

Associate Professor of Civil Engineering
Pavement Engineering & Science Program
Western Regional Superpave Center (WRSC)
Department of Civil & Environmental Engineering
University of Nevada, Reno
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- Ph.D. Civil Engineering University of Nevada, Reno 2005
 - M.S.C.E. Civil Engineering University of Nevada, Reno 2002
 - B.S.C.E. Civil Engineering Lebanese University, Lebanon 1999

Paving materials design and advanced characterization, engineered and sustainable paving materials, numerical modeling of asphalt pavement structures, pavement response to heavy loads, full-scale pavement structure testing, pavement maintenance and rehabilitation, computer applications in civil engineering.

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- Engineer Intern, Nevada No. OT4547

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- Associate Professor, Department of Civil and Environmental Engineering, University of Nevada, Reno (07/16-present)
 - Assistant Professor, Department of Civil and

Hajj, Elie (Principal). "Investigation of the rheological and adhesive/cohesive characteristics of crumb rubber modified asphalt binders mixed with warm

Hajj, Elie (Co-Principal), Sebaaly, Peter E (Principal). "Development of In-Place Density Method for Cold In-Place Recycling", Sponsored by University Transportation Center (SOLARIS), Federal/State, \$101,272.

Submission Date: September 3, 2015

Date Awarded: March 1, 2016

End Date: September 30, 2018

Hajj, Elie (Principal), Motamed, Ramin (Co-Principal). "Resilient Modulus Prediction Models of Unbound Materials for Nevada", Sponsored by University Transportation Center (SOLARIS), Federal/State, \$94,331.

Submission Date: September 3, 2015

Date Awarded: March 1, 2016

End Date: September 30, 2018

Hajj, Elie (Principal), Sebaaly, Peter E (Co-Principal). "Evaluation of Soil Water Characteristic Curves (SWCC) in Pavement ME byes 3.5 (C02 Tc3)a(Da)0.5 (teil (E)-1y2 (ed)-(ed)-(ed)-(ed)-(e5 (M (o)i3 (t)-8.9 (au9 (p)-53au9 (p)-57)-9 (e)0.5 (r)-2.3

Hajj, Elie (Principal), Sebaaly, Peter E (Co-Principal). "FAA Pavement Evaluation and Design Model", Sponsored by Federal Aviation Administration (FAA), Federal, \$100,000.

Submission Date: July 28, 2016

Date Awarded: September 10, 2016

End Date: March 9, 2018

Hajj, Elie (Co-Principal), Sebaaly, Peter E (Principal). "Characterization of Unbound Materials (Soils/Aggregates) for Mechanistic-Empirical Pavement Design Guide (MEPDG)", Sponsored by Nevada DOT, State, \$147,936.

Submission Date: January 22, 2016

Date Awarded: July 22, 2016

End Date: December 31, 2017

Hajj, Elie (Principal), Siddharthan, Rajaratnam (Co-Principal). "Mechanistic-Based Pavement Damage and Associated Cost from OS/OW Vehicles in NV", Sponsored by Nevada DOT, State, \$193,411.

Submission Date: June 3, 2013

Date Awarded: January 7, 2014

End Date: September 30, 2017

Hajj, Elie (Co-Principal), Sebaaly, Peter E (Co-Principal). "Pavement Design and Materials Research 15-17", Sponsored by Nevada DOT, State, \$150,000.

Submission Date: June 22, 2015

Date Awarded: October 1, 2015

End Date: June 30, 2017

Hajj, Elie (Co-Principal), Sebaaly, Peter E (Principal). "Caltrans Curriculum Development", Sponsored by Caltrans, (Subcontracted from California State University Long Beach), State, \$102,673.

Submission Date: June 25, 2015

Date Awarded: January 4, 2016

End Date: 2017

Hajj, Elie (Principal). "Evaluation of TechniSoil G5®", Sponsored by TechniSoil Industrial, Private Corporation, \$26,000.

