Nicola Bianco

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Energy refurbishment of existing buildings through the use of phase change materials: Energy savings and indoor comfort in the cooling season. Applied Energy, 2014, 113, 990-1007.	5.1	255
2	Green roofs in European climates. Are effective solutions for the energy savings in air-conditioning?. Applied Energy, 2013, 104, 845-859.	5.1	226
3	Simulation-based model predictive control by the multi-objective optimization of building energy performance and thermal comfort. Energy and Buildings, 2016, 111, 131-144.	3.1	180
4	Artificial neural networks to predict energy performance and retrofit scenarios for any member of a building category: A novel approach. Energy, 2017, 118, 999-1017.	4.5	179
5	Operation optimization of a distributed energy system considering energy costs and exergy efficiency. Energy Conversion and Management, 2015, 103, 739-751.	4.4	168
6	Building envelope design: Multi-objective optimization to minimize energy consumption, global cost and thermal discomfort. Application to different Italian climatic zones. Energy, 2019, 174, 359-374.	4.5	160
7	Multi-stage and multi-objective optimization for energy retrofitting a developed hospital reference building: A new approach to assess cost-optimality. Applied Energy, 2016, 174, 37-68.	5.1	153
8	A new methodology for investigating the cost-optimality of energy retrofitting a building category. Energy and Buildings, 2015, 107, 456-478.	3.1	150
9	A new methodology for cost-optimal analysis by means of the multi-objective optimization of building energy performance. Energy and Buildings, 2015, 88, 78-90.	3.1	144
10	Energy retrofit of an educational building in the ancient center of Benevento. Feasibility study of energy savings and respect of the historical value. Energy and Buildings, 2015, 95, 172-183.	3.1	137
11	Multi-objective design optimization of distributed energy systems through cost and exergy assessments. Applied Energy, 2017, 204, 1299-1316.	5.1	121
12	Design of the Building Envelope: A Novel Multi-Objective Approach for the Optimization of Energy Performance and Thermal Comfort. Sustainability, 2015, 7, 10809-10836.	1.6	103
13	Metal foam/PCM melting evolution analysis: Orientation and morphology effects. Applied Thermal Engineering, 2021, 187, 116572.	3.0	103
14	Energy retrofit of educational buildings: Transient energy simulations, model calibration and multi-objective optimization towards nearly zero-energy performance. Energy and Buildings, 2017, 144, 303-319.	3.1	102
15	CASA, cost-optimal analysis by multi-objective optimisation and artificial neural networks: A new framework for the robust assessment of cost-optimal energy retrofit, feasible for any building. Energy and Buildings, 2017, 146, 200-219.	3.1	89
16	A new comprehensive framework for the multi-objective optimization of building energy design: Harlequin. Applied Energy, 2019, 241, 331-361.	5.1	86
17	Resilience of robust cost-optimal energy retrofit of buildings to global warming: A multi-stage, multi-objective approach. Energy and Buildings, 2017, 153, 150-167.	3.1	82
18	The effect of open-cell metal foams strut shape on convection heat transfer and pressure drop. Applied Thermal Engineering, 2016, 103, 333-343.	3.0	78

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19	Analysis of a phase change material-based unit and of an aluminum foam/phase change material composite-based unit for cold thermal energy storage by numerical simulation. Applied Energy, 2019, 256, 113921.	5.1	76
20	Multi-objective optimization of the renewable energy mix for a building. Applied Thermal Engineering, 2016, 101, 612-621.	3.0	68
21	Monte Carlo determination of radiative properties of metal foams: Comparison between idealized and real cell structures. International Journal of Thermal Sciences, 2015, 87, 94-102.	2.6	67
