

Air tightness of apartment buildings in Estonia

Kalamees, Targo; Arumägi, Endrik; Tähiste, M. Proceedings of the 4th International Symposium on Building and Ductwork Air tightness (BUILDAIR) / 30th AIVC conference Trends in High Performance Buildings and the Role of Ventilation : Berlin, Germany, October 1-2, 2009 2009 / ? p

Airtightness, air exchange and energy performance in historic residential buildings with different structures

Eskola, Lari; Alev, Üllar; Arumägi, Endrik; Jokisalo, Juha; Donarelli, Anna; Sirén, Kai; Kalamees, Targo International journal of ventilation 2015 / p. 11-26 : ill <https://doi.org/10.1080/14733315.2015.11684066> [Journal metrics at Scopus](#) [Article at Scopus](#)

Analüüs uue puidust liginullenergiahoone kuluoptimaalsusest

Arumägi, Endrik Kõik ärikinnisvarast : [ajalehe Äripäev lisa] 2021 / Lk. 10 https://static-pdf.aripeev.ee/QddBW9e_Hq4I1zNz_G0UWVGUltE.pdf https://www.ester.ee/record=b5223461*est

Analysis of energy economic renovation for historic wooden apartment buildings in cold climates

Arumägi, Endrik; Kalamees, Targo Applied energy 2014 / p. 540-548 : ill <https://doi.org/10.1016/j.apenergy.2013.10.041> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The analysis of indoor hygrothermal loads based on measurements in multi-storey wooden apartment buildings

Kalamees, Targo; Arumägi, Endrik; Thalfeldt, Martin; Ilomets, Simo; Klõšeiko, Paul; Alev, Üllar Proceedings of the 5th International Building Physics Conference (IBPC) : Kyoto, Japan, May 28-31, 2012 2012 / p. 225-232 : ill

Comparative assessment of simple and detailed energy performance models for urban energy modelling based on digital twin and statistical typology database for the renovation of existing building stock

Hallik, Jaanus; Arumägi, Endrik; Pikas, Ergo; Kalamees, Targo Energy and buildings 2024 / art. 114775 <https://doi.org/10.1016/j.enbuild.2024.114775> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Comparison of thermal performance of mineral wool and reflective insulation on internally insulated log wall

Alev, Üllar; Kalamees, Targo; Arumägi, Endrik; Ilomets, Simo Proceedings of Healthy Buildings 2012 : Brisbane, Australia 8-12 July 2012 2012 / [6] p. : ill

Cost and energy reduction of a New nZEB wooden building

Arumägi, Endrik; Kalamees, Targo Energies 2020 / art. 3570, 16 p. : ill <https://doi.org/10.3390/en13143570> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Cost reduction of the new NZEB Wooden building – case study of the kindergarten in Estonia

Arumägi, Endrik; Kalamees, Targo E3S Web of Conferences : 12th Nordic Symposium on Building Physics (NSB 2020) : Tallinn, Estonia, September 6-9, 2020 2020 / art. 13002, 8 p. : ill <https://doi.org/10.1051/e3sconf/202017213002> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Cost-effective energy and indoor climate renovation of Estonian residential buildings

Kalamees, Targo; Kuusk, Kalle; Arumägi, Endrik; Alev, Üllar Cost-effective energy-efficient building retrofitting : materials, technologies, optimization and case studies 2017 / p. 405-454 : ill http://www.ester.ee/record=b4674305*est <https://doi.org/10.1016/B978-0-08-101128-7.00015-0>

Danish, Estonian and Finnish NZEB requirements comparison with European Commission recommendations for office buildings in Nordic and Oceanic climates

Simson, Raimo; Arumägi, Endrik; Thomsen, Kirsten Engelund; Wittchen, Kim Bjarne; Kurnitski, Jarek E3S Web Conferences : The 16th ROOMVENT Conference (ROOMVENT 2022) 2022 / art. 01017 <https://doi.org/10.1051/e3sconf/202235601017> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Dependence of measured specific air leakage rate (qE50) on envelope pressure differences and measurement position: A case study in an apartment building in winter conditions

