

IMPORTANT NOTES:

All times are in GMT; please adjust to your local time zone accordingly.

Links to tracks will be provided via email to all registered participants each day before start.

Some tracks may include extended discussion / roundtables immediately after the last presentation and Q&A; these discussions may continue beyond the session end time.

GMT	TRACK 1 Rigid Pav, Geo, Statistics, Others	TRACK 2 Structures	TRACK 3 Mixes	TRACK 4 Binders		
Friday (July 31st)						
1300 - 1400		901	Test your connection for AM3P	902	Test your connection for AM3P	
Saturday (August 1st)						
1300 - 1400		903	Test your connection for AM3P	904	Test your connection for AM3P	
Monday (August 3rd)						
1300 - 1310	Welcome: Tom Papagiannakis, Chair AM3P 20					
1310 - 1320	Welcome: Tom Scarpas, Chair AM3P SIAC					
1320 - 1400	Keynote Address: Prof. Eyad Masad					
1405 - 1605	311	Functional pavement characteristics and vehicle-pavement interaction	411	Modeling in mixes - Part 1 - Fatigue and fracture	611	Chemo-mechanics and microstructure of asphalt binders
	Moderator: Karim Chatti, Michigan State Univ.		Moderator: Yong-Rak Kim, Texas A&M Univ.		Moderator: Michael Greenfield, Univ. of Rhode Island	
	Effect of Thresholding Algorithms on Pervious Pavement Skid Resistance (A. Jagadeesh, G.P. Ong, & Y.M. Su)		Effect of Load Eccentricity on Uniaxial Fatigue Test for Asphalt Concrete Mixtures Using FEM (A. Seltlilar & M.E. Kutay,)		Dissolution Simulation of Polymers in Bitumen (H. Wang, P. Apostolidis, H. Zhang, X. Liu, S. Erkens & A. Scarpas)	
	Investigation of the Motion and Flow Field of a Wheel Tracking Device (K. Kavinmathi)		Multiscale study of the fracture properties of asphalt materials (L.M. Espinosa, S. Caro, & J. Wills)		A Review of Asphalt and Aggregate Interface Behavior Studies Using MD (H. Gong, J. Tao, X. Luo, and F. Wang)	
	Overview of Pavement Vehicle Interaction Research at the MIT Concrete Sustainability Hub (J. Mack, M. Akbarian, F.J. Ulm, R. Kirchain, J. Gregory, & A. Parametric and Sensitivity Analysis of PVI-Related Surface Characteristics Models for Fuel Consumption (K. Mohanraj, D. Merritt, N. Sivanewaran, & H. Dylla)		Energy Dissipation Approach to Quantify the Fatigue Damage of Glass Fibre Grid Inlaid Asphalt Mixture (A. Raj, B.S. Abhijith, & J. Murali Krishnan)		Asphalt Complex Modulus & Phase Angle by Equilibrium Molecular Dynamics (M. Masoori & M.L. Greenfield)	
	Fracture Properties of Reclaimed Asphalt Pavement-Based Cement Mortar Using Semicircular Bending Test (X. Shi & Z.C. Grasley)		Improved Testing and Analysis of Uniaxial Tension Fatigue Test (Jacob Uzan)		Molecular Dynamics Simulation of Tensile Failure of Asphalt Binder (W. Sun & H. Wang)	
	Measurement of Structural Rolling Resistance at Two Temperatures (N.R. Nielsen, T. Hecksher, C.P. Nielsen, & P.G. Hjorth)		Volumetric Effects on Asphalt Fatigue Performance from VECD Theory (Y.D. Wang, A. Ghanbari, B.S. Underwood, & Y. R. Kim)		A Review of Molecular Dynamics Simulation Based Asphalt Self-Healing Property Studies (J. Tao, H. Gong, X. Luo, and F. Wang)	
	Mechanistic Modeling of Macrotecture's Effect on Rolling Resistance (S. Rajaei & K. Chatti)		Development of a Damage Growth Rate Based Fatigue Criterion (R. Nemati, E. V. Dave, & J. E. Sias)		Macroscopic Evaluation Method for Adhesion Performance of Warm Mix Asphalt Based on AFM (X.J. Zhang, Y.N. Wang, S.L. Song, J.H. Luan, W. Hong, & H.G.)	
