

Analyzing energy flexibility by demand response in a Finnish district heated apartment building

Ju, Yuchen; Jokisalo, Juha; Kosonen, Risto; Kauppi, Ville; Janßen, Philipp E3S Web Conference: Cold Climate HVAC and Energy 2021 2021 / art. 09006, 7 p. : ill <https://doi.org/10.1051/e3sconf/202124609006> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#)

Analyzing power and energy flexibilities by demand response in district heated buildings in Finland and Germany

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Basic design principles of nZEB buildings in scoping and conceptual design

Voll, Hendrik; Kosonen, Risto; Kurnitski, Jarek Cost optimal and nearly zero-energy buildings (nZEB) : definitions, calculation principles and case studies 2013 / p. 103-134 : ill https://doi.org/10.1007/978-1-4471-5610-9_7 [Article collection metrics at Scopus](#) [Article at Scopus](#)

Benefits through space heating and thermal storage with demand response control for a district-heated office building

Ju, Yuchen; Hiltunen, Pauli; Jokisalo, Juha; Kosonen, Risto; Syri, Sanna Buildings 2023 / art. 2670, 23 p. : ill <https://doi.org/10.3390/buildings13102670> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Cost savings and CO2 emissions reduction potential in the German district heating system with demand response

Ju, Yuchen; Lindholm, Joakim; Verbeck, Moritz; Jokisalo, Juha; Kosonen, Risto; Janßen, Philipp; Li, Yantong; Schäfers, Hans; Nord, Natasa Science and Technology for the Built Environment 2022 / p. 255 - 274 <https://doi.org/10.1080/23744731.2021.2018875> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Cost-effective heating control approaches by demand response and peak demand limiting in an educational office building with district heating

Yuan, Xiaolei; Vand, Behrang; Martin, Kristian; Jokisalo, Juha; Liang, Yumin; Kosonen, Risto; Pan, Yiqun Buildings 2023 / art. 332, 18 p. : ill <https://doi.org/10.3390/buildings13020332> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Cost-optimal renovation solutions for detached rural houses in Severe cold regions of China

Hu, Xinyi; Jokisalo, Juha; Kosonen, Risto; Lehtonen, Matti; Shao, Teng Buildings 2023 / art. 771, 19 p. : ill <https://doi.org/10.3390/buildings13030771> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Coupling of the electricity and district heat generation sectors with building stock energy retrofits as a measure to reduce carbon emissions

Jokinen, Ilkka; Lund, Andreas; Hirvonen, Janne; Jokisalo, Juha; Kosonen, Risto; Lehtonen, Matti Energy conversion and management 2022 / art. 115961, 17 p. : ill <https://doi.org/10.1016/j.enconman.2022.115961> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Critical discussion on the challenges of integrating heat pumps in hydronic systems in existing buildings

Cholewa, Tomasz; Bejan, Andrei-Stelian; Miara, Marek; Schauer, Christian; Kosonen, Risto; Borodinecs, Anatolijs; Bogdanovičs, Raimonds; Amanowicz, Łukasz; Vering, Christian; Siuta-Olcha, Alicja; Kurnitski, Jarek Energy 2025 / art. 136158 <https://doi.org/10.1016/j.energy.2025.136158>

Demand response in the German district heating system

Ju, Yuchen; Lindholm, Joakim; Verbeck, Moritz; Jokisalo, Juha; Kosonen, Risto; Janßen, Philipp; Li, Yantong; Schäfers, Hans; Nord, Natasa The 8th Conference of the Sustainable Solutions for Energy and Environment EENVIRO 2022 16/10/2022 - 21/10/2022 Bucharest, Romania 2023 / art. 012016 <https://doi.org/10.1088/1755-1315/1185/1/012016> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Demand response potential of district heating in a swimming hall in Finland

Yuan, Xiaolei; Lindroos, Leo; Jokisalo, Juha; Kosonen, Risto; Pan, Yiqun; Jin, Hui Energy and buildings 2021 / art. 111149, 12 p. : ill <https://doi.org/10.1016/j.enbuild.2021.111149> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Design of high-performing hybrid ground source heat pump (GSHP) system in an educational building

