Angelo Zarrella

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/8426419/publications.pdf

Version: 2024-02-01

80 papers	2,677 citations	172386 29 h-index	189801 50 g-index
80 all docs	80 docs citations	80 times ranked	1861 citing authors

#	Article	IF	Citations
1	Thermal performance of two types of energy foundation pile: Helical pipe and triple U-tube. Applied Thermal Engineering, 2013, 61, 301-310.	3.0	162
2	A computational capacity resistance model (CaRM) for vertical ground-coupled heat exchangers. Renewable Energy, 2010, 35, 1537-1550.	4.3	155
3	An analysis of solar assisted ground source heat pumps in cold climates. Energy Conversion and Management, 2015, 106, 660-675.	4.4	153
4	The design and environmental evaluation of earth-to-air heat exchangers (EAHE). A literature review. Renewable and Sustainable Energy Reviews, 2013, 28, 107-116.	8.2	126
5	People's clothing behaviour according to external weather and indoor environment. Building and Environment, 2007, 42, 3965-3973.	3.0	110
6	Thermal and electrical performance of an integrated PV-PCM system in double skin faÃ§ades: A numerical study. Solar Energy, 2016, 136, 112-124.	2.9	106
7	Short time step analysis of vertical ground-coupled heat exchangers: The approach of CaRM. Renewable Energy, 2011, 36, 2357-2367.	4.3	101
8	Analysis of short helical and double U-tube borehole heat exchangers: A simulation-based comparison. Applied Energy, 2013, 112, 358-370.	5.1	92
9	A heat pump coupled with photovoltaic thermal hybrid solar collectors: A case study of a multi-source energy system. Energy Conversion and Management, 2017, 151, 386-399.	4.4	79
10	Heat transfer analysis of short helical borehole heat exchangers. Applied Energy, 2013, 102, 1477-1491.	5.1	76
11	Design of borehole heat exchangers for ground-source heat pumps: A literature review, methodology comparison and analysis on the penalty temperature. Energy and Buildings, 2012, 55, 369-379.	3.1	64
12	An evaluation of the suitability of lumped-capacitance models in calculating energy needs and thermal behaviour of buildings. Energy and Buildings, 2017, 150, 447-465.	3.1	61
13	A sensitivity analysis on the heating and cooling energy flexibility of residential buildings. Sustainable Cities and Society, 2020, 52, 101815.	5.1	59
14	Evaluating the cost of heat for end users in ultra low temperature district heating networks with booster heat pumps. Energy, 2018, 153, 788-800.	4.5	58
15	Performance analysis of short helical borehole heat exchangers via integrated modelling of a borefield and a heat pump: A case study. Applied Thermal Engineering, 2013, 61, 36-47.	3.0	57
16	Investigations on the influence of aquifers on the ground temperature in ground-source heat pump operation. Applied Energy, 2013, 107, 350-363.	5.1	55
17	Analysis of operating modes of a ground source heat pump with short helical heat exchangers. Energy Conversion and Management, 2015, 97, 351-361.	4.4	55
18	Italian prototype building models for urban scale building performance simulation. Building and Environment, 2021, 192, 107590.	3.0	53

