Hajj, E. (Author Only), Geng, X. (Author Only), 96th Annual Meeting of the Transportation Research Board, Non-Academic, Conference, "Data Processing Framework for Driving Cycle Development with Naturalistic Driving Study Data", Accepted. (January 9, 2017).
41. Hajj, E. (Author Only), Morian, N. (Presenter & Author), 96th Annual Meeting of the Transportation Research Board, Non-Academic, Conference, "Potential Updates to Oxidation Progression in Pavement ME Methodologies", Invited. (January 8, 2017).
42. Hajj, E. Y. (Presenter & Author), Sebaaly, P. E. (Author Only), 2016 International Symposium on Asphalt Emulsion Technology, Non-Academic, Other, "Performance Evaluation of Pavement Preservation Techniques used in Nevada over a 15 Year Period", Invited, International Bitumen Emulsion Federation. (November 4, 2016).
43. Nabizadeh, H. (Author Only), Hajj, E. Y. (Presenter & Author), Siddharthan, R. (Author Only), Elfass, S. A. (Author Only), Sebaaly, P. E. (Author Only), 5th International Conference on Accelerated Pavement Testing, Non-Academic, Conference, "Estimation of In-Situ Shear Strength Parameters for Subgrade Layer Using Non-destructive Testing", Accepted, LannamUCR. (September 16, 2016).
44. Nasimifar, M. (Author Only), Siddharthan, R. (Presenter & Author), Hajj, E. Y. (Author Only), Motamed-Chaboki, R. (Author Only), 5th International Conference on Accelerated Pavement Testing, Non-Academic, Conference, "Investigation of 3D-Move Responses Under Traffic Speed Deflection Devices (TSDDs)", Accepted, LannamUCR. (September 16, 2016).
45. Alavi, M. Z. (Author Only), Hajj, E. Y. (Presenter & Author), Sebaaly, P. E. (Author Only), 8th RILEM International Conference on Mechanisms of Cracking and Debonding in Pavements, Non-Academic, Conference, "Significance of Oxidative Aging on the Thermal Cracking Predictions in Asphalt Concrete Pavements," Accepted, Nantes, France. (June 7, 2016).
46. Habbouche, J. (Presenter & Author), Hajj, E. Y. (Author Only), Sebaaly, P. E. (Author Only), 95th Annual Meeting of the Transportation Research Board, Non-Academic, Conference, "Laboratory Evaluation of Thin Hot-Mix Asphalt Overlays for Pavement Preservation," Accepted, Washington, D.C. (January 13, 2016).
47. Hajj, E. Y. (Author Only), Batioja-Alvarez, D. (Presenter & Author), Siddharthan, R. V. (Author Only), 95th Annual Meeting of the Transportation Research Board, Non-Academic, Conference, "Assessment of Pavement Damage from Bus Rapid Transit: Case Study for State of Nevada," Accepted, Washington, D.C. (January 13, 2016).
48. Hajj, E. Y. (Presenter & Author), Kazemi, S. F. (Author Only), Sebaaly, P. E. (Author Only), Alavi, M. Z. (Author Only), 95th Annual Meeting of the Transportation Research Board, Non-Academic, Conference, "Temperature Estimate Model for Pavement Structures – TEMPS -,," Accepted, Washington, D.C. (January 12, 2016).
49. Sebaaly, P. E. (Presenter & Author), Hajj, E. Y. (Author Only), Hitti, E. (Author Only), Rubberized Asphalt Rubber 2015, Non-Academic, Conference, "Performance of Tire Rubber-Modified Asphalt Binder in Warm Mix Asphalt Mixtures", Accepted, Las Vegas. (October 5, 2015).
50. Alavi, M. Z. (Presenter & Author), Hajj, E. (Author Only), 2015 Airfield & Highway Pavement, Non-Academic, Conference, "Evolution of Asphalt Mixtures Viscoelastic Properties due to Continuing Oxidative Aging", Accepted, Miami, Florida. (June 8, 2015).
51. Hajj, E. Y. (Presenter & Author), Performance-Based Cold In-Place Recycling (CIR) for Nevada, Non-Academic, Conference, "Results from Local Testing and Recent Studies Involving CIR. Targeted Performance Goals, Targeted Performance Specifications, Targeted Long Term Performance of CIR", Invited, Reno, Nevada. (March 3, 2015).

