

# Risto Kosonen

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

123  
papers

1,872  
citations

21  
h-index

39  
g-index

133  
ext. papers

2,396  
ext. citations

4.4  
avg, IF

5.42  
L-index

#	Paper	IF	Citations
123	Performance of Modern Passive Stack Ventilation in a Retrofitted Nordic Apartment Building. <i>Buildings</i> , <b>2022</b> , 12, 96	3.2	2
122	A comparative field study of occupants' thermal exposure in non-heating and decentralized heating environments. <i>Building and Environment</i> , <b>2022</b> , 207, 108501	6.5	1
121	Scalable Room Occupancy Prediction with Deep Transfer Learning Using Indoor Climate Sensor. <i>Energies</i> , <b>2022</b> , 15, 2078	3.1	1
120	Operational Challenges of Modern Demand-Control Ventilation Systems: A Field Study. <i>Buildings</i> , <b>2022</b> , 12, 378	3.2	1
119	Individually controlled localized chilled beam with background radiant cooling system: Human subject testing. <i>Building and Environment</i> , <b>2022</b> , 218, 109124	6.5	0
118	A Comprehensive Evaluation Method for Air-Conditioning System Plants Based on Building Performance Simulation and Experiment Information. <i>Buildings</i> , <b>2021</b> , 11, 522	3.2	0
117	Infection probability under different air distribution patterns. <i>Building and Environment</i> , <b>2021</b> , 207, 108565	6.5	2
116	Experimental study of five different VAV air terminal devices under variable heat gain conditions in simulated office and meeting rooms. <i>Building and Environment</i> , <b>2021</b> , 209, 108641	6.5	0
115	Performance Analysis of the Demand-Based Ventilation in a Nordic Apartment Building. <i>Applied Sciences (Switzerland)</i> , <b>2021</b> , 11, 176	2.6	2
114	Different Approaches for Evaluation and Modeling of the Effective Thermal Resistance of Groundwater-Filled Boreholes. <i>Energies</i> , <b>2021</b> , 14, 6908	3.1	0
113	A Novel Data Management Methodology and Case Study for Monitoring and Performance Analysis of Large-Scale Ground Source Heat Pump (GSHP) and Borehole Thermal Energy Storage (BTES) System. <i>Energies</i> , <b>2021</b> , 14, 1523	3.1	3
112	Effects of Night Ventilation on Indoor Air Quality in Educational Buildings: A Field Study. <i>Applied Sciences (Switzerland)</i> , <b>2021</b> , 11, 4056	2.6	0
111	Overheating Risk and Energy Demand of Nordic Old and New Apartment Buildings during Average and Extreme Weather Conditions under a Changing Climate. <i>Applied Sciences (Switzerland)</i> , <b>2021</b> , 11, 3972	2.6	4
110	Phase change cooling in data centers: A review. <i>Energy and Buildings</i> , <b>2021</b> , 236, 110764	7	13
109	Human response to thermal environment and perceived air quality in an office with individually controlled convective and radiant cooling systems. <i>Building and Environment</i> , <b>2021</b> , 195, 107736	6.5	4
108	An occupant-centric air-conditioning system for occupant thermal preference recognition control in personal micro-environment. <i>Building and Environment</i> , <b>2021</b> , 196, 107749	6.5	6
107	Emissions and power demand in optimal energy retrofit scenarios of the Finnish building stock by 2050. <i>Sustainable Cities and Society</i> , <b>2021</b> , 70, 102896	10.1	10