22	Lord Kelvin and Weaire–Phelan Foam Models: Heat Transfer and Pressure Drop. Journal of Heat Transfer, 2016, 138, .	1.2	66
23	Net zero-energy buildings in Germany: Design, model calibration and lessons learned from a case-study in Berlin. Energy and Buildings, 2016, 133, 688-710.	3.1	63
24	Radiative properties modeling of open cell solid foam: Review and new analytical law. International Journal of Thermal Sciences, 2016, 104, 122-134.	2.6	62
25	Multi-objective operation optimization of a Distributed Energy System for a large-scale utility customer. Applied Thermal Engineering, 2016, 101, 752-761.	3.0	62
26	Rehabilitation of the building envelope of hospitals: Achievable energy savings and microclimatic control on varying the HVAC systems in Mediterranean climates. Energy and Buildings, 2013, 60, 125-138.	3.1	61
27	Thermal comfort prediction in a building category: Artificial neural network generation from calibrated models for a social housing stock in southern Europe. Applied Thermal Engineering, 2019, 150, 492-505.	3.0	59
28	Numerical Analysis of Heat Transfer and Pressure Drop in Metal Foams for Different Morphological Models. Journal of Heat Transfer, 2014, 136, .	1.2	58
29	Developing thermal flow in open-cell foams. International Journal of Thermal Sciences, 2017, 111, 129-137.	2.6	57
30	Multi-objective optimization of finned metal foam heat sinks: Tradeoff between heat transfer and pressure drop. Applied Thermal Engineering, 2021, 182, 116058.	3.0	57
31	A new comprehensive approach for cost-optimal building design integrated with the multi-objective model predictive control of HVAC systems. Sustainable Cities and Society, 2017, 31, 136-150.	5.1	56
32	Thermal conduction in open-cell metal foams: Anisotropy and Representative Volume Element. International Journal of Thermal Sciences, 2019, 137, 399-409.	2.6	55
33	Radiative properties of irregular open cell solid foams. International Journal of Thermal Sciences, 2017, 117, 77-89.	2.6	54
34	Retrofit of villas on Mediterranean coastlines: Pareto optimization with a view to energy-efficiency and cost-effectiveness. Applied Energy, 2019, 254, 113705.	5.1	54
35	The evolution of building energy retrofit via double-skin and responsive façades: A review. Solar Energy, 2021, 224, 703-717.	2.9	54
36	Economic optimization of a residential micro-CHP system considering different operation strategies. Applied Thermal Engineering, 2016, 101, 592-600.	3.0	53

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37	Different methods for the modelling of thermal bridges into energy simulation programs: Comparisons of accuracy for flat heterogeneous roofs in Italian climates. Applied Energy, 2012, 97, 405-418.	5.1	47
38	A real industrial building: Modeling, calibration and Pareto optimization of energy retrofit. Journal of Building Engineering, 2020, 29, 101186.	1.6	47
39	The role of the occupant behavior in affecting the feasibility of energy refurbishment of residential buildings: Typical effective retrofits compromised by typical wrong habits. Energy and Buildings, 2020, 223, 110217.	3.1	46
40	Effects of External and Internal Hyperthermia on LDL Transport and Accumulation Within an Arterial Wall in the Presence of a Stenosis. Annals of Biomedical Engineering, 2015, 43, 1585-1599.	1.3	44
41	Anisotropic convective heat transfer in open-cell metal foams: Assessment and correlations. International Journal of Heat and Mass Transfer, 2020, 154, 119682.	2.5	43
42	Analysis of non-Newtonian effects on Low-Density Lipoprotein accumulation in an artery. Journal of Biomechanics, 2016, 49, 1437-1446.	0.9	42
43	Low-density lipoprotein transport through an arterial wall under hyperthermia and hypertension conditions – An analytical solution. Journal of Biomechanics, 2016, 49, 193-204.	0.9	42
44	The effects of variable porosity and cell size on the thermal performance of functionally-graded foams. International Journal of Thermal Sciences, 2021, 160, 106696.	2.6	41
