BESTInfra 2017 Conference Program: Summary

Day	Time	Atrium	Hall	Room A	Room B	Room C	Villa
Day 0 Wed, 20th Sep	17:00 – 19:00	Registration					
	18:00 – 19:00	Welcome Drink					
Day 1 Thu, 21st Sep	08:00 – 15:00	Registration					
	09:00 – 09:15		Conference Opening				
	09:15 – 10:30		Keynotes				
	10:30 – 11:00	Coffee Break					
	11:00 – 12:30			Management of Transport Infrastructure	Railways 1	Tunnels 1	
	12:30 – 13:30	Lunch					
	13:30 – 15:00			Roads 1	Railways 2	Tunnels 2	
	15:00 – 15:30	Coffee Break					
	15:30 – 17:00			Roads 2	Bridges 1	Tunnels 3	
	19:00 – 23:00						Conference Dinner
Day 2 Fri, 22nd Sep	08:00 – 12:00	Registration					
	09:15 – 10:30		Keynotes				
	10:30 – 11:00	Coffee Break					
	11:00 – 12:30			Roads 3	Bridges 2	Safety of Transport Infrastructure	
	12:30 – 13:30	Lunch					
	13:30 – 15:00			Secondary and Recycled Materials	Bridges 3	Diagnostics of Transport Infrastructure	
	15:00 – 15:15		Closing Remarks				

BESTInfra 2017 Conference Program: Detailed

Day 0: Wednesday, 20th September 2017

17:00 – 19:00 Registration Atrium

18:00 – 19:00 Welcome Drink Atrium

Day 1: Thursday, 21st September 2017

08:00 – 15:00 Registration Atrium

09:00 – 09:15 Conference Opening Hall
Alena Kohoutková

09:15 – 10:30 Keynotes Hall
Durability of recycled and lower temperature asphalts
Cliff Nicholls

Future Technologies to Improve Railway Infrastructure Performance: Applications to High Speed Rail, Main Line Railways and Metros
Edward Stewart

10:30 – 11:00 Coffee Break Atrium

11:00 – 12:30 Sessions

Room A Management of Transport Infrastructure (MAN)
Chairmen: Zdeněk Bittnar & Cliff Nicholls

MAN_1 Improving linear transport infrastructure efficiency by automated learning and optimised predictive maintenance techniques (INFRALERT)
Noemi Jiménez–Redondo, Alvaro Calle–Cordón, Ute Kandler, Axel Simroth, Francisco J Morales, Antonio Reyes, Johan Odelius, Aditya Thaduri, Joao Morgado and Emmanuele Duarte

MAN_2 Integration of RAMS in LCC analysis for linear transport infrastructures. A case study for railways.
Álvaro Calle–Cordón, Noemi Jiménez–Redondo, F J Morales–Gámiz, F A García–Villena, Amir H S Garmabaki and Johan Odelius

MAN_3 Historical maintenance relevant information road–map for a self-learning maintenance prediction procedural approach
Francisco J Morales, Antonio Reyes, Noelia Cáceres, Luis M Romero, Francisco G Benitez, Joao Morgado, Emanuel Duarte and Teresa Martins

MAN_4 Utilization of building information modeling in infrastructure's design and construction
Josef Žák and Helen Macadam

MAN_5 Sustainability of transport structures – some aspects of the nonlinear reliability assessment
Radomír Pukl, Tereza Sajdlová, Alfred Strauss, David Lehký and Drahomír Novák

Room B Railways 1 (RA1)

Chairmen: Otto Plášek & Edward Stewart

RA1_1 Tendencies in the development of operational quality of ballasted and ballastless track superstructure and transition areas
Libor Ižvolt, Janka Šestáková and Michal Šmalo

RA1_2 Application of geocomposite placed beneath ballast bed to improve ballast quality and track stability
Leoš Horníček, Petr Břešťovský and Petr Jasanský