106	Thermal environment and ventilation efficiency in a simulated office room with personalized micro-environment and fully mixed ventilation systems. <i>Building and Environment</i> , <b>2021</b> , 188, 107445	6.5	8
105	The comparison of design airflow rates with dynamic and steady-state displacement models in varied dynamic conditions. <i>Building Simulation</i> , <b>2021</b> , 14, 1201-1219	3.9	1
104	Demand response of district heating using model predictive control to prevent the draught risk of cold window in an office building. <i>Journal of Building Engineering</i> , <b>2021</b> , 33, 101855	5.2	12
103	Seasonal storage of residential exhaust air and sewage waste heat. <i>E3S Web of Conferences</i> , <b>2021</b> , 246, 06009	0.5	0
102	Study on waste heat recoveries and energy saving in combined energy system of ice and swimming halls in Finland. <i>Energy and Buildings</i> , <b>2021</b> , 231, 110620	7	1
101	Analyzing energy flexibility by demand response in a Finnish district heated apartment building. <i>E3S Web of Conferences</i> , <b>2021</b> , 246, 09006	0.5	1
100	Individual thermal comfort prediction using classification tree model based on physiological parameters and thermal history in winter. <i>Building Simulation</i> , <b>2021</b> , 14, 1651-1665	3.9	5
99	Demand response potential of district heating in a swimming hall in Finland. <i>Energy and Buildings</i> , <b>2021</b> , 248, 111149	7	3
98	Heating energy-saving potentials in HVAC system of swimming halls: A review. <i>Building and Environment</i> , <b>2021</b> , 205, 108189	6.5	2
97	Experimental study on thermal environment in a simulated classroom with different air distribution methods. <i>Journal of Building Engineering</i> , <b>2021</b> , 43, 103025	5.2	1
96	Human response to thermal environment and perceived air quality in an office room with individually controlled convective and radiant cooling systems. <i>E3S Web of Conferences</i> , <b>2021</b> , 246, 15002 <sup>0.5</sup>		
95	Impact of different mechanical ventilation strategies for night purging on indoor air quality in public buildings. <i>E3S Web of Conferences</i> , <b>2021</b> , 246, 11003	0.5	0
94	Comparison of the effects of symmetric and asymmetric heat load on indoor air quality and local thermal discomfort with diffuse ceiling ventilation. <i>International Journal of Ventilation</i> , <b>2020</b> , 1-16	1.1	1
93	Carbon Emission Reduction Potential in the Finnish Energy System Due to Power and Heat Sector Coupling with Different Renovation Scenarios of Housing Stock. <i>Processes</i> , <b>2020</b> , 8, 1368	2.9	1
92	An experimental study of the influence of a moving person on airflow characteristics and thermal conditions with diffuse ceiling ventilation. <i>Indoor and Built Environment</i> , <b>2020</b> , 29, 860-880	1.8	5
91	Experimental comparison of local low velocity unit combined with radiant panel and diffuse ceiling ventilation systems. <i>Indoor and Built Environment</i> , <b>2020</b> , 29, 895-914	1.8	10
90	Modelling aerosol transport and virus exposure with numerical simulations in relation to SARS-CoV-2 transmission by inhalation indoors. <i>Safety Science</i> , <b>2020</b> , 130, 104866	5.8	193
89	Effect of long-term thermal history on physiological acclimatization and prediction of thermal sensation in typical winter conditions. <i>Building and Environment</i> , <b>2020</b> , 179, 106936	6.5	9

88	The Effect of Deep Energy Retrofit on The Hourly Power Demand of Finnish Detached Houses. <i>Energies</i> , <b>2020</b> , 13, 1773	3.1	6
87	A Transient Two-dimensional CFD Evaluation of Indoor Thermal Comfort with an Intermittently-operated Radiant Floor Heating System in an Office Building. <i>International Journal of Architectural Engineering Technology</i> , <b>2020</b> , 7, 62-87	0.3	4
86	Improvement in airflow and temperature distribution with an in-rack UFAD system at a high-density data center. <i>Building and Environment</i> , <b>2020</b> , 168, 106495	6.5	12
85	Experimental comparison of thermal conditions in office rooms: Diffuse ceiling ventilation, chilled beam system, and chilled ceiling combined with mixing ventilation. <i>Science and Technology for the Built Environment</i> , <b>2020</b> , 26, 631-642	1.8	3
84	A method and analysis of aquifer thermal energy storage (ATES) system for district heating and cooling: A case study in Finland. <i>Sustainable Cities and Society</i> , <b>2020</b> , 53, 101977	10.1	14
83	Demand response potential of district heating and ventilation in an educational office building. <i>Science and Technology for the Built Environment</i> , <b>2020</b> , 26, 304-319	1.8	16
82	Evaluation and modification of the weighting formulas for mean skin temperature of human body in winter conditions. <i>Energy and Buildings</i> , <b>2020</b> , 229, 110390	7	9
81	Aquifer Thermal Energy Storage (ATES) for District Heating and Cooling: A Novel Modeling Approach Applied in a Case Study of a Finnish Urban District. <i>Energies</i> , <b>2020</b> , 13, 2478	3.1	6
80	Dynamic performance of displacement ventilation in a lecture hall. <i>International Journal of Ventilation</i> , <b>2020</b> , 1-11	1.1	2
79	Waste Incineration Heat and Seasonal Thermal Energy Storage for Promoting Economically Optimal Net-Zero Energy Districts in Finland. <i>Buildings</i> , <b>2020</b> , 10, 205	3.2	4
78	Research on the thermal performance of rack-level composite baffle diversion system for data centre. <i>Energy Efficiency</i> , <b>2020</b> , 13, 1245-1262	3	0
77	Room air conditioning <b>2020</b> , 371-415		
76	EU Emission Targets of 2050: Costs and CO2 Emissions Comparison of Three Different Solar and Heat Pump-Based Community-Level District Heating Systems in Nordic Conditions. <i>Energies</i> , <b>2020</b> , 13, 4167	3.1	11
75	Demand Response Control of Space Heating in Three Different Building Types in Finland and Germany. <i>Energies</i> , <b>2020</b> , 13, 6296	3.1	2
74	From Electricity and Water Consumption Data to Information on Office Occupancy: A Supervised and Unsupervised Data Mining Approach. <i>Applied Sciences (Switzerland)</i> , <b>2020</b> , 10, 9089	2.6	1
73	Emission Reduction Potential of Different Types of Finnish Buildings through Energy Retrofits. <i>Buildings</i> , <b>2020</b> , 10, 234	3.2	4
72	Modelling of room air temperature profile with displacement ventilation. <i>International Journal of Ventilation</i> , <b>2020</b> , 19, 112-126	1.1	5
71	Design and validation of an airflow management system in data center with tilted server placement. <i>Applied Thermal Engineering</i> , <b>2020</b> , 164, 114444	5.8	11

