

**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

**Airtightness of residential buildings in Finland**

Vinha, J., Manelius, E., Korpi, M., Salminen, K., Kurnitski, J., Kiviste, M. & Laukkarinen, A., 1 Nov 2015, In : Building and Environment. 93, P2, p. 128-140 13 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

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

Gashti, E. H. N., Malaska, M. & Kujala, K., 11 Aug 2015, In : Energy and Buildings. 105, p. 1-8 8 p.

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

**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.

Research output: Contribution to journal › Article › 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.

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

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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

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

Krokfors, K., Ilmonen, M., Kangasoja, J., Lehtonen, H., Mälkki, M., Mäntysalo, R., Norvasuo, M., Nupponen, T. & Puustinen, S., Mar 2011, In : PROCEEDINGS OF THE ICE: URBAN DESIGN AND PLANNING. 164, 1, p. 15-17 3 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

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

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

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

Garifullin, M., Bronzova, M. K., Heinisuo, M., Mela, K. & Pajunen, S., 2018, In : Magazine of Civil Engineering. 80, 4, p. 81-94 14 p.

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

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

Kantola, M. & Saari, A., 1 Jul 2014, In : Construction Innovation: Information, Process, Management. 14, 3, p. 370-382 13 p.

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

#### **Computational design concept analysis: A Nordic comparison of four apartment buildings**

Saari, A., 2008, In : STRUCTURAL SURVEY. 26, 1, p. 29-37 9 p.

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

Laukkarinen, A., Kero, P. & Vinha, J., 1 Sep 2018, In : Journal of Building Engineering. 19, p. 592-601 10 p.

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

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

Sekki, T., Andelin, M., Airaksinen, M. & Saari, A., 1 Oct 2016, In : Energy and Buildings. 129, p. 199-206 8 p.

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

Keinänen, M. & Kähkönen, K., 2018, In : In\_bo: Ricerche e progetti per il territorio, la città e l'architettura. Construction Management. 9, 13, p. 208-217 10 p.

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

Kurnitski, J., Saari, A., Kalamees, T., Vuolle, M., Niemelä, J. & Tark, T., Nov 2011, In : Energy and Buildings. 43, 11, p. 3279-3288 10 p.

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

Pärnänen, T., Kanerva, M., Sarlin, E. & Saarela, O., 2015, In : Composite Structures. 119, p. 777-786 10 p.

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#### **Designers' performance evaluation in construction projects**

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

Carfora, D., Di Gironimo, G., Järvenpää, J., Huhtala, K., Määttä, T. & Siuko, M., 9 Jul 2015, In : Fusion Engineering and Design. 98-99, p. 1437-1441 5 p.

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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.

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

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

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

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

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

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

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

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

Immonen, P., Ponomarev, P., Åman, R., Ahola, V., Uusi-Heikkilä, J., Laurila, L., Handroos, H., Niemelä, M., Pyrhönen, J. & Huhtala, K., 1 May 2016, In : Automation in Construction. 65, p. 125-132 8 p.

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

Hassani Nezhad Gashti, E., Malaska, M. & Kujala, K., 15 Sep 2014, In : Engineering Structures. 75, p. 363-373 11 p.

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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

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

Saari, A., Kalamees, T., Jokisalo, J., Michelsson, R., Alanne, K. & Kurnitski, J., Apr 2012, In : Applied Energy. 92, p. 76-83 8 p.

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

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**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.

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

Sekki, T., Airaksinen, M. & Saari, A., 18 Aug 2015, In : Energy and Buildings. 105, p. 247-257 11 p.

