

### **3D Finite Element Model as a Tool for Analyzing the Structural Behavior of a Railway Track**

Kalliainen, A., Kolisoja, P. & Nurmikolu, A., 2016, In : *Procedia Engineering*. 143, p. 820-827 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

### **3D finite elements modelling of percussive rock drilling: Estimation of rate of penetration based on multiple impact simulations with a commercial drill bit**

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Research output: Contribution to journal > Article > Scientific > peer-review

### **Acceptability of contaminated soils and waste materials in landfill structures**

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Research output: Other conference contribution > Paper, poster or abstract > Professional

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Research output: Other conference contribution > Paper, poster or abstract > Scientific

### **A laboratory listening experiment on subjective and objective rating of impact sound insulation of concrete floors**

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific

### **Älypölkky, radan monitorointi, kreosoottipölkyn korvaavat vaihtoehdot**

Luomala, H., 29 Nov 2016

Research output: Other contribution > Scientific

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### **Anisotropic total and effective stress stability analysis of the Perniö failure test**

D'Ignazio, M., Mansikkamäki, J. & Länsivaara, T., 2014, *Numerical Methods in Geotechnical Engineering : Proceedings of the 8th European Conference on Numerical Methods in Geotechnical Engineering NUMGE2014, Delft, The Netherlands, 18-20 June 2014*. Hicks, M. A. , Brinkgreve, R. B. . J. . & Rohe, A. (eds.). CRC Press Taylor & Francis Group; A Balkema book, p. 609-614 6 p.

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

### **A proposal for some modifications of EN 1997-1 design approaches**

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### **Arsenic in bedrock, soil and groundwater - The first arsenic guidelines for aggregate production established in Finland**

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### **ASROCKS-Hankkeen heikkouuttomenetelmien vertailu**

Translated title of the contribution: : ASROCKS-Hankkeen heikkouuttomenetelmien vertailu

Tarvainen, T., Hatakka, T., Backman, B., Ketola, T. & Härmä, P., 2014, GEOLOGIAN TUTKIMUSKESKUS. 13 p.  
Research output: Book/Report › Commissioned report › Professional

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

### **Ballast bed**

Luomala, H., 24 Nov 2016

Research output: Other contribution › Scientific

### **Betonirakenteiden korjausohjeet 2016, by 41**

Köliö, A., Pakkala, T., Lahdensivu, J. & Pentti, M., May 2016, Suomen Betoniyhdistys r.y. 115 p.

Research output: Book/Report › Book › Professional

### **Betonisten ratapölkkyjen väsytestykuormituskokeet**

Translated title of the contribution: : Fatigue loading tests of concrete railway sleepers

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### **Comparison of community managed projects and conventional approaches in rural water supply of Ethiopia**

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Research output: Contribution to journal › Article › Scientific › peer-review

### **Condition-Based Track Maintenance and Rehabilitation Design Using Combined Data Analysis**

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#### **Continuum modelling of dynamic rock fracture under triaxial confinement**

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

#### **Correlations for undrained shear strength of Finnish soft clays**

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Research output: Contribution to journal > Article > Scientific > peer-review

#### **Demolition of concrete by thermal shock spallation: a mesoscopic numerical study based on embedded discontinuity finite elements**

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Research output: Contribution to journal > Article > Scientific > peer-review

#### **Deterioration mechanisms and life cycle of concrete monoblock railway sleepers in Finnish conditions**

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Research output: Chapter in Book/Report/Conference proceeding > Chapter > Scientific > peer-review

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Research output: Contribution to journal > Editorial > Scientific

#### **Effects of Lime Stabilization on Hydraulic Behavior of Finnish Soft Sensitive Clays: Towards a Sustainable Geoenvironment**

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#### **Estimation of preconsolidation stress of clays from piezocone by means of high-quality calibration data**

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### **Identifying criteria for environmental risk assessment models at different stage-gates of nano-material/product innovation considering requirements of various stakeholders (TH083)**

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### **Investigation and geotechnical characterization of Perniö clay, Finland**

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### **Kapillaaristen vedenimuominaisuuksien määrittämiseen sopivan vapaan vedenimukoelaitteiston kehittäminen**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

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Research output: Book/Report › Commissioned report › Professional

### **Kiviainesten otto arseenialueilla - opas kiviainesten tuottajille, maarakentajille ja viranomaisille.**

Translated title of the contribution: : Kiviainesten otto arseenialueilla - opas kiviainesten tuottajille, maarakentajille ja viranomaisille.

