Nicola Massarotti

List of Publications by Year
in descending order

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88 papers	2,128 citations	218381 26 h-index	276539 41 g-index
94 all docs	94 docs citations	94 times ranked	1879 citing authors

#	Article	IF	Citations
1	Conversion of Sewage Sludge to combined heat and power: Modeling and optimization. Smart Energy, 2022, 5, 100061.	2.6	10
2	Combined heat and power production based on sewage sludge gasification: An energy-efficient solution for wastewater treatment plants. Energy Conversion and Management: X, 2022, 13, 100171.	0.9	5
3	Coupled Geothermal Energy Simulations. Journal of Physics: Conference Series, 2022, 2177, 012004.	0.3	1
4	CFD Modeling of Thermoacoustic Energy Conversion: A Review. Energies, 2022, 15, 3806.	1.6	10
5	A novel model for macroscopic simulation of oscillating heat and fluid flow in porous media. International Journal of Thermal Sciences, 2022, 181, 107758.	2.6	7
6	Fluid dynamic and thermal comfort analysis in an actual operating room with unidirectional airflow system. Building Simulation, 2021, 14, 1127-1146.	3.0	10
7	A general numerical procedure for solidification and melting in porous media and free fluids. International Journal of Thermal Sciences, 2021, 161, 106716.	2.6	6
8	Air contamination inside an actual operating room due to ultrafine particles: An experimental-numerical thermo-fluid dynamic study. Atmospheric Environment, 2021, 249, 118155.	1.9	14
9	Innovative Solutions to Use Ground-Coupled Heat Pumps in Historical Buildings: A Test Case in the City of Napoli, Southern Italy. Energies, 2021, 14, 296.	1.6	5
10	Aerosol hazards in operating rooms: A review of numerical and experimental studies. Journal of Aerosol Science, 2021, 158, 105823.	1.8	15
11	Analysis of heat capacity ratio on porous media in oscillating flow. International Journal of Heat and Mass Transfer, 2021, 179, 121724.	2.5	15
12	Sparce Subspace Learning and Characteristic Based Split for Modelling Artificial Ground Freezing. International Journal of Heat and Mass Transfer, 2021, 180, 121789.	2.5	5
13	Geothermal energy for wastewater and sludge treatment: An exergoeconomic analysis. Energy Conversion and Management, 2020, 224, 113180.	4.4	18
14	A novel approach for the numerical analysis of waste-to-energy plants. Journal of Physics: Conference Series, 2020, 1599, 012025.	0.3	1
15	The â€œINNOVAREâ€•Project: Innovative Plants for Distributed Poly-Generation by Residual Biomass. Energies, 2020, 13, 4020.	1.6	18
16	Numerical performance assessment of a novel Darrieus-style VAWT with auxiliary straight blades. Journal of Physics: Conference Series, 2020, 1589, 012020.	0.3	2
17	Modeling Artificial Ground Freezing for Construction of Two Tunnels of a Metro Station in Napoli (Italy). Energies, 2020, 13, 1272.	1.6	17
18	Low Enthalpy Geothermal Systems in Structural Controlled Areas: A Sustainability Analysis of Geothermal Resource for Heating Plant (The Mondragone Case in Southern Appennines, Italy). Energies, 2020, 13, 1237.	1.6	19

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19	A new example of circular economy: Waste vegetable oil for cogeneration in wastewater treatment plants. Energy Conversion and Management, 2020, 211, 112763.	4.4	23
20	Ultrafine particle transport inside an operating room equipped with turbulent diffusers. Journal of Building Performance Simulation, 2020, 13, 443-455.	1.0	8
21	Techno-Economic Assessment of Combined Heat and Power Units Fuelled by Waste Vegetable Oil for Wastewater Treatment Plants: A Real Case Study. Advances in Science, Technology and Innovation, 2020, , 345-348.	0.2	0
22	Energy, exergy and economic analysis of a novel geothermal energy system for wastewater and sludge treatment. Energy Conversion and Management, 2019, 195, 533-547.	4.4	51
23	A novel numerical modelling approach for keratoplasty eye procedure. Biomechanics and Modeling in Mechanobiology, 2019, 18, 1429-1442.	1.4	10
24	The integration of exergy criterion in energy planning analysis for 100% renewable system. Energy, 2019, 174, 749-767.	4.5	26
25	A novel procedure for validation of flow simulations in operating theaters. Science and Technology for the Built Environment, 2019, 25, 629-642.	0.8	10
26	A novel low enthalpy geothermal energy system based on ground freezing probes. , 2019, , 1294-1303.		1
27	On the influence of thermal cycles on the yearly performance of an energy pile. Geomechanics for Energy and the Environment, 2018, 16, 32-44.	1.2	43
28	Modelling electro-osmotic flow in porous media: a review. International Journal of Numerical Methods for Heat and Fluid Flow, 2018, 28, 472-497.	1.6	23
29	A novel energy assessment of urban wastewater treatment plants. Energy Conversion and Management, 2018, 163, 304-313.	4.4	75
30	A generalised porous medium approach to study thermo-fluid dynamics in human eyes. Medical and Biological Engineering and Computing, 2018, 56, 1823-1839.	1.6	13
31	A renewable energy system for a nearly zero greenhouse city: Case study of a small city in southern Italy. Energy, 2018, 143, 347-362.	4.5	58
32	Design of a novel heating device for infusion fluids in vitrectomy. Applied Thermal Engineering, 2018, 128, 625-636.	3.0	7
33	Performance analysis of a biomass powered micro-cogeneration system based on gasification and syngas conversion in a reciprocating engine. Energy Conversion and Management, 2018, 175, 33-48.	4.4	45
34	A novel patientâ€oriented numerical procedure for glaucoma drainage devices. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e3141.	1.0	8
35	A geothermal energy system for wastewater sludge drying and electricity production in a small island. Energy, 2018, 163, 130-143.	4.5	26
36	An integrated system for sewage sludge drying through solar energy and a combined heat and power unit fuelled by biogas. Energy Conversion and Management, 2018, 171, 587-603.	4.4	58

