

Conference Programme

**Wednesday
20 June 2007**

ROOM MACEDONIA

CHAIR:
Andreas Loizos, Tom Scarpas, Imad Al-Qadi

09:00 - 10:40

OPENING SESSION

Chairmen / Opening Remarks

Keynote Addresses:

Prof. Th. Xanthopoulos, Vice Minister, Ministry of Public Works
Prof. K. Moutzouris, Rector, National Technical University of Athens

Research In Europe

Steve Philips, FEHRL Secretary-General

Keynote invited lecture

Prof. Sam Carpenter, University of Illinois Urbana-Champaign
“*Development of Mechanics in the Analysis of HMA Pavements*”

Welcome

10:40 –11:00

Coffee Break

Wednesday 20 June 2007	ROOM A (MACEDONIA A)	ROOM B (MACEDONIA B)
SESSION 1	CHAIR: Robert Lytton	CHAIR: Tom Papagiannakis
11:00 - 13:05	Measurement and Modeling of Pavement Cracking – Part 1	Experimental Laboratory Material Characterisation - Part 1
11:00 - 11:25	Session A 1.1 <i>Thermal Reflective Crack Propagation.</i> S. Hu, F. Zhou and T. Scullion	Session B 1.1 <i>Laboratory Evaluating and Comparison of the SCB1 Test Results with other Common Tests for HMA Mixtures</i> M. Arabani and B. Ferdowsi
11:25 – 11:50	Session A 1.2 <i>Effect of Specimen Geometry and Loading Rate on the Fracture Properties of Bituminous Mixtures.</i> I. Artamendi and H. A. Khalid	Session B 1.2 <i>Fatigue and Permanent Deformation Characteristics of SBS Polymer Modified Asphalt Concrete Mixture for Paving Applications.</i> S.S. Awanti, M.S. Amarnath and A. Veeraragavan
11:50 – 12:15	Session A 1.3 <i>Enhancing Crack Resistance of SMA Mixtures Through The Use of Higher Amounts of Newly Developed Cellulose Fibers.</i> A. A. Selim, R. Muniandy and H. Mahgoub	Session B 1.3 <i>Determination of the Fatigue Behaviour of Asphalt Mixes Using the Results of Direct, Indirect and Triaxial Tensile Tests.</i> C. Weise, F. Wellner and S. Werkmeister
12:15 – 12:40	Session A 1.4 <i>Asphalt Pavements in Cold Climates – a Systematic Approach for the Assessment of Cracking Resistance.</i> M. Wistuba and M. Spiegl	Session B 1.4 <i>Damage Characterization of Asphalt Concrete Specimens by Ultrasonic P and S-Wave Propagation in Laboratory.</i> A. Houel and L. Arnaud
12:40 – 13:05	Session A 1.5 <i>A Bayesian Duration Estimation of Crack Initiation Prediction in In-Service Pavements</i> M.G. Karlaftis and A. Loizos	Session B 1.5 <i>The Use of the UNIBAS-MPT Triaxial Press in the Definition of the Master Curves of the Complex Modulus of Asphalt Concrete.</i> D. Ciampa and S. Olita
13:05 – 14:00	Lunch Break	

Wednesday 20 June 2007	ROOM C (MYCENAE)
SESSION 1	CHAIR: Herve di Benedetto
10:40 - 12:45	Subgrade Testing, Evaluation and Modeling - Part 1
10:40 - 11:05	Session C 1.1 <i>Measurement of Resilient Modulus of Unsaturated Subgrade Soil</i> A. Sawangsuriya, T. B. Edil and C. H. Benson.
11:05 – 11:30	Session C 1.2 <i>Optimizing Aggregate Base Gradation for Maximum Performance.</i> N.N. Khoury, M.M. Zaman and J.G. Laguros
11:30 – 11:55	Session C 1.3 <i>Time and Temperature Dependency of the Geomechanical Properties of Silty Soils Treated with Lime.</i> R. De Bel, Q. Bollens, A. Gomes Correia, P.H. Duvignaud and J.C. Verbrugge
11:55 – 12:20	Session C 1.4 <i>Nonlinear Finite Element Modeling of Unbound Granular Materials.</i> A. Gonzalez, M. Saleh, A. Ali, and M. Gribble.
12:20 – 12:45	Session C 1.5 <i>Modular Ratios for Unbound Granular Pavement Layers.</i> G. Salt and D. Stevens
12:45 – 14:00	Lunch Break