45	Simplified state space representation for evaluating thermal bridges in building: Modelling, application and validation of a methodology. Applied Thermal Engineering, 2013, 61, 344-354.	3.0	38
46	Experimental validation of a numerical code by thin film heat flux sensors for the resolution of thermal bridges in dynamic conditions. Applied Energy, 2014, 124, 213-222.	5.1	38
47	Dynamic insulation of the building envelope: Numerical modeling under transient conditions and coupling with nocturnal free cooling. Applied Thermal Engineering, 2015, 84, 1-14.	3.0	38
48	The prediction of radiation heat transfer in open cell metal foams by a model based on the Lord Kelvin representation. International Journal of Heat and Mass Transfer, 2014, 76, 499-508.	2.5	37
49	Phase Change Materials for Reducing Cooling Energy Demand and Improving Indoor Comfort: A Step-by-Step Retrofit of a Mediterranean Educational Building. Energies, 2019, 12, 3661.	1.6	34
50	Analysis of non-Newtonian effects within an aorta-iliac bifurcation region. Journal of Biomechanics, 2017, 64, 153-163.	0.9	31
51	A Multi-Criteria Approach to Achieve Constrained Cost-Optimal Energy Retrofits of Buildings by Mitigating Climate Change and Urban Overheating. Climate, 2018, 6, 37.	1.2	29
52	Exergy-based operation optimization of a distributed energy system through the energy-supply chain. Applied Thermal Engineering, 2016, 101, 741-751.	3.0	25
53	Knowledge and energy retrofitting of neighborhoods and districts. A comprehensive approach coupling geographical information systems, building simulations and optimization engines. Energy Conversion and Management, 2021, 230, 113786.	4.4	25
54	Predicting the Impact of Climate Change on Thermal Comfort in A Building Category: The Case of Linear-type Social Housing Stock in Southern Spain. Energies, 2019, 12, 2238.	1.6	24

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55	Improved Monte Carlo methods for computational modelling of thermal radiation applied to porous cellular materials. International Journal of Thermal Sciences, 2019, 137, 161-179.	2.6	24
56	Addressing Large-Scale Energy Retrofit of a Building Stock via Representative Building Samples: Public and Private Perspectives. Sustainability, 2017, 9, 940.	1.6	23
57	Weather-data-based control of space heating operation via multi-objective optimization: Application to Italian residential buildings. Applied Thermal Engineering, 2019, 163, 114384.	3.0	23
58	Simulations of paraffine melting inside metal foams at different gravity levels with preliminary experimental validation. Journal of Physics: Conference Series, 2020, 1599, 012008.	0.3	23
59	Numerical Analysis of Radiative Effects on Natural Convection in Vertical Convergent and Symmetrically Heated Channels. Numerical Heat Transfer; Part A: Applications, 2006, 49, 369-391.	1.2	22
60	Radiative effects on natural convection in vertical convergent channels. International Journal of Heat and Mass Transfer, 2010, 53, 3513-3524.	2.5	22
61	The porous media theory applied to radiofrequency catheter ablation. International Journal of Numerical Methods for Heat and Fluid Flow, 2020, 30, 2669-2681.	1.6	22
62	ls it fundamental to model the inter-building effect for reliable building energy simulations? Interaction with shading systems. Building and Environment, 2020, 183, 107161.	3.0	22
63	Design optimization of a distributed energy system through cost and exergy assessments. Energy Procedia, 2017, 105, 2451-2459.	1.8	21
64	Thermo-Fluid-Dynamics of a Ceramic Foam Solar Receiver: A Parametric Analysis. Heat Transfer Engineering, 2020, 41, 1085-1099.	1.2	21
65	Numerical analysis of natural convection in air in a vertical convergent channel with uniformly heated conductive walls. International Communications in Heat and Mass Transfer, 2005, 32, 758-769.	2.9	20
66	Concept, Design and Energy Performance of a Net Zero-Energy Building in Mediterranean Climate. Procedia Engineering, 2016, 169, 26-37.	1.2	19
