

### **Uncertainty in the early phase of a municipal building refurbishment project-A case study in Finland**

Uotila, U., Saari, A. & Junnonen, J. M., 1 Aug 2020, In : Buildings. 10, 8, 18 p., 137.

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

### **Hot-box measurements to investigate the internal convection of highly insulated loose-fill insulation roof structures**

Kivioja, H. & Vinha, J., 1 Jun 2020, In : Energy and Buildings. 216, 10 p., 109934.

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

### **People's current mobility costs and willingness to pay for Mobility as a Service offerings**

Liljamo, T., Liimatainen, H., Pöllänen, M. & Utriainen, R., 1 Jun 2020, In : Transportation Research Part A: Policy and Practice. 136, p. 99-119 21 p.

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

### **Heat protective properties of enclosure structure from thin-wall profiles with foamed concrete**

Rybakov, V. A., Ananeva, I. A., Pichugin, E. D. & Garifullin, M., 1 Mar 2020, In : Magazine of Civil Engineering. 94, 2, p. 11-20 10 p.

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

### **Utilizing mixed-mineralogy ferroan magnesite tailings as the source of magnesium oxide in magnesium potassium phosphate cement**

Ismailov, A., Merilaita, N., Solismaa, S., Karhu, M. & Levänen, E., 20 Jan 2020, In : Construction and building materials. 231, 117098.

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

### **Modeling of hygrothermal behavior for green facade's concrete wall exposed to nordic climate using artificial intelligence and global sensitivity analysis**

May Tzuc, O., Rodríguez Gamboa, O., Aguilar Rosel, R., Che Poot, M., Edelman, H., Jiménez Torres, M. & Bassam, A., 2020, In : Journal of Building Engineering. 33, 101625.

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

### **Reply to the discussion by koutsoftas on "evaluation of sample quality from different sampling methods in finnish soft sensitive clays"<sup>1</sup>**

Di Buò, B., Selänpää, J., Länsivaara, T. T. & D'ignazio, M., 2020, In : Canadian Geotechnical Journal. 57, 8, p. 1261-1262 2 p.

Research output: Contribution to journal > Comment/debate > Scientific

### **Impacts of multiple refurbishment strategies on hygrothermal behaviour of basement walls**

Fedorik, F., Heiskanen, R., Laukkarinen, A. & Vinha, J., Nov 2019, In : Journal of Building Engineering. 26, 9 p., 100902.

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

### **Recycling lithium mine tailings in the production of low temperature (700–900°C) ceramics: Effect of ladle slag and sodium compounds on the processing and final properties**

Lemougna, P. N., Yliniemi, J., Ismailov, A., Levänen, E., Tanskanen, P., Kinnunen, P., Roning, J. & Illikainen, M., 10 Oct 2019, In : Construction and building materials. 221, p. 332-344 13 p.

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

### **Variation of CPTu-based transformation models for undrained shear strength of Finnish clays**

Knuuti, M. & Länsivaara, T., 2 Oct 2019, In : Georisk. 13, 4, p. 262-270 9 p.

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

### **Behaviour of riveted stringer-to-floorbeam connections in cyclic load tests to failure**

Tulonen, J., Siitonen, T. & Laaksonen, A., 1 Sep 2019, In : Journal of Constructional Steel Research. 160, p. 101-109 9 p.

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

### **Parametric study on temperature distribution of square hollow section joints**

Bączkiewicz, J., Pajunen, S., Malaska, M. & Heinisuo, M., 1 Sep 2019, In : Journal of Constructional Steel Research. 160, p. 490-498 9 p.

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

#### **Societal impact as Cost-Benefit Analysis: Comparative analysis of two research infrastructures**

Magazinik, A., Bedolla, J. S., Lasheras, N. C. & Mäkinen, S., 1 Jun 2019, *2019 IEEE International Conference on Engineering, Technology and Innovation, ICE/ITMC 2019*. IEEE

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

#### **Assessing population vulnerability towards summer energy poverty: Case studies of Madrid and London**

Sanchez-Guevara, C., Núñez Peiró, M., Taylor, J., Mavrogianni, A. & Neila González, J., 1 May 2019, In : *Energy and Buildings*. 190, p. 132-143 12 p.

