May 24 – 27, 2021

List of Accepted Papers – Organized by Theme

Theme 1 - Mechanistic-empirical design (road, railways, airfields and harbor facilities)

No. (45): **A Conceptual System Dynamics Framework to Evaluate Performance of Pavement Foundations under Moisture Variations**

By: Sayedmasoud Mousavi, Majid Ghayoomi, Eshan Dave

No. (68): **Dynamic response of a beam on a layered half-space with a poroelastic interlayer subjected to moving loads**

By: Yicheng Li, XiaoLei Zhang, Shijin Feng

No. (70): **Modification of Japanese pavement fatigue life criteria by considering climate effect in cold regions**

By: Tianshu Lin, Tatsuya Ishikawa, Tetsuya Tokoro, Kimio Maruyama, Chigusa Ueno

No. (86): **Influence of vehicle braking on pavement shakedown limits**

By: Yuchen Dai, Jiangu Qian, Feifei Lei

No. (113): **Physical modeling of stress propagation in railway pavement with LWD**

By: Artur Rosa, Maria Esther Soares Marques, Antonio Guimarães, Gleyciane Serra, Marcelino Aurelio Silva

No. (142): **Verification of the structural design parameters for unbound layers of Finnish road structures**

By: Antti Kalliainen, Pauli Kolisoja

No. (163): **FreeHyTE: a hybrid-Trefftz finite element platform for poroelastodynamic problems**

By: Natalia Climent Pera, Ionut Moldovan, Antonio Gomes Correia

No. (179): **Reliability Analysis of Flexible Pavement Design for Stochastic Parameters**

By: Vandana Tare, Piyush Paliwal, ABHISHEK MITTAL

No. (184): **A Mechanistic-Based Analysis Procedure for Designing Geosynthetic Reinforcement in Pavement Systems**

By: Peter Becker

No. (235): **A Generalised Hyper-Viscoplasticity Framework for Developing Rate-dependent Plasticity Models**

By: Ye Aung, Hadi Khabbaz, Behzad Fatahi

No. (251): **Geotechnical characterization of a low volume traffic road**

By: Marina Cabette, Antonio Paula, Manuel Minhoto, Ewerton Fonseca

No. (277): **Development of Prediction Models for Mechanistic Parameters of Granular Roads Using Combined Non-Destructive Tests**

By: Sajjad Satvati, Bora Cetin, Jeramy Ashlock

No. (291): **Influence of Foundation Layer Properties in a Concrete Pavement System Subjected to Heavy Vehicle Loads**

By: Nancy Aguirre, Abbasali Taghavi Ghalesari, Richard Rogers, Cesar Carrasco, Soheil Nazarian

No. (318): **R-Value and Resilient Modulus Prediction Models Based on Soil Index Properties for Colorado Soils**

By: Cara Fragomeni, Ahmadreza Hedayat

No. (319): **Performance Evaluation of Flexible Pavements with Asphalt-treated Base Courses**

By: Jun Liu, Jenny Liu, Peng Li, Stephan Saboundjian

No. (321): **Investigation of Instantaneous Shear Failure in Pavement Subgrade Subjected to Superheavy Load Vehicle**

By: Hadi Nabizadeh, Mohamed Nimeri, Elie Hajj, Raj Siddharthan, Sherif Elfass

No. (327): **Evaluation of Flexible Pavement Performance Models in Mississippi: A Neural Network Approach**

By: Patrick Duckworth, Hakan Yasarer, Yacoub Najjar

No. (339): **Performance Evaluation of Jointed Concrete Pavements on Mississippi Highways via Artificial Neural Network**

By: William Andrews, Hakan Yasarer, Yacoub Najjar

No. (442): **Field Monitoring of Flexible and Rigid Pavement Responses in Thailand**

By: Auckpath Sawangsuriya, Apiniti Jotisankasa, Suphawut Malaikrisanachalee

No. (460): **Class Discriminatory Information for Unbound Granular Layers using Statistical Pattern Recognition Techniques**