1610 - 1910	WS1	Workshop - PASSRigid for the integration of concrete mixture design, pavement design, and durability				
	Jason Weiss, Oklahoma State Univ. and Matt Corrigan, FHWA					
1915 - 2215	WS2	Workshop - PASSFlex for the integration of asphalt mixture design, pavement design, and performance				
	Richard Kim, North Carolina State Univ. and Matt Corrigan, FHWA					

Tuesday (August 4th)								
1300 - 1345	Keynote Address: Prof. Richard Kim							
1355 - 1615	111	Modeling, performance prediction and design of rigid pavements	331	Advances and evaluation of pavement analysis and design methodologies - 1	414	Design and performance evaluation of asphalt mixes	614	Modeling binder rheology and performance - 1
	Moderator: Lev Khazanovich, Univ. of Pittsburgh		Moderator: Elie Hajj, Univ. of Nevada, Reno		Moderator: Shane Underwood, North Carolina State U		Moderator: Kamilla Vasconcelos, Univ of Sao Paolo	
	Reconsidering Shoulder Type for Low Volume Concrete Roads (N. Buettner, L. Khazanovich, & J. Vandenbossche)		Evaluation of Reflective Cracking in Composite Pavement Based on Different Rheological Models (K. H. Moon, A. C. Falchetto, H. W. Park & D. Wang.)		A Comparative Study of SMA and Dense Graded HMA Mixtures Using a Laboratory Rutting Test and APT (D. Batioja-Alvarez, J. Myung, Y. Tian, J. Lee, and J.E.)		Large Amplitude Oscillatory Shear of Modified Asphalt Binder (S. Gulzar & S. Underwood)	
	Chemo Mechanical Properties of Synthesized Tricalcium Silicate (S. Gholami, Y.-R. Kim, & H. Alanazi)		Assessment of Reflective Cracking Performance Life for High Polymer-Modified Asphalt Overlays (J. Habbouche, E. Y. Hajj, & P. E. Sebaaly)		Evaluating Effects of Volumetric Properties on Asphalt Rutting Using SSR Test (A. Ghanbari, Y.D. Wang, B.S. Underwood, & Y.R. Kim)		Geometric Nonlinearities of Bituminous Binder and Mastic using Large Amplitude Oscillatory Shear (LAOS) (I.J.S. Sandeep, S.S. Bhargava, A. Padmarekha, & J. M.)	
	Effect of nominal maximum aggregate size on fatigue damage in concrete (S.R. Kasu, S. Gunda, N. Mitra, & A.R. Muppireddy)		Layered Nonlinear Cross Anisotropic Model for Pavements with Geogrids (M. E. Kutay, M. Hasnat, & E. Levenberg)		Rutting Resistance and High-Temperature PG of Asphalt Mixtures (H. Azari & A. Mohseni)		Fourier Transform Rheology of Asphalt Binders (S. Gulzar & S. Underwood)	
	A Study on Concrete Pavement Growth (J.H. Lee, T. Sok, Y.K. Kim, S.W. Lee)		Calibration and Validation of the Texas Mechanistic - Empirical Flexible Pavement Design Method (E. Alrashyda, A.E. Masad, & A.T. Papagiannakis)		Quantification of Workability of Bituminous Mixtures using an Improved Workability Meter (S. Sudhakar, V. T. Thushara, J. M. Krishnan, & S.C.)		Quantification of Temperature Susceptibility of Bitumen Using Large Amplitude Oscillatory Shear (T. Srikanth, A. Padmarekha, & J.M. Krishnan)	
	Short Continuously Reinforced Concrete Pavement Structural Model (L. S. Salles, L. Khazanovich, & J. T. Balbo)		Dealing with Non Uniqueness of Calculated Asphalt Pavements Responses (K. Gkyrtis, A. Loizos, & C. Plati)		Laboratory Permeability Testing of Chipseal Road Surfaces (S.P. Huszak, T.F.P. Henning, & P. Herrington)		Importance of Triaxial Stress State on Asphalt Binder Tensile Failure (R. Hajj & A. Bhasin)	
Model for Airfield Pavement Resiliency against Extreme Dynamic Events Analysis (D. Whitmore, V.A. Vidal, M. Miletic, A. Bianchini, & J.)		Experimental Performance of Concrete Culvert under Flexible Pavements Subjected to Heavy Dynamic Loads (H.Nabizadeh, S.Elfass, E.Y.Hajj, R.V.Siddharthan, M.Nimeri)		Design of Rubberized Asphalt Mixtures for Noise and Vibration Damping (J. Huang, G. Cuciniello, P. Leandri, & M. Losa)				