52. Hajj, E. Y. (Presenter & Author), Sebaaly, P. E. (Author), ARC deliverables/Products Presentations and Workshops, Non-Academic, Workshop, "ARC Deliverables - University of Nevada", Invited, Washington, D.C. (January 15, 2015).
53. Hajj, E. Y. (Presenter & Author), Pacific Coast Conference on Asphalt Specifications (PCCAS), Non-Academic, Conference, "Cold In-Place Recycling: Mix Design and Properties", Invited, Reno, Nevada. (October 7, 2014).
54. Morian, N. (Presenter & Author), Alavi, M. Zia (Author Only), Hajj, E. (Author Only), Petersen Asphalt Research Conference, Non-Academic, Conference, "Investigation of Aggregate Adhesion and Mixture Characteristics on the Hardening Susceptibility of Asphalt Binders", Accepted, Laramie, Wyoming. (July 15, 2014).
55. Alavi, M. Zia (Presenter & Author), Hajj, E. (Author Only), 12th ISAP conference on Asphalt Pavements, Non-Academic, Conference, "Effect of Cooling Rate on the Thermo-Volumetric, Thermo-Viscoelastic, and Fracture Properties of Asphalt Mixtures", Accepted, Raleigh, North Carolina. (June 2, 2014).
56. Hajj, E. Y. (Presenter & Author), Nevada Transportation Conference, Session 4: Research, Non-Academic, Conference, "Pavements/Materials Research Updates", Invited, Las Vegas, Nevada (April 9, 2014)
57. Ulloa, A. (Presenter & Author), Hajj, E. (Author Only), Sebaaly, P. E. (Author Only), Diaz, C. (Author Only), 93rd Annual Meeting of the Transportation Research Board, Non-Academic, Conference, "Influence of Aggregate Characteristics, Asphalt Binder, and Mixture Properties on Rutting Performance of Hot-Mix Asphalt", Accepted, Washington, D.C. (January 15, 2014).
58. Piratheepan, M. (Presenter & Author), Sanjeevan, S. (Author Only), Hajj, E. (Author Only), Bush, A. (Author Only), 93rd Annual Meeting of the Transportation Research Board, Non-Academic, Conference, "Cold in-place recycling (CIR) technique in Nevada: field performance evaluation for a decade of in-service period", Accepted, Washington, D.C. (January 13, 2014).
59. Hajj, E. Y. (Presenter & Author), Cold Recycle – Engineered Emulsions Local Conference, Non-Academic, Conference, "Research, testing, performance guidelines, long-term performance criteria", Invited, Reno, Nevada. (December 4, 2013).
60. Hajj, E. Y. (Presenter & Author), 22nd Annual Rocky Mountain Asphalt User/Producer Group (RMAU/PG) Meeting, Non-Academic, Conference, "UNR SUPERPAVE Center Update: Exciting New Projects and Research", Invited, Reno, Nevada. (October 16, 2013).
61. Farrar, M. (Presenter & Author), Hajj, E. Y. (Author Only), Planche, J. P. (Author Only), Alavi, Z. (Author Only), 5th European Asphalt Technology Association, Non-Academic, Conference, "A Method to Estimate the Thermal Stress Build-up in an Asphalt Mixture from a Single Cooling Event", Accepted, Braunschweig, Germany. (June 4, 2013).
62. Hajj, E. Y. (Presenter & Author), Alavi, Z. (Author Only), Morian, N. (Author Only), Sebaaly, P. E. (Author Only), 5th European Asphalt Technology Association, Non-Academic, Conference, "Effect of Select warm-mix Additives on Thermo-Viscoelastic Properties of Asphalt Mixtures", Accepted, Braunschweig, Germany (June 4, 2013).
63. Hajj, E. Y. (Presenter & Author), Rocky Mountain Asphalt User/Producer Group (RMAU/PG) and Western Cooperative Test Group (WCTG), Non-Academic, Conference, "Update on RAP and Warm Mix Research", Invited, Phoenix, Arizona. (March 13, 2013).
64. Hajj, E. Y. (Presenter & Author), Utah Asphalt Conference, Non-Academic, Conference, "Performance Evaluation of Surface Treatments", Invited, Salt Lake City, Utah. (March 27, 2013).
65. Hajj, E. Y. (Presenter & Author), Utah Asphalt Conference, Non-Academic, Conference, "When Slurry Seal Becomes A Cost-Effective Surface Treatment", Invited, Salt Lake City, Utah. (March 27, 2013).
