Angelo Zarrella

List of Publications by Citations

78 papers	1,912 citations	26 h-index	42 g-index
80 ext. papers	2,268 ext. citations	5.9 avg, IF	5.43 L-index

#	Paper	IF	Citations
78	A computational capacity resistance model (CaRM) for vertical ground-coupled heat exchangers. *Renewable Energy*, **2010**, 35, 1537-1550	8.1	136
77	Thermal performance of two types of energy foundation pile: Helical pipe and triple U-tube. *Applied Thermal Engineering*, **2013**, 61, 301-310	5.8	127
76	An analysis of solar assisted ground source heat pumps in cold climates. *Energy Conversion and Management*, **2015**, 106, 660-675	10.6	108
75	People's clothing behaviour according to external weather and indoor environment. *Building and Environment*, **2007**, 42, 3965-3973	6.5	91
74	The design and environmental evaluation of earth-to-air heat exchangers (EAHE). A literature review. *Renewable and Sustainable Energy Reviews*, **2013**, 28, 107-116	16.2	88
73	Thermal and electrical performance of an integrated PV-PCM system in double skin façades: A numerical study. *Solar Energy*, **2016**, 136, 112-124	6.8	83
72	Short time step analysis of vertical ground-coupled heat exchangers: The approach of CaRM. *Renewable Energy*, **2011**, 36, 2357-2367	8.1	80
71	Analysis of short helical and double U-tube borehole heat exchangers: A simulation-based comparison. *Applied Energy*, **2013**, 112, 358-370	10.7	75
70	Heat transfer analysis of short helical borehole heat exchangers. *Applied Energy*, **2013**, 102, 1477-1491	10.7	68
69	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	7	59
68	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	10.6	54
67	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	5.8	49
66	Investigations on the influence of aquifers on the ground temperature in ground-source heat pump operation. *Applied Energy*, **2013**, 107, 350-363	10.7	47
65	Analysis of operating modes of a ground source heat pump with short helical heat exchangers. *Energy Conversion and Management*, **2015**, 97, 351-361	10.6	45
64	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	7	38
63	Empirical modeling of maps of geo-exchange potential for shallow geothermal energy at regional scale. *Geothermics*, **2015**, 57, 173-184	4.3	38
62	Evaluating the cost of heat for end users in ultra low temperature district heating networks with booster heat pumps. *Energy*, **2018**, 153, 788-800	7.9	35

61	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	7	34
60	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	7	34
59	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	5.8	33
58	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	10.6	32
57	DIGITHON: A numerical model for the thermal balance of rooms equipped with radiant systems. *Building and Environment*, **2012**, 57, 126-144	6.5	32
56	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	5.8	31
55	A sensitivity analysis on the heating and cooling energy flexibility of residential buildings. *Sustainable Cities and Society*, **2020**, 52, 101815	10.1	30
54	Performance of heat pumps with direct expansion in vertical ground heat exchangers in heating mode. *Energy Conversion and Management*, **2015**, 95, 120-130	10.6	29
53	Thermal Response Testing Results of Different Types of Borehole Heat Exchangers: An Analysis and Comparison of Interpretation Methods. *Energies*, **2017**, 10, 801	3.1	28
52	Radiant floor cooling coupled with dehumidification systems in residential buildings: A simulation-based analysis. *Energy Conversion and Management*, **2014**, 85, 254-263	10.6	25
51	Italian prototype building models for urban scale building performance simulation. *Building and Environment*, **2021**, 192, 107590	6.5	25
50	A simplified mathematical model for transient simulation of thermal performance and energy assessment for active facades. *Energy and Buildings*, **2015**, 104, 97-107	7	23
49	Dynamic energy evaluation and glazing layers optimization of façade building with innovative integration of PV modules. *Energy and Buildings*, **2016**, 111, 468-478	7	20
48	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	10.6	17
47	Ground source heat pump performance in case of high humidity soil and yearly balanced heat transfer. *Energy Conversion and Management*, **2013**, 76, 956-970	10.6	17
46	Energy performance and cost analysis of some borehole heat exchanger configurations with different heat-carrier fluids in mild climates. *Geothermics*, **2017**, 65, 158-169	4.3	17
45	A Database for Climatic Conditions around Europe for Promoting GSHP Solutions. *Geosciences (Switzerland)*, **2018**, 8, 71	2.7	16
44	A multi-objective optimization strategy to reduce correlation and uncertainty for thermal response test analysis. *Geothermics*, **2019**, 79, 176-187	4.3	15