		Evaluation of Emerging Performance Tests & Pavement Prediction Models Using the FlexPAVETM Software (A. Golalipour & D.J. Mensching)						
Wednesday (August 5th)								
1300 - 1345	Keynote Address: Prof. Markus Oeser							
1355 - 1615	211	Pavement Geotechnics: characterization, modeling, and stabilization	333	Advances and evaluation of pavement analysis and design methodologies - 2	421	Performance evaluation of green mixes - Part 1 -RAP	615	Modeling binder rheology and performance - 2
	Moderator: Erol Tutumluer, U Illinois Urbana Champaign		Moderator: Ghassan Chehab, American Univ. of Beirut		Moderator: Zhen Leng, Hong Kong Poly U		Moderator: Kamilla Vasconcelos, Univ of Sao Paolo	
	Organosilane and Lignosulfonate: Road Subsurface Layers Stabilizers (D. M. Barbieri, I. Hoff, S. Adomako, & C. Hu)		Mechanistic Damage Analysis of Pavements: Concept and a Case Study (M. Rahmani & Y-R. Kim)		Permanent Deformation of Reclaimed Asphalt Blended Binders Using Non-Linear Viscoelasticity Theory (B. Vajjipeyajula, L. Roja, E. Masad, & K.R. Rajagopal)		Microscale Observations of Fatigue Damage Mechanism in Asphalt Binder (R. Hajj, K. Mohanraj, A. Bhasin, A. Ramm, & M. Downer)	
	Effect of Plastic Subgrade on Full Depth Reclamation Mix Design (A.K. Frye & A.R. Abbas)		Highlights of High Modulus Asphalt for Cold Regions in Cooperative Research Project (S. Lamothe, S. Proteau Gervais, C. Neyret, M.M.)		Rejuvenation of Reclaimed Asphalt Pavement (RAP) Binder Using the Design of Experiments (M. Thirumalavenkatesh, V. T. Thushara, & J.M. Krishnan)		Improved Test Method for Low-Temperature PG of Asphalt Binders (H. Azari & A. Mohseni)	
	Soil Stabilization using Cement and Polyelectrolyte Complexes (N. Hariharan, J. Huang, J.G. Saavedra, D.N. Little, S.)		Characterizing Low Temperature Field Produced Mix Performance in Iowa (J. Kamau, J. Podolsky, & C. Williams)		Modeling Changes in Asphalt Mixture Properties with RAP Content (N. F. Saleh, D. Mocolin, C. Castorena, & Y. R. Kim)		Discrete Fracture Modelling of Rubber Modified Binder (X. Ding, P. Rath, & W. G. Buttlar)	
	Electrokinetic Treatment of Clay Soil - A Baseline Case Study Intro (N.G. Pavlatos, T. Scarpas, & L.J.M. Houben)		Postmortem Evaluation of In-service Raveled Pavements in Arid Climatic Regions - Case of Kuwait (T. Ahmed, E. Y. Hajj, A. Warrag, & M. Piratheepan)		Determining Optimum Doses of Palm Oil Rejuvenators for Recycled Blends (D.B. Sánchez, S. Caro, & A. Alvarez)		Stress Decomposition of Nonlinear Response of Modified Asphalt Binder Under Large Strains (S. Gulzar & S. Underwood)	
	High Strength and Good Durability of Stabilized Dolomite Fines (Issam Qamhia, Erol Tutumluer, Heather Shoup,		Investigation of Cracking Performance of Asphalt Mixtures in Missouri (B. Jahangiri, H. Majidifard, P. Rathap, & W. Buttlar)		Effect of Recycling Agents on the Homogeneity of High RAP Binders (A. Abdelaziz, A. Epps Martin, E. Masad, E. Arambula-Rejuvenator (S.S. Kar, G. Bharath, & M.K. Shukla)		Evaluation of Models for Binder Dynamic Shear Modulus and Phase angle (I. Onifade, K. Huang, & B. Birgisson)	
Simulation of Granular Material in Distinct Element Model Based on Real Particle Shape (C. Wang, P. Liu, M. Oeser, X. Zhou, & H. Wang)		HMA Characterization Under Different Egyptian Design Conditions (M. M. Saoudy)		Effectiveness of Polymer Modified Emulsion Based Rejuvenator (S.S. Kar, G. Bharath, & M.K. Shukla)		DSR Geometry impact on Asphalt Binder Linear Viscoelastic Properties (J.A. Rodrigues, G.S. Pinheiro, K.L. Vasconcelos, L.B.)		