RA1_3 Determination of the elastic modulus of fly ash-based stabilizer applied in the trackbed
Vít Lojda, Martin Lidmila and Marek Pýcha

RA1_4 Impact capacity reduction in railway prestressed concrete sleepers with vertical holes
Chayut Ngamkhanong, Dan Li and Sakdirat Kaewunruen

RA1_5 Influence of vertical holes on creep and shrinkage of railway prestressed concrete sleepers
Dan Li, Chayut Ngamkhanong and Sakdirat Kaewunruen

Room C Tunnels 1 (TU1)

Chairmen: Jan Pruška & Jiří Šejnoha

TU1_1 Measures for the reduction of sinter formations in tunnels
Gerhard Harer

TU1_2 Geotechnical risk and earth structures
Ivan Vaníček, Daniel Jirásko and Martin Vaníček

TU1_3 Thermal load of the final lining of traffic tunnels
Lukáš Ďuriš, Josef Aldorf and Jiří Geryk

TU1_4 Assessment of tunnel´s face support pressure
Eva Hrubešová and Lukáš Ďuriš

TU1_5 Ovčiarsko tunnel – interpretation of the results of the geotechnical monitoring
Jakub Ondráček

12:30 – 13:30 Lunch Atrium

13:30 – 15:00 Sessions

Room A Roads 1 (RO1)

Chairmen: Jan Valentin & Glynn Holleran

RO1_1 Towards improved correlations between bitumen properties and rutting resistance of bituminous mixtures – FunDBitS literature review
Fátima A Batista, Bernhard Hofko, Joëlle De Visscher, Tine Tanghe and Margarida Sá da Costa

RO1_2 Field investigation of low-temperature cracking and stiffness moduli on selected roads with conventional and high modulus asphalt concrete
Józef Judycki, Mariusz Jaczewski, Dawid Ryś, Marek Pszczoła, Piotr Jaskuła and Adam Glinicki

RO1_3 Effect of wax crystallization on complex modulus of modified bitumen after varied temperature conditioning rates
Diana Simnofske and Konrad Mollenhauer

RO1_4 Performance properties of asphalt mixes for rich bottom layers (RBL)
Petr Bureš, Jiří Fiedler, Jiří Kašpar, Michal Sýkora and Petr Hýzl

RO1_5 Effect of interlayer bonding quality of asphalt layers on pavement performance
Piotr Jaskula and Dawid Rys

Room B Railways 2 (RA2)
Chairmen: Leoš Horníček & Chayut Ngamkhanong

RA2_1 Discrete simulation of railway ballast shear test: spherical and polyhedral grain shapes
Radek Dubina and Jan Eliáš

RA2_2 Design of high-speed turnouts and crossings
Lukáš Raif, Bohuslav Puda, Jiří Havlík and Marek Smolka

RA2_3 Under sleeper pads in switches & crossings
Otto Plášek and Miroslava Hruzíková

RA2_4 Vibro-acoustic performance of newly designed tram track structures
Ivo Haladin, Stjepan Lakušić and Maja Ahac

RA2_5 Proposal of an intelligent wayside monitoring system for detection of critical ice accumulations on railway vehicles
Frank Michelberger, Adrian Wagner, Michael Ostermann and Thomas Maly

Room C Tunnels 2 (TU2)
Chairmen: Eva Hrubešová & Gerhard Harer

TU2_1 Hierarchical stochastic model of terrain subsidence during tunnel excavation
Tomáš Janda, Jiří Šejnoha and Michal Šejnoha

TU2_2 Supervision of tunnelling constructions and software used for their evaluation
Aristotelis Caravanas and Matouš Hilar

TU2_3 Calibration of an advanced material model for a shotcrete lining
Juraj Chalmovský, Martin Závacký and Lumír Miča

TU2_4 Probabilistic approach to damage of tunnel lining due to fire
Jiří Šejnoha, Jan Sýkora, Eva Novotná and Michal Šejnoha

