TECHNICAL PAPERS accepted by the referees for publication in the proceedings

1. Geotechnics for Pavement, Rail Track and Airfield

1-1 Pavement
Characterization of highly compressible marine clay for road foundation, G.W. Chai, N. Mosavat, E.Y. Oh & Y.C. Loo
Evaluation of the mechanical characteristics of recycled base layers produced by full depth reclamation (FDR), J. Depatie, J.-P. Bilodeau & G. Doré
Effects of lime content and amelioration period in double lime application on the strength of lime treated expansive sub-grade soils, C. Gallage, M. Cochrane & J. Ramanujan
The use of recycled crushed concrete as a road base material, J.N. Greitschus
Analysis of traffic-load-induced permanent settlement of highway embankment on soft clay ground, M. Huang & Z. Yao
Effects of freeze-thawing on mechanical behavior of granular base in cold regions, T. Ishikawa, S. Kawabata, S. Kameyama, R. Abe, & T. Ono
Characterization of hydrated cement treated crushed rock base as a road base material in western Australia using disturbed state concept, P. Khobklang, V. Vimonsatit, P. Jitsangiam & H. Nikraz
Role of resilient modulus constitutive models on response of pavements, M. Mazari, E. Navarro, I. Abdallah & S. Nazarian
A prediction method of plastic deformation development of subbase and subgrade in concrete pavement, T. Nishizawa
Effects of the environment-conscious pavements in Fukuoka University and its verification, K. Sato
Study of suction in unsaturated soils applied to pavement mechanics, B. A. Silva & L. M. G. Motta
Cracking and flexural behaviors on cement treated crushed rock for thin flexible pavement, K. Siripun, P. Jitsangiam, H. Nikraz & C. Leek
Jet grouting deformability modulus prediction using data mining tools, J. Tinoco, A. G. Correia & P. Cortez
Full-scale accelerated loading test for load distribution on subgrade due to CFA stabilized base, K. Tomisawa, T. Endoh, H. Godenki, T. Okabe & T. Kanai
Failure on a roadside dip slope with partial anchorage system, H. Wang & J.-J. Hung

1-2 Rail Track
Establishing linkages between ballast degradation and imaging based aggregate particle shape, texture and angularity indices, H. Boler, M. Wnek & E. Tutumluer
Laboratory tests on a ballasted rail track reinforced by geosynthetics, L. Briançon, C. Cojean, N. Calon, S. Costa d’Aguari & A. Robinet
Evaluation of a linear elastic 3D FEM to simulate rail track response under a high speed train, J. Cunha & A. G. Correia
Improvement of rail track subgrade using stone columns combined with geosynthetics, B. Fatahi, H. Khabbaz & T.M. Le
Railway ballast requirements for high speed and heavy haul lines: Hardness, fouling, life cycle, K. Giannakos, A. Loizos & C. Plati
Seismic damage assessment of an airport runway based on non-linear FEM analysis with special reference to crack occurrence, Y. Hata, K. Ichii & A. Nozu
Influence of moisture content on cyclic plastic deformation characteristics of recycled crusher-run material under moving wheel loads, A. Inam, T. Ishikawa & S. Miura
Development of integrated RC roadbed for slab track on clay subgrade, Y. Momoya, T. Takahashi, O. Maruyama, & E. Sekine
Effect of ground properties and embankment height on the embankment failure behavior during earthquake, M. Ohki, M. Seki, T. Sakai & M. Nakano
Railroad foundations · verifications and analysis of the dynamic stability, M. Raithel & E. Leusink
Design method for railway bases reinforced with geogrid, P. Rimoldi
Study on the settlement characteristics and reinforcement technology of
unsaturated soil ground of high-speed rail way, L. Wu & G. Jiang

1-3 Airfield
Development of high durable grout for airport prestressed concrete pavement, N. Kawamura, R. Maekawa, K. Morohashi, A. Shiji, & K. Kamitani