Klõšeiko, Paul; Arumägi, Endrik; Hallik, Jaanus; Kalamees, Targo Journal of Physics: Conference Series 2021 / art. 012229, 3 p. : ill <https://doi.org/10.1088/1742-6596/2069/1/012229> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Design of indoor climate and energy efficiency of the medieval Episcopal Castle of Haapsalu museum

Tark, Teet; Kalamees, Targo; Rodin, Artem; Arumägi, Endrik; Napp, Margus Conference Report : The 3rd International Conference on Energy Efficiency in Historic Buildings 2018 / p. 318-236 : ill <http://eehb2018.com/wp-content/uploads/2018/09/Conference-Report-The-3rd-International-Conference-on-Energy-Efficiency-in-Historic-Buildings.pdf>

Design of the first net-zero energy buildings in Estonia

Arumägi, Endrik; Kalamees, Targo Science and technology for the built environment 2016 / p. 1039-1049 : ill <https://doi.org/10.1080/23744731.2016.1206793> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Eesti eluasemefondi puitkorterelamute ehitustehniline seisukord ning prognoositav eluiga : uuringu lõpparuanne

Kalamees, Targo; Arumägi, Endrik; Just, Alar; Kallavus, Urve; Mikli, Lauri; Thalfeldt, Marko; Klõšeiko, Paul; Agasild, Tõnis;

Liho, Eva; Haug, Priit; Tuurmann, Kristo; Liias, Roode; Õiger, Karl; Langeproon, Priit; Orro, Oliver; Välja, Leele; Suits, Maris; Kodi, Georg; Ilomets, Simo; Alev, Üllar; Kurik, Lembit 2011 http://www.ester.ee/record=b2720728*est

Eesti eluasemefondi suurpaneel-korterelamute ehitustehniline seisukord ning prognoositav eluiga : uuringu lõppraport
Kalamees, Targo; Õiger, Karl; Kõiv, Teet-Andrus; Liias, Roode; Kallavus, Urve; Mikli, Lauri; Lehtla, Andres; Kodi, Georg;
Luman, Andre; Arumägi, Endrik; Mironova, Jelena 2009 http://www.ester.ee/record=b2542472*est

Eesti eluasemefondi telliskorterelamute ehitustehniline seisukord ning prognoositav eluiga : uuringu lõpparuanne
Kalamees, Targo; Kõiv, Teet-Andrus; Liias, Roode; Õiger, Karl; Kallavus, Urve; Mikli, Lauri; Ilomets, Simo; Kuusk, Kalle;
Maivel, Mikk; Mikola, Alo; Klõšeiko, Paul; Agasild, Tõnis; Arumägi, Endrik; Liho, Eva; Ojang, Tanel; Tuisk, Tanel; Raado,
Lembi-Merike; Jõesaar, Tõnu 2010 http://www.ester.ee/record=b2665958*est

Energy and hygrothermal performance challenges in the renovation of a over 100-year-old wooden apartment building into a nearly zero-energy building

Evard, Anni; Arumägi, Endrik; Lomp, Siim; Kalamees, Targo 2nd International Conference on Moisture in Buildings 2023, 3-4 July 2023 2023 / 2 p <https://doi.org/10.14293/ICMB230053>

Energy efficient historic stone houses - a case study highlighting possibilities and risks

Eriksson, P.; Arumägi, Endrik; Donarelli, A.; Stahl, F.; Broström, Tor Proceedings of SB13 Munich : Implementing Sustainability - Barriers and Chances : book of full papers 2013 / p. 99-106

Energy performance of renovation alternatives of traditional rural houses in Estonia

Alev, Üllar; Arumägi, Endrik; Kalamees, Targo Proceedings of CLIMA 2013 : 11th REHVA World Congress and the 8th International Conference on Indoor Air Quality, Ventilation and Energy Conservation in Buildings, Prague 16th-19th June, 2013 2013 / [9] p. : ill