67	A Multi-Step Approach to Assess the Lifecycle Economic Impact of Seismic Risk on Optimal Energy Retrofit. Sustainability, 2017, 9, 989.	1.6	19
68	Mono- and Multi-Objective CFD Optimization of Graded Foam-Filled Channels. Materials, 2022, 15, 968.	1.3	19
69	Combined thermal and optical analysis of laser back-scribing for amorphous-silicon photovoltaic cells processing. International Journal of Heat and Mass Transfer, 1999, 42, 645-656.	2.5	18
70	Prediction of radiative heat transfer in metallic foams. International Journal of Thermal Sciences, 2014, 76, 147-154.	2.6	18
71	Numerical Analysis of a Paraffin/Metal Foam Composite for Thermal Storage. Journal of Physics: Conference Series, 2017, 796, 012032.	0.3	16
72	Design and performance analysis of a zero-energy settlement in Greece. International Journal of Low-Carbon Technologies, 2017, 12, 141-161.	1.2	15

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73	Thermal transient analysis of thin film multilayers heated by pulsed laser. International Journal of Heat and Mass Transfer, 1997, 40, 4487-4491.	2.5	14
74	Effects of ligaments shape on radiative heat transfer in metal foams. International Journal of Numerical Methods for Heat and Fluid Flow, 2016, 26, 477-488.	1.6	14
75	Adiabatic surface temperature as thermal/structural parameter in fire modeling: Thermal analysis for different wall conductivities. Applied Thermal Engineering, 2014, 65, 422-432.	3.0	13
76	Boundary layer considerations in a multi-layer model for LDL accumulation. Computer Methods in Biomechanics and Biomedical Engineering, 2018, 21, 803-811.	0.9	13
77	Comprehensive analysis to drive the energy retrofit of a neighborhood by optimizing the solar energy exploitation – An Italian case study. Journal of Cleaner Production, 2021, 314, 127998.	4.6	13
78	Two-Dimensional Transient Analysis of Absorbing Thin Films in Laser Treatments. Journal of Heat Transfer, 2000, 122, 113-117.	1.2	12
79	Transient Heat Conduction in Solids Irradiated by a Moving Heat Source. Defect and Diffusion Forum, 0, 283-286, 358-363.	0.4	12
80	Thermal design and optimization of vertical convergent channels in natural convection. Applied Thermal Engineering, 2006, 26, 170-177.	3.0	11
81	Experimental investigation on natural convection in a convergent channel with uniformly heated plates. International Journal of Heat and Mass Transfer, 2007, 50, 2772-2786.	2.5	11
82	Turbulent mixed convection in a uniformly heated vertical channel with an assisting moving surface. International Journal of Thermal Sciences, 2013, 71, 20-31.	2.6	10
83	Light and Heavy Energy Refurbishments of Mediterranean Offices. Part II: Cost-optimal Energy Renovation of an Institutional Building. Procedia Engineering, 2017, 180, 1518-1530.	1.2	10
84	Villas on Islands: cost-effective energy refurbishment in Mediterranean coastline houses. Energy Procedia, 2019, 159, 192-200.	1.8	10
85	Conceptualization, development and validation of EMAR: A user-friendly tool for accurate energy simulations of residential buildings via few numerical inputs. Journal of Building Engineering, 2021, 44, 102647.	1.6	10
86	Effect of a moving plate on heat transfer in a uniform heat flux vertical channel. International Journal of Heat and Mass Transfer, 2008, 51, 3906-3912.	2.5	9
87	Numerical analysis of radiation effects in a metallic foam by means of the radiative conductivity model. Applied Thermal Engineering, 2012, 49, 14-21.	3.0	9
88	Anisotropy effects on convective heat transfer and pressure drop in Kelvin's open-cell foams. Journal of Physics: Conference Series, 2017, 923, 012035.	0.3	9
89	Effects of global warming on energy retrofit planning of neighborhoods under stochastic human behavior. Energy and Buildings, 2021, 250, 111306.	3.1	9
90	Two Dimensional Transient Analysis of Temperature Distribution in a Solid Irradiated by a Gaussian Laser Source. , 2004, , 217.		8