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

#### **Initial axial stiffness of welded RHS T joints**

Garifullin, M., Bronzova, M., Pajunen, S., Mela, K. & Heinisuo, M., 1 Feb 2019, In : *Journal of Constructional Steel Research*. 153, p. 459-472 14 p.

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

#### **A life cycle assessment of two residential buildings using two different LCA database-software combinations: Recognizing uniformities and inconsistencies**

Emami, N., Heinonen, J., Marteinsson, B., Säynäjoki, A., Junnonen, J. M., Laine, J. & Junnila, S., 14 Jan 2019, In : *Buildings*. 9, 1, 20 p., 20.

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

#### **Evaluating retrofit options in a historical city center: Relevance of bio-based insulation and the need to consider complex urban form in decision-making**

Claude, S., Ginestet, S., Bonhomme, M., Escadeillas, G., Taylor, J., Marincioni, V., Korolija, I. & Altamirano, H., 1 Jan 2019, In : *Energy and Buildings*. 182, p. 196-204 9 p.

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

#### **Alkali-silica reaction in Finnish swimming pools**

Lahdensivu, J. & Kekäläinen, P., 2019, *Proceedings of the fib Symposium 2019: Concrete - Innovations in Materials, Design and Structures*. Derkowski, W., Krajewski, P., Gwozdziwicz, P., Pantak, M. & Hojdis, L. (eds.). International Federation for Structural Concrete, p. 2006-2013 8 p. (fib Symposium Proceedings).

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

#### **Behavior of capacitive humidity sensors in monitoring the drying of concrete walls**

Tuominen, E., Vinha, J. & Raunima, T., 2019, In : *MATEC Web of Conferences*. 282, 6 p., 02053.

Research output: Contribution to journal › Conference article › Scientific › peer-review

#### **Betonin kosteustekniset materiaaliominaisuudet ja mittausmenetelmän kehittäminen**

Tuominen, E., Vinha, J., Tuominen, O., Vääntinen, K. & Vainio, M., 2019, *Rakennusfysiikka 2019: Uusimmat tutkimustulokset ja hyvät käytännön ratkaisut. 28.-30.10.2019, Tampere*. Vinha, J. & Raunima, T. (eds.). Tampere: Tampereen yliopisto, Rakennustekniikka, Vol. Seminaarijulkaisu 6. p. 111-116 6 p.

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

#### **Buckling length assessment with finite element approach**

Tiainen, T., Mela, K. & Heinisuo, M., 2019, *Stability and Ductility of Steel Structures - Proceedings of the International Colloquia on Stability and Ductility of Steel Structures, 2019*. Wald, F. & Jandera, M. (eds.). CRC Press/Balkema, p. 1145-1150 6 p.

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

#### **Calculation method to determine capillary properties of building materials with automatic free water intake test**

Tuominen, E. & Vinha, J., 2019, In : *MATEC Web of Conferences*. 282, 6 p., 02037.

Research output: Contribution to journal › Conference article › Scientific › peer-review

#### **COMBI-hankkeen paine-eromittausten yhteenveto**

Tuominen, E., Laukkarinen, A., Kauppinen, A., Raunima, T. & Vinha, J., 2019, *Rakennusfysiikka 2019: Uusimmat tutkimustulokset ja hyvät käytännön ratkaisut. 28.-30.10.2019, Tampere*. Vinha, J. & Raunima, T. (eds.). Tampere: Tampereen yliopisto, Rakennustekniikka, Vol. Seminaarijulkaisu 6. p. 139-144

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

#### **COMBI-hankkeen suositukset korkeatasoisten ja kosteusturvallisten palvelurakennusten toteuttamiseksi - COMBI 8**

Vinha, J. & Laukkarinen, A., 2019, *Rakennusfysiikka 2019: Uusimmat tutkimustulokset ja hyvät käytännön ratkaisut. 28.-30.10.2019, Tampere*. Vinha, J. & Raunima, T. (eds.). Tampere: Tampereen yliopisto, Rakennustekniikka, Vol. Seminaarijulkaisu 6. p. 217-222

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

#### **Comparison between calculated and billed building energy consumption values of schools and daycare centers**

Ruusala, A., Laukkarinen, A. & Vinha, J., 2019, In : *MATEC Web of Conferences*. 282, 6 p., 02085.