Energy performance, indoor air quality and comfort in new nearly zero energy day-care centres in northern climatic conditions

Kuusk, Kalle; Kaiser, Ahmed; Lolli, Nicola; Johansson, Jan; Kouvola, Tero Hasu; Gunnarshaug Lien, Anne; Arumägi, Endrik; Kalbe, Kristo; Hallik, Jaanus; Kurnitski, Jarek; Kalamees, Targo Journal of sustainable architecture and civil engineering 2019 / p. 7-16 <https://doi.org/10.5755/j01.sace.24.1.23228>

Field study of hygrothermal performance of log wall with internal thermal insulation

Arumägi, Endrik; Ilomets, Simo; Kalamees, Targo; Tuisk, Tanel XII International Conference on Durability of Building Materials and Components (XII DBMC), Porto, Portugal, April 12th-15th, 2011 2011 / p. 811-819 : ill
<https://www.irbnet.de/daten/iconda/CIB22427.pdf>

Heat loss characteristics of typology-based apartment building external walls for a digital twin-based renovation strategy tool

Ilste, Elisa; Lomp, Siim; Pikas, Ergo; Arumägi, Endrik; Hallik, Jaanus; Õiger, Karl; Kisel, Einari; Liiv, Innar; Kalamees, Targo Journal of Physics: Conference Series 2023 / 8 p <https://doi.org/10.1088/1742-6596/2654/1/012125> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Hoonete kuluoptimaalsete energiatõhususe miinimumtasemete analüüs [Võrguteavik]

Arumägi, Endrik; Simson, Raimo; Kuusk, Kalle; Kalamees, Targo; Kurnitski, Jarek 2017 https://www.ester.ee/record=b4762265*est

Hygrothermal performance of a massive stone wall with interior insulation : an in-situ study for developing a retrofit measure

Klõšeiko, Paul; Kalamees, Targo; Arumägi, Endrik; Kallavus, Urve Energy procedia 2015 / p. 195-200 : ill
<https://doi.org/10.1016/j.egypro.2015.11.139> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Hygrothermal performance of internally insulated brick wall in cold climate : a case study in a historical school building

Klõšeiko, Paul; Arumägi, Endrik; Kalamees, Targo Journal of building physics 2015 / p. 444-464 : ill
<https://doi.org/10.1177/1744259114532609> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Hygrothermal performance of internally insulated brick wall in cold climate : field measurement and model calibration

Klõšeiko, Paul; Arumägi, Endrik; Kalamees, Targo Contributions to Building Physics : proceedings of the 2nd Central European Symposium on Building Physics : 9-11 September 2013, Vienna, Austria 2013 / p. 185-192 : ill

Impact of linear thermal bridges on thermal transmittance of renovated apartment buildings

Ilomets, Simo; Kuusk, Kalle; Paap, Leena; Arumägi, Endrik; Kalamees, Targo Journal of civil engineering and management 2017 / p. 96-104 : ill <https://doi.org/10.3846/13923730.2014.976259> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Indoor climate analyzis of the old observatory in Tartu

Arumägi, Endrik; Kalamees, Targo; Õiger, Karl; Kallavus, Urve; Kurik, Lembit 9th International Conference & Exhibition Healthy

Indoor climate and energy performance in nearly zero energy day care centers and school buildings

Kaiser, Ahmed; **Kuusk, Kalle**; Heininen, Henrik; **Arumägi, Endrik**; **Kalamees, Targo**; Hasu, Tero; Lolli, Nicola; **Kurnitski, Jarek**
E3S Web of Conferences : CLIMA 2019 Congress, Bucharest, Romania, May 26-29, 2019 2019 / art. 02003 ; 9 p. : ill
<https://doi.org/10.1051/e3sconf/20191102003> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Indoor climate and energy performance of traditional stone houses on Gotland, Sweden

