Risto Kosonen

List of Publications by Citations

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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	A review of the performance of different ventilation and airflow distribution systems in buildings. *Building and Environment*, **2014**, 73, 171-186	6.5	251
122	Modelling aerosol transport and virus exposure with numerical simulations in relation to SARS-CoV-2 transmission by inhalation indoors. *Safety Science*, **2020**, 130, 104866	5.8	193
121	Assessment of productivity loss in air-conditioned buildings using PMV index. *Energy and Buildings*, **2004**, 36, 987-993	7	130
120	The effect of perceived indoor air quality on productivity loss. *Energy and Buildings*, **2004**, 36, 981-986	7	96
119	A review of advanced air distribution methods - theory, practice, limitations and solutions. *Energy and Buildings*, **2019**, 202, 109359	7	73
118	Cost-effectiveness of energy performance renovation measures in Finnish brick apartment buildings. *Energy and Buildings*, **2017**, 137, 60-75	7	59
117	Cost-optimal energy performance renovation measures of educational buildings in cold climate. *Applied Energy*, **2016**, 183, 1005-1020	10.7	55
116	Local thermal sensation and comfort study in a field environment chamber served by displacement ventilation system in the tropics. *Building and Environment*, **2007**, 42, 525-533	6.5	50
115	Energy performance and environmental impact analysis of cost-optimal renovation solutions of large panel apartment buildings in Finland. *Sustainable Cities and Society*, **2017**, 32, 9-30	10.1	41
114	Thermal environment in simulated offices with convective and radiant cooling systems under cooling (summer) mode of operation. *Building and Environment*, **2016**, 100, 82-91	6.5	38
113	Towards the EU emissions targets of 2050: optimal energy renovation measures of Finnish apartment buildings. *International Journal of Sustainable Energy*, **2019**, 38, 649-672	2.7	38
112	Air distribution in office environment with asymmetric workstation layout using chilled beams. *Building and Environment*, **2010**, 45, 1923-1931	6.5	35
111	Thermal adaptation of the elderly during summer in a hot humid area: Psychological, behavioral, and physiological responses. *Energy and Buildings*, **2019**, 203, 109450	7	32
110	Impact of heat load location and strength on air flow pattern with a passive chilled beam system. *Energy and Buildings*, **2010**, 42, 34-42	7	30
109	Capture efficiency and thermal comfort in Chinese residential kitchen with push-pull ventilation system in winter-a field study. *Building and Environment*, **2019**, 149, 182-195	6.5	28
108	Hood performance and capture efficiency of kitchens: A review. *Building and Environment*, **2019**, 161, 106221	6.5	27
107	Assessment of thermal environment using a thermal manikin in a field environment chamber served by displacement ventilation system. *Building and Environment*, **2006**, 41, 1661-1670	6.5	26

106	A feasibility study of a ventilated beam system in the hot and humid climate: a case-study approach. *Building and Environment*, **2005**, 40, 1164-1173	6.5	24
105	Experimental and numerical investigation of an airflow management system in data center with lower-side terminal baffles for servers. *Building and Environment*, **2019**, 155, 308-319	6.5	22
104	Flow characteristics in occupied zone An experimental study with symmetrically located thermal plumes and low-momentum diffuse ceiling air distribution. *Building and Environment*, **2018**, 128, 77-88	6.5	22
103	The Impact of Optimal Demand Response Control and Thermal Energy Storage on a District Heating System. *Energies*, **2019**, 12, 1678	3.1	21
102	Cost-optimal renovation solutions to maximize environmental performance, indoor thermal conditions and productivity of office buildings in cold climate. *Sustainable Cities and Society*, **2017**, 32, 417-434	10.1	19