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

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

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

Kouhia, R., Tüma, M., Mäkinen, J., Fedoroff, A. & Marjamäki, H., Oct 2012, In : Computers & Structures. 108-109, p. 110-117 8 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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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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**Initial in-plane rotational stiffness of welded RHS T joints with axial force in main member**

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

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

Taylor, J., Davies, M., Mavrogianni, A., Shrubsole, C., Hamilton, I., Das, P., Jones, B., Oikonomou, E. & Biddulph, P., 1 Apr 2016, In : Building and Environment. 99, p. 1-12 12 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

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

Sekki, T., Airaksinen, M. & Saari, A., 1 Jan 2015, In : Energy and Buildings. 87, p. 105-115 11 p.  
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**Modeling of hygrothermal behavior for green facade's concrete wall exposed to nordic climate using artificial intelligence and global sensitivity analysis**

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

Pajunen, S., Hautala, J. & Heinisuo, M., 2019, In : Magazine of Civil Engineering. 86, 2, p. 20-29 10 p.  
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**Moment-rotation behavior of welded tubular high strength steel T joint**

Havula, J., Garifullin, M., Heinisuo, M., Mela, K. & Pajunen, S., 1 Oct 2018, In : Engineering Structures. 172, p. 523-537 15 p.  
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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**

Carfora, D., Gironimo, G. D., Esposito, G., Huhtala, K., Määttä, T., Mäkinen, H., Micciché, G. & Mozzillo, R., 15 Nov 2016, In : Fusion Engineering and Design. 112, p. 324-331 8 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.

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

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

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#### **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

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

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#### **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.

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

Saari, A., 2008, In : STRUCTURAL SURVEY. 26, 2, p. 108-119 12 p.

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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?**

Heinonen, J., Säynäjoki, A., Junnonen, J. M., Pöyry, A. & Junnila, S., 1 Jan 2016, In : Building and Environment. 95, p. 116-125 10 p.

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#### **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.

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#### **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.

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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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#### **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.

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

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#### **Strategy formation in construction firms**

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

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

Lehtiranta, L. & Junnonen, J. M., 1 Jan 2014, In : BUILT ENVIRONMENT PROJECT AND ASSET MANAGEMENT. 4, 2, p. 128-145 18 p.

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

Doddapaneni, T. R. K. C., Praveenkumar, R., Tolvanen, H., Rintala, J. & Kontinen, J., 2018, In : Applied Energy. 213, p. 272-284 13 p.

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

Tauriainen, M. K., Puttonen, J. A. & Saari, A. J., 1 Jan 2015, In : Journal of Information Technology in Construction. 20, p. 51-67 17 p.

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

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

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#### **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

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

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

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

Mavrogianni, A., Davies, M., Taylor, J., Chalabi, Z., Biddulph, P., Oikonomou, E., Das, P. & Jones, B., 1 Jan 2014, In : Building and Environment. 78, p. 183-198 16 p.

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

Taylor, J., Davies, M., Mavrogianni, A., Chalabi, Z., Biddulph, P., Oikonomou, E., Das, P. & Jones, B., 1 Jan 2014, In : Building and Environment. 76, p. 81-91 11 p.

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### **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.

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

Kähkönen, K. & Rannisto, J., 5 Jan 2015, In : Construction Innovation: Information, Process, Management. 15, 1, p. 7-23 17 p.

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

Das, P., Shrubsole, C., Jones, B., Hamilton, I., Chalabi, Z., Davies, M., Mavrogianni, A. & Taylor, J., 1 Jan 2014, In : Building and Environment. 78, p. 171-182 12 p.

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

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

Sariola, R., 2018, In : Construction Innovation. 18, 2

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### **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.

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### **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.

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### **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.

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### **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.

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

Tuominen, E., Tuominen, O., Vainio, M., Ruuska, T. & Vinha, J., 2019, In : MATEC Web of Conferences. 282, 7 p., 02065.

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

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)"**

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

Research output: Contribution to journal › Editorial › Scientific

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

Annala, P. J., Lahdensivu, J., Suonketo, J. & Pentti, M., 2016, *Recent developments in building diagnosis techniques*. Delgado, J. (ed.). Porto, Portugal: Springer Science+Business Media, Vol. 5. p. 1-20 20 p. (Building Pathology and Rehabilitation; vol. 5).

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

Ylinen, A., Mäkinen, J. & Kouhia, R., 2016, *Computational Methods for Solids and Fluids: Multiscale Analysis, Probability Aspects and Model Reduction*. Springer, p. 463-493 31 p. (Computational Methods in Applied Sciences; vol. 41).

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### **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.

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### **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.

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

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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

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

### **Kosteusvaurioiden vakavuus kuntien rakennuksissa**

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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

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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

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

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

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

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

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

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