Arumägi, Endrik; **Kalamees, Targo**; Broström, Tor NSB 2014 : 10th Nordic Symposium on Building Physics, 15-19 June 2014, Lund, Sweden : full papers 2014 / p. 616-623 : ill

Indoor climate and humidity loads in old rural houses with different usage profiles

Alev, Üllar; **Kalamees, Targo**; **Arumägi, Endrik** Proceedings of the 9th Nordic Symposium on Building Physics (NSB 2011), 29 May- 2 June 2011, Tampere, Finland. Vol. 3 2011 / p. 1103-1110 : ill

Indoor climate conditions and hygrothermal loads in historic wooden apartment buildings in cold climates

Arumägi, Endrik; **Kalamees, Targo**; **Kallavus, Urve** Proceedings of the Estonian Academy of Sciences 2015 / p. 146-156 : ill
https://artiklid.elnet.ee/record=b2727447*est <https://doi.org/10.3176/proc.2015.2.03> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Indoor climate in a naturally ventilated unheated medieval church in Harju-Risti, Estonia

Arumägi, Endrik; **Kalamees, Targo**; Broström, Tor Proceedings of Clima2010 10th Rehva World Congress "Sustainable Energy Use in Buildings" : Antalya, 9-12.05.2010 2010 / [8] p

Indoor hygrothermal condition and user satisfaction in naturally ventilated historic houses in temperate humid continental climate around the Baltic Sea

Alev, Üllar; **Kalamees, Targo**; Eskola, Lari; **Arumägi, Endrik** Architectural science review 2016 / p. 53-67 : ill
<https://doi.org/10.1080/00038628.2015.1038980> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Indoor hygrothermal conditions in Estonian old multi-storey brick apartment buildings

Kalamees, Targo; **Ilomets, Simo**; **Arumägi, Endrik**; **Alev, Üllar**; **Kõiv, Teet-Andrus**; **Mikola, Alo**; **Kuusk, Kalle**; **Maivel, Mikk**
The 12th International Conference on Indoor Air Quality and Climate, June 5-10, 2011, Austin, Texas, USA 2011 / [6] p

Indoor temperature and humidity conditions in Estonian old multi-storey apartment buildings composed of prefabricated concrete elements

Kalamees, Targo; **Kõiv, Teet-Andrus**; **Arumägi, Endrik**; **Ilomets, Simo** Proceedings of Clima2010 10th Rehva World Congress "Sustainable Energy Use in Buildings" : Antalya, 9-12.05.2010 2010 / [8] p

The influence of indoor climate control on risk for damages in naturally ventilated historic churches in cold climate

Kalamees, Targo; **Väli, Alan**; **Kurik, Lembit**; **Napp, Margus**; **Arumägi, Endrik**; **Kallavus, Urve** International journal of architectural heritage : conservation, analysis, and restoration 2016 / p. 486-498 : ill <https://doi.org/10.1080/15583058.2014.1003623> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Integrated design of museum's indoor climate in medieval Episcopal Castle of Haapsalu

Napp, Margus; **Kalamees, Targo**; **Tark, Teet**; **Arumägi, Endrik** Energy procedia 2016 / p. 592-600 : ill
<https://doi.org/10.1016/j.egypro.2016.09.105> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Kuidas viia Eestis sujuvalt läbi renoveerimislaine?