66. Hajj, E. Y. (Presenter & Author), Fifty-second annual asphalt conference, Non-Academic, Conference, "Findings in WMA Project", Invited, Pierre, South Dakota. (April 3, 2013).

67. Hajj, E. Y. (Presenter & Author), Fifty-second annual asphalt conference, Non-Academic, Conference, "Warm Asphalt in the Dakotas", Invited, Pierre, South Dakota. (April 3, 2013).
68. Hajj, E. Y. (Presenter & Author), 92nd Annual Meeting of the Transportation Research Board, Academic, Conference, "Comparison between Mechanistic Properties of Laboratory and Field-Produced Warm-Mix Asphalt Mixtures from Manitoba, Canada", Accepted, Washington, D.C. (January 16, 2013).
69. Hajj, E. Y. (Presenter & Author), 92nd Annual Meeting of the Transportation Research Board, Academic, Conference, "Influence of BituTech RAP Bioasphalt on Viscoelastic Properties of Reclaimed Asphalt mixtures", Accepted, Washington, D.C. (January 16, 2013).
70. Hajj, E. Y. (Presenter & Author), 92nd Annual Meeting of the Transportation Research Board, Academic, Conference, "Influence of Cecabase on Mechanistic, Economical, and Environmental Attributes of Polymer-Modified Asphalt Mixture", Accepted, Washington, D.C. (January 16, 2013).
71. Hajj, E. Y. (Presenter & Author), 2012 Arizona Pavements/Materials Conference: "100 Years of Progress...The Journey Continues," Non-Academic, Conference, "Manitoba RAP Binder and Mix Evaluation", Invited, Phoenix, Arizona. (October 31, 2012).
72. Sebaaly, P. E. (Author Only), Hajj, E. (Author Only), Hitti, E. (Presenter & Author), Asphalt Rubber Conference 2012, Non-Academic, Conference, "Performance of Recycled Rubber Modified Binders in Warm Mix Asphalt Mixtures", Accepted, Munich, Germany. (October 25, 2012).
73. Saadeh, S. (Presenter & Author), Eljairi, O. (Author Only), Kramer, B. (Author Only), Hajj, E. Y. (Author Only), Four-point Bending conference, Non-Academic, Conference, "Development of quality control test procedure for characterizing fracture properties of asphalt mixtures", Accepted, Sacramento, California. (October 9, 2012).
74. Piratheepan, M. (Author Only), Sebaaly, P. E. (Author Only), Hajj, E. Y. (Presenter & Author), Second International Symposium on Asphalt Pavements and Environment, Non-Academic, Conference, "Mix Design of Cold In-Place Recycling", Accepted, Fortaleza, Brazil. (October 1, 2012).
75. Hajj, E. Y. (Presenter & Author), Sebaaly, P. E. (Author Only), Morian, N. (Author Only), Piratheepan, M. (Author Only), Second International Symposium on Asphalt Pavements and Environment, Non-Academic, Conference, "Performance of Hot and Warm Asphalts with Reclaimed Asphalt Pavements in Nevada", Accepted, Fortaleza, Brazil. (October 1, 2012).
76. Hajj, E. Y. (Presenter & Author), Workshop on RAP Recycling, Non-Academic, Workshop, "Mechanical Properties of mixtures Containing RAP", Invited, Fortaleza, Brazil. (September 30, 2012).
77. Alavi, M. Z. (Presenter & Author), Morian, N. (Author Only), Hajj, E. Y. (Author Only), Petersen Asphalt Research Conference, Non-Academic, Conference, "Effect of Oxidative Aging on the Relaxation Spectrum of Asphalt Mixtures Obtained from Dynamic Modulus Test", Accepted, Laramie, Wyoming. (July 11, 2012).
78. Morian, N. (Presenter & Author), Hajj, E. Y. (Author Only), Sebaaly, P. E. (Author Only), The 2012 Petersen Asphalt Research Conference, Non-Academic, Conference, "Significance of Mixture Parameters on Binder Aging in HMA Mixtures", Accepted, Laramie, Wyoming. (July 11, 2012).
79. Sebaaly, P. E. (Presenter & Author), Hajj, E. Y. (Author Only), Hitti, E. (Author Only), 5th Eurasphalt and Eurobitume Congress, Non-Academic, Conference, "Mechanistic Properties of Warm Mix Asphalt Mixtures", Accepted, Istanbul, Turkey. (June 14, 2012).
