

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

Saksala, T., Fourmeau, M., Kane, P-A. & Hokka, M., 2018, In : *Computers and Geotechnics*. 99, p. 55-63 9 p.

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

3D numerical modelling of thermal shock assisted percussive drilling

Saksala, T., 2020, In : *Computers and Geotechnics*. 128, 13 p., 103849.

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

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

Parviainen, A., Loukola-Ruskeeniemi, K., Tarvainen, T., Hatakka, T., Härmä, P., Backman, B., Ketola, T., Kuula, P., Lehtinen, H., Sorvari, J., Pyy, O., Ruskeeniemi, T. & Luoma, S., 1 Nov 2015, In : *Earth-Science Reviews*. 150, p. 709-723 15 p.

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

Artificial neural networks models for rate of penetration prediction in rock drilling

Fathipour Azar, H., Saksala, T. & Jalali, S-M. E., 21 Aug 2017, In : *Rakenteiden mekaniikka*. 50, 3, p. 252-255 4 p.

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

Betonisten ratapölkkyjen väsytytkuormituskokeet

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

Rantala, T., Kerokoski, O. & Nurmikolu, A., 3 Jun 2015, In : *Rakenteiden mekaniikka*. 48, 1, p. 18-33 16 p.

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

Characterization of fine fraction mined from two Finnish landfills

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

Combining mineral fractions of recovered MSWI bottom ash: improvement for utilization in civil engineering structures

Sormunen, L. A., Kalliainen, A., Kolisoja, P. & Rantsi, R., 22 Aug 2016, In : *Waste and Biomass Valorization*. 12 p.

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

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

Behailu, B. M., Suominen, A., Katko, T. S., Mattila, H. & Yayehyirad, G., 30 Sep 2016, In : *African Journal of Environmental Science and Technology*. 10, 9, p. 292-306 15 p., 04AF23059936.

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

Correlations for undrained shear strength of Finnish soft clays

D'Ignazio, M., Phoon, K. K., Tan, S. A. & Länsivaara, T., 2016, In : *Canadian Geotechnical Journal*. 53, 10, p. 1628-1645

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

Saksala, T., 2020, In : *INTERNATIONAL JOURNAL OF FRACTURE*.

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

Failure in anisotropic sensitive clays: a finite element study of the Perniö failure test

D'Ignazio, M., Länsivaara, T. & Jostad, H. P., 2017, In : *Canadian Geotechnical Journal*. 54, 7, p. 1013-1033

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

Investigation and geotechnical characterization of Perniö clay, Finland

Di Buò, B., D'Ignazio, M., Selänpää, J., Haikola, M., Länsivaara, T. & Di Sante, M., 5 Aug 2019, In : AIMS Geosciences. 5, 3, p. 591–616

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

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

Di Sante, M., Di Buò, B., Fratolocchi, E. & Länsivaara, T., 2020, In : Geosciences. 10, 5, 17 p., 182.

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

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

Sormunen, L. A. & Kolisoja, P., 2018, In : Road Materials and Pavement Design . 19, 2, p. 252-270

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

Koulouri, A., Smith, N. D., Vani, B. C., Rimpiläinen, V., Astin, I. & Forte, B., 2020, In : JOURNAL OF GEODESY. 94, 20 p., 22.

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

Modelling of plastic culvert and road embankment interaction in 3D

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

Moisture behavior of external insulated precast concrete wall panels

Sekki, P., Karvinen, T. & Vinha, J., 2020, In : Journal of Building Physics. 26 p.

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

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

Saksala, T., Hokka, M. & Kuokkala, V-T., 2017, In : Computers and Geotechnics. 88, p. 1-8 8 p.

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Numerical modeling of rock failure under dynamic loading with polygonal elements

Saksala, T. & Jabareen, M., 2019, In : International Journal for Numerical and Analytical Methods in Geomechanics. 43, 12, p. 2056-2074

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

Numerical modeling of the tool-rock penetration process using FEM coupled with SPH technique

Mardalizad, A., Saksala, T., Manes, A. & Giglio, M., 2020, In : JOURNAL OF PETROLEUM SCIENCE AND ENGINEERING. 189, 14 p., 107008.

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

Numerical modelling of dynamic spalling test on rock with an emphasis on the influence of pre-existing cracks

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Numerical modelling of pore-fluid-enhanced thermal spallation in granitic rock

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

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On the Strain Rate Sensitivity of Coarse-Grained Rock: A Mesoscopic Numerical Study

Saksala, T., 2019, In : Rock Mechanics and Rock Engineering. 52, 9, p. 3229–3240

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

Problems with Railway Track Drainage in Finland

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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.

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

Vatanshenas, A., Mori, T., Farhadi, M. S. & Länsivaara, T., 10 Jul 2020, In : MATERIALS PHYSICS AND MECHANICS. 44, 2, p. 221-228 8 p.

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

Temporal variation in indoor transfer of dirt-associated environmental bacteria in agricultural and urban areas

Hui, N., Parajuli, A., Puhakka, R., Grönroos, M., Roslund, M. I., Vari, H. K., Selonen, V. A. O., Yan, G., Siter, N., Nurminen, N., Oikarinen, S., Laitinen, O., Rajaniemi, J., Hyöty, H. & Sinkkonen, A., 7 Aug 2019, In : Environment International. 132, November 2019, 9 p., 105069.