TU2_5 Application of fire and evacuation models in evaluation of fire safety in railway tunnels
Kamila Cábová, Tomáš Apeltauer, Petra Okřinová and František Wald

15:00 – 15:30 Coffee Break Atrium

15:30 – 17:00 Sessions

Room A Roads 2 (RO2)

Chairmen: Jan Valentin & Wim Van den bergh

RO2_1 The influence of mixture composition, adhesion promotor and compaction degree on the groove stability of grooved Marshall asphalt
Cedric Vuye, Karolien Couscheir, Leen Lauriks, Wim Van den bergh and Philippe Van Bouwel

RO2_2 The influence of nanoclay on the durability properties of asphalt mixtures for top and base layers
Johan Blom, Bram De Kinder, Jannes Meeusen and Wim Van den bergh

RO2_3 Evaluation of elevated temperature properties of asphalt cement modified with aluminum oxide and calcium carbonate nanoparticles
Shaban Ismael Albrka Ali, Amiruddin Ismail, Ramez A AlMansob and Dhawo Ibrahim Alhmali

RO2_4 Bitumen performance and chemistry in solvent refined bitumen blends
Glynn Holleran, Irina Holleran and Douglas J Wilson

RO2_5 Optimizing the durability of the coarse fraction of porous asphalt RAP for effective recycling
Irina Holleran, Douglas J Wilson, Philippa Black, Glynn Holleran and Lubinda F Walubita

Room B Bridges 1 (BR1)

Chairmen: Pavel Ryjáček & Alena Kohoutková

BR1_1 Thermo-mechanical simulations of early–age concrete cracking with durability predictions
Petr Havlásek, Vít Šmilauer, Karolina Hájková and Luis Baquerizo

BR1_2 Improving resistance of high strength concrete (HSC) bridge beams to frost and defrosting salt attack by application of hydrophobic agent
Jiří Kolísko, Lukáš Balík, Michaela Kostelecká and Petr Pokorný

BR1_3 Experiments on fibre orientation in UHPC
Jan L. Vítek, David Čítek and Robert Coufal

BR1_4 Lightweight HPC beam OMEGA
Michal Sýkora, Petr Jedlinský and Jan Komanec; Václav Kvasnička

BR1_5 Tresfjord Bridge – a human friendly and traffic efficient structure
Kristian B Dahl, Aja Anta Magerøy Tønnessen and Lars I Toverud

Room C Tunnels 3 (TU3)

Chairman: Jan Pruška & Karel Vojtasík

TU3_1 Site investigation as tool for elimination of natural hazard impact on construction project
Pavel Pospíšil and Alexandr Rozsypal

TU3_2 Practical example of the infrastructure protection against rock fall
Daniel Jirásko and Ivan Vaníček

TU3_3 Static design of steel-concrete lining for traffic tunnels
Karel Vojtasík, Marek Mohyla and Eva Hrubešová

19:00 – 23:00 Conference Dinner Villa Richter

Conference dinner will be served on Thursday, September 21 at 7pm at Richters Villa (Stare zamecke schody 251/6, Prague 1) with a great view of Prague. Price of the dinner is 60 EUR if paid in advance, 100 EUR if paid during registration on site. If you pre-registered for the dinner you will find an invitation in your registration kit. Villa Richter can be easily reached by tram number 18 or 20 if you drive three stops to Malostranske namesti.