101	Experimental study on airflow characteristics with asymmetrical heat load distribution and low-momentum diffuse ceiling ventilation. *Building and Environment*, **2018**, 134, 168-180	6.5	19
100	The effect of supply air systems on the efficiency of a ventilated ceiling. *Building and Environment*, **2007**, 42, 1613-1623	6.5	19
99	Towards the EU Emission Targets of 2050: Cost-Effective Emission Reduction in Finnish Detached Houses. *Energies*, **2019**, 12, 4395	3.1	18
98	The effect of typical buoyant flow elements and heat load combinations on room air temperature profile with displacement ventilation. *Building and Environment*, **2016**, 108, 207-219	6.5	17
97	Thermal environment in a simulated double office room with convective and radiant cooling systems. *Building and Environment*, **2017**, 123, 88-100	6.5	17
96	Thermal plumes of kitchen appliances: Cooking mode. *Energy and Buildings*, **2006**, 38, 1141-1148	7	17
95	Experimental study of the effect of turbulence intensities on the maximum velocity decay of an attached plane jet. *Energy and Buildings*, **2013**, 65, 127-136	7	16
94	Demand response potential of district heating and ventilation in an educational office building. *Science and Technology for the Built Environment*, **2020**, 26, 304-319	1.8	16
93	Computational comparison of a novel decentralized photovoltaic district heating system against three optimized solar district systems. *Energy Conversion and Management*, **2019**, 191, 39-54	10.6	14
92	Demand response events in district heating: Results from field tests in a university building. *Sustainable Cities and Society*, **2019**, 47, 101481	10.1	14
91	Thermal effect of temperature gradient in a field environment chamber served by displacement ventilation system in the tropics. *Building and Environment*, **2007**, 42, 516-524	6.5	14
90	A study of perceived air quality and sick building syndrome in a field environment chamber served by displacement ventilation system in the tropics. *Building and Environment*, **2006**, 41, 1530-1539	6.5	14
89	Thermal plumes of kitchen appliances: Idle mode. *Energy and Buildings*, **2006**, 38, 1130-1139	7	14

88	A method and analysis of aquifer thermal energy storage (ATES) system for district heating and cooling: A case study in Finland. *Sustainable Cities and Society*, **2020**, 53, 101977	10.1	14
87	Phase change cooling in data centers: A review. *Energy and Buildings*, **2021**, 236, 110764	7	13
86	Airflow uniformity optimization for modular data center based on the constructal T-shaped underfloor air ducts. *Applied Thermal Engineering*, **2019**, 155, 489-500	5.8	12
85	Local Discomfort Caused by Draft Perception in a Space Served by Displacement Ventilation System in the Tropics. *Indoor and Built Environment*, **2006**, 15, 225-233	1.8	12
84	Improvement in airflow and temperature distribution with an in-rack UFAD system at a high-density data center. *Building and Environment*, **2020**, 168, 106495	6.5	12
83	Demand response of district heating using model predictive control to prevent the draught risk of cold window in an office building. *Journal of Building Engineering*, **2021**, 33, 101855	5.2	12
82	The Influence of a Capture Jet on the Efficiency of a Ventilated Ceiling in a Commercial Kitchen. *International Journal of Ventilation*, **2003**, 1, 189-199	1.1	11
81	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. *Energies*, **2020**, 13, 4167	3.1	11
80	Design and validation of an airflow management system in data center with tilted server placement. *Applied Thermal Engineering*, **2020**, 164, 114444	5.8	11
79	Experimental comparison of local low velocity unit combined with radiant panel and diffuse ceiling ventilation systems. *Indoor and Built Environment*, **2020**, 29, 895-914	1.8	10
78	Computational and experimental performance analysis of a novel method for heating of domestic hot water with a ground source heat pump system. *Energy and Buildings*, **2018**, 161, 22-40	7	10