Wednesday 20 June 2007	ROOM A (MACEDONIA A)	ROOM B (MACEDONIA B)
SESSION 2	CHAIR: Gerald Huber	CHAIR: Eyad Masad
14:00 - 16:05	Measurement and Modeling of Pavement Cracking – Part 2	Experimental Laboratory Material Characterisation - Part 2
14:00 - 14:25	Session A 2.1 <i>Development of Viscoelastic Mechanistic Response Model for Crack Sealant at Low Temperature.</i> S. Dessouky and I. L. Al-Qadi	Session B 2.1 <i>An Experimental Analysis of the Effects of Compaction Operations on Asphalt Pavement Macrotecture.</i> M. Crispino, R. Rampini and M. Pozzi
14:25 – 14:50	Session A 2.2 <i>Evaluation of Fracture Resistance of Hot-Mix Asphalt.</i> F. M. Bayomy, A. M. Abu Abdo, M. A. Mull and M. J. Santi	Session B 2.2 <i>Investigation of a Surrogate Fatigue Test Protocol for Asphalt Mix-Design and Mixture Screening.</i> Lubinda F. Walubita, A. E. Martin, and Magdy Y. Mikhail
14:50 – 15:15	Session A 2.3 <i>Reflective and Thermal Cracking Modeling of Asphalt Concrete Overlays.</i> E. V. Dave, S. H. Song, W. G. Buttlar and G. H. Paulino	Session B 2.3 <i>Observations on Current Performance Tests and Prediction Models for Asphalt Concrete Mixes.</i> G. B. Way, K. E. Kaloush and J.B. Sousa
15:15 – 15:40	Session A 2.4 <i>Prediction of Bituminous Sealant-Aggregate Bond Strength and Curing Time Using a Newly Developed Blister Test.</i> I. L. Al-Qadi, E. H. Fini and J-F. Masson	Session B 2.4 <i>Comparison of Direct Shear Test and Torque Tests for Determining Viscoelastic Shear Behavior of Tack Coats.</i> M. Diakhate, C. Petit, A. Millien, A. Phelipot-Mardele, B. Pouteau and H. Goacolou
15:40 – 16:05	Session A 2.5 <i>Low Temperature Behavior of Bituminous Mixes: Thermal Stress Restrained Specimen Tests and Acoustic Emission.</i> C. Sauzéat, H. Di Benedetto, P. Chaverot and G. Gauthier	Session B 2.5 <i>Dynamic Creep Test in Several Asphalt Binders. The Role of Temperature and Stress.</i> J. Stastna, L. Zanzotto, T.L.J. Wasage, G. Polacco and M.Cantu
16:05 – 16:20	Coffee Break	

Wednesday 20 June 2007	ROOM C (MYCENAE)	ROOM D (PELLA)
SESSION 2	CHAIR: Giancarlo Gioda	CHAIR: Robert Chaliér & Lyesse Laloui
14:00 - 16:05	Subgrade Testing, Evaluation and Modeling – Part 2	COST 351 Workshop
14:00 - 14:25	Session C 2.1 <i>Simulation of the Expansive Soil Behavior Using State Surfaces</i> X. Zhang and R.L. Lytton	<i>Introduction on COST 351 action</i> A. Dawson
14:25 – 14:50	Session C 2.2 <i>Geotechnical Characterization of Backfill Granular Materials</i> A.Cividini	<i>Technical overview of road deterioration due to water, and about the contaminants in the road environment</i> S. Baltzer & A. Dawson
14:50 – 15:15	Session C 2.3 <i>Analyzing Pavements on Lime-Stabilized Soils with Artificial Neural Networks.</i> O. Pekcan, E. Tutumluer, and M.R. Thompson	<i>Transport of moisture and temperate in cold regions</i> A. Hermansson, S Arlingsson et al.
15:15 – 15:40	Session C 2.4 <i>Characterization of Anisotropic Base Materials with High Fines Content.</i> D. N. Little, E. Masad, R. Salehi Ashtiani	<i>Water influence on mechanical behaviour of pavements: numerical and constitutive models vs. experimental evidence</i> R. Charlier, L. Laloui, C. Cekerevac et al.
15:40 – 16:05	Session C 2.5 <i>Characterization of Bitumen Stabilised Granular Pavement Material Properties Using Tri-Axial Testing.</i> L.J. Ebels, K.J. Jenkins	<i>Paper IJRMPD: Prediction of permanent deformations of unbound granular materials.</i> P. Hornych, C. Chazallon, F. Allou, A. El Abd
16:05 – 16:20	Coffee Break	

Wednesday 20 June 2007 SESSION 3	ROOM A (MACEDONIA A)	ROOM B (MACEDONIA B)
	CHAIR: Kim Jenkins	CHAIR: Gabriele Tebaldi
16:20 – 18:25	Railroad Ballast Characterisation	Innovative Pavement Materials and Interface Systems - Part 1
16:20 – 16:45	Session A 3.1 <i>Distribution of Stresses Under the Sleepers of a Railway Line: A Theoretical Analysis and Application.</i> K. Lymperis	Session B 3.1 <i>L.E.A.® (Low Energy Asphalt) : a New Generation of Half-Warm Asphalt Mixtures.</i> F. Olard, J-P Antoine, B. Heritier, A. Romier and Y. Martineau
16:45 – 17:10	Session A 3.2 <i>Angularity Assessment of Several Railroad Ballast Sources Using Image Processing.</i> Y. Descantes, F. Russo and J.M. Balabaud	Session B 3.2 <i>A Finite Element Model to Evaluate the Role of Interlayer Fiberglass Geogrids in Retarding Reflective Cracking in Flexible Pavements.</i> M. Agostinacchio and F. Fiori
17:10 – 17:35	Session A 3.3 <i>An Experimental Research on the Properties of Sicilian Railroad Ballast Aggregates to the EN 13450:2002.</i> G. Di Mino, C.M. Di Liberto and J.Nigrelli	Session B 3.3 <i>Evaluation of the Damage and Implementation of Separation Function of Geotextiles in Road Structure.</i> A. Vaitkus, D. Čygas, A. Laurinavičius
17:35 – 18:00	Session A 3.4 <i>Imaging Aided Discrete Element Modeling of Railroad Ballast.</i> H. Huang, E. Tutumluer, Y.M.A. Hashash, and J. Ghaboussi	Session B 3.4 <i>Influence of Reinforcement Geosynthetics on Flexion Behaviour of Double-Layer Bituminous Systems.</i> M. Bocci, A. Grilli, F. A. Santagata and A. Virgili
18 :00 – 18 :25	Session A 3.5 <i>Mechanical Behavior of Ballast Under Monotonic and Cyclic Loading.</i> K. Karraz, G. Bonnet, J.C. Dupla and J. Canou	Session B 3.5 <i>Lessons Learned from Modelling and Laboratory Experiences on Reinforcement of Asphalt Pavements with Double Twist Steel Wire Mesh.</i> M. Vicari