70	A review of total volume environment and individually controlled micro-environment. <i>E3S Web of Conferences</i> , <b>2019</b> , 111, 02002	0.5	
69	Thermal adaptation of the elderly during summer in a hot humid area: Psychological, behavioral, and physiological responses. <i>Energy and Buildings</i> , <b>2019</b> , 203, 109450	7	32
68	Effect of apartment building energy renovation on hourly power demand. <i>International Journal of Sustainable Energy</i> , <b>2019</b> , 38, 918-936	2.7	5
67	Hood performance and capture efficiency of kitchens: A review. <i>Building and Environment</i> , <b>2019</b> , 161, 106221	6.5	27
66	Individual temperature control on demand response in a district heated office building in Finland. <i>Energy</i> , <b>2019</b> , 180, 946-954	7.9	9
65	The Impact of Optimal Demand Response Control and Thermal Energy Storage on a District Heating System. <i>Energies</i> , <b>2019</b> , 12, 1678	3.1	21
64	Indoor airflow interactions with symmetrical and asymmetrical heat load distributions under diffuse ceiling ventilation. <i>Science and Technology for the Built Environment</i> , <b>2019</b> , 25, 716-731	1.8	5
63	Experimental and numerical investigation of an airflow management system in data center with lower-side terminal baffles for servers. <i>Building and Environment</i> , <b>2019</b> , 155, 308-319	6.5	22
62	Airflow uniformity optimization for modular data center based on the constructal T-shaped underfloor air ducts. <i>Applied Thermal Engineering</i> , <b>2019</b> , 155, 489-500	5.8	12
61	Computational comparison of a novel decentralized photovoltaic district heating system against three optimized solar district systems. <i>Energy Conversion and Management</i> , <b>2019</b> , 191, 39-54	10.6	14
60	Demand response events in district heating: Results from field tests in a university building. <i>Sustainable Cities and Society</i> , <b>2019</b> , 47, 101481	10.1	14
59	Dynamic modeling of liquid-desiccant regenerator based on a state-space method. <i>Applied Energy</i> , <b>2019</b> , 240, 744-753	10.7	7
58	A cost-optimal solar thermal system for apartment buildings with district heating in a cold climate. <i>International Journal of Sustainable Energy</i> , <b>2019</b> , 38, 141-162	2.7	8
57	A review of advanced air distribution methods - theory, practice, limitations and solutions. <i>Energy and Buildings</i> , <b>2019</b> , 202, 109359	7	73
56	Optimization of emission reducing energy retrofits in Finnish apartment buildings. <i>E3S Web of Conferences</i> , <b>2019</b> , 111, 03002	0.5	2
55	Demand response of space heating using model predictive control in an educational office building. <i>E3S Web of Conferences</i> , <b>2019</b> , 111, 03067	0.5	
54	Dynamic design model of displacement ventilation. <i>E3S Web of Conferences</i> , <b>2019</b> , 111, 04049	0.5	1
53	Cost optimal energy performance renovation measures in a municipal service building in a cold climate. <i>E3S Web of Conferences</i> , <b>2019</b> , 111, 03022	0.5	4