Xue, Tianchen; Jokisalo, Juha; Kosonen, Risto; Ju, Yuchen Buildings 2023 / art. 1825, 26 p. : ill <https://doi.org/10.3390/buildings13071825> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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 2024 / 5 p <https://invitepeople.com/public/events/fe41371a0b/pages/ed19d3ae89>

Effect of the urban microenvironment on the indoor air temperature of the residential building stock in the Helsinki region

Kravchenko, Iliia; Farahani, Azin Velashjerdi; Kosonen, Risto; Kilpeläinen, Simo; Saranko, Olli; Fortelius, Carl Building and Environment 2023 / art. 110971 <https://doi.org/10.1016/j.buildenv.2023.110971> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effects of night ventilation on indoor air quality in educational buildings—a field study

Lestinen, Sami; Kilpeläinen, Simo; **Kosonen, Risto**; Valkonen, Maria; **Jokisalo, Juha**; Pasanen, Pertti Applied sciences 2021 / art. 4056, 20 p. : ill <https://doi.org/10.3390/app11094056> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Emissions and power demand in optimal energy retrofit scenarios of the Finnish building stock by 2050

Hirvonen, Janne; Heljo, Juhani; **Jokisalo, Juha**; Kurvinen, Antti; Saari, Arto; Niemelä, Tuomo; Sankelo, Paula; **Kosonen, Risto** Sustainable cities and society 2021 / art. 102896, 22 p. : ill <https://doi.org/10.1016/j.scs.2021.102896> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Energy, cost and emission saving potential of demand response and peak power limiting in the German district heating system

Suhonen, Janne; Lindholm, Joakim; Verbeck, Moritz; **Ju, Yuchen**; **Jokisalo, Juha**; **Kosonen, Risto**; Janßen, Philipp; Schäfers, Hans International journal of sustainable energy 2023 / p. 1092-1127 : ill <https://doi.org/10.1080/14786451.2023.2251601> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Experimental evaluation of IDA ICE and COMSOL models for an asymmetric borehole thermal energy storage field in Nordic climate

Xue, Tianchen; **Jokisalo, Juha**; **Kosonen, Risto**; Vuolle, Mika; Marongiu, Federica; Vallin, Sami; Leppäharju, Nina; Arola, Teppo Applied thermal engineering 2022 / art. 119261, 15 p. : ill <https://doi.org/10.1016/j.applthermaleng.2022.119261> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Experimental investigation of air distribution and ventilation efficiency in an ice rink arena

Toomla, Sander; Lestinen, Sami; Kilpeläinen, Simo; Leppä, Lauri; Kosonen, Risto; **Kurnitski, Jarek** International journal of ventilation 2019 / p. 187-203 : ill <https://doi.org/10.1080/14733315.2018.1437881> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Heating energy-saving potentials in HVAC system of swimming halls : a review

Yuan, Xiaolei; Chen, Zhisen; Liang, Yumin; Pan, Yiqun; **Jokisalo, Juha**; **Kosonen, Risto** Building and environment 2021 / art. 108189, 18 p. : ill <https://doi.org/10.1016/j.buildenv.2021.108189> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Indoor temperature conditions and energy demand of a Finnish detached house in a changing climate

Farahani, Azin Velashjerdi; **Jokisalo, Juha**; Korhonen, Natalia; **Kosonen, Risto** E3S Web Conference: Cold Climate HVAC and Energy 2021 2021 / art. 15001, 7 p. : ill <https://doi.org/10.1051/e3sconf/202124615001> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Numerical modeling and validation of a large-scale borehole thermal energy storage system in Finland

Xue, Tianchen; **Jokisalo, Juha**; **Kosonen, Risto**; Vuolle, Mika; Marongiu, Federica; Vallin, Sami; Leppäharju, Nina; Arola, Teppo E3S Web of Conferences : BuildSim Nordic 2022 2022 / art. 06003 <https://doi.org/10.1051/e3sconf/202236206003> [Conference proceeding at Scopus](#) [Article at Scopus](#)

Overheating assessment for apartments during average and hot summers in the Nordic climate

Farahani, Azin Velashjerdi; Kravchenko, Iliia; **Jokisalo, Juha**; Korhonen, Natalia; Jylhä, Kirsti; **Kosonen, Risto** Building research and information 2024 / p. 273-291 : ill <https://doi.org/10.1080/09613218.2023.2253338> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Overheating risk and energy demand of nordic old and new apartment buildings during average and extreme weather conditions under a changing climate