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### **Konvektiivinen lämmönsiirtyminen ratapenkereessä**

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**Lime treatment of a soft sensitive clay: A sustainable reuse option**

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**Mechanical properties of recovered municipal solid waste incineration bottom ash: the influence of aging and changes in moisture content**

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Research output: Contribution to journal › Article › Scientific › peer-review

**Methodology to estimate ionospheric scintillation risk maps and their contribution to position dilution of precision on the ground**

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**Modelling of plastic culvert and road embankment interaction in 3D**

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Research output: Contribution to journal › Article › Scientific › peer-review

**Näkökulma-kolumni: Putkiremontit kestävät aivan liian kauan**

Saari, A., 24 Nov 2016, Sanoma Talotekniikkajulkaisut Oy.

Research output: Other contribution › Scientific

**Numerical 3D modelling of the effects of strain rate and confining pressure on the compressive behavior of Kuru granite**

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**Numerical modeling of rock failure under dynamic loading with polygonal elements**

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Research output: Contribution to journal › Article › Scientific › peer-review

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Research output: Contribution to journal › Article › Scientific › peer-review

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Research output: Contribution to journal › Article › Scientific › peer-review

### **Numerical modelling of fracture processes in thermal shock weakened rock**

Pressacco, M. & Saksala, T., May 2018, *Geomechanics and Geodynamics of Rock Masses, Volume 1 Proceedings of the 2018 European Rock Mechanics Symposium*. Litvinenko, V. (ed.). CRC Press, p. 883-888  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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Translated title of the contribution: : Now it comes - namely Tampere3 university  
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### **Preliminary results from a study aiming to improve ground investigation data**

Di Buò, B., D'Ignazio, M., Selänpää, J. & Länsivaara, T., May 2016, *Proceedings of the 17th Nordic Geotechnical Meeting: Challenges in Nordic Geotechnic 25th-28th of May*. Reykjavik: Icelandic Geotechnical Society, p. 187-197 11 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Problems related to field vane testing in soft soil conditions and improved reliability of measurements using an innovative field vane device**

Selänpää, J., Buò, B. D., Länsivaara, T. & D'Ignazio, M., 2017, *Landslides in Sensitive Clays: From Research to Implementation*. Springer, p. 121-131 11 p. (Advances in Natural and Technological Hazards Research; vol. 46).

Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

**Problems with Railway Track Drainage in Finland**

Latvala, J., Nurmikolu, A. & Luomala, H., 13 Jul 2016, In : *Procedia Engineering*. 143, p. 1051-1058 7 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Reply to the discussion by Mesri and Wang on "Correlations for undrained shear strength of Finnish soft clays"**

D'Ignazio, M., Phoon, K-K., Tan, S. A., Länsivaara, T. & Lacasse, S., 2017, In : *Canadian Geotechnical Journal*. 5 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Selvitys UUMA-materiaalien teknisen kelpoisuuden arviointiin liittyvistä testausstandardeista ja -menetelmistä (1. vaihe), 29.12.2014**

Translated title of the contribution: : Selvitys UUMA-materiaalien teknisen kelpoisuuden arviointiin liittyvistä testausstandardeista ja -menetelmistä (1. vaihe), 29.12.2014

Kuula, P., Kolisoja, P., Sjöberg, M., Ketola, T., Koivisto, K., Forsman, J., Dettenborn, T. & Jyvärä, H., 2015, Ramboll. (UUMA 2, Uusiomateriaalit maarakentamisessa ohjelma 2013-2015)

Research output: Book/Report › Commissioned report › Professional

**Shear bands in soft clays: strain-softening behavior in finite element method**

D'Ignazio, M. & Länsivaara, T., 2015, In : *Rakenteiden mekaniikka*. 48, 1, p. 83-98 16 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Sleepers**

Luomala, H., 24 Nov 2016

Research output: Other contribution › Scientific

**Spatial variability of reed bed spectra in Olkiluoto Island**

Tuominen, J. & Lipping, T., 2016, *2016 IEEE International Geoscience and Remote Sensing Symposium (IGARSS): July 10-15, Beijing, China*. IEEE, p. 7188-7191 4 p. (IEEE International Geoscience and Remote Sensing Symposium Proceedings).

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**Stiffmaster - A continuous track stiffness measurement device**

Luomala, H., Peltokangas, O. & Nurmikolu, A., 2014, *GEORAIL 2014 : 2nd International symposium - Railway geotechnical engineering, 6-7 November 2014, France*. IFSTTAR, p. 109-118 10 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Strength increase below an old test embankment in Finland**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Stress-strain hysteresis shape estimation of different soils using deformation-history integral (DHI) model**

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