				Impacts of Unblended Reclaimed Asphalt on Volumetric Mixture Design (S.E. Pape & C.A. Castorena)				

Thursday (August 6th)								
1300 - 1430	511	Variability and sensitivity in performance and modeling	321	Monitoring & modeling to predict performance of pavement structures - 1	412	Modeling in mixes - Part 2 - Computational and analytical methods	612	Asphalt binder aging - Part 1
	Moderator: Katherine Petros, FHWA		Moderator: Emin Kutay, Michigan State Univ.		Moderator: Eshan Dave, Univ of New Hampshire		Moderator: Katerina Varveri, TU Delft	
	Sensitivity Analysis of AASHTOWare PMED to Climatic Inputs and Depth of Water Table (K.J. Msechu, M. Onyango, W. Wu, & S. Udeh)		Modified Area Under Pavement Profile for Light Weight Deflectometer Measurements (A. Burhani, I. Khoury, S. Sargand, & R. Green)		A Dissipated Energy Approach for Flow Number Determination (H. Sager, M.D. Nazzari, M. Al-khasawneh, A. Abbas, & S.S.)		Assessment of Different Long-term Aging Effect on FAM Mixtures (A. Ningappa & S.N. Suresha)	
	Sensitivity Analysis of Simplified Viscoelastic Continuum Damage Model (J. Ding & B.S. Underwood)		New Methods of Structural Assessment on Project Level (D. Jansen & U. Zander)		A Step Towards a Multiscale Model of Frost Damage in Asphalt Mixtures (L. Lövgqvist, R. Balieu, & N. Kringos)		Kinetics of Epoxy Asphalt Oxidation (P. Apostolidis, X. Liu, S. Erkens, & A. Scarpas)	
	On Uncertainty in Asphalt Binder Unit Response Mastercurves (A. Rema, & A.K. Swamy)		Towards a Mechanistic Empirical IRI Prediction (H.S. Lee)		Mix Design and Linear Viscoelastic characterization of Fine Aggregate Matrix (FAM) (C. Pratelli, P. Leandri, M. Losa, & M.P. Wistuba)		Preliminary Study on Using Lignin as Aging Inhibitor in Bitumen (Y.Zhang, X. Liu, R. Jing, P. Apostolidis, S. Erkens, & A.	
	Pavement Performance Prediction Using Mixture Performance-Volumetric Relationship (J. Jeong, A. Ghanbari, & Y. R. Kim)		A Parameter Backcalculation Technique for Pavements Under Moving Loads (Z. Sun, C. Kasbergen, K.N. van Dalen, K. Anupam, S. M.J.G.)		Asphalt Mixture Compaction in Gyrotory Compactor Using Bullet Physics Engine (S. Komaragiri, A. Gigliotti, S. Rahman and A. Bhasin)		Limitations of Sulfoxide Index as a Metric to Quantify Asphalt Aging (S. Arafat, N.M. Wasiuddin, & D. Salomon)	
	Impact of WIM Systematic Bias on Axle Load Spectra A Case Study (M.M. Masud, S. Haider, O. Selesneva, & D. Woolf)		Effect of Seasonal and Daily FWD Measurements on Back-calculated Parameters – LTPP SMP Study (S. Haider, H. Muslim, & K. Chatti)		Constitutive Properties of Materials from Digital Image Correlation (G. Nsengiyumva & Yong-Rak Kim)			
Effect of Uncertainty in Dynamic Modulus on Performance Prediction (H.A. Kassem & G.R. Chehab)								
1435 - 1605	531	AI, Big Data, Machine Learning	322	Monitoring & modeling to predict performance of pavement structures - 2	413	Modeling in mixes - Part 3 - Porous asphalt mixes	613	Asphalt binder aging - Part 2
	Moderator: Wynand Steyn, Univ. of Pretoria		Moderator: Emin Kutay, Michigan State Univ.		Moderator: Eshan Dave, Univ of New Hampshire		Moderator: Katerina Varveri, TU Delft	
	Neural Network Models for Flexible Pavement Structural Evaluation (N. Citir, H. Ceylan, & S. Kim)		Monitoring Asphalt Pavement Behavior Through In Situ Instrumentation (G. B. Colpo, L. A. T. Brito, J. A. P. Ceratti, & D. M. Mocelin)		Design of Poroelastic Wearing Course With the Use of Direct Shear Test (D. Rys, P. Jaskula, M. Stiens, & C. Szydlowski)		Oxidation Simulation of Thin Bitumen Film (P. Apostolidis, H. Wang, H. Zhang, X. Liu, S. Erkens, & A. Scarpas)	
