

Air change efficiency of room ventilation units

Mikola, Alo; Rehand, Juhan; Kurnitski, Jarek E3S Web of Conferences : CLIMA 2019 Congress, Bucharest, Romania, May 26-29, 2019 / art. 01017, 8 p <https://doi.org/10.1051/e3sconf/201911101017> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Air leakages in air handling units with rotary heat exchanger : estimating extract air transfer to supply air flow

Simson, Raimo; Vösa, Karl-Villem; Kiil, Martin; Mikola, Alo; Kurnitski, Jarek Healthy Buildings America 2021, Honolulu, Hawaii, USA, January 18-20, 2022 : virtual format 2022 / 2 p. : ill https://hb2021-america.exordo.com/files/papers/309/final_draft/HB2021_AHU_air_leakages.pdf

Airtightness and ventilation of new Estonian apartments constructed 2001-2010

Paap, Leena; Mikola, Alo; Kõiv, Teet-Andrus; Kalamees, Targo Joint Conference 33rd AIVC Conference and 2nd TightVent Conference : Optimising Ventilative Cooling and Airtightness for [Nearly] Zero-Energy Buildings, IAQ and Comfort : Copenhagen, Denmark, 11–11 October 2012 : proceedings 2012 / p. 177-180 : ill <https://www.aivc.org/resource/airtightness-and-ventilation-new-estonian-apartments-constructed-2001-2010>

Building and ductwork airtightness in Estonia : national trends and requirements

Kalamees, Targo; Hallik, Jaanus; Mikola, Alo Ventilation challenges in a changing world : the 42nd AIVC, 10th Tightvent and 8th venticool Conference : proceedings 2022 / p. 640-641 https://www.aivc.org/sites/default/files/download/AIVC2022_Proceedings.pdf

Carbon dioxide levels in educational institutions

Hani, Allan; Kõiv, Teet-Andrus; Mikola, Alo Recent Researches in Energy & Environment : 6th IASME / WSEAS International Conference on Energy & Environment (EE '11), Cambridge, UK, February 23-25, 2011 / p. 359-364 : ill

Case-study analysis of concrete large-panel apartment building at pre- and post low-budget energy-renovation

Kuusk, Kalle; Kalamees, Targo; Link, Siim; Ilomets, Simo; Mikola, Alo Journal of civil engineering and management 2017 / p. 67-75 : ill <https://doi.org/10.3846/13923730.2014.975741> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Continuous automated ventilation heat recovery efficiency performance assessment using building monitoring system

Kull, Tuule Mall; Mikola, Alo; Tukia, Andres; Köse, Ahmet; Petlenkov, Eduard; Thalfeldt, Martin E3S Web Conference: Cold Climate HVAC and Energy 2021 / art. 10006, 10 p. : ill <https://doi.org/10.1051/e3sconf/202124610006> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Contributions to ventilation system demand response: a case study of an educational building

Maask, Vahur; Mikola, Alo; Korõtko, Tarmo; Rosin, Argo; Thalfeldt, Martin E3S Web Conference: Cold Climate HVAC and Energy 2021 / art. 11001, 6 p <https://doi.org/10.1051/e3sconf/202124611001> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

DHW design flow rates and consumption profiles in educational, office buildings and shopping centres

Kõiv, Teet-Andrus; Mikola, Alo; Toode, Alvar Smart grid and renewable energy 2013 / p. 287-296 : ill

Eesti eluasemefondi ehitustehniline seisukord - ajavahemikul 1990-2010 kasutusele võetud korterelamud : uuringu lõpparuanne

Kalamees, Targo; Ilomets, Simo; Liias, Roode; Raado, Lembi-Merike; Kuusk, Kalle; Maivel, Mikk; Ründva, Marko; Klõšeiko, Paul; Liho, Eva; Paap, Leena; Mikola, Alo; Seinre, Erkki; Lill, Irene; Soekov, Erki; Paadam, Katrin; Ojamäe, Liis; Kallavus, Urve; Mikli, Lauri; Kõiv, Teet-Andrus 2012 http://www.ester.ee/record=b2878060*est

Eesti eluasemefondi telliskorterelamute ehitustehniline seisukord ning prognoositav eluiga : uuringu lõpparuanne

Kalamees, Targo; Kõiv, Teet-Andrus; Liias, Roode; Öiger, 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

Effect of Infector's location and occupants' activity level on airborne spread in a gym – an experimental and CFD study