Submission Date: May 15, 2015

Date Awarded: May 20, 2015

End Date: December 31, 2016

Hajj, Elie (Co-Principal), Sebaaly, Peter E (Co-Principal). "Pavement Technology (DCPW) 14-16", Sponsored by

DOI AICID I-8.672 -1Tw 27.50 Tc 0 Tw 11.64edTSphnoSp 2(.)JJ/TT3 1 Tf0 T645 0 Td(.)T918MC /P AICID 28 BDC -0.302 Tc 0.004

Hajj, Elie (Co-Principal), Sebaaly, Peter E (Co-Principal). "Pavement Design and Materials Research 11-13", Sponsored by Nevada DOT, State, \$150,000.

Submission Date: July 2011
Date Awarded: December 6, 2011
End Date: June 30, 2013

Hajj, Elie (Co-Principal), Sebaaly, Peter E (Co-Principal). "Pavement Technology 11-13", Sponsored by Washoe County Regional Transportation Commission, Local, \$150,000.

Submission Date: May 2011
Date Awarded: September 8, 2011
End Date: June 30, 2013

Hajj, Elie (Co-Principal), Sebaaly, Peter E (Principal). "Develop a PWL System for Dense graded HMA Construction, Including Pay Factors", Sponsored by Nevada DOT, State, \$298,984.

Submission Date: February 2009
Date Awarded: July 1, 2010
End Date: December 31, 2014

Hajj, Elie (Co-Principal), Sebaaly, Peter E (Principal). "Pavement Design and Materials Research 09-11", Sponsored by Nevada DOT, State, \$150,000.

Submission Date: July 2009
Date Awarded: August 24, 2009
End Date: June 30, 2011

Hajj, Elie (Co-Principal), Sebaaly, Peter E (Principal). "Evaluation of Warm Mix Asphalt Concrete Pavement in South Dakota Conditions", Sponsored by South Dakota DOT, State, \$140,000.

Submission Date: July 3, 2008
Date Awarded: October 15, 2008
End Date: February 28, 2015

Hajj, Elie (Principal), Siddharthan, Raj V. (Co-Principal). "Evaluating the Impact of Lime on Pavement Performance", Sponsored by National Lime Association, Private Industry, \$100,000.

Submission Date: February 2, 2007
Date Awarded: July 1, 2007
End Date: June 30, 2009

Hajj, Elie (Co-Principal), Sebaaly, Peter E (Principal). "Pavement Design and Materials Research 07-09", Sponsored by Nevada DOT, State, \$300,000.

Submission Date: June 2007
Date Awarded: July 1, 2007
End Date: June 30, 2009

Hajj, Elie (Co-Principal), Sebaaly, Peter E (Principal). "Use of Reclaimed Asphalt Pavements (RAP) in Airfields HMA Pavements", Sponsored by Airfield Asphalt Pavement Technology Program, FAA, Federal, \$110,000.

Submission Date: October 4, 2006
Date Awarded: January 2, 2007
End Date: February 29, 2008

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 recode153 TD

7. Garcia Cucalon, L., Kaseer, F., Arámbula-Mercado, E., Epps Martin, A., Morian, N., Pournoman, S., & (2018). [The crossover temperature: significance and application towards engineering balanced recycled binder blends](#). Road Materials and Pavement Design, 1–22.
8. Batioja-Alvarez, D. D., Kazemi, S.-F., 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).
9. Gu, F., Luo, X., Luo, R., & 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.
10. Alavi, M., & Sebaaly, P. E. (2017). [A comprehensive model for predicting thermal cracking events in asphalt pavements](#). International Journal of Pavement Engineering, 18(9), 871–885.
11. Sebaaly, P. E., Sathanathan, T., & Shivakolunthar, S. (2017). [A comprehensive evaluation of moisture damage of asphalt concrete mixtures](#). International Journal of Pavement Engineering, 18(2), 169–182.
12. Sun, Y., Xu, H., Wu, J., & 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.
13. Habbouche, J., 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.
14. Sanders, D. H., & Weitzel, N. D. (2016). [Evaluation of Modified Engineered Cementitious Composite with Local Materials](#). Transportation Research Record, 2577(1), 78–87.
15. Gu, F., Luo, X., D Tw 1.377 0 5.339 0 T, dREoersa47.3 (e)0.50i.5 ()0.5 8s0 0 1 rg0.0002 Tc 0o7e Tc 4x2 A/CID 50 BD-2.2 (i)0.0.