Wednesday 20 June 2007 SESSION 3	ROOM C (MYCENAE)	ROOM D (PELLA)
	CHAIR: Patrick Selvadurai	CHAIR: Robert Chahier & Lyesse Laloui
16:20 – 18:25	Constitutive Modeling - Part 1	COST 351 Workshop
16:20 – 16:45	Session C 3.1 <i>Filler and Binder Influence on the Linear Viscoelastic Behavior of Mastics.</i> B. Delaporte, H. Di Benedetto, P. Chaverot and G. Gauthier	<i>Roads as a source of water contamination</i> M. Brencic, T. Leitao, L. Folkesson et al.
16:45 – 17:10	Session C 3.2 <i>A Theoretical-Experimental Visco-Elastic-Plastic Analysis of the Mastic Asphalt.</i> M. Pasetto and N. Baldo	<i>How to control water in and around roads, a review of good European practices.</i> S. Baltzer, J. Santinho Faisca, A. Dawson et al.
17:10 – 17:35	Session C 3.3 <i>Uniqueness of the Viscoelastic Time-Function for Asphalt-Aggregate Mixes.</i> E. Levenberg and J. Uzan	<i>Paper IJRMPD: State-of-practice in prevention of water-born pollution from pavements</i> A. Dawson & S. Baltzer
17:35 – 18:00	Session C 3.4 <i>Creep and Recovery of Linear and Non-linear Rheological Bodies.</i> T. Pellinen, M. Oeser, A. Scarpas and C. Kasbergen	<i>Paper IJRMPD: Unified stress framework for modelling unsaturated subsoil behaviour.</i> M. Nuth, L. Laloui
18 :00 – 18 :25	Session C 3.5 <i>Fracture Modeling Considered Rate-Dependency of Asphalt Concrete Using Discrete Element Method.</i> H. Kim, M. P. Wagoner and W. G. Buttlar	<i>Panel discussion</i> <i>Conclusions</i> A. Dawson

Thursday 21 June 2007 SESSION 4	ROOM A (MACEDONIA A)	ROOM B (MACEDONIA B)
	CHAIR: Charles Schwartz	CHAIR: Lazlo Gaspar
9:00 – 10:40	Finite Element Simulation – Part 1	Innovative Pavement Materials and Interface Systems – Part 2
9:00 – 9:25	Session A 4.1 <i>3D FE Analysis of Accelerated Pavement Test Results from New Zealand's CAPTIF Facility.</i> S.Werkmeister, A. Gonzalez, B. Hayward and D. Alabaster	Session B 4.1 <i>Responses of Geogrid-Reinforced Flexible Pavement to Accelerated Loading.</i> I. L. Al-Qadi, E. Tutumluer, S. Dessouky and J. Kwon
9:25 – 9:50	Session A 4.2 <i>A Modeling to Understand Where a Vertical Crack Can Propagate in Pavements.</i> A. Chabot, Q. D. Tran and A. Ehlacher	Session B 4.2 <i>Evaluation of the Fracture Behavior of Asphalt Road Surface with a Geosynthetic Overlay System</i> R. G. Lugmayr and Th. Hasslacher
9:50 – 10:15	Session A 4.3 <i>Predicting Response and Performance of Granular Pavements with Thin Bituminous Surfaces Under Heavy Vehicles Using Three-Dimensional Non-Linear Finite Element model.</i> B.T. Vuong	Session B 4.3 <i>Influence of Interface Condition on Concrete Pavement Response – An Experimental Evaluation.</i> S. R. Maitra, K. S. Reddy and L. S. Ramachandra
10:15 – 10:40	Session A 4.4 <i>Aircraft Load Rating and Pavement Structural Reporting Based on Analytical Models.</i> G. Charonitis and A. Loizos	Session B 4.4 <i>A new frontier for ecologic bituminous mixes: innovative polifunctional additive for warm mixes and against stripping and ravelling of hot bituminous mixes</i> A. Giannattasio
10:40 – 11:00	Coffee Break	