80. Hajj, E. Y. (Presenter & Author), Sebaaly, P. E. (Author Only), West, R. (Author Only), Morian, N. (Author Only), Loria, L. (Author Only), 87th AAPT Annual Meeting and Technical Sessions, Non-Academic, Conference, "Recommendations for the Characterization of RAP Aggregate Properties Using Traditional Testing and Mixture Volumetrics", Accepted, Austin, Texas. (April 4, 2012).
81. Alavi, M. Z. (Presenter & Author), Hajj, E. Y. (Author Only), Hanz, A. (Author Only), Bahia, H. (Author Only), 44th Annual Symposium on Engineering Geology and Geotechnical Engineering, Non-Academic, Seminar, "Influence of Aggregate, Binder, and Warm-Mix Additive Interaction on Moisture Resistance of Asphalt Mixtures", Accepted, Reno, Nevada. (March 22, 2012).

82. Ulloa, A. (Presenter & Author), Hajj, E. Y. (Author Only), 44th Annual Symposium on Engineering Geology and Geotechnical Engineering, Non-Academic, Seminar, "Laboratory Evaluation of HMA Mixtures for High Temperature Stability", Accepted, Reno, Nevada. (March 22, 2012).
83. Siddharthan, R. (Presenter & Author), Hajj, E. Y. (Author Only), Rasanayagam, N. (Author Only), 44th Annual Symposium on Eng. Geology and Geotechnical Eng., Non-Academic, Seminar, "Response and Performance of Layered Systems under 3D Contact Stress Distribution", Accepted, Reno, Nevada. (March 22, 2012).
84. Hajj, E. Y. (Presenter Only), Pavement Preservation Workshop, Non-Academic, " UNR Report: Slurry and Micro Surfacing Performance", California Chip Seal Association, Invited, Sacramento, California. (February 10, 2012).
85. Hajj, E. Y. (Presenter & Author), Loria, L. (Author Only), Sebaaly, P. E. (Author Only), Transportation Research Board (TRB) 91st Annual Meeting, Non-Academic, Conference, "Estimating Effective Performance Grade of Asphalt Binders in High-RAP Mixtures Using Different Methodologies: Case Study", Accepted, Washington, D.C. (January 24, 2012).
86. Alavi, M. Z. (Author Only), Hajj, E. Y. (Author Only), Hanz, A. (Presenter & Author), Bahia, H. (Author Only), Transportation Research Board (TRB) 91st Annual Meeting, Non-Academic, Conference, "Evaluating Adhesion Properties and Moisture Damage Susceptibility of Warm-Mix Asphalts Using Bitumen Bond Strength and Dynamic Modulus Ratio Tests", Accepted, Washington, D.C. (January 24, 2012).
87. Hajj, E. Y. (Presenter & Author), Thushanthan, P. (Author Only), Sebaaly, P. E. (Author Only), Siddharthan, R. (Author Only), Transportation Research Board (TRB) 91st Annual Meeting, Non-Academic, Conference, "Influence of Tire-Pavement Stress Distribution, Shape, and Braking on Asphalt Pavement Performance Predictions", Accepted, Washington, D.C. (January 24, 2012).
88. Loria, L. (Author Only), Hajj, E. (Author Only), Sebaaly, P. E. (Presenter & Author), Cortez, E. M. (Author Only), Gibson, S. (Author Only), Transportation Research Board (TRB) 91st Annual Meeting, Non-Academic, Conference, "Effective Timing of Sequential Slurry Seal Applications on Asphalt Pavement Performance", Accepted, Washington, D.C. (January 24, 2012).
89. Ulloa, A. (Author Only), Hajj, E. (Presenter & Author), Siddharthan, R. (Author Only), Sebaaly, P. E. (Author Only), Transportation Research Board (TRB) 91st Annual Meeting, Non-Academic, Conference, "Establishing Equivalent Loading Frequencies in Static Multilayer Analyses to Simulate Dynamic Responses in Asphalt Layer", Accepted, Washington, D.C. (January 24, 2012).