By: Reza S. Ashtiani

No. (506): **Deformation and failure parameters of cement-modified loess: application to the calculation of the safety factor of a road structure**

By: Thomas Lenoir, Thierry Dubreucq, Thibaut Lambert, Denis Killinger

No. (522): **Physical modelling of the washboard effect on unpaved roads**

By: Bernardo Caicedo, Gregoire Aguettant

No. (532): **Finite Element Analysis of Nonlinear Elastic Behavior of Unbound Aggregate Materials under Repeated Loading**

By: Haohang Huang, Jiayi Luo, Issam Qamhia, Erol Tutumluer, Jeb S. Tingle, and Carlos R. Gonzalez

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Theme 2 - Optimized geomaterial (including hydraulically bound materials and asphalt mixtures) use, reuse and recycling in road embankments and structural layers

No. (23): **Feasibility of using selected and mixed recycled aggregates from Construction and Demolition Waste in unbound pavement layers**

By: Castorina S. Vieira, Paulo Pereira, Maria de Lurdes Lopes

No. (43): **Study of Deformation and Failure States of Reinforced Mesh Cushion in the Geosynthetics Reinforced and Pile Supported Structure of High-speed Railway**

By: TAIFENG LI, Degou Cai, ZhiBo CHENG, QianLi ZHANG, Yin Gao, Colin Basye, JingYu LIU, XinGang ZHANG

No. (48)**: A feasibility study for using Ferronickel slag (FNS) as a horizontal drainage material in landfills**

By: Bongsuk Cho, Hokyu Kim, Yoonseok Chung

No. (50): **Structural pavement rehabilitation with recycled materials in a circular economy approach**

By: A. C. Freire, E. Correia, J. Neves, I. Martins, A. J. Roque, M. I. M. Pinto, C. Ferreira, A. Martins

No. (79): **Crushed Rock Geopolymer as a Future Road Construction Material: An Evaluation of Compaction and Strength Characteristics**

By: Peerapong Jitsangiam, Teewara Suwan, Korakod Nusit, Prinya Chindaprasirt, Sararat Kwunjai

No. (480): **Field scale trial of fibre-reinforced ballast**

By: Geoff Watson, Edgar Ferro, Louis Le Pen, David Milne, Tristan Rees-White, William Powrie

No. (482): **Mechanical performance of Tire-Derived Aggregate Permeable Pavements under live traffic loads**

By: Ramin Raeesi, Amin Soltani, Russell King, Mahdi Disfani

No. (512): **Alternate Materials for the construction of Landfills and Embankments**

By: Yeluri Meghana, E.C.Nirmala Peter

No. (523): **Prediction of California Bearing Ratio from Consistency and Compaction Characteristics of Fine-grained Soils in Sulaimani City, Iraq**

By: Kamal Ahmad Rashed

No. (525): **Geotechnical Properties of modified railway sidings coal discard**

By: Felix Okonta, Carl Hien Rottcha

No. (535): **Fit-for-Purpose Road Recycling? Triaxial Evaluation of Bitumen Stabilized RAP and Secondary Materials**

By: Jenkins Kim, CE Rudman, NA Mazibuko

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Theme 3 - Sustainability in transportation geotechnics

No. (49): **A Mixture of Waste Materials as a Construction Fill in Transportation Infrastructure**

By: Miriam Tawk, Buddhima Indraratna, Cholachat Rujikiatkamjorn, Ana Heitor

No. (54): **Finite element simulations of Recycled Asphalt Pavement (RAP) materials to be utilized in unbound pavement layers**

By: Andreas Loizos, Brad Cliatt, Christina Plati

No. (124): **Effectiveness of double layer HDPE geocell system to reinforce reclaimed asphalt pavement (RAP)-base layer**

By: Md Ashrafuzzaman Khan, Nripojyoti Biswas, Aritra Banerjee, Surya Sarat Chandra Congress, Anand Puppala

No. (147): **Geotechnical and geoenvironmental characterization of fine-grained construction and demolition recycled materials reinforced with geogrids**