40. Farrar, M. J., , 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.
41. , 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.
42. , 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.
43. , 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.
44. Alavi, M. Z., , 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.
45. Porras, J., , 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.
46. , 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).
47. Sebaaly, P. E., , Sathanathan, T., and S. Shivakolunthar. "Impact of Lime and Liquid Additives on Life-Cycle Cost of Asphalt Pavements," Lime: Building on the 100-

- Transportation Research Board of the National Academies, Washington, D.C., 2011, pp. 107–116, ISSN: 0361-1981.
55. Loria, L., , 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.
 56. , 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.
 57. , 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.
 58. Kvasnak, A., West, R., Michael, J., Loria, L., , 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.
 59. , 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.
 60. , 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.
 61. Ma, T., Bahia, H., Mahmoud, E., and . "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.
 62. , 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.
 63. , 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.
 64. , 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.
 65. Sebaaly, H. K., , 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.
 66. Loria, L., Sebaaly, P. E., and . "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.
 67. , 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.
 68. , 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.
 69. Sebaaly, P. E., Little, D.,

70. , 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.
71. Bazi, G. M., , 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.
72. , 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)
73. Tohme, P., Sebaaly, P. E., , and D. Johnston. "Effectiveness of Antistripping Additives for Bituminous Mixtures." *International Journal of Pavements*, Vol. 3, #1-2, 2004, pp. 50-62, ISSN: 1676-2797.

1. Batioja-Alvarez, D., Kazemi, S. F., , 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.
2. Nimeri, M., Nabizadeh, H., , 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.
3. 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.
4. 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.
5. Kazemi, S. F., Hand, A. J. T., 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.
6. , 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.
7. Nabizadeh, H., , 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.
8. 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.
9. Nasimifar, M., Siddharthan, R. S., , Motamed, R. (2016). Investigation of 3D-Move Responses Under Traffic Speed Deflection Devices (TSDDs). In: Aguiar-3 ~~March~~ gE.0 Td(.10 Tw 127 0 Td(H)3.8 (a)4.5 (j)0.5-.5 (-)-3.s)-67(ar)-2.

- Pavements," July 18-21, 2016, Yellowstone and Jackson Hole.
12. Alavi, M. Z., 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(4) 3-8 (2005).

- Cycles and Data Sources. Enhanced Prediction of Vehicle Fuel Economy and Other Vehicle Operating Costs, U.S. Department of Transportation, FHWA, p. 43.
29. Piratheepan, M., Sebaaly, P. E., Selvaratnam, S. (2014). Evaluation of Long-Term Performance of Cold In-Place Recycling Pavements in Nevada. Final Report, Nevada DOT, p. 48.
 30. jj,(

- 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

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).
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).
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).

Lectern/Podium Presentations

1. 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).
2. Hajj, E., Hands-

- 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).
61. Hajj, E. Y. (Presenter & Author), Workshop on RAP Recycling, Non-Academic, Workshop, "Mechanical Properties of mixtures Containing RAP", Invited, Fortaleza, Brazil. (September 30, 2012).
 62. 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).
 63. m(h-(ei-6)0.50 h0/)-x6(Dy-2 cc) -2.2c2..08/0nn9-ff0/5 (x(o (e)01-

Asphalt Mixtures Using Bitumen Bond Strength and Contact-Angle Measurement Tests," Accepted, Washington,

- Pavement Structural Design. (2009 - 2011).
- Attendee, Meeting, NCHRP Special Meeting on National Training: Challenges and Opportunities. (2013).
- MoCo-0.005 0 Td((- 0.002 Tw 0.508 0 d(M)Tj3-0.002]e

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Advised: Murugaiyah Piratheepan

Completed, "Development of Pavement Performance Evaluation Subroutines for 3D-Move Analysis Software". Student home department: Civil Engineering. August 15, 2009 - August 15, 2011.