Thursday 21 June 2007 SESSION 4	ROOM C (MYCENAE)
	CHAIR: Jacob Uzan
9:00 - 10:40	Constitutive Modeling - Part 2
9:00 – 9:25	Session C 4.1 <i>Inverse Fitting of a Fatigue Damage Model on Structural Tests.</i> R. Chkir, D. Bodin, G. Gauthier and G. Pijaudier Cabot.
9:25 – 9:50	Session C 4.2 <i>Nonlinear Viscoelastic Modeling of Asphalt Binders.</i> E. Masad, C. Huang, G. Airey and A. Muliana
9:50 – 10:15	Session C 4.3 <i>Determination of the Burgers' Parameters by Application of the Dynamic ITT</i> M. Huurman and M. Poot
10:15 – 10:40	Session C 4.4 <i>“Bottom-up” Multiscale Modeling of Viscoelastic Properties of Asphalt</i> E.G. Aigner, C. Pichler and R. Lackner
10:40 – 11:00	Coffee Break

Thursday 21 June 2007 SESSION 5	ROOM A (MACEDONIA A)	ROOM B (MACEDONIA B)
	CHAIR: Andrew Collop	CHAIR: Joakim Laguros
11:00 - 13:05	Finite Element Simulation - Part 2	Nondestructive Measurement Techniques and Analysis Tools-Part 1
11:00 - 11:25	Session A 5.1 <i>Modeling Test Rolling on Cohesive Subgrades.</i> J. P. Hambleton and A. Drescher	Session B 5.1 <i>Development of VS-CBR-DCP Empirical Model for Determining Dynamic Stiffness of Pavement Base Layer using SASW.</i> S.A. Rosyidi, M.R. Taha, K.A.M. Nayan, Z. Chik, A. Ismail and M. Siegfried
11:25 - 11:50	Session A 5.2 <i>Investigation of Pavement Foundation Behavior Using Axisymmetric and Three-Dimensional Finite Element Analyses.</i> M. Kim and E. Tutumluer	Session B 5.2 <i>Estimating Resilient Modulus of Florida Granular Subgrade Materials.</i> W. V. Ping, C.C. Ling, B. Dietrich and D. Horhota
11:50 - 12:15	Session A 5.3 <i>Modeling of Permanent Deformation Development in Multilayered Flexible Pavement.</i> M. Gajewski, S. Jemioło, M. Maliszewski, R. Mularzuk and D. Sybilski	Session B 5.3 <i>The Stiffness of Pavements and Subgrades at Small Strains - Geotechnical Aspects.</i> M.S. Kovačević, A. Ivanković and D. Jurić-Kačunić
12:15 - 12:40	Session A 5.4 <i>The Complex Guiding the Simple: Enhancement of Mechanistic-Empirical Pavement Rutting Models Using Nonlinear Finite Element Analysis.</i> C. W. Schwartz and R. L. Carvalho	Session B 5.4 <i>Backcalculation of Subgrade Stiffness Under Rubblized PCC Slabs Using Multi-Level FWD Loads.</i> S. Mun and Y. Richard Kim
12:40 - 13:05	Session A 5.5 <i>3D Finite Elements Modelling of Rut Depth Evolution of Flexible Pavements with the Shakedown Theory.</i> F. Allou, C. Chazallon, C. Petit, P. Hornych	Session B 5.5 <i>Shortcut Techniques for Backcalculation of Pavement Moduli.</i> C. A. Lenngren
13:05 - 14:00	Lunch Break	

Thursday 21 June 2007 SESSION 5	ROOM C (MYCENAE)
	CHAIR: Antonio Gomes Correia
11:00 - 13:05	Rail – Track Assessment and Rehabilitation
11:00 - 11:25	Session C 5.1 <i>A FEM model of Rail Track-Ground System to Calculate the Ground Borne Vibrations: A Case of Rail Track with Wooden Sleepers and k-Fastenings at Castelvetro.</i> G. Di Mino, C.M. Di Liberto and J. Nigrelli
11:25 - 11:50	Session C 5.2 <i>Influence of High-Resilient Fastenings on the Track Mass Participating in Unsprung Masses.</i> K. Giannakos
11:50 - 12:15	Session C 5.3 <i>Loads on Railway Superstructure - Influence of High-Resilient Fastenings on Sleepers Loading.</i> K. Giannakos and A. Loizos
12:15 - 12:40	Session C 5.4 <i>Application of Spectral Analysis of Surface Waves (SASW) in the Characterisation of Railway Platforms.</i> E. Fortunato, J. B. Serra and J. Marcelino
12:40 - 13:05	Session C 5.5 <i>Ladder Sleeper Behavior Analysis.</i> F. M. Nejad and M.H.M. Moghadam
13:05 - 14:00	Lunch Break