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91	Influence of wall emissivity and convective heat transfer coefficient on the adiabatic surface temperature as thermal/structural parameter in fire modeling. Applied Thermal Engineering, 2013, 51, 573-585.	3.0	8
92	Mitigating the cooling need and improvement of indoor conditions in Mediterranean educational buildings, by means of green roofs. Results of a case study. Journal of Physics: Conference Series, 2015, 655, 012027.	0.3	8
93	Experimental Validation of a Tool for the Numerical Simulation of a Commercial Hot Water Storage Tank. Energy Procedia, 2017, 105, 4266-4273.	1.8	8
94	Natural convection in a vertical channel with open-cell foams. Journal of Physics: Conference Series, 2020, 1599, 012013.	0.3	7
95	Building heating demand vs climate: Deep insights to achieve a novel heating stress index and climatic stress curves. Journal of Cleaner Production, 2021, 296, 126616.	4.6	7
96	Instationary conjugate optical-thermal fields in thin films due to pulsed laser heating: A comparison between back and front treatment. Heat and Mass Transfer, 1998, 34, 255-261.	1.2	6
97	Numerical characterization of a highly concentrated solar radiation sensor based on an inverse method. Solar Energy, 2015, 111, 407-417.	2.9	6
98	Are transparent double-skin facades effective for energy retrofit? Answers for an office building - with and without photovoltaic integration. Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 2022, 44, 257-271.	1.2	6
99	Transient conductive–radiative numerical analysis of multilayer thin films heated by different laser pulses. International Journal of Thermal Sciences, 2001, 40, 959-968.	2.6	5
100	Theoretical comparison of two-dimensional transient analysis between back and front laser treatment of thin multilayer films. International Journal of Thermal Sciences, 2004, 43, 611-621.	2.6	5
101	Effect of Solid Thickness on Transient Heat Conduction in Workpieces Irradiated by a Moving Heat Source. Defect and Diffusion Forum, 2010, 297-301, 1445-1450.	0.4	5
102	Exergy-efficient management of energy districts. , 2014, , .		5
103	Optimal operation of residential micro-CHP systems with thermal storage losses modelling. , 2014, , .		5
104	Numerical Simulation of a Solar Domestic Hot Water System. Journal of Physics: Conference Series, 2014, 547, 012015.	0.3	5
105	Prescriptive- and Performance-based Approaches of the Present and Previous German DIN 4108-2. Hourly Energy Simulation for Comparing the Effectiveness of the Methods. Energy Procedia, 2015, 75, 1315-1324.	1.8	5
106	Energy Audit of Health Care Facilities: Dynamic Simulation of Energy Performances and Energy-Oriented Refurbishment of System and Equipment for Microclimatic Control. American Journal of Engineering and Applied Sciences, 2016, 9, 814-834.	0.3	5
107	Transient heat transfer through walls and thermal bridges. Numerical modelling: Methodology and validation. , 2012, , .		4
108	Optimal Operation of Micro-CHP Systems for a Single-Family House in Italy. Applied Mechanics and Materials, 2014, 492, 467-472.	0.2	4

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109	Building Envelope, HVAC Systems and RESs for the Energy Retrofit of a Conference Hall on Naples Promenade. Energy Procedia, 2015, 75, 1261-1268.	1.8	4
110	Cost-Effective Refurbishment of Italian Historic Buildings. , 2017, , 553-600.		4
111	5.21 Energy Management in Hospitals. , 2018, , 827-854.		4
112	Numerical investigation of sensible thermal energy storage in high temperature solar systems. WIT Transactions on Modelling and Simulation, 2009, , .	0.0	4
113	Scaled models in the analysis of fire-structure interaction. Journal of Physics: Conference Series, 2015, 655, 012053.	0.3	3
114	Assessment of pollutants emission of two residential micro-CHP systems. , 2015, , .		3
115	Technical and economic analysis of green roofs to reduce building cooling needs. , 2015, , 349-378.		3