Research output: Contribution to journal > Conference article > Scientific > peer-review

#### **Huokoisten puukuitu- ja kipsilevytuulensuojalevyjen homehtumisherkyys**

Tuominen, E., Ruusala, A., Laukkarinen, A., Pätsi, S., Pessi, A-M. & Vinha, J., 2019, *Rakennusfysiikka 2019: Uusimmat tutkimustulokset ja hyvät käytännön ratkaisut. 28.-30.10.2019, Tampere*. Vinha, J. & Raunima, T. (eds.). Tampere: Tampereen yliopisto, Rakennustekniikka, Vol. Seminaarijulkaisu 6. p. 517-524

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

#### **Ilmakehän pitkäaaltoinen säteily rakennusfysikaalisissa laskentatarkasteluissa**

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

#### **Kapasiivisten kosteusantureiden käyttäytyminen betoniseinien ja kipsivalulattioiden kuivumisen seurannassa**

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

#### **Kipsilevytuulensuojallisten puurunkoisten ulkoseinärakenteiden rakennusfysikaalinen toiminta**

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

#### **Koulujen ja päiväkotien sisäilman lämpötilan, suhteellisen kosteuden ja hiilidioksidipitoisuuden mittaukset COMBI-hankkeessa**

Laukkarinen, A., Kauppinen, A., Tuominen, E., Raunima, T. & Vinha, J., 2019, *Rakennusfysiikka 2019: Uusimmat tutkimustulokset ja hyvät käytännön ratkaisut. 28.-30.10.2019, Tampere*. Vinha, J. & Raunima, T. (eds.). Tampere: Tampereen yliopisto, Rakennustekniikka, Vol. Seminaarijulkaisu 6. p. 133-138

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

#### **Modelling the stressed skin effect by using shell elements with meta-material model**

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

#### **Nano-structured optical fibers made of glass-ceramics, and phase separated and metallic particle-containing glasses**

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

#### **Performance of Variable Partial Factor approach in a slope design**

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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 › Professional

#### **Puurunkoisten ulkoseinien liitosten lämpö- ja kosteustekninen toiminta**

Moisio, T., Laukkarinen, A. & Vinha, J., 2019, *Rakennusfysiikka 2019: Uusimmat tutkimustulokset ja hyvät käytännön ratkaisut. 28.-30.10.2019, Tampere*. Vinha, J. & Raunima, T. (eds.). Tampere: Tampereen yliopisto, Rakennustekniikka, Vol. Seminaarijulkaisu 6. p. 67-74

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

#### **Rakennuksen ulkovaipan yli vaikuttavien paine-erojen määrittäminen rakennusfysikaalisia laskentatarkasteluja varten**

Moisio, T., Laukkarinen, A. & Vinha, J., 2019, *Rakennusfysiikka 2019: Uusimmat tutkimustulokset ja hyvät käytännön ratkaisut. 28.-30.10.2019, Tampere*. Vinha, J. & Raunima, T. (eds.). Tampere: Tampereen yliopisto, Rakennustekniikka, Vol. Seminaarijulkaisu 6. p. 49-54

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

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#### **Second-order analysis of prestressed concrete columns**

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#### **Thermal and moisture properties of calcium silicate insulation boards**

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Research output: Contribution to journal › Conference article › Scientific › peer-review

#### **Moment-rotation behavior of welded tubular high strength steel T joint**

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#### **Condensation at the exterior surface of windows**

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

#### **Radon, fungal spores and MVOCs reduction in crawl space house: A case study and crawl space development by hygrothermal modelling**

Keskikuru, T., Salo, J., Huttunen, P., Kokotti, H., Hyttinen, M., Halonen, R. & Vinha, J., 15 Jun 2018, In : *Building and Environment*. 138, p. 1-10 10 p.