Thursday 21 June 2007 SESSION 6	ROOM A (MACEDONIA A)	ROOM B (MACEDONIA B)
	CHAIR: Lev Khazanovich	CHAIR: Michael Gorski
14:00 - 16:05	Concrete Pavements	Nondestructive Measurement Techniques and Analysis Tools-Part 2
14:00 – 14:25	Session A 6.1 <i>Prediction of Early-Age Strength Development of Ultra Fast-Track Concrete for Pavement Rehabilitation.</i> B. Anckaert, L. Vandewalle, A. Beeldens and L. Rens	Session B 6.1 <i>Use of Stiffness in Pavement Foundation Design as Measured with Light Drop-Weight Testing.</i> M. Livneh
14:25 – 14:50	Session A 6.2 <i>Sensitivity Analysis of the MEPDG to the Coefficient of Thermal Expansion Test Variability.</i> J. Tanesi, R. Meininger, M. Nicolaescu, E. Kutay, A. Abbas	Session B 6.2 <i>GPR Investigations on Degraded Road Pavements Built on Embankments.</i> S. Colagrande, D. Ranalli, M. Scozzafava and M. Tallini
14:50 – 15:15	Session A 6.3 <i>EAF Slag Aggregate Behavior In Anti-skid Course In Road Construction Industry.</i> I. Liapis	Session B 6.3 <i>Variation in Information Obtained From Interpretation of Ground Penetrating Radar (GPR) Pavement Investigation Data.</i> R. D. Evans, M. W. Frost, M. Stonecliffe-Jones and N. Dixon
15:15 – 15:40	Session A 6.4 <i>A Micromechanical Approach to Computing Linear and Nonlinear Moisture and Temperature Stresses in Concrete Pavements.</i> R.A. Rodden, J.R. Roesler and D.A. Lange	Session B 6.4 <i>Practical Application of GPR in Transport Infrastructure Survey.</i> S. Fontul, M.L. Antunes, E. Fortunato and M. Oliveira
15:40 – 16:05	Session A 6.5 <i>Simulation of Early-Age JPCP Deformation Under Environmental Loading Using the Finite Element Method.</i> S. Kim, H. Ceylan, K. Gopalakrishnan	Session B 6.5 <i>Interpreting Vehicle-Pavement Interaction Through Wavelets.</i> A.T. Papagiannakis, H.M. Zelelew and B. Muhunthan
17:30	Social: Acropolis / Gala Dinner	

Thursday 21 June 2007 SESSION 6	ROOM C (MYCENAE)
	CHAIR: Christophe Petit
14:00 - 16:05	Pavement Design Aspects and Interface Characteristics
14:00 – 14:25	Session C 6.1 <i>Austroroads Asphalt Overlay Fatigue Life Prediction.</i> G. Jameson
14:25 – 14:50	Session C 6.2 <i>Main Types and Features of Brazilian Pavements Over Bridges and Viaducts.</i> C. E. L. de Paiva and C. F. Peixoto
14:50 – 15:15	Session C 6.3 <i>Describing the Behaviour of Two Asphaltic Surfacing Materials for Orthotropic Steel Deck Bridges.</i> T.O. Medani, M. Huurman, X. Liu, A. Scarpas and A.A.A. Molenaar
15:15 – 15:40	Session C 6.4 <i>Effects of Aircraft Tire Pressures on Flexible Pavements.</i> M. J. Roginski
15:40 – 16:05	Session C 6.5 <i>Laboratory Measurement of Shear Interface Strength Beneath a Thin Asphalt Layer.</i> M.H. Sutanto, A.C. Collop, G. D. Airey and R.C. Elliott
17:30	Social: Acropolis / Gala Dinner

Friday 22 June 2007 SESSION 7	ROOM A (MACEDONIA A)	ROOM B (MACEDONIA B)
	CHAIR: Hidle Soenen	CHAIR: Kamil Kaloush
9:00 - 10:40	Open Graded HMA and Moisture Damage - Part 1	Hot-Mix Asphalt Design
9:00 – 9:25	Session A 7.1 <i>Impact of Lime and Liquid Anti-Strip on Moisture Sensitivity of HMA Mixtures.</i> P.E. Sebaaly, E.Y. Hajj and E. Berger	Session B 7.1 <i>"State of the Art" Volumetric Mix Design Stone Mastic Asphalt (SMA).</i> F.C van de Ven and M.M.J. Jacobs
9:25 – 9:50	Session A 7.2 <i>Determination of Combined Physical-Mechanical Moisture Induced Damage in the Aggregate-Mastic Interface</i> A. Copeland, J. Youtcheff, N. Kringos and A. Scarpas"	Session B 7.2 <i>Influence of Asphalt Mixture Compaction Method and Specimen Size on Internal Structure and Mechanical Properties.</i> M. Iwama, G.D. Airey and A.E. Hunter
9:50 – 10:15	Session A 7.3 <i>Methods to Quantify Interfacial Adhesion and Debonding in Bitumen-Aggregate Systems in Dry and Wet Conditions.</i> A. Bhasin and D.N. Little	Session B 7.3 <i>The Heterogeneity of aAir Void Distribution in HMA Superpave Gyrotory Specimens.</i> S. Thyagarajan, L. Tashman, and K. Nam
10:15 – 10:40	Session A 7.4 <i>Durability Related Investigation into Porous Asphalt.</i> E.T. Hagos, A.A.A. Molenaar, M.F.C. van de Ven and J.L.M. Voskuilen	Session B 7.4 <i>Comparison of Engineering Characteristics of Sixteen Asphalt Mixtures.</i> J.E. Crince and G. Y. Baladi
10:40 – 12:00	Poster Session (Room D) & Coffee Break	
12:00 – 13:00	Lunch break	