77	Emissions and power demand in optimal energy retrofit scenarios of the Finnish building stock by 2050. *Sustainable Cities and Society*, **2021**, 70, 102896	10.1	10
76	Experimental investigation of air distribution and ventilation efficiency in an ice rink arena. *International Journal of Ventilation*, **2019**, 18, 187-203	1.1	10
75	Individual temperature control on demand response in a district heated office building in Finland. *Energy*, **2019**, 180, 946-954	7.9	9
74	Effect of long-term thermal history on physiological acclimatization and prediction of thermal sensation in typical winter conditions. *Building and Environment*, **2020**, 179, 106936	6.5	9
73	Evaluation and modification of the weighting formulas for mean skin temperature of human body in winter conditions. *Energy and Buildings*, **2020**, 229, 110390	7	9
72	A cost-optimal solar thermal system for apartment buildings with district heating in a cold climate. *International Journal of Sustainable Energy*, **2019**, 38, 141-162	2.7	8
71	Full-scale test and CFD-simulation of radiant panel integrated with exposed chilled beam in heating mode. *Building Simulation*, **2017**, 10, 75-85	3.9	8

70	Methods to Reduce Stack Effect and Improve Energy Efficiency in a Nordic High Rise Residential Building. *Procedia Engineering*, **2017**, 205, 2311-2317		8
69	Thermal environment and ventilation efficiency in a simulated office room with personalized micro-environment and fully mixed ventilation systems. *Building and Environment*, **2021**, 188, 107445	6.5	8
68	Dynamic modeling of liquid-desiccant regenerator based on a state□pace method. *Applied Energy*, **2019**, 240, 744-753	10.7	7
67	The effect of free cooling and demand-based ventilation on energy consumption of self-regulating and traditional chilled beam systems in cold climate. *Indoor and Built Environment*, **2017**, 26, 256-271	1.8	6
66	The Effect of Deep Energy Retrofit on The Hourly Power Demand of Finnish Detached Houses. *Energies*, **2020**, 13, 1773	3.1	6
65	Perceived IEQ Conditions: Why the Actual Percentage of Dissatisfied Persons is Higher than Standards Indicate? **2011**, 75-88		6
64	Aquifer Thermal Energy Storage (ATES) for District Heating and Cooling: A Novel Modeling Approach Applied in a Case Study of a Finnish Urban District. *Energies*, **2020**, 13, 2478	3.1	6
63	An occupant-centric air-conditioning system for occupant thermal preference recognition control in personal micro-environment. *Building and Environment*, **2021**, 196, 107749	6.5	6
62	The effects of mixing air distribution and heat load arrangement on the performance of ceiling radiant panels under cooling mode of operation. *Science and Technology for the Built Environment*, **2017**, 23, 1090-1104	1.8	5
61	Effect of apartment building energy renovation on hourly power demand. *International Journal of Sustainable Energy*, **2019**, 38, 918-936	2.7	5
60	Indoor airflow interactions with symmetrical and asymmetrical heat load distributions under diffuse ceiling ventilation. *Science and Technology for the Built Environment*, **2019**, 25, 716-731	1.8	5
59	An experimental study of the influence of a moving person on airflow characteristics and thermal conditions with diffuse ceiling ventilation. *Indoor and Built Environment*, **2020**, 29, 860-880	1.8	5
58	Actimetry for Estimating Occupant Activity Levels in Buildings: A Step Toward Optimal and Energy-Efficient Indoor Conditioning. *IEEE Consumer Electronics Magazine*, **2019**, 8, 67-71	3.2	5
57	Modelling of room air temperature profile with displacement ventilation. *International Journal of Ventilation*, **2020**, 19, 112-126	1.1	5
56	Individual thermal comfort prediction using classification tree model based on physiological parameters and thermal history in winter. *Building Simulation*, **2021**, 14, 1651-1665	3.9	5
55	Cost optimal energy performance renovation measures in a municipal service building in a cold climate. *E3S Web of Conferences*, **2019**, 111, 03022	0.5	4