Kisel, Einari; **Kalamees, Targo**; **Pikas, Ergo**; **Liiv, Innar**; **Arumägi, Endrik** Mente et Manu 2023 / lk. 40-41 : fot
https://www.ester.ee/record=b1242496*est

Low carbon emission renovation of historic residential buildings

Kertsmik, Kadri-Ann; **Arumägi, Endrik**; **Hallik, Jaanus**; **Kalamees, Targo** 5th International Conference Forum Wood Building Baltic : 26-28 February 2024, Tallinn, Estonia : proceedings 2024 / p. 206-207 : ill <https://digikogu.taltech.ee/et/Item/22318c67-e0ef-42f1-88c7-34c9d9677b17> https://www.ester.ee/record=b5668645*est

Low carbon emission renovation of historical residential buildings

Kertsmik, Kadri-Ann; **Arumägi, Endrik**; **Hallik, Jaanus**; **Kalamees, Targo** Energy reports 2024 / p. 3836-3847
<https://doi.org/10.1016/j.egyr.2024.03.030> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Maaelamute sisekliima, ehitusfüüsika ja energiasääst I : uuringu I etapi lõpparuanne

Kalamees, Targo; **Alev, Üllar**; **Arumägi, Endrik**; **Ilomets, Simo**; **Just, Alar**; **Kallavus, Urve** 2011
http://www.ester.ee/record=b2665966*est

Method for assessment of energy retrofit measures in milieu valuable buildings

Arumägi, Endrik; **Mändel, Maris**; **Kalamees, Targo** Energy procedia 2015 / p. 1027-1032 : ill

Moisture safety strategies for renovations of a roof with prefabricated additional insulation elements: A whole building heat, air, and moisture simulation approach

Kalamees, Targo; Kalbe, Kristo; Kodi, Georg-Mihkel; Pihelo, Peep; Simson, Raimo; Arumägi, Endrik Multiphysics and Multiscale Building Physics : Proceedings of the 9th International Building Physics Conference (IBPC 2024) ; Volume 1: Moisture and Materials 2025 / p. 262–269 https://doi.org/10.1007/978-981-97-8305-2_36

Nearly zero energy wooden buildings : day-care centres from NERO project

Kuusk, Kalle; Kaiser, Ahmed; Lolli, Nicola; Jan, Johansson; Hasu, Tero; Gunnarshaig Lien, Anne; Arumägi, Endrik; Kalbe, Kristo; Hallik, Jaanus; Kurnitski, Jarek; Kalamees, Targo Proceedings of the I Forum Wood Building Baltic, 2019 : [27.02-1.03.2019, Tallinn] 2019 / p. 54-55 : ill https://www.ester.ee/record=b5197207*est

Performance of interiorly insulated log wall : Experiences from Estonian cold climate conditions

Kalamees, Targo; Arumägi, Endrik; Alev, Üllar Conference Report : The 3rd International Conference on Energy Efficiency in Historic Buildings 2018 / p. 99-107 : ill <http://eehb2018.com/wp-content/uploads/2018/09/Conference-Report-The-3rd-International-Conference-on-Energy-Efficiency-in-Historic-Buildings.pdf>

Preservation of historic wooden buildings with traditional surface finishes

Liblik, Johanna; Arumägi, Endrik; Just, Alar; Küppers, Judith New Horizons in the Conservation of Wooden Built Heritage 21st IIVC Symposium, York 2018, 12 - 15 September 2018, York, UK 2019 / p. 150–158 . ill <https://static1.squarespace.com/static/5cad2053da50d37b4c2cfd70/t/5d06ee5635c9720001f32a5b/1560735355161/York+Proceedings+3.pdf>

Principles and practice of zero energy buildings in Estonia [Online resource]

Arumägi, Endrik; Kalamees, Targo Sustainable Built Environment : Transition Zero : conference publication of the Utrecht SBE16 Conference on 7-8 April 2016 2016 / p. 147-155 : ill <http://hu-conferenties.nl/getmedia.php?Media=sbe16/sbe16.pdf&Online=true>

Puidust liginullenergiahoone kuluoptimaalseks

Arumägi, Endrik Ehitaja 2021 / lk. 32-33 : ill https://www.ester.ee/record=b1072123*est

Quality and accuracy of digital twin models for the neighbourhood level building energy performance calculations