#	Article	IF	Citations
19	A simulation-based analysis of variable flow pumping in ground source heat pump systems with different types of borehole heat exchangers: A case study. Energy Conversion and Management, 2017, 131, 135-150.	4.4	47
20	Long-term analysis of two GSHP systems using validated numerical models and proposals to optimize the operating parameters. Energy and Buildings, 2015, 93, 50-64.	3.1	43
21	Empirical modeling of maps of geo-exchange potential for shallow geothermal energy at regional scale. Geothermics, 2015, 57, 173-184.	1.5	43
22	DIGITHON: A numerical model for the thermal balance of rooms equipped with radiant systems. Building and Environment, 2012, 57, 126-144.	3.0	41
23	Energetic and economic aspects of a heating and cooling district in a mild climate based on closed loop ground source heat pump. Applied Thermal Engineering, 2014, 71, 895-904.	3.0	40
24	An appropriate use of the thermal response test for the design of energy foundation piles with U-tube circuits. Energy and Buildings, 2017, 134, 259-270.	3.1	38
25	Radiant floor cooling coupled with dehumidification systems in residential buildings: A simulation-based analysis. Energy Conversion and Management, 2014, 85, 254-263.	4.4	37
26	Thermal Response Testing Results of Different Types of Borehole Heat Exchangers: An Analysis and Comparison of Interpretation Methods. Energies, 2017, 10, 801.	1.6	35
27	Effect of axial heat transfer and atmospheric conditions on the energy performance of GSHP systems: A simulation-based analysis. Applied Thermal Engineering, 2015, 78, 591-604.	3.0	33
28	Increasing the energy flexibility of existing district heating networks through flow rate variations. Applied Energy, 2020, 275, 115411.	5.1	33
29	Performance of heat pumps with direct expansion in vertical ground heat exchangers in heating mode. Energy Conversion and Management, 2015, 95, 120-130.	4.4	31
30	Evaluation of the impact of input uncertainty on urban building energy simulations using uncertainty and sensitivity analysis. Applied Energy, 2022, 311, 118691.	5.1	30
31	A simplified mathematical model for transient simulation of thermal performance and energy assessment for active facades. Energy and Buildings, 2015, 104, 97-107.	3.1	28
32	Application of artificial neural networks to near-instant construction of short-term g-functions. Applied Thermal Engineering, 2018, 143, 910-921.	3.0	28
33	Analysis and application of a lumped-capacitance model for urban building energy modelling. Sustainable Cities and Society, 2020, 63, 102450.	5.1	28
34	A dynamic analysis of a SAGSHP system coupled to solar thermal collectors and photovoltaic-thermal panels under different climate conditions. Energy Conversion and Management, 2020, 213, 112851.	4.4	28
35	Dynamic energy evaluation and glazing layers optimization of faÃ§ade building with innovative integration of PV modules. Energy and Buildings, 2016, 111, 468-478.	3.1	27
36	A multi-objective optimization strategy to reduce correlation and uncertainty for thermal response test analysis. Geothermics, 2019, 79, 176-187.	1.5	26

#	Article	IF	Citations
37	EUReCA: An open-source urban building energy modelling tool for the efficient evaluation of cities energy demand. Renewable Energy, 2021, 173, 544-560.	4.3	26
38	The validation of a novel lumped parameter model for photovoltaic thermal hybrid solar collectors: a new TRNSYS type. Energy Conversion and Management, 2019, 188, 414-428.	4.4	23
39	Ground source heat pump performance in case of high humidity soil and yearly balanced heat transfer. Energy Conversion and Management, 2013, 76, 956-970.	4.4	22
40	Energy performance and cost analysis of some borehole heat exchanger configurations with different heat-carrier fluids in mild climates. Geothermics, 2017, 65, 158-169.	1.5	22
41	Simulation-Based Comparison Between the Thermal Behavior of Coaxial and Double U-Tube Borehole Heat Exchangers. Energies, 2019, 12, 2321.	1.6	22
42	Energy analysis of different configurations for a reversible ground source heat pump using a new flexible TRNSYS Type. Applied Thermal Engineering, 2021, 197, 117413.	3.0	21
43	Solar Assisted Ground Source Heat Pump in Cold Climates. Energy Procedia, 2015, 82, 623-629.	1.8	19
44	A Database for Climatic Conditions around Europe for Promoting GSHP Solutions. Geosciences (Switzerland), 2018, 8, 71.	1.0	18
45	Investigation on Individual and Collective PV Self-Consumption for a Fifth Generation District Heating Network. Energies, 2022, 15, 1022.	1.6	18
46	Ground source heat pump systems in historical buildings: two Italian case studies. Energy Procedia, 2017, 133, 183-194.	1.8	16
47	First Italian TRT database and significance of the geological setting evaluation in borehole heat exchanger sizing. Geothermics, 2021, 94, 102098.	1.5	16
48	Management of a district heating network using model predictive control with and without thermal storage. Optimization and Engineering, 2021, 22, 1897-1919.	1.3	15
49	Assessment of the Urban Heat Island Impact on Building Energy Performance at District Level with the EUReCA Platform. Climate, 2021, 9, 48.	1.2	14
50	Possible applications of ground coupled heat pumps in high geothermal gradient zones. Energy and Buildings, 2014, 79, 12-22.	3.1	13
51	A European Database of Building Energy Profiles to Support the Design of Ground Source Heat Pumps. Energies, 2019, 12, 2496.	1.6	13
52	Evaluation of energy recovery of multiple skin facades: The approach of DIGITHON. Energy and Buildings, 2014, 85, 337-345.	3.1	11
53	The effect of discretization on the accuracy of two district heating network models based on finite-difference methods. Energy Procedia, 2018, 149, 625-634.	1.8	11
54	A revised capacitance resistance model for large diameter shallow bore ground heat exchanger. Applied Thermal Engineering, 2019, 162, 114305.	3.0	11