2. Geomaterial, including Nontraditional Materials
Performance assessment of clay soil stabilized with recycled gypsum based on SEM and XRD, A. Ahmed, M. Kobayashi & K. Ugai
Blended recycled clay masonry and crushed concrete aggregate in bases, A. H., Azam, D. A. Cameron & M. M. Rahman
Evaluation of non-traditional stabilizers with silty-clay desert soil, A. Bayat & O. Farzaneh
Mechanical characteristics of hydrated cement treated crushed rock base for western Australian road base, S. Chummineerat, P. Jitsangiam & H. Nikraz
Study on effect of mixing condition on strength of mixture of dredged soil and steel slag, S. Hirai, T. Mizutani, Y. Kikuchi, S. Nakashima & K. Iguchi
Mechanical characteristics of foamed bitumen mixtures in western Australia, Y. Huan, P. Jitsangiam, H. Nikraz & R. Grant
Recycled concrete aggregate as a base course material in western Australian road, P. Jitsangiam, K. Siripun, H. Nikraz & C. Leek
A method for accelerating the solidification of granulated blast furnace slag, Y. Kikuchi, T. Mizutani, S. Oka & K. Nakashima
Improvement of swelling-collapsible behaviors of silty clay by calcium carbide residue, A. Kumpala, S. Horpibulsuk & J. Suebsuk
Effects of compaction condition on seismic performance of dike embankment and its evaluation, S. Matsumura, S. Miura & S. Yokohama
Experimental study on deformation characteristics of granular materials made from recycled glass bottles under traffic loading, T. Mikami, J. Koseki & T. Sato
Dynamic centrifuge model tests on quay wall backfilled with granular treated soil, Y. Morikawa, H. Takahashi, K. Hayano & Y. Okusa
Characterization of gold mine tailings for utilization in development of the rural infrastructure, F.K. Mutabazi & P.M. Bujulu
Efficiency of thermal vertical drains for the consolidation of soils, S. Salager, L. Laloui & M. Nuth
Mechanical characteristics of composite geomaterial mixed with lightweight granular material, K. Yamanaka & K. Minegishi
Change in mechanical characteristics of embankment material by compaction control and its evaluation, S. Yokohama, S. Miura & S. Matsumura

3. Asphalt Mixtures and Hydraulically-bound Materials
Influences of in situ HMA compaction on its performances, Y. Hachiya, K. Kitaocchi & T. Watanabe
Characterization of emulsion bitumen stabilized aggregate base, M. Moaveni, I. Abuawad, K. Hasiba, D. Zhang & E. Tutumluer
Effects of mineral fillers on rheological properties of asphalt binders, A.D. Mwanza, P. Hao & H. Hui
Behaviour of asphalt mixture under large amplitude cyclic loading, Q. T. Nguyen, H. Di Benedetto & C. Sauzeat
Effect of water on the strength of bituminous mixes with waste concrete aggregates, M.A. Sobhan, S.A. Mofiz, T. Humyra & M.R. Awali
New x-ray CT evaluation method of engineering characteristics of asphalt mixture, S. Taniguchi, I. Nishizaki, K. Ogawa & J. Otani
A study of developing new tests to evaluate compaction property and deformation resistance for slipform paving concrete, S. Yokota, T. Sato, R. Kamishita, K. Nakamura, O. Kamada & Y. Sakamoto

4. Earthworks for Transportation Facilities
A study on the structural assessment of pavement damaged by the Tohoku Earthquake and liquefaction and causes of the damages, N. Abe
A study on increased layer thickness for embankment construction using ordinary compaction machinery, T. Adachi, S. Nishimoto & A. Sato
Influence of the drainage in the reinforced soil wall during seepage
flow, M. Kobayashi, K. Miura & T. Konami
The effect of dry unit weight, suction, and imparted energy on the modulus of a compacted mixture of sand and kaolin, C. Rujikiatkamjorn, A. Heitor & B. Indraratna
Proposal of control criteria for embankment compaction in Hokkaido, A. Sato, S. Nishimoto & T. Suzuki
Numerical study on dynamic interaction between embankment and consecutive culverts, Y. Sawamura, K. Kishida & M. Kimura
Relationship between compaction equipment and compaction results, M. Yamada, S. Nishimoto & A. Sato

5. Application of Geosynthetics
Monitoring and predicting the seismic behaviors of geosynthetic reinforced soil retaining structures, S.J. Chao, A. Cheng, C.Y. Chan & J.R. Chang
Effects of subbase geogrid reinforcement on residual deformation characteristics of asphalt pavement, D. Hirakawa & Y. Miyata
Rural road maintenance using geotextile available in developing countries, M. Kimura & Y. Fukubayashi
Effectiveness of geotextiles in unsurfaced pavements over weak subgrade evaluated from accelerated field testing, D. Mishra & E. Tutumluer
Geosynthetic reinforced earth embankments under traffic induced cyclic loading, K. Rajagopal & N. Unnikrishnan
Effect of geosynthetic drainage layers on the recovery rate of pavement surface modulus, C. Savioie, G. Doré, J.-P. Bilodeau & J. Fachon

6. Laboratory Testing and In-situ Testing
Modification and stabilization of Farmahin city area soil by lime and cement, M. Asgari & T. Miri
Influence of stress rotation in unbound granular material using hollow cylinder testing, H. Barón, D. Gutiérrez & B. Caicedo
Solidification of dredged marine clay under varied mix conditions: A laboratory investigation, C. M. Chan, Y. Kikuchi & T. Mizutani

