

# Proceedings of the Institution of Civil Engineers UK, Volume 164, 2011

## S. No. Main topic Volume / Issue Month / Year

### 1 Water Management

#### Papers

##### **Modelling of urban flooding due to Yangtze River dike break**

X. Wang; Z. Cao; G. Pender and G. Tan

##### **Data mining approach for friction factor in mobile bed channel**

B. Kumar

##### **Optimal reservoir rule curves using simulated annealing**

A. Kangrang; S. Compliew and R. Hormwichian

##### **Modelling phytoplankton dynamics in a complex estuarine system**

S. Nash; M. Hartnett and T. Dabrowski

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### 2 Water Management

#### Papers

##### **Multireservoir optimisation in discrete and continuous domains**

O. Bozorg Haddad; A. Afshar and M. A. Mariño

##### **A local scour prediction method for pile caps in complex piers**

S. Ata Amini; T. A. Mohammad; A. A. Aziz;

A. H. Ghazali and B. B. K. Huat

##### **Methodology to estimate hydraulic efficiency of drain inlets**

M. Gómez and B. Russo

##### **Suspended sediment effects on hydraulic jump characteristics**

M. H. Omid; M. Nasrabadi and J. Farhoudi

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### 3 Construction Materials

#### Papers

##### **Compaction and design of gypsiferous fill for hot desert road pavements**

S. S Razouki; D. K Kuttah and M. H Abood

##### **Building limes in the United Kingdom**

P. Livesey

##### **Corrosion mitigation of chloride-contaminated reinforced concrete structures: a state-of-the-art review**

S. C Das; H. S. Pouya and E. Ganjian

##### **Self-healing cementitious materials: a review of recent work**

C. Joseph; D. Gardner; T. Jefferson; B. Isaacs and B. Lark

##### **Geopolymer concrete using industrial byproducts**

K. K. Deevasan and R. V. Ranganath

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## 4 Ground Improvement

### Papers

#### **Electrokinetic treatment on a tropical residual soil**

K. B. Ahmad; M.R. Taha and K. A. Kassim

#### **Role of moulding water content in lime stabilisation of soil**

H. N. G. Ramesh and P. V. Sivapullaiah

#### **Geometric parametric studies on reinforced soil gabion walls**

P. K. Jayasree and K. S. Beena

#### **Field behaviour of stiffened deep cement mixing piles**

P. Jamsawang; D. T. Bergado and P. Voottipruex

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## 5 Management, Procurement and Law

### Papers

#### **The case for behaviour-based safety in construction**

H. Lees and J. Austin

#### **The task demands assessment methodology**

P. Mitropoulos and M. Namboodiri

#### **A framework of task demand factors for residential framing**

P. Mitropoulos and V. Guillama

#### **A task-based safety model for construction projects**

D. Liang; L. Song and T. Branham

#### **Vietnamese construction workers' attitude to health and safety**

A. Tutesigensi and B. N. Phung

#### **OHSAS 18001 in a UK county highways and transportation department**

M. Winter and T. Norman

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## 6 Transport

### Papers

#### **Mix design for fine-grained exposed aggregate PCC pavement**

S. W. Lee; Y.-H. Cho; B. J. Chon and C. Park

#### **Heavy vehicle road wear on sealed unbound granular roads**

T. C. Martin

#### **Seasonal variability of skid resistance in paved roadways**

T. Echaveguren and H. de Solminihac

#### **Traffic microsimulation scenario tests by the Taguchi method**

B. Gunay and S. Hinishlioglu

#### **Modelling gender perception of quality in interurban bus services**

M. Rojo; H. Gonzalo-Orden; L. dell'Olio and A. Ibeas

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## 7 Energy

### Briefing

#### **Navigating the UK energy funding landscape**

J. Hardy

### Papers

#### **Achieving zero carbon code level 6 for the Kingspan Lighthouse building**

K. Holden and C. Twinn

#### **Light-emitting diodes and their applications in energy-saving lighting**

M. A. Moram

#### **Operation of the 2030 GB power generation system**

A. Gerber; B. Awad; J. B. Ekanayake and N. Jenkins

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## 8 Geotechnical Engineering

### Papers

#### **Landslide in the area of the bridge on the Danube in Novi Sad**

M. Djogo and M. Vasic

#### **Mass behaviour of embedded improved soil raft in an excavation**

H. Yang; T. S. Tan and C. F. Leung

#### **The increase of wave velocity with time in concrete piles**

M. Zhang and J. Liu

#### **Stabilising peat soil with cement and silica fume**

B. Kalantari; A. Prasad and B. B. K. Huat

#### **Cavity expansion analysis with non-linear failure criterion**

X. L. Yang and J. F. Zou

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## 9 Structures and Buildings

### Papers

#### **Masonry bell towers: dynamic considerations**

S. Ivorra; F. J. Pallarés and J. M. Adam

#### **Grillage analysis of cellular decks with inclined webs**

C. M. Mozos and Á. C. Aparicio

#### **Forensic engineering of structures with durability problems**

M. Holický

#### **Plate-strengthened deep reinforced concrete coupling beams**

R. K. L. Su and B. Cheng

#### **Reliability analysis of shear strengthening externally bonded FRP models**

J. L. Lima and J. A. Barros

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## 10 Engineering History and Heritage