54	A Transient Two-dimensional CFD Evaluation of Indoor Thermal Comfort with an Intermittently-operated Radiant Floor Heating System in an Office Building. *International Journal of Architectural Engineering Technology*, **2020**, 7, 62-87	0.3	4
53	Waste Incineration Heat and Seasonal Thermal Energy Storage for Promoting Economically Optimal Net-Zero Energy Districts in Finland. *Buildings*, **2020**, 10, 205	3.2	4

52	Emission Reduction Potential of Different Types of Finnish Buildings through Energy Retrofits. *Buildings*, **2020**, 10, 234	3.2	4
51	Overheating Risk and Energy Demand of Nordic Old and New Apartment Buildings during Average and Extreme Weather Conditions under a Changing Climate. *Applied Sciences (Switzerland)*, **2021**, 11, 3972	2.6	4
50	Human response to thermal environment and perceived air quality in an office with individually controlled convective and radiant cooling systems. *Building and Environment*, **2021**, 195, 107736	6.5	4
49	Chilled Beams and Radiant Ceiling Systems **2017**, 151-166		3
48	A Continuous and Proactive Process to Enhance Well-being Indoors **2011**, 353-370		3
47	Experimental comparison of thermal conditions in office rooms: Diffuse ceiling ventilation, chilled beam system, and chilled ceiling combined with mixing ventilation. *Science and Technology for the Built Environment*, **2020**, 26, 631-642	1.8	3
46	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. *Energies*, **2021**, 14, 1523	3.1	3
45	Demand response potential of district heating in a swimming hall in Finland. *Energy and Buildings*, **2021**, 248, 111149	7	3
44	Optimization of emission reducing energy retrofits in Finnish apartment buildings. *E3S Web of Conferences*, **2019**, 111, 03002	0.5	2
43	Ventilation and environmental control of underground spaces: a short review. *E3S Web of Conferences*, **2019**, 111, 01039	0.5	2
42	Performance of Modern Passive Stack Ventilation in a Retrofitted Nordic Apartment Building. *Buildings*, **2022**, 12, 96	3.2	2
41	Infection probability under different air distribution patterns. *Building and Environment*, **2021**, 207, 108565	6.5	2
40	Performance Analysis of the Demand-Based Ventilation in a Nordic Apartment Building. *Applied Sciences (Switzerland)*, **2021**, 11, 176	2.6	2
39	Dynamic performance of displacement ventilation in a lecture hall. *International Journal of Ventilation*, **2020**, 1-11	1.1	2
38	Demand Response Control of Space Heating in Three Different Building Types in Finland and Germany. *Energies*, **2020**, 13, 6296	3.1	2
37	The use of displacement and zoning ventilation in a multipurpose arena. *International Journal of Ventilation*, **2016**, 15, 151-166	1.1	2
36	Heating energy-saving potentials in HVAC system of swimming halls: A review. *Building and Environment*, **2021**, 205, 108189	6.5	2
35	Comparison of the effects of symmetric and asymmetric heat load on indoor air quality and local thermal discomfort with diffuse ceiling ventilation. *International Journal of Ventilation*, **2020**, 1-16	1.1	1

34	Carbon Emission Reduction Potential in the Finnish Energy System Due to Power and Heat Sector Coupling with Different Renovation Scenarios of Housing Stock. *Processes*, **2020**, 8, 1368	2.9	1
33	Dynamic design model of displacement ventilation. *E3S Web of Conferences*, **2019**, 111, 04049	0.5	1
32	Airflow characteristics under planar opposed ventilation jets in a controlled indoor environment. *E3S Web of Conferences*, **2019**, 111, 01029	0.5	1
31	A comparative field study of occupants□thermal exposure in non-heating and decentralized heating environments. *Building and Environment*, **2022**, 207, 108501	6.5	1
30	From Electricity and Water Consumption Data to Information on Office Occupancy: A Supervised and Unsupervised Data Mining Approach. *Applied Sciences (Switzerland)*, **2020**, 10, 9089	2.6	1
29	Prediction of thermal sensation using low-cost infrared array sensors monitoring system. *IOP Conference Series: Materials Science and Engineering*, **2019**, 609, 032002	0.4	1
