

### **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

### **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

### **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

### **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

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

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

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

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

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### **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.

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#### **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.

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#### **Remote diagnostics application software for remote handling equipment**

Alanen, J., Ruiz Morales, E., Muhammad, A., Saarinen, H. & Minkkinen, J., 2019, In : Fusion Engineering and Design.

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

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

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

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

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

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

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

**Investigating the kinetics and biofuel properties of *Alstonia congensis* 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**

Evchina, Y. & Martinez Lastra, J. L., 31 Mar 2018, In : *Automation in Construction*. 87, p. 106-116 11 p.

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

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

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

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

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

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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.

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

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

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

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

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

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

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**Energy saving and indoor climate effects of an added glazed facade to a brick wall building: Case study**

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**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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**Effects of added glazing on Balcony indoor temperatures: Field measurements**

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**Surrogate modeling for initial rotational stiffness of welded tubular joints**

Garifullin, M. R., Barabash, A. V., Naumova, E. A., Zhuvak, O. V., Jokinen, T. & Heinisuo, M., 2016, In : Magazine of Civil Engineering. 63, 3, p. 53-76 24 p.

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**Improving the thermal performance of concrete-sandwich envelopes in relation to the moisture behaviour of building structures in boreal conditions**

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**Airtightness of residential buildings in Finland**

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**Assessing uncertainty in housing stock infiltration rates and associated heat loss: English and UK case studies**

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**Impact of building usage and occupancy on energy consumption in Finnish daycare and school buildings**

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**Analysis of thermo-active pile structures and their performance under groundwater flow conditions**

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#### **Diverter remote handling for DEMO: Concept design and preliminary FMECA studies**

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#### **Role and nature of systemic innovations in construction and real estate sector**

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#### **Understanding fundamental and practical ingredients of construction project data management**

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#### **Measured energy consumption of educational buildings in a Finnish city**

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#### **The assessment of constructability: BIM cases**

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#### **Debonding and impact damage in stainless steel fibre metal laminates prior to metal fracture**

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#### **Experimental study on the behavior of wear resistant steels under high velocity single particle impacts**

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

#### **Evaluation of thermo-mechanical behaviour of composite energy piles during heating/cooling operations**

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#### **Commissioning for nearly zero-energy building projects**

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#### **Stretching risk management standards: Multi-organizational perspectives**

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#### **The impact of occupancy patterns, occupant-controlled ventilation and shading on indoor overheating risk in domestic environments**

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#### **The relative importance of input weather data for indoor overheating risk assessment in dwellings**

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**Using probabilistic sampling-based sensitivity analyses for indoor air quality modelling**

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**Passive wireless antenna sensor for strain and crack sensing - Electromagnetic modeling, simulation, and testing**

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**Implementation of a direct procedure for critical point computations using preconditioned iterative solvers**

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**Financial viability of energy-efficiency measures in a new detached house design in Finland**

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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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**Briefing: Initial findings from the urba project**

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**Precision refurbishment of buildings: A façade refurbishment case study**

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**Strategy formation in construction firms**

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

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**Urban social housing resilience to excess summer heat**

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### **Two models for hydraulic cylinders in flexible multibody simulations**

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### **Practical experiences from several moisture performance assessments**

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

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

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

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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 › Scientific › peer-review

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

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### **A slotted patch antenna for wireless strain sensing**

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Yi, X., Wu, T., Lantz, G., Cooper, J., Cho, C., Wang, Y., Tentzeris, M. M. & Leon, R. T., 2011, *Structural Health Monitoring 2011: Condition-Based Maintenance and Intelligent Structures - Proceedings of the 8th International Workshop on Structural Health Monitoring*. Vol. 1. p. 759-766 8 p.

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

### **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

### **Editorial to "The best papers from the 32nd International Symposium on Automation and Robotics in Construction and Mining (ISARC 2015)"**

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Research output: Contribution to journal > Editorial > Scientific

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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

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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.)