90. Hajj, E. Y. (Presenter & Author), Sebaaly, P. E. (Author Only), Pacific Coast Conference on Asphalt Specifications (PCCAS), Non-Academic, Conference, "Updates on Asphalt Research Consortium ", Invited, Reno, Nevada. (October 25, 2011)
91. Hajj, E. Y. (Presenter & Author), Chia, C. (Author Only), Sebaaly, P. E. (Author Only), Kasozi, A. (Author Only), Gibson, S. (Author Only), Second International Conference on Warm-mix Asphalt, Non-Academic, "Properties of Foamed Warm-Mix Asphalt Incorporating Recycled Asphalt Pavement from Two Field Projects – Case Studies", Accepted, Saint Louis, Missouri. (October 12, 2011).
92. Hajj, E. Y. (Presenter & Author), Sebaaly, P. E. (Author Only), Hitti, E. (Author Only), Borroel, C. (Author Only), 86th AAPT Annual Meeting and Technical Sessions, Non-Academic, "Performance Evaluation of Terminal Blend Tire Rubber HMA and WMA Mixtures – Case Studies", Accepted, Tampa, Florida. (March 29, 2011).
93. Hajj, E. Y. (Presenter Only), Nevada Transportation Conference, Non-Academic, "WMA Experience in Nevada", Invited, Reno, Nevada. (March 22, 2011).
94. Morian, N. (Author Only), Hajj, E.Y. (Presenter & Author), Glover, C. (Author Only), Sebaaly, P. E. (Author Only), Transportation Research Board (TRB) 90th Annual Meeting, Non-Academic, "Oxidative Aging of Asphalt Binders in Hot Mix Asphalt Mixtures", Accepted, Washington, D.C. (January 25, 2011).

95. Hajj, E. Y. (Presenter & Author), Loria, L. (Author Only), Sebaaly, P. E. (Author Only), Borroel, C. (Author Only), Levia, P. (Author Only), Transportation Research Board (TRB) 90th Annual Meeting, Non-Academic, "Optimum Time for Application of Slurry to Asphalt Concrete Pavements", Accepted, Washington, D.C. (January 25, 2011).
96. Hajj, E. Y. (Presenter & Author), Sebaaly, P. E. (Author Only), Pacific Coast Conference on Asphalt Specifications (PCCAS), Non-Academic, Conference, "Updates on Asphalt Research Consortium ", Invited, Reno, Nevada. (November 9, 2010)
97. Hajj, E. Y. (Presenter Only), Pavement Preservation Workshop, Non-Academic, "Modified Binder Chip Seals", California Chip Seal Association, Invited, Seaside, California. (January 21, 2010).
98. Sebaaly, P. E. (Author Only), Hajj, E. Y. (Presenter & Author), Weitzel, D. (Author Only), 10th International Conference on Asphalt Pavements, "A Superpave Volumetric Mix Design for Nevada's Conditions", Accepted, Quebec City, Quebec. (August 16, 2006).
99. Hajj, E. (Presenter & Author), Sebaaly, P. E. (Author Only), Siddharthan, R. (Author Only), Mechanics and Materials Conference, McMat, "Response of Asphalt Pavement Mixture Under a Slow Moving Truck", Accepted, Baton Rouge, Louisiana (June 2, 2005).

Poster Presentations

100. Chkaiban, R. (Presenter & Author), Hajj, E. (Presenter & Author), Sime, M. (Author Only), Bailey, G. (Author Only), Sebaaly, P. E. (Author Only), 99th TRB Annual Meeting, Non-Academic, Conference, "Asymmetric Logistic Model for Estimation of Mileage-Related Vehicle Depreciation Function of Roadway Characteristics", Accepted, The National Academies of Sciences, Engineering, and Medicine. (January 15, 2020).
101. Sime, M. (Presenter & Author), Bailey, G. (Presenter & Author), Hajj, E. (Presenter & Author), Chkaiban, R. (Presenter & Author), Pulley, R. (Author Only), 99th TRB Annual Meeting, Non-Academic, Conference, "Road Load-Based Model for Vehicle Repair and Maintenance Cost Estimation", Accepted, The National Academies of Sciences, Engineering, and Medicine. (January 15, 2020).
102. Sime, M. (Presenter & Author), Bailey, G. (Presenter & Author), Hajj, E. (Presenter & Author), Chkaiban, R. (Presenter & Author), 99th TRB Annual Meeting, Non-Academic, Conference, "Impact of Pavement Roughness on Fuel Consumption for a Range of Vehicle Types", Accepted, The National Academies of Sciences, Engineering, and Medicine. (January 14, 2020).