43	Increasing the energy flexibility of existing district heating networks through flow rate variations. *Applied Energy*, **2020**, 275, 115411	10.7	15
42	Application of artificial neural networks to near-instant construction of short-term g-functions. *Applied Thermal Engineering*, **2018**, 143, 910-921	5.8	15
41	Analysis and application of a lumped-capacitance model for urban building energy modelling. *Sustainable Cities and Society*, **2020**, 63, 102450	10.1	15
40	Solar Assisted Ground Source Heat Pump in Cold Climates. *Energy Procedia*, **2015**, 82, 623-629	2.3	14
39	Ground source heat pump systems in historical buildings: two Italian case studies. *Energy Procedia*, **2017**, 133, 183-194	2.3	13
38	Simulation-Based Comparison Between the Thermal Behavior of Coaxial and Double U-Tube Borehole Heat Exchangers. *Energies*, **2019**, 12, 2321	3.1	13
37	Possible applications of ground coupled heat pumps in high geothermal gradient zones. *Energy and Buildings*, **2014**, 79, 12-22	7	12
36	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	10.6	10
35	Evaluation of energy recovery of multiple skin facades: The approach of DIGITHON. *Energy and Buildings*, **2014**, 85, 337-345	7	10
34	A European Database of Building Energy Profiles to Support the Design of Ground Source Heat Pumps. *Energies*, **2019**, 12, 2496	3.1	9
33	The effect of discretization on the accuracy of two district heating network models based on finite-difference methods. *Energy Procedia*, **2018**, 149, 625-634	2.3	9
32	A revised capacitance resistance model for large diameter shallow bore ground heat exchanger. *Applied Thermal Engineering*, **2019**, 162, 114305	5.8	8
31	EUReCA: An open-source urban building energy modelling tool for the efficient evaluation of cities energy demand. *Renewable Energy*, **2021**, 173, 544-560	8.1	8
30	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	5.3	7
29	Assessment of the Urban Heat Island Impact on Building Energy Performance at District Level with the EUReCA Platform. *Climate*, **2021**, 9, 48	3.1	7
28	Techno-economic parametric analysis of large diameter shallow ground heat exchanger in California climates. *Energy and Buildings*, **2020**, 228, 110444	7	6
27	Analysis of Retrofit Solutions of a Ground Source Heat Pump System: An Italian Case Study. *Energies*, **2020**, 13, 5680	3.1	5
26	Analysis of Vertical Ground Heat Exchangers: The New CaRM Tool. *Energy Procedia*, **2015**, 81, 288-297	2.3	5

25	Efficiency in Heating Operation of Low-Temperature Radiant Systems Working under Dynamic Conditions in Different Kinds of Buildings. *Applied Sciences (Switzerland)*, **2018**, 8, 2399	2.6	5
24	EU project Cheap-GSHPs the geoexchange field laboratory. *Energy Procedia*, **2017**, 125, 511-519	2.3	4
23	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	1.8	4
22	Use of Municipal Solid Waste Landfill as Heat Source of Heat Pump. *Energy Procedia*, **2016**, 101, 352-359	2.3	4
21	Comparative Analysis between Dynamic and Quasi-Steady-State Methods at an Urban Scale on a Social-Housing District in Venice. *Energies*, **2021**, 14, 5164	3.1	4
20	Energy analysis of different configurations for a reversible ground source heat pump using a new flexible TRNSYS Type. *Applied Thermal Engineering*, **2021**, 197, 117413	5.8	4
19	Investigation on Individual and Collective PV Self-Consumption for a Fifth Generation District Heating Network. *Energies*, **2022**, 15, 1022	3.1	3
18	New tools to support the designing of efficient and reliable ground source heat exchangers: the Cheap-GSHPs databases and maps. *Advances in Geosciences*,49, 47-55		3
17	Experimental study on the thermal imbalance and soil temperature recovery performance of horizontal stainless-steel ground heat exchanger. *Applied Thermal Engineering*, **2022**, 200, 117697	5.8	3
16	First Italian TRT database and significance of the geological setting evaluation in borehole heat exchanger sizing. *Geothermics*, **2021**, 94, 102098	4.3	3
15	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	1.8	2
14	Management of a district heating network using model predictive control with and without thermal storage. *Optimization and Engineering*, **2021**, 22, 1897	2.1	2
13	Evaluation of the impact of input uncertainty on urban building energy simulations using uncertainty and sensitivity analysis. *Applied Energy*, **2022**, 311, 118691	10.7	2
12	Retrofit solutions for an historic building integrated with geothermal heat pumps. *E3S Web of Conferences*, **2019**, 111, 03055	0.5	1
11	Two software tools for facilitating the choice of ground source heat pumps by stakeholders and designers. *E3S Web of Conferences*, **2019**, 111, 06023	0.5	1
10	Large scale energy analysis and renovation strategies for social housing in the historic city of Venice. *Sustainable Energy Technologies and Assessments*, **2022**, 52, 102041	4.7	1
9	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	4.9	1
8	A new air handling unit system for residential buildings: experiment and simulation-based analysis. *IOP Conference Series: Materials Science and Engineering*, **2019**, 609, 052033	0.4	1

7	Development of g-functions for large diameter shallow bore helical ground heat exchangers. *Applied Thermal Engineering*, **2021**, 117620	5.8	1
6	Experimental tests on the performance of an Economic Model Predictive Control system in a lightweight building. *Applied Thermal Engineering*, **2022**, 118693	5.8	1
5	An all-in-one machine coupled with a horizontal ground heat exchanger for the air-conditioning of a residential building. *Building and Environment*, **2021**, 207, 108558	6.5	0
4	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	10.7	0
3	Archetype definition for analysing retrofit solutions in urban areas in Europe. *E3S Web of Conferences*, **2019**, 111, 03027	0.5	
2	Development of a Modelica-based simplified building model for district energy simulations. *Journal of Physics: Conference Series*, **2021**, 2042, 012078	0.3	
1	Primary air treatment vs energy saving: comparison between different design solutions. *IOP Conference Series: Materials Science and Engineering*, **2019**, 609, 052001	0.4	