Friday 22 June 2007 SESSION 7	ROOM C (MYCENAE)
	CHAIR: Jack Youtcheff
9:00 - 10:40	Chemo-Physical Processes
9:00 – 9:25	Session C 7.1 <i>Surface Chemistry at the Bitumen-Aggregate Interface.</i> M. E. Labib, A. W. Hefer and D. N. Little
9:25 – 9:50	Session C 7.2 <i>Advances Using Surface Chemistry Relations to Quantify Bitumen - Aggregate Stripping.</i> A. W. Hefer, D. N. Little and M.E. Labib
9:50 – 10:15	Session C 7.3 <i>Influence of Material Factors on Surface Free Energy and Performance related Parameters.</i> J. E. Howson, A. Bhasin, E. Masad, D.N. Little, R.L. Lytton and H. Claros
10:15 – 10:40	Session C 7.4 <i>Ageing of Bitumen in Bulk versus the Ageing of Bitumen in an Asphalt Mixture.</i> J. Wu, E. Lepercq and G.D. Airey
10:40 – 12:00	Poster Session (Room D) & Coffee Break
12:00 – 13:00	Lunch break

Friday 22 June 2007 SESSION 8	ROOM A (MACEDONIA A)	ROOM B (MACEDONIA B)
	CHAIR: Sandra Erkens	CHAIR: Reynaldo Roque
13:00 – 14:40	Open Graded HMA and Moisture Damage - Part 2	Field Measurement and In-Situ Characterisation
13:00 – 13:25	Session A 8.1 <i>Assessment of Moisture Transport in Hot Mix Asphalt Using X-ray Computed Tomography.</i> E. Arambula, E. Masad, A.E. Martin, R. A. Ketcham and A. R. Abbas	Session B 8.1 <i>Utilization of Embedded Pavement Instrumentation to Validate Material Characterization in Backcalculation.</i> D. H. Timm
13:25 – 13:50	Session A 8.2 <i>Asphalt Mixture Moisture Damage Assessment combined with Surface Energy Characterization.</i> G.D. Airey, E. Masad, A. Bhasin, S. Caro and D. Little	Session B 8.2 <i>In-Situ Shear Stiffness of Asphalt Concrete Mixtures.</i> W. Bekheet, A.O. Abd El Halim and S. Easa
13:50 – 14:15	Session A 8.3 <i>Determination of Volumetric Parameters of one and two-layer Porous Asphalt with X-ray computerised Tomography.</i> M.F.C. van de Ven, W. Verwaal and J.L.M. Voskuilen	Session B 8.3 <i>Mechanical Behaviour of Hot Mix Recycled Asphalt Concrete in Plant.</i> A. M. C. Baptista and L. G. Picado-Santos
14:15 – 14:40	Session A 8.4 <i>Micro-Structural Characterization of Porous Pavements.</i> C. B. Nielsen, J. Raaberg and D. van Vliet	Session B 8.4 <i>Monitoring Mechanical Response of in Service Pavements Using Retrofitted Fibre Optic Sensors.</i> G. Doré, G. Duplain and P. Pierre
14:40 – 15:00	Coffee Break	

Friday 22 June 2007 SESSION 8	ROOM C (MYCENAE)	ROOM D (PELLA)
	CHAIR: Anastasios Mouratidis	CHAIR: Alex T. Visser
13:00 – 14:40	Environmental Issues Related to Pavements and Case Studies - Part 1	DAWG
13:00 – 13:25	Session C 8.1 <i>Effects of Environment on the Long-Term Performance of Flexible and Rigid Pavements in the LTPP SPS-8 Experiment.</i> S. W. Haider, K. Chatti, N. Buch and A. S. Pulipaka	<i>Chairman's Welcome Staff Report</i>
13:25 – 13:50	Session C 8.2 <i>Mechanical Characterization of Environmentally Friendly Mixtures.</i> F. Canestrari, M. Bocci, G. Ferrotti and E. Pasquini	<i>Moisture content and density of soil layers from time domain reflectometry using micromechanics and systems identification</i> R.L. Lytton
13:50 – 14:15	Session C 8.3 <i>Laboratory Evaluation of Blending RAP with Virgin Aggregates.</i> B. Huang , X. Chen and Q. Dong	<i>Influence of roughness on structural integrity of pavements using the boundary element method</i> L. Picado-Santos
14:15 – 14:40	Session C 8.4 <i>Investigation and Analysis of Hot Mix Asphalt Mixtures at Nevada's Intersections.</i> E.Y. Hajj, P. E. Sebaaly, R.V. Siddharthan and D. Weitzel	<i>LTPP: Understanding the accuracy, repeatability and reproducibility of longitudinal profiling equipment</i> L.J. Wisser
14:40 – 15:00	Coffee Break	