Farahani, Azin Velashjerdi; **Jokisalo, Juha**; Korhonen, Natalia; Jylhä, Kirsti; Ruosteenoja, Kimmo; **Kosonen, Risto** Applied sciences 2021 / art. 3972, 25 p. : ill <https://doi.org/10.3390/app11093972> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Peak shaving of a district heated office building with short-term thermal energy storage in Finland

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Performance assessment of ventilative and radiant cooling systems in office buildings during extreme weather conditions under a changing climate

Farahani, Azin Velashjerdi; **Jokisalo, Juha**; Korhonen, Natalia; Jylhä, Kirsti; **Kosonen, Risto**; Lestinen, Sami Journal of building engineering 2022 / art. 104951, 22 p. : ill <https://doi.org/10.1016/j.jobe.2022.104951> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Performance of an earth-air heat exchanger (EAHE) in a heat recovery ventilation for residential buildings in severe cold regions

Hu, Xinyi; **Jokisalo, Juha**; **Kosonen, Risto**; Lehtonen, Matti BuildSim Nordic 2024 : Espoo, Finland, June 9-11, 2024 2024 / 12 p.

<https://doi.org/10.1051/e3sconf/202456205002> Conference proceedings at Scopus Article at Scopus Article at WOS

Performance of modern passive stack ventilation in a retrofitted Nordic apartment building

Kravchenko, Iliia; **Kosonen, Risto**; **Jokisalo, Juha**; Kilpeläinen, Simo Buildings 2022 / art. 96, 27 p. : ill

<https://doi.org/10.3390/buildings12020096> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Risk of microbial growth in ventilation ductwork located in the humid and cold conditions

Kravchenko, Iliia; Pasanen, Pertti; Lestinen, Sami; Kilpeläinen, Simo; **Kosonen, Risto** Buildings 2023 / art. 1683, 14 p. : ill

<https://doi.org/10.3390/buildings13071683> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Seasonal storage of residential exhaust air and sewage waste heat

Hirvonen, Janne; **Jokisalo, Juha**; **Kosonen, Risto** E3S Web Conference: Cold Climate HVAC and Energy 2021 2021 / art. 06009,

7 p <https://doi.org/10.1051/e3sconf/202124606009> Conference proceedings at Scopus Article at Scopus Article at WOS

Simulation analysis of Finnish residential buildings' resilience to hot summers under a changing climate

Farahani, Azin Velashjerdi; **Jokisalo, Juha**; Korhonen, Natalia; Jylhä, Kirsti; **Kosonen, Risto** Journal of building engineering 2024 /

art. 108348, 20 p. : ill <https://doi.org/10.1016/j.jobe.2023.108348> Journal metrics at Scopus Article at Scopus Journal metrics at WOS

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Simulation of demand response on buildings and district heating production

Ju, Yuchen; Lindholm, Joakim; Verbeck, Moritz; **Jokisalo, Juha**; **Kosonen, Risto**; JanäÃ Â Enc, Philipp; Li, Yantong; Schäfers,

Hans; Nord, Natasa E3S Web of Conferences : BuildSim Nordic 2022 2022 / art. 13002 <https://doi.org/10.1051/e3sconf/202236213002>

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Simulation of modern passive stack ventilation in a retrofitted Nordic apartment building

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14003 <https://doi.org/10.1051/e3sconf/202236214003> Conference proceeding at Scopus Article at Scopus

Socio-economic impacts of large-scale deep energy retrofits in Finnish apartment buildings

Hirvonen, Janne; Saari, Arto; **Jokisalo, Juha**; Kosonen, Risto Journal of cleaner production 2022 / art. 133187, 19 p. : ill

<https://doi.org/10.1016/j.jclepro.2022.133187> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

The impact of energy renovation on continuously and intermittently heated residential buildings in Southern Europe

Wang, Yangmin; Hirvonen, Janne; Qu, Ke; **Jokisalo, Juha**; **Kosonen, Risto** Buildings 2022 / art. 1316, 33 p. : ill

<https://doi.org/10.3390/buildings12091316> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

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>