116	Optimization of solar energy exploitation for a neighborhood towards nearly zero energy buildings. , 2020, , .		3
117	An Experimental Study of Radiative Effects on Natural Convection in Air in Convergent Channels. , 2003, , 189.		2
118	Influence of energy quality management on CO <inf>2</inf> emissions in operation optimization of a distributed energy system. , 2015, , .		2
119	Thermal Dynamic Insulation: Numerical Modeling in a Transient Regime and Application to Alternative Aviary Houses. Energy Procedia, 2015, 75, 1711-1721.	1.8	2
120	Light and Heavy Energy Refurbishments of Mediterranean Offices. Part I: Energy Audit of an Institutional Building on the Naples Coast. Procedia Engineering, 2017, 180, 1506-1517.	1.2	2
121	MORPHOLOGY OF OPEN-CELL FOAMS: A CRITICAL REVIEW AND GEOMETRIC MODELING. Journal of Porous Media, 2019, 22, 869-887.	1.0	2
122	Modeling heat conduction in open-cell metal foams by means of the Three-Dimensional Thermal Fin theory. Journal of Physics: Conference Series, 2019, 1224, 012009.	0.3	2
123	Numerical Analysis of Opposing Mixed Convection in Air in a Vertical Channel With a Moving Plate. , 2005, , .		2
124	Quasi-Steady State Numerical Model for a Multilayer Thin Film Irradiated by a Moving Laser Source at High Peclet Numbers. , 2003, , 177.		1
125	Mixed Convection in Air in an Open Ended Cavity With a Moving Plate Parallel to the Cavity Open Surface. , 2005, , 603.		1
126	Numerical Model for Multilayer Thin Films Irradiated by a Moving Laser Source. Defect and Diffusion Forum, 2009, 283-286, 352-357.	0.4	1

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127	Numerical Investigation on Transient Conjugate Optical-Thermal Fields in Thin Films Irradiated by Moving Sources for Front Treatments. Defect and Diffusion Forum, 0, 297-301, 1439-1444.	0.4	1
128	Effect of Impinging Jet on Heat Conduction in Workpieces Irradiated by a Moving Heat Source. Defect and Diffusion Forum, 2011, 312-315, 924-928.	0.4	1
129	Analysis of Heat Transfer and Pressure Drop Through Idealized Open Cell Ceramic Foams: Comparison Between Kelvin and Weaire-Phelan Cell Structures. , 2013, , .		1
130	Microtomography-Based Analysis of Pressure Drop and Heat Transfer Through Open Cell Metal Foams. , 2013, , .		1
131	Three-dimensional CFD Evaluation of the Characterizing Parameters in the Fire/Structure Interaction. Energy Procedia, 2014, 45, 385-394.	1.8	1
132	Artificial Neural Networks for Predicting the Energy Behavior of a Building Category. , 2017, , 305-340.		1
133	Experimental test of a hot water storage system including a macro-encapsulated phase change material (PCM). Journal of Physics: Conference Series, 2017, 796, 012030.	0.3	1
134	Development of an analytical model to investigate the effects of the extraflux versus the sky and the ground and optimization of the radiative characteristics of a thermochromic paint for a typical Italian location. AIP Conference Proceedings, 2019, , .	0.3	1
135	Numerical Analysis of Heat Conduction in Cooling of Aluminum Extrusion. , 2002, , 137.		0
136	Radiative Effects on Mixed Convection in a Uniformly Heated Vertical Convergent Channel with an Unheated Moving Plate. Advances in Applied Mathematics and Mechanics, 2011, 3, 280-296.	0.7	0
137	A simplified analytical model of radiative heat transfer in open cell foams. Journal of Physics: Conference Series, 2014, 547, 012045.	0.3	0
138	Experimental validation of CFD model of thermal fluxes through a multilayer wall. Journal of Physics: Conference Series, 2017, 796, 012022.	0.3	0
139	Numerical analysis of mixed convection in air in an inclined channel with a moving plate. WIT Transactions on Modelling and Simulation, 2007, , .	0.0	0
140	Comprehensive insights into the influence of climatic stress on building heating demand. , 2020, , .		0
141	Functionally-graded foams for volumetric solar receivers. Journal of Physics: Conference Series, 2022, 2177, 012030.	0.3	0