By: Castorina S. Vieira, Paulo Pereira

No. (162): **Strength assessment of quarry dust treated soil –reclaimed asphalt pavement (rap) mixture**

By: Mildred Cakuru, Rajab Tenywa, Samuel Jjuuko, Denis Kalumba

No. (172): **Optimization of Marble Dust based on California Bearing Ratio (CBR) with Expansive soil for its Utilization in Highway Construction**

By: Ankush Kumar Jain, Arvind Kumar Jha, Shivanshi

No. (173): **Reuse of waste HDPE bottle derived geo cells for stabilization of hilly roadway slopes**

By: Punit Bhanwar, Sunil Ahirwar, Trudeep Dave

No. (181): **Polymer reinforced RAP and WMM mix as base course of flexible pavement**

By: Jnanendra Nath Mandal, Dulal Saha

No. (214): **Physico-Chemical and Mechanical Characterization of Ferrochrome Slag Aggregates for Utilization as a Road Material**

By: Narala Gangadhara Reddy, B. Hanumantha Rao

No. (472): **Durability of Stabilized Quarry By-Products in Base and Subbase Applications**

By: Issam I. A. Qamhia, Erol Tutumluer, Hasan Ozer, Heather Shoup, and Andrew Stolba

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Theme 4 - Rail track substructures, including transition zones, and transportation geodynamics

No. (2): **Substructure Sensing in a Rail Bridge**

By: Helsin Wang, Chih-Hsin Hu, Hsin-Chu Tsai, Chung-Yue Wang

No. (6): **Mathematical modeling of the short-term performance of railway track under train induced loading**

By: Piyush Punetha, Sanjay Nimbalkar

No. (12): **A Deep Investigation into the Mechanisms and Factors Producing Mud Pumping**

By: Stephen Wilk, Dingqing Li

No. (15): **A multi-model approach to analyse railway track-ground dynamics and soil nonlinearity**

By: Chonlatis Charoenwong, David Connolly, Kaitai Dong, Pedro Costa, P.J. Soares, Peter Woodward

No. (17): **A digitalized 3D railway ballast database for shape analysis and discrete element simulation**

By: Lianheng Zhao, Shuaihao Zhang, Dongliang Huang, Xiang Wang

No. (21): **Performance of jointed S&C bearers**

By: Ali Shahbaz Khan, Edgar Ferro, Louis Le Pen, William Powrie

No. (24): **Asphalt/ballast trackbeds for improved clearance beneath historical bridges for electrification works**

By: Taufan Abadi, Louis Le Pen

No. (35): **Settlement of ballasted track with large sleeper spacing**

By: Yoshitsugu Momoya, Kazuki Ito, Shuhei Kikkawa

No. (41): **Dynamic response of subgrade in a bridge transition along the Qinshen high-speed rail**

By: Tengfei Wang, Qiang Luo, Liang Zhang, Jun Yao

No. (51): **An alternative approach to track settlement prediction**

By: Giacomo Ognibene, Louis Le Pen, John Harkness, Antonis Zervos, William Powrie

No. (57): **Evaluation of ballast particle degradation under micro-Deval testing using photogrammetry**

By: Andre Paixao, Carlos Afonso, Bruno Delgado, Eduardo Fortunato

No. (58): **Importance of bending stiffness of different track forms**

By: Toshan Rampat, Louis Le Pen, William Powrie, John Harkness

No. (69): **Track Geomechanics for Future Railways: Use of Artificial Inclusions**

By: Buddhima Indraratna, Trung Ngo, Yujie Qi, Cholachat Rujikiatkamjorn

No. (76): **Studying Railway Vibration Projects with a Focus on Environmental Aspects**

By: Agnes Van Uitert, Saeed Hosseinzadeh, Peter Schouten, Otto Heeres

No. (110): **Receptance test performed on a laboratory ballasted track section**

By: Ana Ramos, Alexandre Pinto, Ahmet Esen, Antonio Gomes Correia, Pedro Costa, Rui Calçada, Peter Woodward, Omar Laghrouche