Friday 22 June 2007 SESSION 9	ROOM A (MACEDONIA A)	ROOM B (MACEDONIA B)
	CHAIR: Dallas Little	CHAIR: Terhi Pellinen
15:00 - 16:40	Open Graded HMA and Moisture Damage - Part 3	Permanent Deformation
15:00 – 15:25	Session A 9.1 <i>Modifying HMA Stone Aggregates Prone to Stripping with Lime-based Additives.</i> A. Khoshghalb, M. Elshafey and A. O. Abd El Halim	Session B 9.1 <i>Influence of Progressive Plastic Deformation of the Subgrade on Rutting on Lightly Trafficked Asphalt Pavements.</i> Y. Takeuchi, T. Nishizawa, Y. Hachiya and K. Himeno
15:25 – 15:50	Session A 9.2 <i>Effect of Compaction Method on Bituminous Mixtures Voids Distribution.</i> S. Abo-Qudais and M. Qudah	Session B 9.2 <i>Effects on Rutting and Stiffness by Varying Coarse and Fine Aggregates.</i> M. A. Kamal and M. J. M. Niaz
15:50 – 16:15	Session A 9.3 <i>Asphalt-Moisture Testing Utilizing a Modified Dynamic Shear Rheometer.</i> A. N. Kvasnak and R. C. Williams	Session B 9.3 <i>Assessment of Pavement Rutting Due to Asphalt Flow.</i> A. Mouratidis and A. R. Freitas
16:15 – 16:40	Session A 9.4 <i>Laboratory Evaluation of Road Surface. Macrotecture Durability.</i> M. Ech, S. Morel, S. Yotte, D. Breyse and B. Pouteau	Session B 9.4 <i>A laboratory Investigation of the Effect of Multiple Axle and Truck Configurations on HMA Mixture Rutting.</i> H. K. Salama and K. Chatti
16:40 – 17:00	Coffee Break	
17:00 – 17:30	Closing Session (Room Macedonia A)	
18:20	Social: Sounio / Closing Social	

Friday 22 June 2007 SESSION 9	ROOM C (MYCENAE)	ROOM D (PELLA)
	CHAIR: Emmanuel Chailleux	CHAIR : Alex T. Visser
15:00 - 16:40	Environmental Issues Related to Pavements and Case Studies - Part 2	DAWG
15:00 – 15:25	Session C 9.1 <i>The Utilisation of Pavement Performance Data in the Hungarian Road Management.</i> L. Gáspár	<i>Bitumen stabilised materials: a modeling performance</i> K. Jenkins
15:25 – 15:50	Session C 9.2 <i>Comprehensive Evaluation Approach of Flexible MEPDG for Minnesota Conditions.</i> R.A. Velasquez, M.O. Marasteanu, L. Khazanovich, M. Jensen	<i>Techniques for improving the prediction of pavement life using Falling Weight Deflectometer measurements</i> G. Salt
15:50 – 16:15	Session C 9.3 <i>Investigating Long Life Pavements. A Case Study.</i> M. Gorski, R. Benetti, M. Garozzo and M. Mori	<i>New approaches to designing asphalt overlays for joined concrete pavements</i> T. Scullion
16:15 – 16:40	Session C 9.4 <i>Perpetual Pavements: Applying the Approach to Very Heavy Loads.</i> G. A. Huber, D. H. Timm, Y. Yang and X. Gao	<i>Concluding remarks</i>
16:40 – 17:00	Coffee Break	
17:00 – 17:30	Closing Session (Room Macedonia A)	
18:20	Social: Sounio / Closing Social	

Friday
22 June 2007
10:40-12:00

POSTER SESSIONS / ROOM D (PELLA)

Constitutive Modeling

Numerical Temperature Predication Model and Thermal Properties for Asphalt Pavement.

Lu Jia, Lijun Sun and Likui Huang

Rheological Elements on the Basis of Fractional Derivatives.

M. Oeser, A. Scarpas, C. Kasbergen and T. Pellinen

The Displacement Discontinuity Method for Predicting HMA Fracture Energy in the Bending Beam Test.

B. Birgisson, A. Montepara, E. Romeo, R. Roque and G. Tebaldi

Rheological Study of Bituminous Mastics for the Sealing of Cracks of Flexible and Semi-Rigid Pavements.

M. Agostinacchio and S. Olita

Experimental Laboratory Material Characterisation

Laboratory Fatigue Characterization of Asphalt Mixtures Using the Flexural Bending Beam Fatigue Test.

L. F. Walubita and A. Epps Martin

Characterisation of Repeated Creep Recovery Behaviour of Asphaltic Mixtures.

H.T. Taherkhani, J.R.A. Grenfell, A.C. Collop, G.D. Airey and A. Scarpas

Effect of Aggregate Inhomogeneity on Mechanical Properties of Asphalt Mixtures.

H. Azari

Design and Construction of the Large-Scale Tri-Axial Testing Apparatus.

T. Glatz and K.J. Jenkins

Characterizing Engineering Properties of Asphalt Concrete Using UPV Test.

M. Arabani and P.T. Kheiry

Study on the Steel Slag-Fly Ash-Phosphogypsum Solidified Material

W.G. Shen and M.K. Zhou

Subgrade Testing, Evaluation and Modeling

Required Thickness of the Sub-Base Layer for Flexible Pavements on Highway Embankments Constructed of Poor Materials.

M. Kavvas, P. Fortsakis, G. Prountzopoulos and A. Papakonstantinou

Consolidation of Aggregate Base and Subbase Layers Under Heavy Aircraft Loading at the National Airport Pavement Test Facility.