#	Article	IF	Citations
55	ulti-Source Heat Pump Coupled with a Photovoltaic Thermal (PVT) Hybrid Solar Collectors Technology: a Case Study in Residential Application. International Journal of Energy Production and Management, 2016, 1, 382-392.	1.9	10
56	Experimental study on the thermal imbalance and soil temperature recovery performance of horizontal stainless-steel ground heat exchanger. Applied Thermal Engineering, 2022, 200, 117697.	3.0	10
57	Experimental tests on the performance of an economic model predictive control system in a lightweight building. Applied Thermal Engineering, 2022, 213, 118693.	3.0	10
58	Analysis of Retrofit Solutions of a Ground Source Heat Pump System: An Italian Case Study. Energies, 2020, 13, 5680.	1.6	9
59	A comparison of numerical simulation methods analyzing the performance of a ground-coupled heat pump system. Science and Technology for the Built Environment, 2018, 24, 502-512.	0.8	8
60	Techno-economic parametric analysis of large diameter shallow ground heat exchanger in California climates. Energy and Buildings, 2020, 228, 110444.	3.1	8
61	Comparative Analysis between Dynamic and Quasi-Steady-State Methods at an Urban Scale on a Social-Housing District in Venice. Energies, 2021, 14, 5164.	1.6	8
62	Flow rate control in standing column wells: A flexible solution for reducing the energy use and peak power demand of the built environment. Applied Energy, 2022, 313, 118774.	5.1	8
63	Use of Municipal Solid Waste Landfill as Heat Source of Heat Pump. Energy Procedia, 2016, 101, 352-359.	1.8	7
64	Efficiency in Heating Operation of Low-Temperature Radiant Systems Working under Dynamic Conditions in Different Kinds of Buildings. Applied Sciences (Switzerland), 2018, 8, 2399.	1.3	7
65	Large scale energy analysis and renovation strategies for social housing in the historic city of Venice. Sustainable Energy Technologies and Assessments, 2022, 52, 102041.	1.7	7
66	Analysis of Vertical Ground Heat Exchangers: The New CaRM Tool. Energy Procedia, 2015, 81, 288-297.	1.8	5
67	Analysis of the effect of icing on the thermal behavior of helical coil heat exchangers in surface water heat pump applications. International Journal of Heat and Mass Transfer, 2022, 183, 122074.	2.5	5
68	An all-in-one machine coupled with a horizontal ground heat exchanger for the air-conditioning of a residential building. Building and Environment, 2022, 207, 108558.	3.0	5
69	EU project â€œCheap-GSHPsâ€: the geoexchange field laboratory. Energy Procedia, 2017, 125, 511-519.	1.8	4
70	All-air system and radiant floor for heating and cooling in residential buildings: A simulation-based analysis. Science and Technology for the Built Environment, 2020, 26, 1397-1411.	0.8	4
71	New tools to support the designing of efficient and reliable ground source heat exchangers: the Cheap-GSHPs databases and maps. Advances in Geosciences, 0, 49, 47-55.	12.0	4
72	Double source heat pump: A case study. , 2018, , .		3

#	Article	IF	Citations
73	Development of g-functions for large diameter shallow bore helical ground heat exchangers. Applied Thermal Engineering, 2021, , 117620.	3.0	2
74	Retrofit solutions for an historic building integrated with geothermal heat pumps. E3S Web of Conferences, 2019, 111, 03055.	0.2	1
75	Two software tools for facilitating the choice of ground source heat pumps by stakeholders and designers. E3S Web of Conferences, 2019, 111, 06023.	0.2	1
76	A new air handling unit system for residential buildings: experiment and simulation-based analysis. IOP Conference Series: Materials Science and Engineering, 2019, 609, 052033.	0.3	1
77	ulti-Source Heat Pump Coupled with a Photovoltaic Thermal (PVT) Hybrid Solar Collectors Technology: a Case Study in Residential Application. International Journal of Energy Production and Management, 2016, 1, 382-392.	1.9	1
78	Archetype definition for analysing retrofit solutions in urban areas in Europe. E3S Web of Conferences, 2019, 111, 03027.	0.2	0
79	Primary air treatment vs energy saving: comparison between different design solutions. IOP Conference Series: Materials Science and Engineering, 2019, 609, 052001.	0.3	0
80	Development of a Modelica-based simplified building model for district energy simulations. Journal of Physics: Conference Series, 2021, 2042, 012078.	0.3	0