No. (183): **Experimental study on deformation characteristics of subgrade soil under intermittent train load**

By: Rusong Nie, Yafeng Li, Huihao Mei, Junli Dong

No. (198): **Investigation into the mechanical behavior of track-bed materials with different grain size distributions of coarse grains**

By: Shuai Qi, Yujun Cui, Renpeng Chen

No. (200): **Stress-strain analysis of heavy haul rail track with steel slag ballast by laboratory tests and numerical simulations**

By: Bruno Delgado, António Viana da Fonseca, Eduardo Fortunato

No. (203): **Railroad ballast movements pattern recognition by using Smartrocks**

By: Kun Zeng, Hai Huang

No. (236): **Effect of degraded subgrade stiffness on rail geometry and train vibrations in high-speed railways**

By: Hongguang Jiang, Shun Liu, Yinxin Li, Haoran Chi, Jizhe Zhang, Ming Liang, Zhanyong Yao

No. (241): **Can one exclude track and rolling stock stiffness for the assessment of dynamic impact forces due to variations in track profile?**

By: Erdem BALCI, Niyazi Özgür BEZGİN

No. (255): **The influence of local irregularities on the vehicle-track interaction**

By: Aditi Kumawat, Ullrich Martin, Sebastian Bahamon, Sebastian Rapp

No. (265): **Repeatability of Minimum and Maximum Density Testing on Clean and Fouled Ballast**

By: Mariel Jones, Emily Akey, Carlton Ho, Aaron Rubin

No. (266): **Measuring Railroad Ballast Modulus of Elasticity Using Light Weight Deflectometer**

By: Emily Akey, Mariel Jones, Carlton Ho, Aaron Rubin

No. (272): **The effect of elastic pads and mats on the stress-strain state of railway subgrade**

By: Andrei Petriaev, Anastasia Konon, Vladimir Egorov

No. (294): **Ballast Fouling Identification through Statistical Pattern Recognition Techniques on Ballast Particle Movement**

By: Saharnaz Nazari, Hai Huang, Tong Qiu

No. (300): **Study of the track dynamics for optimizing the railway superstructure**

By: Silva Filho JC, Skwarok AM, Witiuk RL

No. (317): **Update and Case Studies of GeotrackTM: A Software for Railway Track and Subgrade Analysis**

By: Yin Gao, Patti Schreiber, Stephen Wilk, Amanda Hanson, Taifeng Li, Dingqing Li

No. (323): **Railway subgrade characterization through repeated loading triaxial testing**

By: Gino Vizcarra, Luiz Muniz da Silva, Thatyane Goncalves, Sanjay Nimbalkar

No. (340): **Investigation into ground vibration responses of high-speed rail slab tracks considering train-track-soil interactions**

By: Ting Li, Qian Su, Sakdirat Kaewunruen

No. (357): **Timber Crosstie-Ballast Average Interfacial Load Magnitudes and Relative Distributions: In-Track Measurements and Finite Element Modeling**

By: Brent Thompson, David Clarke, Jerry G. Rose

No. (358): **Analysis of contact stress at ballast bed-soil subgrade interface under cyclic loading based on coupled DEM-FEM**

By: Junhua Xiao, De Zhang, Xiao Zhang

No. (375): **Mud Pumping in Ballastless Slab Track of High-speed Railway and its Remediation**

By: Zhangbo WAN, Shuhao Li, Xuecheng Bian, Yunmin Chen

No. (382): **Geotechnical and geophysical railway embankment auscultation**

By: Amine DHEMAIED, Robin HERAIBI, Marine DANGEARD, Ludovic BODET

No. (390): **Evaluation on the Performance of Asphalt Concrete for the Railway Substructure**

By: Liangwei Lou, Degou Cai, Jie Zhou, Xianhua CHEN, Yuefeng SHI

No. (392): **Interface Test Study on Asphalt Concrete Full-section Waterproof Sealing Structure of High-speed Railway**