N. Garg, G. F. Hayhoe

Evaluation and Modelling of Subgrade Stiffness During the Construction Phase of Asphalt Pavements.

J.M.C. Neves, A. Gomes Correia

Finite Element Modeling of Vertical Drainage Systems in Wet Soft Clay.

X. Liu, A. Scarpas and C. Kasbergen

Modeling of Unbound Granular Material Under Cyclic Loading.

B. Dongmo-Engeland and I. Hoff

Mechanical Behaviour of UGM for Portuguese Conditions.

R.C. Luzia and L. Picado-Santos

Time Dependency Behavior of Granular Materials.

E. Parhamifar

Field Measurement and In-Situ Characterisation

Design Optimization of Foamed Asphalt – Czech experience

J. Valentin, P. Mondschein, O. Vacin, V. Neuvirt

In Situ Characterization of Pavement Materials Stabilized with Foamed Asphalt and Cement.

A. Loizos and V. Papavasiliou

Hot-mix Asphalt Design

The Volumetric Mix-Design of Porous Asphalt: an Italian Study of Ndesign Determination.

G. Di Mino and M. Giunta

Towards a Better Understanding of the Three Points Bending Test Performed on Bituminous Binders.

E. Chailleux, L. Gaillet, D. Hamon and V. Mouillet

Influence of Mix Parameters on Fuel Resistance of Porous and Dense-Graded HMAs.

F.G. Praticò, R. Ammendola and A. Moro

Concrete Pavements

An Innovative Rehabilitation Technique for Airport Concrete Pavements.

M. Crispino and E. Toraldo

Finite Element Simulation

Investigation of Semi-Rigid Airport Pavement Bearing Capacity Using Computational Tools.

A. Loizos, G. Charonitis and A. Armeni

Experimental Results and Finite Element Numerical Simulation of a Wheel Tracking Asphalt Mixture Beam Fatigue Test.

M.-C. Liao, S. Wang and G. D. Airey

Open Graded HMA and Moisture Damage

Influence of Air-void and Binder Contents on Moisture Sensitivity of Hot Mix Asphalt in Flexural Beam Fatigue Test.

Q. Lu and J.T. Harvey

Analysis of Moisture Ingress and Retention Processes in Asphalt Mixes with Nonlinear Mixed Effects Models.

Q. Lu and J.T. Harvey

Simulation of Combined Physical-Mechanical Moisture Induced Damage in Asphaltic Mixes

N. Kringos and A. Scarpas

Simulation of Mastic Transport from Open Graded Asphalt Mixes Using a Hybrid Lagrangian-Eulerian Finite Element Approach.

N. Kringos, A. Scarpas and A.P.S. Selvadurai

Pavement Interface Characteristics and Innovative Materials

Describing the Behaviour of a Bitumen-Based Membrane for Orthotropic Steel Deck Bridges.

T.O. Medani, X. Liu, A. Scarpas, M. Huurman and A.A.A. Molenaar

Dynamic Effects of Waste Tire Thread Mesh Reinforcement on the Asphaltic Pavement Characters.

M. Arabani, A.K. Hagh, S.M. Mirabdolazimi and M. Haghgo

A Pavement Response Model for Base-Reinforced Flexible Pavements.

S.W. Perkins and E.V. Cuelho

Structural design of roads with steel reinforcing nettings

P. Timperman and A. Vanelstraete

Chemo-Physical Processes and Environmental Issues Related to Pavements

Effect of Sulfate on Chemically Treated Expansive Clay

Z. Nalbantoglu

Aspects Concerning the Design and Performance of Recycled Bases Courses

D. Stehlik and P. Hyzl

Nondestructive Measurement Techniques and Analysis Tools

Railway Trackbed Assessment Using GPR Technique.

A. Loizos, M. Silvast, S. Dimitrellou

A New Dynamic Method for FWD Inverse Analysis and its Application in CRCP Pavement.

Chun-Ying Wu, Xue-Yan Liu, A. Scarpas, Xiu-Run Ge

Assessment of Asphalt Pavement Remaining Life using Artificial Neural Network Modeling.

A. Loizos, P. Georgiou and C. Plati

Pavement Management and Design

Distress Points, Distress Index and Remaining Service Life and Asset Values.

G. Y. Baladi

Functional Requirements for Integrated Infrastructure Management Systems.

O.M. Salem

Limit-Analysis based Upscaling of Strength Properties of Matrix-Inclusion Materials.

J. Füssl and R. Lackner

Rock Failure Risk Assessment in Highway Maintenance Management.

A. Mouratidis and L. Pantelidis

Accelerated Testing

Forensic Investigation of a Rich Bottom Pavement Under Accelerated Loading.

J. R. Willis and D. H. Timm

Strain Responses and Fatigue Performances from the FHWA ALF Modified Binder Pavements.

X. Qi, N. Gibson and J. Youtcheff

Surface Characterization and Tire-Surface Interaction

Development of a General 3D Contact Algorithm to Model Tire-Pavement Interaction.

C. Kasbergen, A. Scarpas

Development of Pavement Roughness Index Using Power Spectral Density Analysis.

A. Loizos, C. Plati, E. Teroviti and G. Kanellaidis.