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

#### **Puukerrostalorakentamisen kosteudenhallinta**

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

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

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

#### **ÄKK-hankkeen suositukset tulevaisuuden ääneneristysmääräyksiä koskien**

Hongisto, V., Kylliäinen, M. & Hyönä, J., 22 Oct 2015, *Rakennusfysiikka 2015*. Tampere: Tampereen teknillinen yliopisto, rakennustekniikan laitos, rakennetekniikka, p. 561-566 6 p.

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

#### **Puuväli pohjien akustiset ominaisuudet**

Latvanne, P. & Kylliäinen, M., 22 Oct 2015, *Rakennusfysiikka 2015*. Tampereen teknillinen yliopisto, rakennustekniikan laitos, rakennetekniikka, p. 567-572 6 p.

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

#### **Menetelmä parvekelasien ääneneristävyyden mitoittamiseksi liikennemelualueilla**

Kovalainen, V. & Kylliäinen, M., 22 Oct 2015, *Rakennusfysiikka 2015*. Tampereen teknillinen yliopisto, rakennustekniikan laitos, rakennetekniikka, p. 617-622 6 p.

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

#### **Puurunkoisten tuuletettujen yläpohjien kosteustekninen toiminta**

Junttila, H., Laukkarinen, A. & Vinha, J., 22 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. 77-82 6 p. (Rakennustekniikan laitos. Rakennetekniikka. Seminaarijulkaisu; no. 4).

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

#### **Lasitetun parvekkeen lämpötilan ja lämpöhäviöiden laskenta**

Laukkarinen, A. & Hilliaho, K., 20 Oct 2015, *Rakennusfysiikka 2015. Uusimmat tutkimustulokset ja hyvät käytännön ratkaisut. 20.-22.10.2015, Tampere*. Vinha, J. & Ruuska, T. (eds.). Tampereen teknillinen yliopisto, rakennustekniikan laitos, rakennetekniikka, p. 181-186 6 p. (Rakennustekniikan laitos. Rakennetekniikka. Seminaarijulkaisu; no. 4).

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

#### **Raudoitteiden korroosionopeuden määrittäminen betonijulkisivussa korkean aikaresoluution säädätin avulla**

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

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

Vinha, J., Hedman, M., Sirén, K., Harsia, P., Pentti, M., Teriö, O., Heljo, J., Laukkarinen, A., Annila, P., Kaasalainen, H., Jokisalo, J. & Pihlajamaa, P., 20 Oct 2015, *Rakennusfysiikka 2015. Uusimmat tutkimustulokset ja hyvät käytännön ratkaisut. 20.-22.10.2015, Tampere..* Vinha, J. & Ruuska, T. (eds.). Tampereen teknillinen yliopisto, rakennustekniikan laitos, rakennetekniikka, p. 487-496 10 p. (Rakennustekniikan laitos. Rakennetekniikka. Seminaarijulkaisu; no. 4).

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

#### **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

Hilliaho, K., Nordquist, B. & Wallentén, P., 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. 509-516 8 p. (Rakennustekniikan laitos. Rakennetekniikka. Seminaarijulkaisu 4; no. 4).

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

#### **Acoustics of vanished 19th century concert halls in Helsinki**

Niemi, H., Kylliäinen, M., Jäppinen, J. & Lindqvist, M., Oct 2015, *9th International conference on Auditorium Acoustics 2015*. Institute of Acoustics, Vol. 37. p. 182-189 8 p.

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

#### **Auralization of vanished 19th century concert halls in Helsinki**

Niemi, H., Kylliäinen, M., Jäppinen, J. & Lindqvist, M., Oct 2015, *9th International Conference on Auditorium Acoustics 2015*. Institute of Acoustics, Vol. 37. p. 470-477 8 p.