By: Yangsheng Ye, Degou Cai, Hongye YAN, Jianping YAO, Liangwei Lou, Yuefeng SHI, TAIFENG LI, Song LYU

No. (395): **The Settlement Characteristics of Ballast Bed Based on Variable Boundary Ballast Box**

By: Liang Gao, Hao Yin, Yang Xu, Shunwei Shi, Hang Cai, Xiangning Wang

No. (411): **Ballasted tracks maintenance modeling using DEM**

By: Jean-Francois FERELLEC, Eric CHAPTEUIL, Nicolas Docquier, Olivier LANTSOGHT

No. (418): **Settlement laws of bed layers in ballasted tracks as determined in 1:1 scale models performed in CEDEX Track Box**

By: Jose Estaire

No. (444): **Dynamic Behavior Modeling of Full-Scale High-Speed Ballasted Track using Discrete Element Method**

By: Zhongyi Liu, Bin Feng, Wei Li, Erol Tutumluer, Xuecheng Bian, Youssef M.A. Hashash

No. (453): **Steel slag aggregates characteristics evaluation as railway ballast**

By: Guoqing Jing, Peyman Aela, Qiang Zhou, wenli jia

No. (495): **A study on the evolution of ballast particle surface damage**

By: Akash Gupta, Madhusudhan BN Murthy, Antonis Zervos, John Harkness

No. (503): **Speed potential estimation of railway embankments**

By: Anoop Bhardwaj, Satyendra Mittal

No. (505): **Investigation into the critical speed in ballasted and ballastless track**

By: Jing Hu, Ying Wu, Xuecheng Bian, Yunmin Chen

No. (521): **Measuring the contact stiffness at the grain scale of fresh and used granite ballast**

By: Geoff Watson, Jacapo Piazza, Madhusudhan BN Murthy, Louis Le Pen

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Theme 5 - Stabilization and reinforcement of geomaterials and its implications in pavement and rail track design

No. (9): **Prediction of Durability, Resilient Modulus and Resistance Value of Cement Kiln Dust Stabilized Expansive Clay for Flexible Pavement Application Using Artificial Neural Networks**

By: Salahudeen Bunyamin Anigilaje, Jalili Mehdi, Danial R. Eidgahee, Kennedy C. Onyelowe, Mohsen K. Kabiri

No. (67): **Seepage behavior within embankment constructed of mixed soil with steel slag**

By: Katsuyuki Kawai, Kaito Arinishi, Satsuki Kataoka, Koji Nakashima

No. (71): **The water-repellent ability of road pavement material stabilized with synthetic and natural polymers**

By: Korakod Nusit, Peerapong Jitsangiam, Prinya Chindaprasirt

No. (96): **Behavior of polymer-reinforced granular mixtures for railway sub-ballasts**

By: Eivy Alvarez, Xiaobin Chen, Francisco Grajales-Saavedra

No. (106): **Construction and monitoring of the short-term strength development of a cement-s tabilized lateritic pavement layer under tropical climatic conditions**

By: Samuel Ampadu, Thomas Arthur, Priscilla Ackah, Fred Boadu

No. (120): **Experimental study on mass stabilization of soft soil foundation based on MgO-CO2 carbonation technology**

By: Song-Yu Liu, Guang-Hua Cai, Guang-Yin Du, Liang Wang, Jia-Fu Chen, Chuan Qin, Jing Ruan

No. (131): **Analytical solution for plane strain consolidation of soft soil stabilised by stone columns**

By: Sam Doan, Behzad Fatahi, Hadi Khabbaz, Haleh Rasekh

No. (153): **Mineralogical and microstructural characterization of dispersive soil stabilized with industrial by-products**

By: Samaptika Mohanty, Nagendra Roy, Suresh Prasad Singh

No. (215): **Impact of Lime Stabilization on Swelling and Soil Water Retention Behavior of Expansive Subgrade**

By: Asmaa Al-Taie, Mahdi Disfani, Robert Evans, Arul Arulrajah, Ehsan Yaghoubi

No. (227): **Evaluation of Strength and Microstructural Characteristics of Weak Lateritic Soil Stabilized with Calcined Clay and Iron Slag Dust**