103. Chkaiban, R. (Presenter & Author), Hajj, E. (Presenter & Author), Bailey, G. (Author Only), Sime, M. (Author Only), Xu, H. (Author Only), Kazemi, S.-F. (Author Only), Sebaaly, P. E. (Author Only), RILEM INTERNATIONAL SYMPOSIUM ON BITUMINOUS MATERIALS - ISBM LYON 2020, Non-Academic, Conference, "Enhanced Models for Vehicle Fuel Consumption for Life Cycle Assessment of Pavements", Accepted, The International Union of Laboratories and Experts in Construction Materials, Systems and Structures (RILEM). (December 15, 2020).
104. Chkaiban, R. (Presenter & Author), Hajj, E. (Presenter & Author), Bailey, G. (Author Only), Sime, M. (Author Only), Xu, H. (Author Only), Kazemi, S.-F. (Author Only), Sebaaly, P. E. (Author Only), 98th TRB Annual Meeting, Non-Academic, Conference, "Effect of Road Level of Service on Compact Car Fuel Economy", Accepted, The National Academies of Sciences, Engineering, and Medicine. (January 15, 2019).
105. Habbouche, J. (Presenter & Author), Hajj, E. (Presenter & Author), Piratheepan, M. (Author Only), Sebaaly, P. E. (Author Only), Morian, N. (Author Only), 98th TRB Annual Meeting, Non-Academic, Conference, "Field Performance and Economic Analysis of Rehabilitated Pavement Sections with Engineered Stress Relief Course Interlayers", Accepted, The National Academies of Sciences, Engineering, and Medicine. (January 15, 2019).
106. Nimery, M. (Presenter & Author), Hajj, E. (Presenter & Author), Nabizadeh, H. (Presenter & Author), Siddharthan, R. (Author Only), Elfass, S. A. (Author Only), 98th TRB Annual Meeting, Non-Academic,

- Conference, "Load Nucleus Approach for Flexible Pavement Responses Under Complex Vehicles Moves", Accepted, The National Academies of Sciences, Engineering, and Medicine. (January 14, 2019).
107. Nabizadeh, H. (Presenter & Author), Hajj, E. (Presenter & Author), Siddharthan, R. (Author Only), Nimery, M. (Author Only), Elfass, S. A. (Author Only), 98th TRB Annual Meeting, Non-Academic, Conference, "Modified Wedge Method for the Investigation of Side Slope Failure in Flexible Pavements Subjected to Heavy Vehicle Loads", Accepted, The National Academies of Sciences, Engineering, and Medicine. (January 14, 2019).
 108. Sebaaly, P. E. (Author Only), Hajj, E. Y. (Presenter & Author), 8th RILEM International Conference on Mechanisms of Cracking and Debonding in Pavements, Non-Academic, Conference, "Impact of Additives on the Cracking Resistance of Asphalt Mixtures," Accepted, Nantes, France. (June 7, 2016).
 109. Hajj, E. Y. (Author Only), Sanders, D. H. (Author Only), Weitzel, N. D. (Presenter & Author), 95th Annual Meeting of the Transportation Research Board, Non-Academic, Conference, "Evaluation of Modified Engineered Cementitious Composite Using Local Materials," Accepted, Washington, D.C. (January 11, 2016).
 110. Siddharthan, R. (Presenter & Author), Tan, X. (Author Only), Hajj, E. (Author Only), 93rd Annual Meeting of the Transportation Research Board, Non-Academic, Conference, "Investigation of Transverse Wheel Wander Using Monte Carlo Simulation", Accepted, Washington, D.C. (January 13, 2014).
 111. Alavi, M. Zia (Presenter & Author), Pouranian, M. R. (Author Only), Hajj, E. (Author Only), 93rd Annual Meeting of the Transportation Research Board, Non-Academic, Conference, "Prediction of Asphalt Pavement Temperature Profile Using the Finite Control Volume Method", Accepted, Washington, D.C. (January 13, 2014).
 112. Morian, N. (Presenter & Author), Alavi, M. Zia (Author Only), Hajj, E. (Author Only), Sebaaly, P. E. (Author Only), 93rd Annual Meeting of the Transportation Research Board, Non-Academic, Conference, "Evolution of Thermo-Viscoelastic Properties of Asphalt mixtures with Oxidative Aging", Accepted, Washington, D.C. (January 14, 2014).