Day 2: Friday, 22nd September 2017

08:00 – 15:00 Registration Atrium

09:15 – 10:30 Keynotes Hall

Standardization of quality control plans for highway bridges in Europe: COST Action TU 1406
Joan R Casas and Jose Campos e Matos

Typical technical status, technology improvements, requirements and needs of roads in developing countries shown on a case study
Rafiq Kakar

10:30 – 11:00 Coffee Break Atrium

11:00 – 12:30 Sessions

Room A Roads 3 (RO3)
Chairmen: Jan Valentin & Rafiq Kakar

RO3_1 Test of cold asphalt storability based on alternative approaches
Zora Abaffyová and Jozef Komačka

RO3_2 Analysis of the binder yield energy test as an indicator of fatigue behaviour of asphalt mixes
Johan O'Connell, Georges A J Mturi, Julius Komba and Louw Du Plessis

RO3_3 Analyzing the stripping potential of warm mix asphalt using imaging technique
Muhammad Rafiq Kakar, Meor Othman Hamzah and Jan Valentin

RO3_4 The use of a non-nuclear density gauge for monitoring the compaction process of asphalt pavement
Wim Van den bergh, Cedric Vuye, Patricia Kara, Karolien Couscheir, Johan Blom and Philippe Van Bouwel

RO3_5 Evaluation of permanent deformation and durability of epoxidized natural rubber modified asphalt mix
Ramez A Al–Mansob, Amiruddin Ismail, Riza Atiq O K Rahmat, Muhamad Nazri Borhan, Jamal M A Alsharef, Shaban Ismael Albrka and Mohamed Rehan Karim

Room B Bridges 2 (BR2)
Chairmen: Pavel Ryjáček & Joan Casas

BR2_1 Strengthening of bridges by post-tensioning using monostrands in substituted cable ducts
Ladislav Klusáček and Adam Svoboda

BR2_2 Effective way to reconstruct arch bridges using concrete walls and transverse strands
Ladislav Klusáček, Robin Pěkník and Radim Nečas

BR2_3 Special heavy plates and steel solutions for bridge building
Tobias Lehnert

BR2_4 Dynamic response of footbridges with tuned mass dampers
Jiří Máca

BR2_5 Reserves in load capacity assessment of existing bridges
Jan Žitný and Pavel Ryjáček

Room C Safety of Transport Infrastructure (SAF)

Chairmen: Josef Stryk & Onur Pekcan

SAF_1 Innovative neuro-fuzzy system of smart transport infrastructure for road traffic safety
Anna Beinarovica, Mikhail Gorobetz and Anatoly Levchenkov

SAF_2 Joint road safety operations in tunnels and open roads
Adewole Adesiyun, Antonio Avenoso, Kallistratos Dionelis, Liljana Cela, Christophe Nicodème, Thierry Goger and Carlo Polidori

SAF_3 New research opportunities for roadside safety barriers improvement
Giuseppe Cantisani, Paola Di Mascio and Carlo Polidori

SAF_4 Simulation of crash tests for high impact levels of a new bridge safety barrier
Jiří Drozda and Tomáš Rotter

SAF_5 Increasing of visibility on the pedestrian crossing by the additional lighting systems
Richard Baleja, Petr Bos, Tomáš Novák, Karel Sokanský and Tomáš Hanusek

12:30 – 13:30 Lunch Atrium

13:30 – 15:00 Sessions

Room A Use of Secondary and Recycled Materials (REC)

Chairmen: Roman Ličbinský & Fátima Batista

REC_1 Recommendations and strategies for using reclaimed asphalt pavement in the Flemish Region based on a first life cycle assessment research
Wim Van den bergh, Patricia Kara, Joke Anthonissen, Alexandros Margaritis, Geert Jacobs and Karolien Couscheir

REC_2 Polish experience with cold in-place recycling
Bohdan Dołżycki

REC_3 Utilisation of metallurgical by-products in road construction in the Czech Republic
František Kresta

REC_4 Potential use of fly ash to soil treatment in the Morava region
Lucia Bulíková, František Kresta and Martin Rochovanský

REC_5 Utilization of the waste from the marble industry for application in transport infrastructure: mechanical properties of cement pastes
Zdeněk Prošek, Jan Trejbal, Jaroslav Topič, Tomáš Plachý and Pavel Tesárek