By: Adedeji Quadri, Oladapo Abiola, S.O. Odunfa, Jamiu Azeez

No. (239): **Utilization of Red mud in synergy with Fly ash and Gypsum as a Subgrade material in road construction**

By: Sarath Chandra, Sankranthi Krishnaiah

No. (250): **A case study on efficacy of cement treated base/subbase**

By: Ashish Gharpure, Prashant Navalakha, Asita Dalvi

No. (281): **Effect of Calcined Waste on Strength and Durability Properties of Fiber reinforced Subgrade Soil**

By: Amit Kumar, D. K. Soni

No. (289): **Comparative Evaluation of Lime and Biopolymer Amended Expansive Soil**

By: Landlin Guunasekaran, B Sharmila, S Bhuvaneshwari

No. (322): **Evaluation of penetration index of untreated and treated soil using dynamic cone penetrometer**

By: Pavan Kumar

No. (338): **Fundamental study on combination of Paper sludge ash and Cement for dredged clay soil stabilization**

By: Nguyen Binh Phan, Kimotoshi Hayano, Mochizuki Yoshitoshi

No. (342): **Shrinkage Curve of Treated Sulfate-Bearing Soils with GGBS**

By: Hussein Al-Dakheeli, Amir Hossein Javid, Mengting Chen, Rifat Bulut

No. (354): **A Study on Electrokinetic Dewatering of Saturated Soil**

By: Abhishek Sutar, Veerabhadrappa Rotte

No. (367): **Evaluation of mineral formation in sulfate-bearing soil stabilized with slag cement using XRD**

By: Mengting Chen, Hussein Al-Dakheeli, Jim Puckette, Rifat Bulut

No. (376): **CBR characteristics of kaolin-simulated clay type subgrade stabilised with cement, lime, poly-fiber and ionic compounds mix**

By: Chee-Ming Chan, Abdul Rashid Ahmad Nasri, Poi-Cheong Tan, Danny Ng

No. (396): **Influence of moisture content on strength of stabilised drilling slurry**

By: Mingwei Feng, Juan Wang, Shu Liu, Yunfeng Hu

No. (451): **Compaction and CBR Behaviour of Cement Stabilised Sand-Black Cotton Soil Mixtures**

By: Charles Nwaiwu, Benjamin Baba, Obinna Ubani

No. (526): **Improving mechanical properties of two Mexican soils by utilizing calcium oxide**

By: Natalia Perez, Paul Garnica, Francisco Javier Castañeda, Mario Enrique Peña

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Theme 6 - Geosynthetics in transportation applications

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By: Yewei Zheng, Patrick Fox, John McCartney

No. (44): **Evaluation of Swelling Subgrade-Geogrid Layer under Heavy Highway Load**

By: Hadeel Ammar, Hanan Afaj, Ghadah Ghassan

No. (53): **Coupled Analysis on Frost-Heaving Depression Effect of Geosynthetics Drainage Material for Road Pavement**

By: Yasuoka Tomohisa, Tatsuya Ishikawa, Bin Luo, Kimio Maruyama, Chigusa Ueno

No. (101): **Tension behavior of bituminous mixture samples reinforced by fiberglass geogrids in different directions**

By: Reuber Freire, Herve Di Benedetto, Cedric Sauzeat, Simon Pouget, Didier Lesueur

No. (111): **Application of Wicking Geotextile for Pavement Infrastructure on Expansive Soil**

By: Nripojyoti Biswas, Md Ashrafuzzaman Khan, Aritra Banerjee, Anand Puppala, Sayantan Chakraborty

No. (150): **Performance evaluation of reinforced expansive soil subgrade with polypropylene fiber and geogrid**

By: Nitin Tiwari, Neelima Satyam Devarakonda

No. (161): **Effects of geogrid encasement on behavior of stone column-improved soft clay**

