



## Poster Presentations

### **Mechanistic-empirical design (road, railways, airfields and harbor facilities)**

Dynamic response of a beam on a layered half-space with a poroelastic interlayer subjected to moving loads (Poster # 1)

*Yicheng Li, Xiaolei Zhang, Shijin Feng*

Influence of braking on the pavement shakedown limits (Poster # 2)

*Yuchen Dai, Jiangu Qian, Feifei Lei*

FreeHyTE: a hybrid-Trefftz finite element platform for poroelastodynamic problems (Poster # 3)

*Natalia Climent, Ionut Moldovan, António Gomes Correia*

R-Value and Resilient Modulus Prediction Models Based on Soil Index Properties for Colorado Soils (Poster # 4)

*Cara Fragomeni, Ahmadreza Hedayat*

Investigation of Instantaneous Shear Failure in Pavement Subgrade Subjected to Superheavy Load Vehicle (Poster # 5)

*Hadi Nabizadeh, Mohamed Nimeri, Elie Hajj, Raj Siddharthan, Sherif Elfass*

Performance Evaluation of Jointed Concrete Pavements on Mississippi Highways via Artificial Neural Network (Poster # 6)

*William Andrews, Hakan Yasarer, Yacoub Najjar*

### **Optimized geomaterial use, reuse and recycling in road embankments and structural layers**

Introduction of Stone Matrix Asphalt for National Highways in Japan's Cold, Snowy Regions (Poster # 7)

*Shunsuke Tanaka, Kimio Maruyama, Shuichi Kameyama*

The Analysis of Road Performance, Mechanism and Environmental Benefits of SMC Normal Temperature Modifier (Poster # 8)

*Haoyuan Luo, Yanjun Qiu, Ting Su*

Discrete Element Simulation of the Internal Structure of Asphalt Mixtures with High Contents of Tire Rubber (Poster # 9)

*Xiaodong Zhou, Siyu Chen, Dongzhao Jin, Zhanping You*

Effective Subgrade Remediation by materials improved with blast furnace type B cement (Poster # 10)

*Atsuko Sato, Osamu Hatakeyma, Naoyuki Kuji*

Particle Breakage of a Crushed Sandstone-Mudstone particle Mixture (Poster # 11)

*Zhenfeng Qiu, Shaobo Yang, Junjie Wang, Ting Cao*

Alternate Materials for the construction of Landfills and Embankments (Poster # 12)

*Yeluri Meghana, E. C. Nirmala Peter, Srinivas Allena*

### **Sustainability in transportation geotechnics**

Reuse of waste HDPE bottle derived geocells for stabilization of hilly roadway slopes (Poster # 13)

*Punit Bhanwar, Sunil Ahirwar, Trudeau Dave*

Polymer reinforced RAP and WMM mix as base course of flexible pavement (Poster # 14)

*Jnanendra Nath Mandal, Dulal Chandra Saha*

### **Rail track substructures, including transition zones, and transportation geodynamics**

Performance of jointed S&C bearers (Poster # 15)

*Ali Shahbaz Khan, Edgar Ferro, Louis Le Pen, William Powrie*

Dynamic response of subgrade in a bridge transition along the Qinshen high-speed rail (Poster # 16)

*Tengfei Wang, Qiang Luo, Liang Zhang, Jun Yao*

Experimental study on deformation characteristics of subgrade soil under intermittent train load (Poster # 17)

*Rusong Nie, Yafeng Li, Huihao Mei, Junli Dong*

Effect of degraded subgrade stiffness on rail geometry and train vibrations in high-speed railways (Poster # 18)

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

Interface Test Study on Asphalt Concrete Full Section Waterproof Sealing Structure of Subgrade of High Speed Railway (Poster # 19)

*Yang-sheng Ye, De-gou Cai, Hong-ye YAN, Jian-ping YAO, Liang-wei Lou, Feng Chen, Yue-Feng Shi, Tai-Feng Li, Song Lv*

The Settlement Characteristics of Ballast Bed Based on Variable Boundary Ballast Box (Poster # 20)

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

A study on the evolution of ballast particle surface damage (Poster # 21)

*Akash Gupta, Madhusudhan BN Murthy, Antonis Zervos, John Harkness*

### **Stabilization and reinforcement of geomaterials and its implications in pavement and rail track design**

Comparative Evaluation of Lime and Biopolymer Amended Expansive Soil (Poster # 22)

*Landlin Guunasekaran, B. Sharmila, S. Bhuvaneshwari*

Evaluation of penetration index of untreated and treated soil using dynamic cone penetrometer (Poster # 23)

*PVSN Pavan Kumar*

Shrinkage Curve of Treated Sulfate-Bearing Soils with GGBS (Poster # 24)

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

CBR characteristics of kaolin-simulated clay type subgrade stabilised with cement, lime, poly-fiber and ionic compounds mix (Poster # 25)

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

### **Geosynthetics in transportation applications**

Effects of geogrid encasement on behavior of stone column-improved soft clay (Poster # 26)