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

#### **Investigating the kinetics and biofuel properties of *Alstonia congestis* and *Ceiba pentandra* via torrefaction**

Oluoti, K., Doddapaneni, T. R. K. C. & Richards, T., 1 May 2018, In : *Energy*. 150, p. 134-141 8 p.

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#### **An approach to combining related notifications in large-scale building management systems with a rehabilitation facility case study**

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#### **Characterization of elastic constants of anisotropic composites in compression using digital image correlation**

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#### **Cold-formed RHS T joints with initial geometrical imperfections**

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#### **Core Project Team As a Management Entity for Construction Projects**

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#### **Fatigue loading tests of concrete railway sleepers**

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#### **Julkisivujen ja parvekkeiden talvikorjaus 2018**

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#### **Techno-economic evaluation of integrating torrefaction with anaerobic digestion**

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#### **Utilizing the innovation potential of suppliers in construction projects**

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#### **Initial in-plane rotational stiffness of welded RHS T joints with axial force in main member**

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#### **The effect of steel grade on weight and cost of warren-type welded tubular trusses**

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

#### **Kosteusvaurioiden vakavuus kuntien rakennuksissa**

Annala, P., Lahdensivu, J., Suonketo, J., Pentti, M., Laukkarinen, A. & Vinha, J., 24 Oct 2017, *Rakennusfysiikka 2017. Uusimmat tutkimustulokset ja hyvät käytännön ratkaisut: 24.-26.10.2017, Tampere*. Vinha, J. & Kivioja, H. (eds.). Tampere: Tampereen teknillinen yliopisto, Rakennustekniikka, Rakennusfysiikka, Vol. 1. p. 135-140 6 p. (Tampereen teknillinen yliopisto. Rakennustekniikka. Rakennusfysiikka.).

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

#### **Maanvastaisten seinien lämpö- ja kosteustekninen toiminta**

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

#### **Paine-erot Pirkanmaan ja Helsingin julkisissa palvelurakennuksissa**

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

#### **Puukerrostalon työmaavaiheen lämpö- ja kosteusolosuhteiden mittaukset**

Laukkarinen, A., Musakka, S., Penttilä, O., Teriö, O. & Vinha, J., 24 Oct 2017, *Rakennusfysiikka 2017. Uusimmat tutkimustulokset ja hyvät käytännön ratkaisut: 24.-26.10.2017, Tampere*. Vinha, J. & Kivioja, H. (eds.). Tampere: Tampereen teknillinen yliopisto, Rakennustekniikka, Rakennusfysiikka, Vol. 1. p. 167-172 6 p. (Tampereen teknillinen yliopisto. Rakennustekniikka. Rakennusfysiikka.).

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#### **Puukerrostalorakentamisen kosteudenhallinta**

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

#### **Relationships among Civil Engineering Students' Approaches to Learning, Perceptions of the Teaching-Learning Environment, and Study Success**

Salmisto, A., Postareff, L. & Nokelainen, P., 1 Oct 2017, In : *Journal of Professional Issues in Engineering Education and Practice*. 143, 4, 04017010.

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

#### **Julkisivujen ja parvekkeiden talvikorjausohje**

Pakkala, T., Lahdensivu, J., Köliö, A. & Annala, P., Oct 2017, *Rakennusfysiikka 2017: Uusimmat tutkimustulokset ja hyvät käytännön ratkaisut, 24-26.10.2017, Tampere*. Vinha, J. & Kivioja, H. (eds.). Tampere: Tampereen teknillinen yliopisto, Rakennustekniikka, Rakennusfysiikka, p. 179-184 6 p. (Tampereen teknillinen yliopisto. Rakennustekniikka. Rakennusfysiikka.).