Room B **Bridges 3 (BR3)**

Chairmen: Jan Vítek & Roberto Gomez

BR3_1 Instrumentation and monitoring of segmental post-tensioned girders
Roberto Gomez, J Alberto Escobar and Hector Guerrero

BR3_2 Steel bridge in interaction with modern slab track fastening systems under various vertical load levels
Vojtěch Stančík, Pavel Ryjáček and Miroslav Vokáč

BR3_3 SHS and RHS stainless steel slender members loaded by compression and bending interaction
Břetislav Židlický and Michal Jandera

BR3_4 Behaviour of several fatigue prone bridge details
Petr Kubiš and Pavel Ryjáček

Room C **Diagnostics of Transport Infrastructure (DIA)**

Chairmen: Josef Stryk & Carlo Polidori

DIA_1 Structural health monitoring system for bridges based on skin-like sensor
Konstantinos Loupos, Yannis Damigos, Angelos Amditis, Reimund Gerhard, Dmitry Rychkov, Werner Wirges, Manuel Schulze, Sotiris–Angelos Lenas, Christos Chatziandreoglou, Christina M. Malliou, Vassilis Tsaoussidis, Ken Brady and Bernd Frankenstein

DIA_2 Crack identification for rigid pavements using unmanned aerial vehicles
Ahmet Bahaddin Ersoz, Onur Pekcan and Turker Teke

DIA_3 Using traffic speed deflectometer to measure deflections and evaluate bearing capacity of asphalt road pavements at network level
Ilja Březina, Josef Stryk and Jiří Grošek

DIA_4 Pavement noise measurements in Poland
Ewa Zofka, Adam Zofka and Tomasz Mechowski

DIA_5 Application of infrared camera to bituminous concrete pavements: measuring vehicle
Michal Janků and Josef Stryk

15:00 – 15:15 Closing Remarks **Hall**

Alena Kohoutková

Poster Session Atrium

Roads

P001 Influence of selected test parameters on measured values during the MSCR test
Lucie Benešová and Jan Valentin

P002 Viscoelastic behaviour of cold recycled asphalt mixes
Zuzana Čížková and Jan Suda; Jan Valentin

P003 Comparison of influence of ageing on low-temperature characteristics of asphalt mixtures
Pavla Vacková, Jan Valentin and Lucie Benešová

P004 Effect of new type of synthetic waxes on reduced production and compaction temperature of asphalt mixture with reclaimed asphalt
Tereza Valentová, Lucie Benešová, Jan Mastný and Jan Valentin

P005 Practical experiences with new types of highly modified asphalt binders
Petr Špaček, Zdeněk Hegr and Jan Beneš

P006 Asphalt mixtures with a high amount of RAP – case study
Tomas Koudelka and Michal Varaus

P007 Epoxy asphalt concrete is a perspective material for the construction of roads
Valerii Vyrozhemskyi, Ivan Kopynets, Sergii Kischynskyi and Nataliia Bidnenko

P008 High temperature impact on fatigue life of asphalt mixture in Slovakia
Ján Mandula and Tomáš Olexa; Jakub Bokomlaško

P009 Asphalt mix reinforced with vegetable fibers
Peter Gallo

P010 Microtexture diagnostics of asphalt pavement surfaces
Zuzana Florková and Ľubomír Pepucha

P011 The road surface as a source of particulate matter
Daša Fullová, Dušan Jandačka, Daniela Ďurčanská, Adriana Eštoková and Jitka Hegrová

P012 Contamination of environment in the road surroudings –
impact of road salting on Norway spruce *(Picea abies)* and Scots pine *(Pinus sylvestris)*
Jitka Hegrová, Oliver Steiner, Walter Goessler, Stefan Tanda and Petr Anděl

P013 Alternative modifications of bituminous binders for mastic asphalt mixtures
Jakub Šedina, Jan Valentin and Lucie Benešová