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

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

Jokela, 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. 61-66

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

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

Jokela, 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. 55-60

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

#### **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

#### **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

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

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

#### **Huokoisten puukuitu- ja kipsilevytuulensuojalevyjen homeutumisherkkyydet**

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

### **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

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

Tuominen, E., Raunima, T., Vinha, J. & Sekki, P., 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. 103-110

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

### **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

### **Puuelementtien välisen sauman tiivistys kumitiivisteellä**

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

### **Pyöräväylien tiedot ja laatutaso**

Laitinen, K., Mattila, K., Metsäpuro, P. & Nykänen, L., 2015, 2015 ed. Helsinki: Liikennevirasto. 72 p.

Research output: Book/Report › Commissioned report › Professional

### **WIN-WINTER - Tie- ja katuverkon talvihoidon tutkimusohjelma. Esiselvitys: Raportti tuloksista**

Karhula, K., Pöllänen, M., Mäntynen, J., Rauhamäki, H., Leppäniemi, M. & Luukkonen, T., 2015, Tampereen teknillinen yliopisto. Liikenteen tutkimuskeskus Verne. 15 p.

Research output: Book/Report › Commissioned report › Professional

### **WIN-WINTER - Nordic winter road maintenance research program. Preliminary study: Project report**

Karhula, K., Pöllänen, M., Mäntynen, J., Rauhamäki, H., Leppäniemi, M. & Luukkonen, T., 2015, Tampere University of Technology. 15 p.

Research output: Book/Report › Commissioned report › Professional

### **ÄKK Loppuraportti: rakennusten ääniolosuhteiden käyttäjälähtöinen kehittäminen**

Hongisto, V. & Kylliäinen, M., 2015, Helsinki: Finnish Institute of Occupational Health. 40 p.

Research output: Book/Report › Commissioned report › Professional

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

Translated title of the contribution: : Basis for defining the basic service level of road and rail network  
Mäntynen, J., Pöllänen, M., Eskelinen, H., Lehtola, I., Perrels, A. & Johanna, K., 1 Dec 2002, Helsinki: Liikenne- ja viestintäministeriö. 134 p. (Liikenne- ja viestintäministeriön julkaisuja; no. 48/2002)

Research output: Book/Report › Commissioned report › Professional

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

Pakkala, T., Lahdensivu, J., Köliö, A. & Annala, P., 2018, Vaasa: Suomen Betoniyhdistys r.y. (BY Tekniset ohjeet ; no. 70)

Research output: Book/Report › Book › Professional

### **Eriste- ja levyrappaus 2016, by 57**

Lahdensivu, J., Annala, P. & Pikkuvirta, J., Jun 2016, Helsinki: Suomen Betoniyhdistys r.y. 145 p. (BY. Tekniset ohjeet; no. 57)

Research output: Book/Report › Book › Professional

**Tuulettuvat julkisivut 2016, by 64**

Annala, P., Lahdensivu, J., Lemberg, A-M., Pikkuvirta, J. & Pakkala, T., Apr 2016, Helsinki: Suomen Betoniyhdistys r.y. 121 p.

Research output: Book/Report › Book › Professional

**Liikennetekniikan perusteet: Opetusmoniste**

Mäntynen, J., Kallberg, H., Kalenoja, H., Rauhamäki, H., Pöllänen, M. M., Luukkonen, T. & Karhula, K., 2012, Tampere: Tampereen teknillinen yliopisto. Liikenteen tutkimuskeskus Verne. 216 p.

Research output: Book/Report › Book › Professional

**Tuulettuvien yläpohjien lämpö- ja kosteustekninen toiminta nykyisessä ja tulevaisuuden ilmastossa**

Laukkarinen, A., Oct 2015, Tampereen teknillinen yliopisto, rakennustekniikan laitos, rakennetekniikka. 107 p.

Research output: Book/Report › Master's Thesis › Scientific

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

Pakkala, T., Lemberg, A-M. & Lahdensivu, J., Jun 2016, p. 53. 1 p.

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