Advised: Vijayathanan Noel Vijayaruban

Completed, "Develop a Laboratory Mixing Procedure for Hot Mix Asphalt Containing RAP Materials". Student home department: Civil Engineering. August 15, 2009 - August 15, 2011.

Advised: Matthew Barton

Completed, "Impact of Contact Stress Distribution and Pattern on Asphalt Pavement Performance Using 3D-Move Analysis Software." Student home department: Civil Engineering. August 2007 - December 2010.

Advised: Thushanthan Palasantharan (Engineer, Rone Eng. Services)

Completed, "Impact of Anti-Strip Additives on Performance of Asphalt Pavements." Student home department: Civil Engineering. January 2007 – May 2010.

Advised: Thileepan Sathanathan (Sr. Geotechnical/Structural Engineer, Houston Offshore Eng., TX)

Completed, "Impact of Anti-strip Additives on Long-term Aging Properties of Asphalt Mixtures." Student home department: Civil Engineering. January 2007 – December 2009.

Advised: Sivakulan Shivakolunthar (Sr. Staff Geotechnical Engineer, URS Corp.)

Completed, "Characteristics of Dynamic Triaxial Testing of Asphalt Mixtures." Student home department: Civil Engineering. August 2007 – December 2009.

Advised: Alvaro Ulloa Calderon

Completed, "Use of Reclaimed Asphalt Pavements (RAP) in Airfields HMA Pavements." Student home department: Civil Engineering. August 2006 – August 2008.

Advised: Kandiah Pratheepan (Engineer, Earth Mechanics Inc.)

In-Process. Student home department: Civil Engineering. January 15, 2018 - Present.

Advised: Habtamu Merga

In-Process. Student home department: Civil Engineering. August 15, 2018 - Present.

Advised: Michael Hartley

In-Process. Student home department: Civil Engineering. August 15, 2018 - Present.

Advised: Sailesh Bista

In-Process. Student home department: Civil Engineering. August 15, 2018 - Present.

Advised: Vlademir Abou Sejaam

In-Process. Student home department: Civil Engineering. January 15, 2019 - Present.

Advised: Kiran Bhandari

In-Process. Student home department: Civil Engineering. January 15, 2019 - Present.

Advised: Michel El Sebaaly

In-Process. Student home department: Civil Engineering. January 15, 2019 - Present.

Advised: Nicole Elias

In-Process. Student home department: Civil Engineering. January 15, 2019 - Present.
Advised: Stephanos Khalil

Completed. Student home department: Civil Engineering. January 15, 2017 - May 15, 2018.
Advised: Federico Ayala

Completed. Student home department: Civil Engineering. January 15, 2017 - May 15, 2018.
Advised: Alberto Elbejjani

Completed. Student home department: Civil Engineering. January 15, 2017 - May 15, 2018.
Advised: Elise Mansour

Completed. Student home department: Civil Engineering. January 15, 2017 - May 15, 2018.
Advised: Daniela Maria Montenegro

Completed. Student home department: Civil Engineering. August 15, 2016 – May 15, 2018.
Advised: Prathapan Ragavan

Completed. Student home department: Civil Engineering. August 15, 2016 – December 15, 2017.
Advised: Rami Ckaiban

Completed. Student home department: Civil Engineering. December 15, 2015 – December 15, 2017.
Advised: Jorge Castro Ortiz

Completed. "Evaluation of Nevada's Warm Mix Asphalt Mixtures with Recycled Asphalt Pavements". Student home department: Civil Engineering. January 15, 2014 – August 15, 2016.
Advised: Balasekaram Jayaprakas

Completed. "Performance Characterization of Recycled Asphalt Pavements with Warm Mix Asphalt Technologies". Student home department: Civil Engineering. January 15, 2014 – May 15, 2016.
Advised: Sandeep Pandey

Completed. "Evaluation of Thermal Oxidative Aging Effect on the Rheological Performance of Modified Asphalt Binders". Student home department: Civil Engineering. August 15, 2013 – Dece4.