28	The comparison of design airflow rates with dynamic and steady-state displacement models in varied dynamic conditions. *Building Simulation*, **2021**, 14, 1201-1219	3.9	1
27	Study on waste heat recoveries and energy saving in combined energy system of ice and swimming halls in Finland. *Energy and Buildings*, **2021**, 231, 110620	7	1
26	Analyzing energy flexibility by demand response in a Finnish district heated apartment building. *E3S Web of Conferences*, **2021**, 246, 09006	0.5	1
25	The Effect of Demand Response on Perceived Thermal Comfort in a District Heated Office Building **2018**,		1
24	Experimental study on thermal environment in a simulated classroom with different air distribution methods. *Journal of Building Engineering*, **2021**, 43, 103025	5.2	1
23	Scalable Room Occupancy Prediction with Deep Transfer Learning Using Indoor Climate Sensor. *Energies*, **2022**, 15, 2078	3.1	1
22	Operational Challenges of Modern Demand-Control Ventilation Systems: A Field Study. *Buildings*, **2022**, 12, 378	3.2	1
21	A Comprehensive Evaluation Method for Air-Conditioning System Plants Based on Building Performance Simulation and Experiment Information. *Buildings*, **2021**, 11, 522	3.2	0
20	Experimental study of five different VAV air terminal devices under variable heat gain conditions in simulated office and meeting rooms. *Building and Environment*, **2021**, 209, 108641	6.5	0
19	Different Approaches for Evaluation and Modeling of the Effective Thermal Resistance of Groundwater-Filled Boreholes. *Energies*, **2021**, 14, 6908	3.1	0
18	Research on the thermal performance of rack-level composite baffle diversion system for data centre. *Energy Efficiency*, **2020**, 13, 1245-1262	3	0
17	Effects of Night Ventilation on Indoor Air Quality in Educational Buildings□A Field Study. *Applied Sciences (Switzerland)*, **2021**, 11, 4056	2.6	0

16	Seasonal storage of residential exhaust air and sewage waste heat. *E3S Web of Conferences*, **2021**, 246, 06009	0.5	0
15	Analyzing power and energy flexibilities by demand response in district heated buildings in Finland and Germany. *Science and Technology for the Built Environment*,1-21	1.8	0
14	Impact of different mechanical ventilation strategies for night purging on indoor air quality in public buildings. *E3S Web of Conferences*, **2021**, 246, 11003	0.5	0
13	Airflow management and energy saving potentials at a high-density data center with stepped-like server placement. *International Journal of Green Energy*,1-14	3	0
12	Individually controlled localized chilled beam with background radiant cooling system: Human subject testing. *Building and Environment*, **2022**, 218, 109124	6.5	0
11	A review of total volume environment and individually controlled micro-environment. *E3S Web of Conferences*, **2019**, 111, 02002	0.5	
10	Demand response of space heating using model predictive control in an educational office building. *E3S Web of Conferences*, **2019**, 111, 03067	0.5	
9	Influence of installation of displacement ventilation diffusers above occupied zone on the vertical temperature gradient in simulated office rooms. *E3S Web of Conferences*, **2019**, 111, 02012	0.5	
8	Basis to Calculate Exhaust Airflow Rate **2019**, 191-235		
7	Design of Kitchen Ventilation **2019**, 237-252		
6	High-Performance Kitchen Ventilation **2019**, 253-329		
5	Solving Indoor Environmental Problems: What Can Be Found Out through Individual Measurements? **2011**, 439-452		
4	Basic Design Principles of nZEB Buildings in Scoping and Conceptual Design. *Green Energy and Technology*, **2013**, 103-134	0.6	
3	A Flexibility Chilled Beam System in Hot and Humid Climate. *Lecture Notes in Electrical Engineering*, **2014**, 227-233	0.2	
2	Room air conditioning **2020**, 371-415		
1	Human response to thermal environment and perceived air quality in an office room with individually controlled convective and radiant cooling systems. *E3S Web of Conferences*, **2021**, 246, 15002	0.5	