*Meixiang Gu, Jie Cui, Yang Wu, Jie Yuan, Yadong Li*

Finite Element Analyses of Geocell Reinforced Tracks over Clayey Subgrade (Poster # 27)

*Lalima Banerjee, Sowmiya Chawla, Sujit Dash*

Bearing capacity test with small model soil box model on reinforcement of base course using geotextile (Poster # 28)

*Kenichi Sato, Takuro Fujikawa, Chikashi Koga, Takumi Kitamura*

Effect of Natural Reinforcement Aperture Shape on Bearing Capacity of Reinforced Soil (Poster # 29)

*Sunil Ahirwar, J. N. Mandal*

### **Subsurface sensing for transportation infrastructure**

Disturbance deformation of ground induced by a large-area piling: A field test (Poster # 30)

*Limin Wei, Shuanglong Li, Qun He, Meng Du, Hong Zhou*

Characterizing the Effect of Fines Content on the Small Strain Shear Modulus of Sand-Silt Mixtures during Hy-draulic Hysteresis (Poster # 31)

*Mohammadreza Jebeli, S. Mohsen Haeri, and Ali Khosravi*

A back-analysis technique for condition assessment of ballasted railway tracks (Poster # 32)

*Shadi Fathi, Moura Mehravar*

### **Tunnels**

Influence of shield slurry property on filter cake quality in sand stratum (Poster # 33)

*Weitao Ye, Longlong Fu, Shunhua Zhou*

Dynamic response and long-term settlement of four overlapping tunnels subject to train load (Poster # 34)

*Xiangliang Zhou, Quanmei Gong, Zhiyao Tian, Yao Shan*

Research on Calculating Quantity of Utility Tunnel with Revit Secondary Development (Poster # 35)

*Qi Zhang, Qian Su, Yan Yan*

The effect of excavation unloading on the deformation of existing underlying shield tunnel (Poster # 36)

*Min-yun Hu, Jing-tian Yang, Li-dong Pan, Kong-shu Peng, and Yu-ke Lu*

### **Climatic effects on geomaterial behavior related to mechanics of unsaturated transportation foundations**

Moisture Influence on the Shakedown Limit of a Tropical Soil (Poster # 36)

Gleyciane Almeida Serra, Antonio Carlos Rodrigues Guimaraes, Maria Esther Soares Marques, Carmen Dias Castro, Artur Cortes da Rosa

Long-term performance of ballastless high-speed railway track under the conditions of ground water level variations (Poster # 37)

*Hongming Liu, Xuecheng Bian, Lili Yan, Yunmin Chen*

Climate Change Impacts on Flexible Pavement Performance (Poster # 38)

*Shahjalal Chowdhury, Mojtaba Sadegh, Debakanta Mishra*

Experimental Study on the Effect on Stress Release Holes to Decrease Frost Heaves of Fine Particle Fillers in the North of China (Poster # 39)

*Tianxiao Tang, Yupeng Shen, Xin Liu, Ruifang Zuo*

### **Slope stability and risk management**

Earth pressure, a load or a resistance: Formulation of the 'What You Design Is What You Get' model for stability design of propped cantilever walls (Poster # 40)

*Chi-Kuen Stanley Yuen*

Maintenance Planning Framework for Rock Slope Management (Poster # 41)

*Roman Denysiuk, Joaquim Tinoco, José Matos, Tiago Miranda, António Gomes Correia*

### **Harbor geotechnics**

A study on suction properties, subgrade modulus and compressibility of marine soil subgrade for flexible pavements (Poster # 42)

*Ram Wanare, Pritam Sinha, Kannan K. R. Iyer*

### **Retaining walls**

Numerical and experimental analysis of internal stability of back to back mechanically stabilized earth walls supporting the rail embankment system (Poster # 43)

*Shilpa S Vadavadagi, Sowmiya Chawla*

### **Deep foundations**

Analysis and Reconstruction of rock joint surface based on DCT algorithm (Poster # 44)

*Lianheng Zhao, Dongliang Huang, Shuaihao Zhang, Xiang Wang, Yingbin Zhang, Shi Zuo*

Influence of Pile Side Grouting Reinforcement on the Compressive Load Bearing Capacity of Existing Piles (Poster # 45)

*Xinran Li, Quanmei Gong, Yao Shan, Xiaofan Nie*

Attenuation characteristics of plane waves by metabarriers with negative parameters (Poster # 46)

*Jiahua Zhou, Xingbo Pu, Zhifei Shi*

Shearing Behavior of Jointed Rocks under Monotonic & Cyclic Loading with Varying Gouge Materials  
(Poster # 47)

*Nirali Hasilkar, Lalit S. Thakur, Nikunj Amin*

Model research on the deformation behavior of geogrid supported by rigid-flexible piles under cyclic loading (Poster # 48)

*Kaifu Liu, Yonghao Cai, Yi Hu, Dazhi Wu, Zhenying Zhang*