 113. Morian, N. (Author Only), Hajj, E. Y. (Presenter & Author), Sebaaly, P. E. (Author Only), 92nd Annual Meeting of the Transportation Research Board, Academic, Conference, "Significance of Mixture Parameters on Binder Aging in Hot-Mix-Asphalt Mixtures", Accepted, Washington, D.C. (January 15, 2013).
 114. Aguiar-Moya, J. P. (Author Only), Loria-Salazar, L. (Presenter & Author), Salazar, J. (Author Only), Villegas, E. (Author Only), Corrales-Azofeifa, J. P. (Author Only), Hajj, E. Y. (Author Only), Transportation Research Board (TRB) 92nd Annual Meeting, Non-Academic, Conference, "Evaluation of Adhesion Properties of Costa Rican Asphalt Mixtures Using Bitumen Bond Strength and Contact-Angle Measurement Tests," Accepted, Washington, D.C. (January 15, 2013).
 115. Sebaaly, P. E. (Author Only), Hajj, E. Y. (Author Only), Porras, J. (Presenter & Author), Corrales, J. (Author Only), Transportation Research Board (TRB) 91st Annual Meeting, Non-Academic, Conference, "Laboratory Evaluation of Hot-Mix Asphalt Mixtures for Reflective Cracking Interlayers", Accepted, Washington, D.C. (January 24, 2012).
 116. Porras, J. (Presenter & Author), Hajj, E. Y. (Author Only), Sebaaly, P. E. (Author Only), Kass, S. (Author Only), Liske, T. (Author Only), Transportation Research Board (TRB) 91st Annual Meeting, Non-Academic, Conference, "Performance Evaluation of Field-Produced Warm-Mix Asphalt Mixtures in Manitoba", Accepted, Washington, D.C. (January 24, 2012).
 117. Cortez, E. M. (Presenter & Author), Hajj, E. Y. (Author Only), Sebaaly, P. E. (Author Only), Alavi, M. Z., Transportation Research Board (TRB) 90th Annual Meeting, Non-Academic, "Investigating Low-Temperature Properties of Cylindrical Superpave Gyrotory-Compacted Asphalt Concrete Specimens using the Thermal Stress-Restrained Specimen Test (TSRST)", Accepted, Washington, D.C. (January 25, 2011).

118. Kasozi, A. (Author Only), Hajj, E. Y. (Presenter & Author), Sebaaly, P. E. (Author Only), Elkins, J., Transportation Research Board (TRB) 90th Annual Meeting, Non-Academic, "Evaluation of Foamed Warm-Mix Asphalt Incorporating Recycled Asphalt Pavement for Volumetric and Mechanical Properties", Accepted, Washington, D.C. (January 25, 2011).
119. Loria, L. (Presenter & Author), Hajj, E. (Author Only), Sebaaly, P. E. (Author Only), Barton, M. (Author Only), Kass, S. (Author Only), Liske, T. (Author Only), Transportation Research Board (TRB) 90th Annual Meeting, Non-Academic, "Performance Evaluation of Asphalt Mixtures with High RAP Content", Accepted, Washington, D.C. (January 25, 2011).
120. Cortez, E. M. (Presenter & Author), Hajj, E. (Author Only), Sebaaly, P. E. (Author Only), Transportation Research Board (TRB) 90th Annual Meeting, Non-Academic, "Pavement Temperature Rates in the Intermountain Region of the United States", Accepted, Washington, D.C. (January 25, 2011).

Webinars

1. Hajj, E. (Presenter & Author), Nabizadeh, H. (Presenter & Author), Kazemi, S.-F. (Presenter & Author), TRB Webinar, Non-Academic, "Evaluation of Superheavy Load Movement on Flexible Pavements", Accepted, Online. (April 23, 2019). (372 Attendees)
2. Hajj, E. (Presenter & Author), Xu, H. (Presenter & Author), Sime, M. (Presenter & Author), TRB Webinar, Non-Academic, "Modeling the Relationship Between Vehicle Speed & Fuel Consumption", Accepted, Online. (March 14, 2018). (155 Attendees) <http://www.trb.org/Main/Blurbs/177158.aspx>
3. Hajj, E. (Presenter & Author), Morian, N. (Presenter & Author), Alavi, M. Z. (Presenter & Author), TRB Webinar, Academic, Other, "Comprehensive Analysis of Thermal Cracking in Asphalt Concrete Pavements", Accepted, Transportation Research Board. (March 8, 2016).