Ejaz, Muhammad Farhan; Kilpeläinen, Simo; Mikola, Alo; Kiil, Martin; Kurnitski, Jarek; Kosonen, Risto E3S Web of Conferences : Roomvent Conference 2024 / 5 p <https://invitepeople.com/public/events/fe41371a0b/pages/ed19d3ae89>

Energy efficiency and indoor climate of apartment and educational buildings in Estonia

Kõiv, Teet-Andrus; Maivel, Mikk; Mikola, Alo; Kuusk, Kalle Recent Researches in Energy, Environment, Devices, Systems, Communications and Computers : International Conference on Energy, Environment, Devices, Systems, Communications, Computers (EEDSCC'11) : Venice, Italy, March 8-10, 2011 / p. 191-196 : ill

Energy efficiency and indoor climate of apartment buildings in Estonia

Kõiv, Teet-Andrus; Mikola, Alo; Kuusk, Kalle International journal of energy science 2012 / p. 94-99 : ill

Exhaust air heat pump heat recovery system for apartment buildings

Kõiv, Teet-Andrus; Mikola, Alo; Kuusk, Kalle Lecture Notes in Information Technology. Vol 13, 2012 International Conference on

Finnish energy renovation subsidies in multifamily apartment buildings : Lessons learnt and best practices

Hajian, Hatef; Pyly, Petri; **Simson, Raimo**; Ahmed, Kaiser; Sankelo, Paula; **Mikola, Alo**; Kurnitski, Jarek Energy and buildings 2024 / art. 113986 <https://doi.org/10.1016/j.enbuild.2024.113986>

Gray box time variant clogging behaviour and pressure drop prediction of the air filter in the HVAC system

Alimohammadi, Hossein; Vassiljeva, Kristina; Petlenkov, Eduard; Thalfeldt, Martin; **Mikola, Alo**; Kull, Tuule Mall; Köse, Ahmet E3S Web Conference: Cold Climate HVAC and Energy 2021 2021 / art. 10002 <https://doi.org/10.1051/e3sconf/202124610002>
[Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Heat loss due to domestic hot water pipes

Hamburg, Anti; **Mikola, Alo**; Parts, Tuule Mall; Kalamees, Targo Energies 2021 / art. 6446 <https://doi.org/10.3390/en14206446>
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The impact of air pressure conditions on the performance of single room ventilation units in multi-story buildings

Mikola, Alo; **Simson, Raimo**; Kurnitski, Jarek Energies 2019 / art. 2633, 18 p. : ill <https://doi.org/10.3390/en12132633> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The impact of the technical requirements of the renovation grant on the ventilation and indoor air quality in apartment buildings

Mikola, Alo; **Hamburg, Anti**; Kuusk, Kalle; Kalamees, Targo; Voll, Hendrik; Kurnitski, Jarek Building and environment 2022 / art. 108698 <https://doi.org/10.1016/j.buildenv.2021.108698> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Indoor air quality in apartment buildings of Estonia

Mikola, Alo; **Kõiv, Teet-Andrus** Recent Researches in Environment, Energy Planning and Pollution : Proceedings of the 5th WSEAS International Conference on Renewable Energy Sources (RES'11). [...(EPESE'11), ... (WWA'11)] : Iasi, Romania, July 1-3, 2011 2011 / p. 13-17 : ill

Indoor climate and energy consumption in residential buildings

Kõiv, Teet-Andrus; Voll, Hendrik; Kuusk, Kalle; Mikola, Alo Selected topics on energy and development-environment-biomedicine 2009 : proceedings of the 3rd International Conference on Energy and Development-Environment-Biomedicine (EDEB 09) 2009 / p. 82-86

Indoor climate and energy consumption in residential buildings in Estonian climatic conditions

Kõiv, Teet-Andrus; Voll, Hendrik; **Mikola, Alo**; Kuusk, Kalle; Maivel, Mikk WSEAS transactions on environment and development 2010 / 4, p. 235-244 : ill

Indoor climate of classrooms with alternative ventilation systems

Mikola, Alo; Voll, Hendrik; **Kõiv, Teet-Andrus**; Rebane, Merje Recent Researches in Geography, Geology, Energy, Environment and Biomedicine : Proceedings of the 4th WSEAS International Conference on Engineering Mechanics, Structures, Engineering Geology (EMESEG '11) : Proceedings of the 2nd International Conference on Geography and Geology 2011 (WORLD-GEO '11) : Proceedings of the 5th International Conference on Energy and Development - Environment - Biomedicine 2011 (EDEB '11), Corfu Island, Greece, July 14-16, 2011 2011 / p. 423-428 : ill

Indoor climate problems in apartment and school buildings

Mikola, Alo; **Kõiv, Teet-Andrus** 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 / p. 1754-1764 : ill