### Papers

#### **Middle Eastern archaeology**

G. Roberts

#### **The origin of federal drinking water quality standards**

P. L. Gurian and J. A. Tarr

#### **The woodhead dam on Table Mountain, Cape Town, South Africa**

T. Murray

#### **Paddington station: span 4 refurbishment and strengthening**

G. Slade

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## 11 Engineering and Computational Mechanics

### Papers

#### **Vegetated flows in their environmental context: a review**

A. M. Folkard

#### **The explicit stiffness matrix of the 15-noded cubic strain triangle**

A. J. Anyaegbunam and U. G. Ojiako

#### **Mesoscopic modeling of masonry failure**

K. De Proft, K. Heyens and B. Sluys

#### **Improved robust design optimization of structures**

S. Chakraborty and S. Bhattacharjya

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## 12 Maritime Engineering

### Briefing

#### **Young Coastal Scientists and Engineers Conference 2010**

R. R. Simons, A. H. Brampton, T. A. A. Adcock, R. Briganti, B. Carroll, F. D. Milne and D. Stagonas

### Papers

#### **Rehabilitation of Sines west breakwater: wave overtopping study**

M. T. Reis, M. G. Neves, M. R. Lopes, K. Hu and L. G. Silva

#### **Salinity intrusion length: comparison of different approaches**

A. Etemad-Shahidi, J. Parsa and M. Hajiani

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## 13 Construction Materials

### Papers

#### **Early-age properties of concrete: overview of fundamental concepts and state-of-the-art research**

M. Nehdi and A. M. Soliman

#### **Durability of wheat straw ash concrete exposed to freeze-thaw damage**

N. M. Al-Akhras

#### **Compacted dune sand concrete for pavement applications**

S. El Euch Khay, J. Neji and A. Loulizi

#### **Material cost and escalation clauses in Indian construction contracts**

R. Maran, S. Rajendran and S. Kalidindi

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## 14 Water Management

### Papers

#### **Optimal design and operation of pumping stations using NLP-GA**

S. Rasoulzadeh-Gharibdousti, O. Bozorg Haddad and M. A. Marino

#### **Performance of a novel hybrid algorithm in the design of water networks**

N. Ghajarnia, O. Bozorg Haddad and M.A. Marino

#### **Surface vortex prevention at power intakes by horizontal plates**

S. M. Amiri, A. R. Zarrati, R. Roshan and H. Sarkardeh

#### **Modelling runoff and sediment rate using a neuro-fuzzy technique**

P. C. Nayak and S. K. Jain

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## 15 Geotechnical Engineering Compacted fills – part 1

### Papers

#### **Assessment of pyritic Lower Lias mudrocks for earthworks**

M. A. Czerewko, S. A. Cross, P. G. Dumelow and A. Saadvandi

#### **Earthworks to reclaim UK quarry for housing development**

S. T. Jarvis

#### **The design and construction of filled building platforms**

D. P. McNicholl

#### **High speed 1, UK: a silty sustainable earthworks case study**

C. Barker and A. Phear

#### **Compaction of fills involving stabilisation of expansive soils**

M. N. Rahmat and J. M. Kinuthia

#### **Study of carbonate sedimentary rocks are engineered dry fills**

H. T. Brocklebank and P. Sharp

#### **Assessment of water retention behaviour in compacted fills**

M. Zielinski, M. Sánchez, E. Romero and P. Sentenac

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## 16 Structures and Buildings Timber engineering

### Papers

#### **Ductile moment-resistant steel – timber connections**

M. Andreolli, M. Piazza, R. Tomasi and R. Zandonini

#### **Ductility of timber joints under static and cyclic loads**

M. Piazza, A. Polastri and R. Tomasi

#### **Optimisation of pre/post-stressed embedment-type timber joint**

T. Shiratori, A. J. M. Leijten and K. Komatsu

#### **Design of timber gridded shell structures**

R. Harris

#### **Development of prefabricated timber-concrete composite floor systems**

M. Fragiaco and E. Lukaszewska

#### **Timber-concrete practical applications – bridge case study**

A.M. P. G. Dias, M. C. P. Ferreira, L. F. C. Jorge and H. M. G. Martins

#### **Long-term load deformation behaviour of timber-concrete joints**

J. W. G. Van de Kuilen and A. M. P. G. Dias

#### **Long-term load test of a wood-concrete composite beam**

L. To, M. Fragiaco, J. Balogh and R. M. Gutkowski

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## 17 Transport

### Papers

#### **Modelling railway track geometry deterioration**

H. Guler, S. Jovanovic and G. Evren

#### **Examining model choice disparities in high school students**

D. Alemu and J. – I. G. Tsutsumi

#### **A new approach for GIS-supported mapping of traffic accidents**

I. B. Gundogdu

#### **Fibre-reinforced roller-compacted concrete transport pavements**

K. Neocleous, H. Angelakopoulos, K. Pilakoutas and M. Guadagnini

#### **Use of volcanic aggregates in asphalt pavement mixes**

H. Akbulut, C. Gurer and S. Cetin

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