The influence of moisture on the detection of de-bonding in asphalt pavements using ground penetrating radar (GPR), R.D. Evans & M. Rahman
Improving the use of unbound granular materials in railway sub-ballast layer, E. Fortunato, A. Paixão & S. Fontul
Measurement of the deformation behavior of asphalt mixture by using a high-speed camera, Y. Hisari, S. Yokota & K. Takehara
Development of medium-size triaxial apparatus for unsaturated granular base course materials, T. Ishikawa, Y. Zhang, H. Segawa, S. Miura & T. Tokoro
Characterization of polymer modified asphalt for rutting and cracking potential using dynamic shear rheometer, M.A. Javid & M.W. Mirza
Full scale model tests on slab track constructed on embankment, H. Jiang, X. Bian, Y. Chen & J. Jiang
Shakedown behavior of unbound granular material under repeated portable FWD loading, M. Kamiura
Surface free energy components of aggregates from contact angle measurements using sessile drop method, M. Koc & R. Bulut
Influence of reclaimed materials on base course quality, K. Kubo, M. Itani & S. Horiiuchi
In-situ measurement of damping ratio spectra from the inversion of phase velocities of P and S waves in cross-hole seismic testing, C.G. Lai & A. G. Ozebe
Large-scale triaxial tests of dense gravel material at low confining pressure, S. Lenart, J. Koseki, T. Sato, Y. Miyashita & H.V. Thang
Characteristics of in-situ dynamic stresses of pavement subgrade under portable falling weight deflectometer test, G.L.M. Leung, Y.H.Wang & A.W.G Wong
Accumulation of excess pore water pressure and post-cyclic settlement of saturated soft clay subjected to multi-directional cyclic simple shear, H. Matsuda, T. T. Nhan, R. Ishikura
Determination of air-entry value for different compacted unsaturated soils, T. Nishimura, J. Koseki & H. Rahardjo

Experimental study on responses of saturated clay to traffic loading, J.G. Qian, J.F. Zhang, S.B. Guo & M.S. Huang

Influence of underground structures on cavity formation due to various conditions of water flow, M. Sato & R. Kuwano

Geotechnical behavior of cement treated soils from southern coast line of Caspian Sea, P. Sedighi & A. Esfahni

An innovative approach for continuous measurement of cemented sand stiffness immediately after layer compaction, J. Silva, M. Azenha, & A. G. Correia

A study on the design of highway bridge pile foundations in volcanic ash ground, K. Tomisawa, T. Egawa & S. Miura

The case studies of damage investigation of the 2011 East Japan earthquake disaster using the vehicle for exploring under roads by GPR, Y. Yamashita, A. Matsuyama & H. Murakami

Intact soft clay responses to cyclic principal stress rotation in undrained condition, J. Zhou, J. Yan, Y. Cao & X. Gong

Challenges for transportation geotechnics in extreme climates of Kazakhstan and Korea, A. Zhussupbekov, Z. Shakhmov, E.C. Shin & S. Krasnikov

**7. Modeling and Numerical Simulations**


Numerical modeling of "soil-Mixing" columns used for railway subgrade reinforcement, S. C. D’Aguiar, M. Diagne & N. Calon

Modelling cemented sand using DEM, J.P. de Bono, G.R. McDowell & D. Wantaowski

Modelling of sand behavior in drained cyclic shear, L. I. N. De Silva & J. Koseki

Innovative sleeper design analysis using DEM, J.-F. Ferellec & G.R. McDowell


Comparison between a 3-D finite element pavement model and the mechanistic-empirical pavement design guide for asphalt pavements, S. Im, H. Ban, Y.-R. Kim & S.-W. Park

Centrifuge modelling of an embankment stabilised with discretely spaced reinforced concrete piles, T. J. Kelly, J. A. Knappett & R. Muller

Finite element simulation of a box-jacking tunnel method, K. Komiya, H. Ha, H. U. & T. Nakayama

3D-DEM simulation for shaking table test of ballasted test track, A. Kono & T. Matsushima

Performance analysis of EPS test embankment, L. Korkiala-Tanttu & M. Juvankoski & H. Kivikoski

Dynamic response for critical velocity effect depending on track supporting stiffness, I.W. Lee, S.J. Lee & S.H. Lee

Numerical analysis of settlements at bridge approaches, M. S. Nam & J.-H. Jung

The use of geotechnical instrumentation and finite element analysis for assessment of bridge foundation stability due to breccia resiling over clayshale, P. P. Rahardjo, Y. Halim & H. Wisanto

Shear strain development and pore pressure distribution in sandy model slope under repeated rainfall, K. Sasahara & N. Sakai

Physical model of surcharge loading to the intersecting ridge between two slopes, S. Thay, S. Kitakata, T. Pipatpongsa & A. Takahashi

On 1G slope failure model tests due to rainfalls – Difference of failure patterns due to difference of densities of a subsurface sand layer – N. Tokoro, K. Tanikawa, H. Saito, Y. Kohgo, & T. Hori

Effect of deformed wick drain in soft ground improvement for embankments in Vietnam, H.-H. Tran- Nguyen & H. H. Ha


Shaking Table Test and Effective Stress Analysis of Bridge Pile Foundation with Seismic Isolation Rubber in Liquefied Ground, K. Uno, M. Mitou & H. Otsuka

**8. Design, Construction and Maintenance**

A study on materials and environmental conditions for mechanistic-empirical design method of asphalt pavement in cold snowy regions, R. Abe, M. Kumagai & K. Maruyama

Limerick tunnel approach roads – Geotechnical design & performance of...