52	Airflow characteristics under planar opposed ventilation jets in a controlled indoor environment. <i>E3S Web of Conferences</i> , <b>2019</b> , 111, 01029	0.5	1
51	Influence of installation of displacement ventilation diffusers above occupied zone on the vertical temperature gradient in simulated office rooms. <i>E3S Web of Conferences</i> , <b>2019</b> , 111, 02012	0.5	
50	Ventilation and environmental control of underground spaces: a short review. <i>E3S Web of Conferences</i> , <b>2019</b> , 111, 01039	0.5	2
49	Basis to Calculate Exhaust Airflow Rate <b>2019</b> , 191-235		
48	Design of Kitchen Ventilation <b>2019</b> , 237-252		
47	High-Performance Kitchen Ventilation <b>2019</b> , 253-329		
46	Towards the EU Emission Targets of 2050: Cost-Effective Emission Reduction in Finnish Detached Houses. <i>Energies</i> , <b>2019</b> , 12, 4395	3.1	18
45	Prediction of thermal sensation using low-cost infrared array sensors monitoring system. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2019</b> , 609, 032002	0.4	1
44	Towards the EU emissions targets of 2050: optimal energy renovation measures of Finnish apartment buildings. <i>International Journal of Sustainable Energy</i> , <b>2019</b> , 38, 649-672	2.7	38
43	Actimetry for Estimating Occupant Activity Levels in Buildings: A Step Toward Optimal and Energy-Efficient Indoor Conditioning. <i>IEEE Consumer Electronics Magazine</i> , <b>2019</b> , 8, 67-71	3.2	5
42	Capture efficiency and thermal comfort in Chinese residential kitchen with push-pull ventilation system in winter-a field study. <i>Building and Environment</i> , <b>2019</b> , 149, 182-195	6.5	28
41	Experimental investigation of air distribution and ventilation efficiency in an ice rink arena. <i>International Journal of Ventilation</i> , <b>2019</b> , 18, 187-203	1.1	10
40	Experimental study on airflow characteristics with asymmetrical heat load distribution and low-momentum diffuse ceiling ventilation. <i>Building and Environment</i> , <b>2018</b> , 134, 168-180	6.5	19
39	Computational and experimental performance analysis of a novel method for heating of domestic hot water with a ground source heat pump system. <i>Energy and Buildings</i> , <b>2018</b> , 161, 22-40	7	10
38	Flow characteristics in occupied zone [An experimental study with symmetrically located thermal plumes and low-momentum diffuse ceiling air distribution. <i>Building and Environment</i> , <b>2018</b> , 128, 77-88	6.5	22
37	The Effect of Demand Response on Perceived Thermal Comfort in a District Heated Office Building <b>2018</b> ,		1
36	Cost-effectiveness of energy performance renovation measures in Finnish brick apartment buildings. <i>Energy and Buildings</i> , <b>2017</b> , 137, 60-75	7	59
35	Energy performance and environmental impact analysis of cost-optimal renovation solutions of large panel apartment buildings in Finland. <i>Sustainable Cities and Society</i> , <b>2017</b> , 32, 9-30	10.1	41