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

Infection risk-based ventilation effectiveness assessment in cruise ship common spaces using tracer gas measurements

Mikola, Alo; Kiil, Martin; Vösa, Karl-Villem; Kurnitski, Jarek E3S Web of Conferences : Roomvent Conference 2024 2024 / 5 p <https://invitepeople.com/public/events/fe41371a0b/pages/ed19d3ae89>

Investigating airflow patterns near supply and exhaust vents of room-based ventilation unit using laser doppler anemometry

Simson, Raimo; Annus, Ivar; **Mikola, Alo**; **Kõiv, Teet-Andrus** European scientific journal 2014 / p. 227-236 : ill

Investigation of heat transfer between neighbouring apartments

Hamburg, Anti; Thalfeldt, Martin; **Kõiv, Teet-Andrus**; **Mikola, Alo** The 9th International Conference "Environmental Engineering" : 22-23 May 2014, Vilnius, Lithuania : selected papers 2014 / p. 1-6 : ill

Mis on tõhusam - renoveerida olemasolev ventilatsioon või paigaldada uus?

kinnisvarauudised.ee 2023 [Mis on tõhusam - renoveerida olemasolev ventilatsioon või paigaldada uus?](#)

Nearly zero energy office building without conventional heating

Thalfeldt, Martin; Kurnitski, Jarek; Mikola, Alo Estonian journal of engineering 2013 / p. 309-328 : ill

<https://doi.org/10.3176/eng.2013.4.06> [Article at Scopus](#)

Performance of ventilation in Estonian apartment buildings

Mikola, Alo; Kalamees, Targo; Kõiv, Teet-Andrus Energy procedia 2017 / p. 963-968 : ill <https://doi.org/10.1016/j.egypro.2017.09.681>

[Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Point source ventilation effectiveness of mixing ventilation solutions used in non-residential settings

Kiil, Martin; Mikola, Alo; Võsa, Karl-Villem; Simson, Raimo; Kurnitski, Jarek Proceedings, Indoor Air 2024 2024 / 8 p

https://www.isiaq.org/conference_proceedings.php

Post-COVID ventilation design : infection risk-based target ventilation rates and point source ventilation effectiveness

Kurnitski, Jarek; Kiil, Martin; Mikola, Alo; Võsa, Karl-Villem; Aganovic, Amar; Schild, Peter G.; Seppänen, Olli Energy and buildings 2023 / art. 113386 <https://doi.org/10.1016/j.enbuild.2023.113386> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Problems with using the exhaust air heat pump for renovation of ventilation systems in old apartment buildings

Mikola, Alo; Tennokese, Kaspar; Kõiv, Teet-Andrus Danish journal of engineering and applied sciences 2015 / p. 44-55 : ill

<https://doi.org/10.6084/M9.FIGSHARE.1510922>

Quality of ventilation systems in residential buildings : status and perspectives in Estonia

Mikola, Alo; Kõiv, Teet-Andrus; Kalamees, Targo International workshop : securing the quality of ventilation systems in residential buildings : status and perspectives : proceedings : Brussels, Belgium, 18-19 March 2013 2013 / [10] p. : ill

Rakvere Smart House Competence Centre nZEB office building without conventional heating

Thalfeldt, Martin; Mikola, Alo Liginullenergiahooned täna ja homme : artiklite kogumik 2015 / p. 97-103 : ill

Realisation of energy performance targets of an old apartment building renovated to nZEB

Hamburg, Anti; Kuusk, Kalle; Mikola, Alo; Kalamees, Targo Energy 2020 / art. 116874, 10 p. : ill

<https://doi.org/10.1016/j.energy.2019.116874> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Renovation of ventilation in apartment buildings - Estonian experience

Mikola, Alo; Kuusk, Kalle; Hamburg, Anti; Kurnitski, Jarek; Kalamees, Targo The REHVA European HVAC journal 2019 / p. 20-

26 : ill <https://www.rehva.eu/rehva-journal/chapter/renovation-of-ventilation-in-apartment-buildings-estonian-experience>

Renovation results of Finnish single-family renovation subsidies : oil boiler replacement with heat pumps

Sankelo, Paula; Ahmed, Kaiser; Mikola, Alo; Kurnitski, Jarek Energies 2022 / art. 7620 <https://doi.org/10.3390/en15207620> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Respiratory infection risk based ventilation and room conditioning design method with year-round thermal comfort control in modern office buildings