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Nysse tulee - Tampere3 nimittäin

Translated title of the contribution: : Now it comes - namely Tampere3 university

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Research output: Contribution to journal › Article › Professional

Vesihuollon instituutiot vaativat taitavaa jalkapallopeleä

Translated title of the contribution: : Water services institutions require skilful soccer playing

Inha, L., Katko, T. S. & Rajala, R., Jun 2019, In : Rakennustekniikka. 75, 3, p. 38-40 3 p.

Research output: Contribution to journal › Article › Professional

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Translated title of the contribution: : Water services to be developed strategically: Recognizing the core and non-core activities of water services

Katko, T. S. & Hukka, J. J., 2016, In : Kuntatekniikka. 70, 2, p. 12-13 2 p.

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Translated title of the contribution: : WC and signs only as dirt in our eyes?

Katko, T. S., 2018, In : Kuntatekniikka. 72, 4, p. 45 1 p.

Research output: Contribution to journal › Article › Professional

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Research output: Contribution to journal › Review Article › Scientific

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

D'Ignazio, M., Lunne, T., Andersen, K. H., Yang, S., Di Buo, B. & Länsivaara, T., 8 May 2019, In : AIMS Geosciences. 5, 2, p. 104-116 13 p.

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Evaluation of sample quality from different sampling methods in Finnish soft sensitive clays

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Malaska, M. & Heikkilä, R., 1 Nov 2016, In : Automation in Construction. 71, p. 1 1 p.

Research output: Contribution to journal › Editorial › Scientific

Determination of remoulding energy of sensitive clays

Thakur, V., Degago, S. A., Selänpää, J. & Länsivaara, T., 2017, *Landslides in Sensitive Clays: From Research to Implementation*. Springer, p. 97-107 11 p. (Advances in Natural and Technological Hazards Research; vol. 46).

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

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

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

Liite 6: Yleistä kaivannaisjätealueista ja patoturvallisuudesta

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

Kylliäinen, M., Hongisto, V., Oliva, D. & Rekola, L., Aug 2016, *Proceedings of the INTER-NOISE 2016, 45th International Congress on Noise Control Engineering : Towards a Quieter Future, August 21-24, 2016, Hamburg, Germany*. Hamburg: German Acoustical Society (DEGA), p. 894-902 9 p. 193

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

A method for design of sound insulation of glazed balconies against traffic noise

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

Kapillaaristen vedenimuominaisuuksien määrittämiseen sopivan vapaan vedenimukoelaitteiston kehittäminen

Tuominen, E. & Vinha, J., 20 Oct 2015, *Rakennusfysiikka 2015. Uusimmat tutkimustulokset ja hyvät käytännön ratkaisut. 20.-22.10.2015, Tampere*. Vinha, J. & Ruuska, T. (eds.). Tampere: Tampereen teknillinen yliopisto, rakennustekniikan laitos, rakennetekniikka, p. 233-238 6 p.

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Back-calculation of the Saint-Alban A test embankment with a new modelling approach in LEM

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Commercialising reclaimed materials in earthworks – guidelines for productization and the process of appending these materials in the Finnish national code of practice

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

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

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

Evaluation of existing CPTu-based correlations for the undrained shear strength of soft Finnish clays

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Numerical modelling of fracture processes in thermal shock weakened rock

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Pressacco, M. & Saksala, T., 2020, *Rock Mechanics for Natural Resources and Infrastructure Development - Full Papers: Proceedings of the 14th International Congress on Rock Mechanics and Rock Engineering (ISRM 2019), September 13-18, 2019, Foz do Iguassu, Brazil*. CRC Press, p. 2547-2553 7 p. (Proceedings in Earth and geosciences; vol. 6).

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Numerical modelling of thermal spallation of rock

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

Numerical modelling of underground tunnel in rock under seismic loading with polygonal finite elements

Saksala, T., 2019, *Earthquake Geotechnical Engineering for Protection and Development of Environment and Constructions: Proceedings of the 7th International Conference on Earthquake Geotechnical Engineering, (ICEGE 2019), June 17-20, 2019, Rome, Italy*. CRC Press, p. 4808-4814 7 p. (Proceedings in Earth and geosciences ; vol. 4).

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Preliminary results from a study aiming to improve ground investigation data

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Spatial variability of reed bed spectra in Olkiluoto Island

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

Stiffmaster - A continuous track stiffness measurement device

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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

The effects of improved energy efficiency on indoor environmental quality in multi-family buildings

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

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A High-resolution Coupled Permafrost - Ice Sheet Model

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

Chasing measurements for real-world emissions of city buses

Järvinen, A., Karjalainen, P., Bloss, M., Potila, O., Simonen, P., Kuuluvainen, H., Timonen, H., Saarikoski, S., Niemi, J. V., Keskinen, J. & Rönkkö, T., 2017.

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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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The effect of climate change on freeze-thaw durability of concrete structures in Finland

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Thermal Evolution of a Holocene Arctic Environment in Western Greenland

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