Christian Ghiaus

List of Publications by Year
in descending order

43 papers	1,291 citations	393982 19 h-index	344852 36 g-index
43 all docs	43 docs citations	43 times ranked	1092 citing authors

#	Article	IF	Citations
1	Optimal temperature control of intermittently heated buildings using Model Predictive Control: Part I â€“ Building modeling. Building and Environment, 2012, 51, 379-387.	3.0	188
2	Optimal temperature control of intermittently heated buildings using Model Predictive Control: Part II â€“ Control algorithm. Building and Environment, 2012, 51, 388-394.	3.0	124
3	Experimental estimation of building energy performance by robust regression. Energy and Buildings, 2006, 38, 582-587.	3.1	90
4	Fast method to predict building heating demand based on the design of experiments. Energy and Buildings, 2009, 41, 669-677.	3.1	89
5	Urban environment influence on natural ventilation potential. Building and Environment, 2006, 41, 395-406.	3.0	85
6	Fast simulation of temperature distribution in air conditioned rooms by using proper orthogonal decomposition. Building and Environment, 2009, 44, 280-289.	3.0	61
7	Calculation of optimal thermal load of intermittently heated buildings. Energy and Buildings, 2010, 42, 1248-1258.	3.1	56
8	Modeling of water spray evaporation: Application to passive cooling of buildings. Solar Energy, 2006, 80, 1540-1552.	2.9	54
9	Grey-box identification of air-handling unit elements. Control Engineering Practice, 2007, 15, 421-433.	3.2	48
10	Causality issue in the heat balance method for calculating the design heating and cooling load. Energy, 2013, 50, 292-301.	4.5	44
11	Potential for free-cooling by ventilation. Solar Energy, 2006, 80, 402-413.	2.9	42
12	Fuzzy model and control of a fan-coil. Energy and Buildings, 2001, 33, 545-551.	3.1	37
13	Model Predictive Control of thermal comfort as a benchmark for controller performance. Automation in Construction, 2014, 43, 98-109.	4.8	37
14	Fault diagnosis of air conditioning systems based on qualitative bond graph. Energy and Buildings, 1999, 30, 221-232.	3.1	34
15	Equivalence between the load curve and the free-running temperature in energy estimating methods. Energy and Buildings, 2006, 38, 429-435.	3.1	29
16	Free-running temperature and potential for free cooling by ventilation: A case study. Energy and Buildings, 2011, 43, 2705-2711.	3.1	29
17	Physical parameters identification of walls using ARX models obtained by deduction. Energy and Buildings, 2015, 108, 317-329.	3.1	24
18	Free-running building temperature and HVAC climatic suitability. Energy and Buildings, 2003, 35, 405-411.	3.1	23

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19	An efficient Bayesian experimental calibration of dynamic thermal models. Energy, 2018, 152, 818-833.	4.5	22
20	Optimization of multifunction multi-source solar systems by design of experiments. Solar Energy, 2012, 86, 593-607.	2.9	18
21	Order selection of thermal models by frequency analysis of measurements for building energy efficiency estimation. Applied Energy, 2015, 139, 230-244.	5.1	17
22	A blind event-based learning algorithm for non-intrusive load disaggregation. International Journal of Electrical Power and Energy Systems, 2021, 129, 106834.	3.3	16
23	Influence of Initial and Boundary Conditions on the Accuracy of the QUB Method to Determine the Overall Heat Loss Coefficient of a Building. Energies, 2020, 13, 284.	1.6	15
24	Linear algebra solution to psychometric analysis of air-conditioning systems. Energy, 2014, 74, 555-566.	4.5	12
25	Design of experiments for Quick U-building method for building energy performance measurement. Journal of Building Performance Simulation, 2019, 12, 465-479.	1.0	12
26	Thermal circuits assembling and state-space extraction for modelling heat transfer in buildings. Energy, 2020, 195, 117019.	4.5	12
27	Linear fuzzy-discriminant analysis applied to forecast ozone concentration classes in sea-breeze regime. Atmospheric Environment, 2005, 39, 4691-4702.	1.9	10
28	Evaluation of the indoor temperature field using a given air velocity distribution. Building and Environment, 1999, 34, 671-679.	3.0	9
29	New analytical methodologies for radiative heat transfer in enclosures based on matrix formalism and network analogy. Applied Thermal Engineering, 2016, 107, 1269-1286.	3.0	8
30	Gray-box state-space model and parameter identification of desiccant wheels. Applied Thermal Engineering, 2013, 51, 742-752.	3.0	7
31	Exergy performance and optimization potential of refrigeration plants in free cooling operation. Energy, 2020, 209, 118464.	4.5	6
32	Optimal settings of residential oil burners. Energy and Buildings, 2002, 34, 83-90.	3.1	5
33	Gray-box identification of thermal transfer coefficients of desiccant wheels. Energy and Buildings, 2014, 70, 384-397.	3.1	4
34	Frequency response limitation of heat flux meters. Building and Environment, 2017, 114, 233-245.	3.0	4
35	Study of Error Propagation in the Transformations of Dynamic Thermal Models of Buildings. Journal of Control Science and Engineering, 2017, 2017, 1-15.	0.8	4
36	Error Analysis of QUB Method in Non-Ideal Conditions during the Experiment. Energies, 2020, 13, 3398.	1.6	4

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37	Thermal networks from the heat equation by using the finite element method. , 2016, , .		4
38	Natural Ventilation Potential of Urban Buildings. International Journal of Ventilation, 2005, 4, 49-56.	0.2	3
39	Optimization potential index (OPI): An evaluation method for performance assessment and optimization potential of chillers in HVAC plants. Applied Energy, 2020, 259, 114111.	5.1	3
40	Dynamic Models for Energy Control of Smart Homes. , 2021, , 163-198.		1
41	Computational psychrometric analysis as a control problem: case of cooling and dehumidification systems. Journal of Building Performance Simulation, 2022, 15, 21-38.	1.0	1
42	On the physical meaning of minimization criterion for Model Predictive Control. , 2010, , .		0
43	Refrigeration machine modeling for exergy-based performance and optimization potential evaluation of chillers in real field plants. International Journal of Refrigeration, 2021, 131, 775-785.	1.8	0