P014 Analysis of laboratory compaction methods of roller compacted concrete
Tomáš Trtík, Roman Chylík, Petr Bílý and Josef Fládr

P015 Precast concrete pavement – systems and performance review
Josef Novák, Alena Kohoutková, Vladimír Křístek and Jan Vodička

P016 Durable high strength cement concrete topping for asphalt roads
Valerii Vyrozhemskyi, Kateryna Krayushkina and Nataliia Bidnenko

P017 Importance of dowels in transversal joints in concrete pavements
Jiří Grošek, Vladimír Chupík, Josef Stryk and Ilja Březina

P018 Assessment of the transport routes of oversized and excessive loads in relation to the passage through roundabout
Jan Petrů, Jiří Doležel and Vladislav Křivda

P019 Capacity analysis of a bypass of roundabouts
Ivan Sedlačik and Petr Slabý

P020 Influence of roundabout capacity enhancement on emission production
Andrea Kocianová, Marek Drliciak and Eva Pitlová

P021 Road structural elements temperature trends diagnostics using sensory system of own design
Juraj Dudak, Gabriel Gaspar, Stefan Sedivy, Lubomir Pepucha and Zuzana Florkova

P022 Swelling soils in the road structures
Jan Pruška and Miroslav Šedivý

Railways

P023 Assessment of rail long-pitch corrugation
Jan Valehrach, Petr Guziur, Tomáš Říha and Otto Plášek

P024 Seismic impact of the railway on the geotechnical constructions
Martin Stolárik and Miroslav Pinka

P025 Acoustic energy propagation around railways
Petra Čížková

Bridges

P026 FEM simulation of static loading test of the Omega beam
Petr Bílý, Alena Kohoutková and Petr Jedlinský

P027 Analysis of the connection of the timber-fiber concrete composite structure
Milan Holý, Lukáš Vráblík and Vojtěch Petřík

P028 Fracture properties of concrete specimens made from alkali activated binders
Hana Šimonová, Barbara Kucharczyková, Libor Topolář, Vlastimil Bílek, Jr. and Zbyněk Keršner

P029 Push-out tests and evaluation of FRP perfobond rib shear connectors performance
Ludvík Kolpaský and Pavel Ryjáček

P030 Assessment of the transportation route of oversize and excessive loads in relation to the load-bearing capacity of existing bridges
Jiří Doležel, Drahomír Novák and Jan Petrů

Tunnels

P031 Design, construction and conditions of the application of unreinforced concrete final lining in conventionally driven tunnels
Jan Faltýnek, Jiří Hořejší, Libor Mařík and Pavel Růžička

P032 The ultimate limit state of the underground circular tunnel segment lining
Václav Ráček and Jaromír Zlámal

P033 New drainage tunnel of the tunnel Višňové – design and excavation
Igor Jurík, Ladislav Grega, Jozef Valko and Peter Janega

P034 Spray-applied waterproofing membranes: effective solution for safe and durable tunnel linings?
Barbora Píšová and Matouš Hilar

Use of Secondary and Recycled Materials

P035 Mechanical properties and durability of crumb rubber concrete
Roman Chylík, Tomáš Trtík, Josef Fládr and Petr Bílý

P036 Influence of increasing amount of recycled concrete powder on mechanical properties of cement paste
Jaroslav Topič, Zdeněk Prošek and Tomáš Plachý

Management of Transport Infrastructure

P037 Utilization of BIM for automation of quantity takeoffs and cost estimation in transport infrastructure construction projects in the Czech Republic
Stanislav Vitásek and Petr Matějka

P038 User costs as one of main advantages of precast concrete application in highway construction
Radan Tomek

P039 Risk variables in evaluation of transport projects
Petr Vařbuchta, Hana Kovářová, Vít Hromádka and Eva Vítková

P040 Research of cost aspects of cement pavements construction
Artem Bezuglyi, Sergii Illiash and Oleksandr Tymoshchuk