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#### **A generic method to optimize a redundant serial robotic manipulator's structure**

Kivelä, T., Mattila, J. & Puura, J., 1 Sep 2017, In : *Automation in Construction*. 81, p. 172-179 8 p.

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

#### **Carbon dioxide permeability of building materials and their impact on bedroom ventilation need**

Niemelä, T., Vinha, J., Lindberg, R., Ruuska, T. & Laukkarinen, A., 1 Jul 2017, In : *Journal of Building Engineering*. 12, p. 99-108 10 p.

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

#### **The effect of matrix type on ageing of thick vinyl ester glass-fibre-reinforced laminates**

Sarlin, E., Sironen, R., Pärnänen, T., Lindgren, M., Kanerva, M. & Vuorinen, J., 15 May 2017, In : *Composite Structures*. 168, p. 840-850

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#### **Effect of energy measures on the values of energy efficiency indicators in Finnish daycare and school buildings**

Sekki, T., Airaksinen, M. & Saari, A., 15 Mar 2017, In : *Energy and Buildings*. 139, p. 124-132 9 p.

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#### **Output power variation of different PV array configurations during irradiance transitions caused by moving clouds**

Lappalainen, K. & Valkealahti, S., 15 Mar 2017, In : *Applied Energy*. 190, p. 902-910 9 p.

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**Overheating in English dwellings: comparing modelled and monitored large-scale datasets**

Symonds, P., Taylor, J., Mavrogianni, A., Davies, M., Shrubsole, C., Hamilton, I. & Chalabi, Z., 17 Feb 2017, In : Building Research and Information. 45, 1-2, p. 195-208 14 p.

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

**The corrosion rate in reinforced concrete facades exposed to outdoor environment**

Köliö, A., Pakkala, T. A., Hohti, H., Laukkanen, A., Lahdensivu, J., Mattila, J. & Pentti, M., Feb 2017, In : Materials and Structures. 50, 23

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**Designers' performance evaluation in construction projects**

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**Multicriteria selection in concept design of a divertor remote maintenance port in the EU DEMO reactor using an AHP participative approach**

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

**Instrumentation and fe analysis of a large-span culvert built under a railway, in Finland**

Asp, O. & Laaksonen, A., 3 Nov 2016, In : Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering. 26, 4, p. 357-364 8 p.

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Research output: Contribution to journal > Editorial > Scientific

**Consideration of energy consumption, energy costs, and space occupancy in Finnish daycare centres and school buildings**

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

**Stress relaxation in tempered glass caused by heat soak testing**

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

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Research output: Book/Report > Book > Professional

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

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

### **Effects of strain rate and confining pressure on the compressive behavior of Kuru granite**

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### **Energy saving in working hydraulics of long booms in heavy working vehicles**

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### **Mapping indoor overheating and air pollution risk modification across Great Britain: A modelling study**

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### **Pre-use phase LCA of a multi-story residential building: Can greenhouse gas emissions be used as a more general environmental performance indicator?**

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### **Koko Julkisivua peittävän lasijulkisivun vaikutus Etelä-Ruotsissa sijaitsevan rakennuksen energiatehokkuuteen**

Translated title of the contribution: : The impact of the added façade glazing on the building energy consumption in the southern Sweden

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**Raudoitteiden korroosionopeuden määrittäminen betonijulkisivussa korkean aikaresoluution säädätan avulla**

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**Uudessa COMBI-hankkeessa tutkitaan energiatehokkaan palvelurakentamisen haasteita ja ratkaisuja**

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#### **Cost optimal and nearly zero (nZEB) energy performance calculations for residential buildings with REHVA definition for nZEB national implementation**

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#### **Shear buckling and resistance of thin-walled steel plate at non-uniform elevated temperatures**

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### **Lähtökohtia tie- ja rataverkon peruspalvelutason määrittämiselle**

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