Parts, Egert-Ronald; Pikas, Ergo; Parts, Tuule Mall; Arumägi, Endrik; Liiv, Innar E3S Web of Conferences : 11th International Conference on Indoor Air Quality, Ventilation and Energy Conservation in Buildings, IAQVEC2023 2023 / art. 04021, 8 p. : ill <https://doi.org/10.1051/e3sconf/202339604021> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Quantification of building envelope heat losses on a district level for comparative renovation strategies assessment

Arumägi, Endrik; Hallik, Jaanus; Pikas, Ergo; Kalamees, Targo; Liiv, Innar; Kisel, Einari Journal of Physics: Conference Series 2023 / 10 p <https://doi.org/10.1088/1742-6596/2654/1/012003> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Redefining cost-optimal nZEB levels for new residential buildings

Simson, Raimo; Arumägi, Endrik; Kuusk, Kalle; Kurnitski, Jarek E3S Web of Conferences : CLIMA 2019 Congress, Bucharest, Romania, May 26-29, 2019 2019 / art. 03035, 7 p. : ill <https://doi.org/10.1051/e3sconf/201911103035> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Reliability of interior thermal insulation as a retrofit measure in historic wooden apartment buildings in cold climate

Arumägi, Endrik; Pihlak, Margus; Kalamees, Targo Energy procedia 2015 / p. 871-876 : ill <https://doi.org/10.1016/j.egypro.2015.11.010> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Renovation alternatives to improve energy performance of historic rural houses in the Baltic Sea region

Alev, Üllar; Eskola, Lari; Arumägi, Endrik; Kalamees, Targo Energy and buildings 2014 / p. 58-66 : ill <https://doi.org/10.1016/j.enbuild.2014.03.049> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Renovation of historic wooden apartment buildings

Arumägi, Endrik Liginullenergiahooned täna ja homme : artiklite kogumik 2015 / p. 139-144 : ill

Renovation of historic wooden apartment buildings = Ajalooliste puitkorterelamute renoveerimine

Arumägi, Endrik 2015 http://www.ester.ee/record=b4483126*est

Research demand of old apartment buildings in Estonia

Kalamees, Targo; Ilomets, Simo; Arumägi, Endrik; Kuusk, Kalle; Liias, Roode; Kõiv, Teet-Andrus; Öiger, Karl IEA Annex 55 (RAP-RETRO) : working meeting : Holzkirchen, Germany, 15-16 April, 2010 2010 / [8] p

Sisäolosuhteet ja ilmanvaihto historiallisissa rakennuksissa

Alev, Üllar; Eskola, Lari; Kalamees, Targo; Arumägi, Endrik Sisäilmastoseminaari 2015 : Messukeskus, Helsinki, 11.3.2015 2015 / s. 271-276 : ill

Technical condition of prefabricated concrete large panel apartment buildings in Estonia

Kalamees, Targo; Öiger, Karl; Kõiv, Teet-Andrus; Liias, Roode; Kallavus, Urve; Mikli, Lauri; Lehtla, Andres; Kodi, Georg; Arumägi, Endrik XII International Conference on Durability of Building Materials and Components : Porto, Portugal, April 12-15, 2011 : proceedings. II 2011 / p. 973-981 : ill

The analysis of indoor hygrothermal conditions in multi-storey wooden apartment buildings

Kalamees, Targo; Arumägi, Endrik; Ilomets, Simo IEA Annex 55 (RAP-RETRO), Working meeting, Porto, Portugal, 18-20 April 2011 / [17] p

The feasibility of zero-emission neighbourhood renovation of apartment buildings in a cold climate

Kertsmik Kadri-Ann; Kalamees, Targo; Arumägi, Endrik; Hallik, Jaanus Building and Environment 2025 / art. 113004

<https://doi.org/10.1016/j.buildenv.2025.113004>

Validation of a simulation model for hygrothermal performance of log wall with internal thermal insulation in cold climate

Arumägi, Endrik; Kalamees, Targo Proceedings of the 5th International Building Physics Conference (IBPC) : Kyoto, Japan, May 28-31, 2012 2012 / p. 345-352 : ill