Kiil, Martin; Simson, Raimo; Võsa, Karl-Villem; Mikola, Alo; Thalfeldt, Martin; Kurnitski, Jarek E3S Web Conference: The 16th ROOMVENT Conference 2022 / art. 05008 <https://doi.org/10.1051/e3sconf/202235605008> [Conference proceedings at Scopus](#) [Article at Scopus](#)

The application of the ground source and air-to-water heat pumps in cold climate areas

Tennokese, Kaspar; Kõiv, Teet-Andrus; Mikola, Alo; Vares, Villu Smart grid and renewable energy 2013 / p. 473-481 : ill

The efficiency analysis of the exhaust air heat pump system

Mikola, Alo; Kõiv, Teet-Andrus Engineering 2014 / p. 1037-1045 : ill

The indoor climate and energy consumption of educational buildings

Kõiv, Teet-Andrus; Mikola, Alo; Karro, Ulli-Kaisa WSEAS transactions on environment and development 2014 / p. 366-373 : ill

<https://www.wseas.org/multimedia/journals/environment/2014/a205715-204.pdf> [Journal metrics at Scopus](#) [Article at Scopus](#)

The indoor climate and students' learning performance in schools

Kõiv, Teet-Andrus; Mikola, Alo; Saar, Aider; Silm, G. Management of natural resources, sustainable development and ecological hazards IV 2015 / p. 287-294 : ill <https://doi.org/10.2495/RAV150241> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

The indoor climate and ventilation of elderly homes

Kõiv, Teet-Andrus; Voll, Hendrik; Mikola, Alo; Lukjanov, Dmitri Recent Researches in Environment, Energy Planning and

Pollution : Proceedings of the 5th WSEAS International Conference on Renewable Energy Sources (RES'11). [...(EPESE'11), ... (WWA'11)] : Iasi, Romania, July 1-3, 2011 2011 / p. 229-232 : ill

The influence of indoor climate on students' learning performance

Kõiv, Teet-Andrus; Mikola, Alo; Saar, Aider Recent advances in environmental science and biomedicine : proceedings of the 8th International Conference on Energy and Development, Environment and Biomedicine (EDEB '14) : Lisbon, Portugal, October 30-November 1, 2014 2014 / p. 61-68 : ill

The new dimensioning method of the district heating network

Kõiv, Teet-Andrus; Mikola, Alo; Palmiste, Ülar Applied thermal engineering 2014 / p. 78-82 : ill

<https://doi.org/10.1016/j.applthermaleng.2014.05.087> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The performance of the ventilation in Estonian retrofitted apartment buildings

Mikola, Alo; Kõiv, Teet-Andrus; Tennokese, Kaspar CLIMA 2016 - proceedings of the 12th REHVA World Congress. Vol. 5 2016 / [10] p. : ill http://vbn.aau.dk/files/233760270/paper_641.pdf

The usage of CO2 tracer gas methods for ventilation performance evaluation in apartment buildings [Online resource]

Mikola, Alo; Kõiv, Teet-Andrus; Rehand, Juhan; Voll, Hendrik The 10th International Conference Environmental Engineering : 10th ICEE selected papers : April 27-28, 2017, Vilnius, Lithuania 2017 / p. 1-8 : ill <https://doi.org/10.3846/enviro.2017.267>

The use of heat pump in the renovation of residential buildings

Kõiv, Teet-Andrus; Mikola, Alo Proceedings of the ICENS : Waseda University, Tokyo, Japan, 22-24 July 2015 2015 / p. 193-203

Thermal comfort and draught assessment in a modern open office building in Tallinn

Kiil, Martin; Mikola, Alo; Thalfeldt, Martin; Kurnitski, Jarek E3S Web of Conferences : CLIMA 2019 Congress, Bucharest, Romania, May 26-29, 2019 2019 / art. 02013, 7 p. : ill <https://doi.org/10.1051/e3sconf/201911102013> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Using portable air cleaners to restrict airborne transmission in an open plan office – a field measurement and CFD study

Kilpeläinen, Simo; Ejaz, Muhammad F.; **Mikola, Alo; Kiil, Martin; Kurnitski, Jarek**; Kosonen, Risto E3S Web of Conferences : Roomvent Conference 2024 2024 / 6 p <https://invitepeople.com/public/events/fe41371a0b/pages/ed19d3ae89>

Vanad ventilatsioonisüsteemid teevad kortermajade renoveerimise keerukaks

novaator.err.ee 2023 [Vanad ventilatsioonisüsteemid teevad kortermajade renoveerimise keerukaks https://www.estonianscience.com/record=b5505006*est](https://www.estonianscience.com/record=b5505006*est) <https://digikogu.taltech.ee/et/Item/55e3f98e-1a11-498e-98c5-3068a231e2d5>