34	The effects of mixing air distribution and heat load arrangement on the performance of ceiling radiant panels under cooling mode of operation. <i>Science and Technology for the Built Environment</i> , <b>2017</b> , 23, 1090-1104	1.8	5
33	Cost-optimal renovation solutions to maximize environmental performance, indoor thermal conditions and productivity of office buildings in cold climate. <i>Sustainable Cities and Society</i> , <b>2017</b> , 32, 417-434	10.1	19
32	The effect of free cooling and demand-based ventilation on energy consumption of self-regulating and traditional chilled beam systems in cold climate. <i>Indoor and Built Environment</i> , <b>2017</b> , 26, 256-271	1.8	6
31	Thermal environment in a simulated double office room with convective and radiant cooling systems. <i>Building and Environment</i> , <b>2017</b> , 123, 88-100	6.5	17
30	Chilled Beams and Radiant Ceiling Systems <b>2017</b> , 151-166		3
29	Full-scale test and CFD-simulation of radiant panel integrated with exposed chilled beam in heating mode. <i>Building Simulation</i> , <b>2017</b> , 10, 75-85	3.9	8
28	Methods to Reduce Stack Effect and Improve Energy Efficiency in a Nordic High Rise Residential Building. <i>Procedia Engineering</i> , <b>2017</b> , 205, 2311-2317		8
27	The effect of typical buoyant flow elements and heat load combinations on room air temperature profile with displacement ventilation. <i>Building and Environment</i> , <b>2016</b> , 108, 207-219	6.5	17
26	Thermal environment in simulated offices with convective and radiant cooling systems under cooling (summer) mode of operation. <i>Building and Environment</i> , <b>2016</b> , 100, 82-91	6.5	38
25	The use of displacement and zoning ventilation in a multipurpose arena. <i>International Journal of Ventilation</i> , <b>2016</b> , 15, 151-166	1.1	2
24	Cost-optimal energy performance renovation measures of educational buildings in cold climate. <i>Applied Energy</i> , <b>2016</b> , 183, 1005-1020	10.7	55
23	A review of the performance of different ventilation and airflow distribution systems in buildings. <i>Building and Environment</i> , <b>2014</b> , 73, 171-186	6.5	251
22	A Flexibility Chilled Beam System in Hot and Humid Climate. <i>Lecture Notes in Electrical Engineering</i> , <b>2014</b> , 227-233	0.2	
21	Experimental study of the effect of turbulence intensities on the maximum velocity decay of an attached plane jet. <i>Energy and Buildings</i> , <b>2013</b> , 65, 127-136	7	16
20	Basic Design Principles of nZEB Buildings in Scoping and Conceptual Design. <i>Green Energy and Technology</i> , <b>2013</b> , 103-134	0.6	
19	A Continuous and Proactive Process to Enhance Well-being Indoors <b>2011</b> , 353-370		3
18	Perceived IEQ Conditions: Why the Actual Percentage of Dissatisfied Persons is Higher than Standards Indicate? <b>2011</b> , 75-88		6
17	Solving Indoor Environmental Problems: What Can Be Found Out through Individual Measurements? <b>2011</b> , 439-452		



16	Air distribution in office environment with asymmetric workstation layout using chilled beams. <i>Building and Environment</i> , <b>2010</b> , 45, 1923-1931	6.5	35
15	Impact of heat load location and strength on air flow pattern with a passive chilled beam system. <i>Energy and Buildings</i> , <b>2010</b> , 42, 34-42	7	30
14	Local thermal sensation and comfort study in a field environment chamber served by displacement ventilation system in the tropics. <i>Building and Environment</i> , <b>2007</b> , 42, 525-533	6.5	50
13	Thermal effect of temperature gradient in a field environment chamber served by displacement ventilation system in the tropics. <i>Building and Environment</i> , <b>2007</b> , 42, 516-524	6.5	14
12	The effect of supply air systems on the efficiency of a ventilated ceiling. <i>Building and Environment</i> , <b>2007</b> , 42, 1613-1623	6.5	19
11	Local Discomfort Caused by Draft Perception in a Space Served by Displacement Ventilation System in the Tropics. <i>Indoor and Built Environment</i> , <b>2006</b> , 15, 225-233	1.8	12
10	A study of perceived air quality and sick building syndrome in a field environment chamber served by displacement ventilation system in the tropics. <i>Building and Environment</i> , <b>2006</b> , 41, 1530-1539	6.5	14
9	Assessment of thermal environment using a thermal manikin in a field environment chamber served by displacement ventilation system. <i>Building and Environment</i> , <b>2006</b> , 41, 1661-1670	6.5	26
8	Thermal plumes of kitchen appliances: Idle mode. <i>Energy and Buildings</i> , <b>2006</b> , 38, 1130-1139	7	14
7	Thermal plumes of kitchen appliances: Cooking mode. <i>Energy and Buildings</i> , <b>2006</b> , 38, 1141-1148	7	17
6	A feasibility study of a ventilated beam system in the hot and humid climate: a case-study approach. <i>Building and Environment</i> , <b>2005</b> , 40, 1164-1173	6.5	24
5	The effect of perceived indoor air quality on productivity loss. <i>Energy and Buildings</i> , <b>2004</b> , 36, 981-986	7	96
4	Assessment of productivity loss in air-conditioned buildings using PMV index. <i>Energy and Buildings</i> , <b>2004</b> , 36, 987-993	7	130
3	The Influence of a Capture Jet on the Efficiency of a Ventilated Ceiling in a Commercial Kitchen. <i>International Journal of Ventilation</i> , <b>2003</b> , 1, 189-199	1.1	11
2	Analyzing power and energy flexibilities by demand response in district heated buildings in Finland and Germany. <i>Science and Technology for the Built Environment</i> , 1-21	1.8	0
1	Airflow management and energy saving potentials at a high-density data center with stepped-like server placement. <i>International Journal of Green Energy</i> , 1-14	3	0