By: Meixiang Gu, Jie Cui, Yang Wu, Jie Yuan, Yadong Li

No. (193): **Finite Element Analyses of Geocell Reinforced Tracks over Clayey Subgrade**

By: Lalima Banerjee, Sowmiya Chawla, Sujit Dash

No. (205): **Experimental Investigations on Footings supported on soft clay beds reinforced with strength enhanced Jute Geogrids**

By: Deendayal Rathod, Mohammed Shakeel Abid

No. (221): **The use of Draintube drainage geocomposites under railway infrastructures**

By: Stephan Fourmont, Mathilde Riot

No. (270): **Rapid Pavement Roughness Measurement of Geogrid-Stabilized Roads**

By: Prajwol Tamrakar, Mark H. Wayne, Garrett Fountain, Aaron Schlessinger, Coady Cameron

No. (343): **Behavior of Asphalt Overlays with Geogrids and Geocomposite Interlayer Systems**

By: V. Vinay Kumar, Sireesh Saride, Jorge Zornberg

No. (344): **Study of the strained state of bored foundations for weak soils by strengthening the grillage with geosynthetic materials**

By: Sergey Kudryavtcev, Tatiana Valtceva, Semyon Bugunov, Zhanna Kotenko, Natalya Sokolova

No. (348): **Bearing capacity test with small model soil box on reinforcement of base course using geotextile**

By: Kenichi Sato, Takuro Fujikawa, Chikashi Koga, Takumi Kitamura, Yuichiro Wakabayashi, Junichi Hironaka, and Yusaku Isobe

No. (353): **The use of microporous membranes to address mud pumping - UK experience**

By: Philip Sharpe, Andrew Leech

No. (462): **ASIRI+: French National Research Program on soil Reinforcement with Rigid Inclusions**

By: Laurent Briançon, Luc THOREL, Bruno SIMON

No. (502): **Expanded polystyrene geofoam (EPS) as a train-induced vibration screening material**

By: Mainak Majumder, Sayan Bhattacharyya

No. (516): **Effect of Natural Reinforcement Aperture Shape on Bearing Capacity of Reinforced Soil**

By: Sunil Ahirwar, J. N. Mandal

No. (518): **Correlation of geosynthetic index properties to cyclic plate load test performance in flexible airfield pavements**

By: Jeremy Robinson, Jeb Tingle

No. (528): **Behaviors of geogrid-reinforced railway ballast under train traffic loads**

By: Qiusheng Gu, Xuecheng Bian, Sindy He

No. (530): **Near geogrid stiffness quantification in airport pavement base layers using bender element field sensor**

By: Mingu Kang, Issam I. A. Qamhia, Erol Tutumluer, Murphy Flynn, Navneet Garg, Wilfredo Villafane

No. (540): **Experimental Investigation of the Stabilization Performance of Geogrids for Unpaved Roads with Low Bearing Capacity Subgrade**

By: Süleyman Gökova, Mehmet Saltan, Serdal Terzi, Erol Tutumluer, Volkan Emre Uz, and Mustafa Karaşahin

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Theme 7 - Subsurface sensing for transportation infrastructure

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By: David Milne, Louis Le Pen, Geoff Watson, William Powrie

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By: Robson Costa, Josã Pires, Edson Moura, Rosangela Motta, Guilherme Castro, Liedi Bernucci, Luciano Oliveira

No. (90): **Evaluation method of deformation modulus of subgrade soils considering drainage condition**

By: Hiroaki Wakatsuki, Yukihiro Kohata, Daisuke Tamayama, Toshiyuki Mitachi

No. (125): **Validation of photogrammetry-based method to determine the absolute volume of unsaturated soils**

By: Sara Fayek, Xiaolong Xia, Xiong Zhang

No. (139): **Vibration Prediction of Buildings along Open-cut Frame Structure Railway**

By: Dubei Feng, Jizhong Yang, Feizhi Xiao, Yiting Chen

No. (174): **Development of In-situ Modulus Detector for Transportation Substructure**