	Development of Machine Learning Performance Prediction Models for Asphalt Mixtures (E.Omer & S. Saadeh)		Pavement Instrumentation with Near Surface LVDTs (A. Skar, J. Nielsen, & E. Levenberg)		Simulation of Performance of PA Mixtures with Different Mastics (P. Liu, C. Wang, G. Lu, D. Wang, M. Oeser, X. Yang, & S.)		Aging Differences Within RAP Binder Layers (W. L. G. Ferreira, C. Branco, K. Vasconcelos, A. Bhasin, & A. Sreeram)	
	Characterization of Road Fleet Weight Using Big Data Tools (C.L.S. Romeiro Jr., H.F. Grimm, L.A.T. Brito, M.R. Garcez, & L.F. Heller)		Study on the Health Monitoring Technology of Saline Soil Subgrade and Subgrade Water Temperature (X.J. Zhang, J.H. Luan, S.L. Song, B. Zhang, W. Hong, & Y.N.)		Challenges in the Generation of Two Dimensional PFC Microstructures (L. Manrique-Sanchez, S. Caro, D. F. Tolosa, & N. Estrada)		Laboratory and Field Ageing of Asphalt Mixtures (R. Jing, A. Varveri, D. van Lent, & S. Erkens)	
	Digital Twinning of Asphalt Pavement Surfacings Using Visual Simultaneous Localization and Mapping (W.J.vdM. Steyn, A. Broekman, & G.J. Jordaan)		Evaluation of Pavement Service Life Reduction in Overload Corridors (A. Morovatdar & R. Ashtiani)		Micromechanical Modelling of Porous Asphalt Mixes at High Temperatures (K. Anupam, H. Zhang, A. Scarpas, C. Kasbergen, S. Erkens, Aging and Moisture Induced Adhesion Reduction of High Viscosity Modified Bitumen in Porous Mixture (M. Zhang, K. Zhong, M. Sun, Y. Zhang, R. Jing)		Effect of Aging on the Molecular Structure of Bitumen (M. Guo, M. C. Liang, Y. B. Jiao, & Ye Fu)	
Friday (August 7th)								
1300 - 1345	APSE panel on careers and closing remarks; Moderator Silvia Caro, Univ. of Los Andes							
1355 - 1615	811	Novel materials and other technological advancements in pavements			422	Performance evaluation of green mixes - Part 2 - Cold mixes and others	813	Impact of aggregate and filler properties on performance
	Moderator: TBD				Moderator: Zhen Leng, Hong Kong Poly U		Moderator: Silvia Caro, Univ. of Los Andes	
	Application and Evaluation of NovaSurfacing Technology (X.Z. Zhang, W. Hong, S.L. Song, J.H. Luan, Q. Liu, & P.J. Zhang)				Stress-Strain-Time Response of Emulsified Cold Recycled Mixture in Repeated Compression Loading (A. Behera & J.M. Krishnan)		Influence of Nanoclay in Viscosity Graded Asphalt Binder at Different Test Temperatures (M. Sukhija & N. Saboo)	
	Field Performance Experience of Sulfur Extended Asphalt (SEA) Pavement in Saudi Arabia (A. M. Alyami & L.S. Toyogon.)				Mix Design Approach of Cold Mix Asphalt using Response Surface Method (S.S. Kar, S. Chandra, & M.N. Nagabhushana)		Influence of Filler-Binder ratio and Temperature on the Linear Viscoelastic (LVE) characteristics of Mastics (M. Chaudhary, N. Saboo, A. Gupta, M. Teineder, & B Hofko)	
	Curing and Adhesive Characteristics of Single-Component Polyurethane Binders (M. Zhang, K. Zhong, M. Sun, X. Wang, & Z. Sun)				Effect of Biochar on the Basic Characteristics of Asphalt Mixtures (X. Sanchez, T. Somers, H. Dhasmana, & O. Owolabi)		Nanomaterial to Resist Moisture Damage of Pure Siliceous Aggregates (H. Chakravarty & S. Sinha)	
	Towards the Application of Drones for Smart Pavement Maintenance (J.D. Rodriguez, R. Balieu, & N. Kringos)				Low Density Polyethylene for Asphalt Binder Modification (K. Lakshmi Roja, A. Rehman, E. Masad, & A. Abdala)		Aggregate Properties Affecting Adhesive Quality in Asphalt Mixtures (A. Cala, S. Caro, & Y. Rojas-Agramonte)	
	Microwave Heating Simulation of Asphalt Pavements (H. Wang, P. Apostolidis, H. Zhang, X. Liu, S. Erkens & A. Scarpas)						Investigating the Factors that Influence the Asphalt Aggregate Bond (M.N. Fakhreddine & G. Chehab)	
Application of Phase Change Self Regulating Temperature Material in Asphalt Pavement (X.J. Zhang, S.L. Song, P. Yang, Y.Z. Yu, H.L. Xu, & W. D. Liu)								