Variation of indoor/outdoor particulates in Tallinn, Estonia – the role of ventilation, heating systems and life-style

Orru, Hans; **Mikola, Alo; Upan, Madis; Kõiv, Teet-Andrus** Journal of environment pollution and human health 2014 / p. 52-57 : ill

Ventilating of old apartment buildings

Kõiv, Teet-Andrus; Mikola, Alo Recent advances in Energy and Environment Integrated Systems : proceedings of the 2nd International Conference on Integrated Systems and Management for Energy, Development, Environment and Health (ISMAEDELH '13) : Morioka City, Iwate, Japan, April 23-25, 2013 2013 / p. 11-16

Ventilating with room units in educational institutions

Hani, Allan; Kõiv, Teet-Andrus; Mikola, Alo International journal of energy and environment 2011 / p. 629-636 : ill

Ventilation effectiveness and incomplete mixing in air distribution design for airborne transmission

Kiil, Martin; Mikola, Alo; Võsa, Karl-Villem; Simson, Raimo; Kurnitski, Jarek Building and environment 2025 / art. 112207 <https://doi.org/10.1016/j.buildenv.2024.112207>

Ventilation effectiveness in classroom infection risk control

Kiil, Martin; Valgma, Ingo; Võsa, Karl-Villem; Simson, Raimo; Mikola, Alo; Tark, Teet; Kurnitski, Jarek E3S Web of Conferences : 11th International Conference on Indoor Air Quality, Ventilation and Energy Conservation in Buildings, IAQVEC2023 2023 / art. 01043, 8 p <https://doi.org/10.1051/e3sconf/202339601043> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Ventilation effectiveness measurements and CFD simulations in classrooms for infection risk control

Mikola, Alo; Kiil, Martin; Võsa, Karl-Villem; Ejaz, Muhammad Farhan; Kilpeläinen, Simo; Kosonen, Risto; Kurnitski, Jarek E3S Web of Conferences : Roomvent Conference 2024 2024 / 6 p <https://invitepeople.com/public/events/fe41371a0b/pages/ed19d3ae89>

Ventilation of apartment buildings and nursing homes

Mikola, Alo; Kõiv, Teet-Andrus; Voll, Hendrik Smart grid and renewable energy 2014 / p. 107-119 : ill

Ventilation performance in deep renovation of multifamily apartment buildings = Terviklikult renoveeritud korterelamute ventilatsioonisüsteemide toimivus

Mikola, Alo 2022 <https://doi.org/10.23658/taltech.38/2022> <https://digikogu.taltech.ee/et/Item/55e3f98e-1a11-498e-98c5-3068a231e2d5>

https://www.ester.ee/record=b5505006*est

Ventilation solutions in renovated apartment buildings in cold climate conditions

Kõiv, Teet-Andrus; Mikola, Alo; Simson, Raimo Engineering 2015 / p. 129-139 : ill

Ventilation Strategies for Deep Energy Renovations of High-Rise Apartment Buildings : Energy Efficiency and Implementation Challenges

Hamburg, Anti; Palmiste, Ülar; Mikola, Alo; Kalamees, Targo Energies 2025 / art. 2785 <https://doi.org/10.3390/en18112785>
<https://www.mdpi.com/1996-1073/18/11/2785>

Ventilatsiooni renoveerimise valikutest

Mikola, Alo Ehitaja 2023 / lk. 40 : ill https://www.ester.ee/record=b1072123*est https://artiklid.elnet.ee/record=b2903184*est

Ventilatsioonisüsteemid renoveeritud korterelamutes

Mikola, Alo Ehitaja 2022 / lk. 36-40 : ill https://www.ester.ee/record=b1072123*est https://artiklid.elnet.ee/record=b2899309*est

Результаты реконструкции многоквартирных домов в Эстонии по схеме KredEx. Вентиляционные системы

Kurnitski, Jarek; Mikola, Alo abok.ru 2022 / 1 с. : ил https://www.abok.ru/for_spec/articles.php?nid=8035

Старые системы вентиляции усложняют реновацию многоквартирных домов

Dotšar, Iļja rus.err.ee 2023 [Старые системы вентиляции усложняют реновацию многоквартирных домов](https://digikogu.taltech.ee/et/Item/55e3f98e-1a11-498e-98c5-3068a231e2d5)
<https://digikogu.taltech.ee/et/Item/55e3f98e-1a11-498e-98c5-3068a231e2d5> https://www.ester.ee/record=b5505006*est