By: Yong-Hoon Byun, Dong-Ju Kim

No. (187): **Evaluation of Various Spatial Interpolation Techniques for Generating Synthetic CPT Data Profile**

By: Md. Rahman Habibur, Murad Y. Abu-Farsakh

No. (190): **Disturbance deformation of ground induced by a large-area piling: A field test**

By: Limin WEI, Shuanglong LI, Qun HE, Meng DU, Hong ZHOU

No. (242): **Simulating water balance of road embankment lysimeters**

By: Manuel Melsbach, Emanuel Birle

No. (282): **Electrical Resistivity Changes in Wet and Dry Side of Optimum Moisture Content for Soils with Low to High Fines Content**

By: Hamid Rostami, Abdolreza Osouli

No. (306): **Characterizing the Effect of Fines Content on the Small Strain Shear Modulus of Sand-Silt Mixtures during Hy-draulic Hysteresis**

By: Mohammadreza Jebeli, S. Mohsen Haeri, Ali Khosravi

No. (439): **Features of a large-scale survey of highways with georadar**

By: Alan frid, Vladimir Frid

No. (474): **Bender Element Field Sensors for Base Course Stiffness Measurements in Airport Pavements**

By: Mingu Kang, Issam I. A. Qamhia, Erol Tutumluer, Won-Taek Hong, Jesse D. Doyle, Harold T. Carr, Wayne D. Hodo, Ben C. Cox, Jeb S. Tingle

No. (514): **Monitoring and Modeling of Soil Thermal and Hydraulic Behavior beneath a Granular-Surfaced Roadway**

By: Derya Genc, Jeramy Ashlock, Bora Cetin, Kristen Cetin, Masrur Mahedi, Robert Horton, Halil Ceylan

No. (519): **Risk Evaluation of Unbound Pavement Layers to Extreme Weather Events Using Remote Sensing**

By: Joe Rosalez, Sonya Lopez, Mehran Mazari

No. (531): **Riprap stockpile size and shape analyses using computer vision**

By: Jiayi Luo, Haohang Huang, Issam Qamhia, John M. Hart, Erol Tutumluer

No. (538): **Statistical analysis of the influence of ballast fouling on penetrometer and geoendoscope data**

By: Jorge Rojas Vivanco, Sébastien Barbier, Miguel Angel Benz Navarrete, Pierre Breul

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Theme 8 - Tunnels

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By: Feizhi Xiao, jizhong yang, Yao Shan

No. (66): **Influence of shield slurry property on filter cake quality in sand stratum**

By: Weitao Ye, Longlong Fu, Shunhua Zhou

No. (94): **Dynamic response and long-term settlement of four overlapping tunnels subject to train load**

By: Xiangliang Zhou, Quanmei Gong, Zhiyao Tian, Yao Shan

No. (132): **Properties and Applications of a New Grouting Material**

By: Xiaohua Yang, Kunlong Zheng, Nieyangzi Yang, Lixiao Xu

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By: Zhengheng Xu, Hadi Khabbaz, Behzad Fatahi, Jeffrey Lee, Sangharha Bhandari

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By: Sangharha Bhandari, Behzad Fatahi, Hadi Khabbaz, Jeffrey Lee, Zhengheng Xu, Jinjiang Zhong

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By: Omid Habibzadeh-Bigdarvish, Teng Li, Gang Lei, Aritra Banerjee, Xinbao Yu, Anand Puppala

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By: Guilherme Castro, J. Pires, Rosangela Motta, Robson Costa, Edson Moura, Liedi Bernucci, Luciano Oliveira

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By: Jakob Schallberger, Lalita Oka

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By: Dr. F. Collazos Arias, J.C. Mas Bahillo1, Dr. D. Castro-Fresno, Dr. J. Rodriguez-Hernandez, Dr. E. Blanco-Fernan-dez, Dr. L. Castanon-Jano, Dr. D. Garcia-Sanchez, I. Beltran Hernando

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By: Renpeng Chen, Chunyin Peng, Jianfu Wang, Hanli Wang

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