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37	Modelling approaches to biomass gasification: A review with emphasis on the stoichiometric method. Renewable and Sustainable Energy Reviews, 2017, 74, 71-88.	8.2	143
38	Numerical analysis of a compression ignition engine powered in the dual-fuel mode with syngas and biodiesel. Energy, 2017, 137, 969-979.	4.5	35
39	Direct use of waste vegetable oil in internal combustion engines. Renewable and Sustainable Energy Reviews, 2017, 69, 759-770.	8.2	87
40	Energy piles for ground source heat pump applications: Comparison of heat transfer performance for different design and operating parameters. Applied Thermal Engineering, 2017, 124, 1492-1504.	3.0	62
41	Heat and fluid flow in electro-osmotically driven systems. Energy Procedia, 2017, 126, 91-98.	1.8	1
42	Strong temperature dependent viscosity effects on bio-magnetic fluid flow under the action of localized magnetic field and viscous dissipation. Journal of Molecular Liquids, 2017, 248, 616-625.	2.3	8
43	Effectiveness of flow obstructions in enhancing electro-osmotic flow. Microfluidics and Nanofluidics, 2017, 21, 1.	1.0	5
44	Temperature Effect on Rheological Behavior of Silicone Oils. A Model for the Viscous Heating. Journal of Physical Chemistry B, 2017, 121, 7048-7054.	1.2	9
45	Polygeneration system based on PEMFC, CPVT and electrolyzer: Dynamic simulation and energetic and economic analysis. Applied Energy, 2017, 192, 530-542.	5.1	64
46	Influence of one porous layer insert on the transient heat transfer in a tall annulus in presence of large source terms. International Journal of Heat and Technology, 2017, 35, S478-S484.	0.3	1
47	Effects of Inhomogeneities on Heat and Mass Transport Phenomena in Thermal Bridges. Energies, 2016, 9, 126.	1.6	8
48	New benchmark solutions for transient natural convection in partially porous annuli. International Journal of Numerical Methods for Heat and Fluid Flow, 2016, 26, 1187-1225.	1.6	23
49	Thermo-economic analysis of a novel cogeneration system for sewage sludge treatment. Energy, 2016, 115, 1560-1571.	4.5	43
50	Thermo-mechanical behaviour of energy pile in underground railway construction site. , 2016, , 83-88.		4
51	Influence of thermal radiation on contaminated air and water flow past a vertical wavy frustum of a cone. International Communications in Heat and Mass Transfer, 2016, 76, 63-68.	2.9	23
52	CFD modelling of a RDF incineration plant. Applied Thermal Engineering, 2016, 101, 710-719.	3.0	27
53	Models for thermo-fluid dynamic phenomena in low enthalpy geothermal energy systems: A review. Renewable and Sustainable Energy Reviews, 2016, 60, 330-355.	8.2	39
54	Transient Natural Convection in Partially Porous Vertical Annuli. International Journal of Heat and Technology, 2016, 34, S512-S518.	0.3	21

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55	Energy Analysis of a Small Geothermal District Heating System in Southern Italy. International Journal of Heat and Technology, 2016, 34, S519-S527.	0.3	9
56	Transient Natural Convection in Partially Porous Vertical Annuli. International Journal of Heat and Technology, 2016, 34, S512-S518.	0.3	6
57	Modeling and optimization of an incinerator plant for the reduction of the environmental impact. International Journal of Numerical Methods for Heat and Fluid Flow, 2015, 25, 1463-1487.	1.6	9
58	Engineering bed models for solid fuel conversion process in grate-fired boilers. Energy, 2014, 77, 244-253.	4.5	28
59	High Order Explicit Solutions for the Transient Natural Convection of Incompressible Fluids in Tall Cavities. Numerical Heat Transfer; Part A: Applications, 2014, 66, 839-862.	1.2	30
60	Artificial compressibility based CBS solutions for double diffusive natural convection in cavities. International Journal of Numerical Methods for Heat and Fluid Flow, 2013, 23, 205-225.	1.6	29
61	New solutions for axial flow convection in porous and partly porous cylindrical domains. International Journal of Heat and Mass Transfer, 2013, 57, 155-170.	2.5	35
62	A new model for the analysis of operating conditions of micro-cogenerative SOFC units. International Journal of Hydrogen Energy, 2013, 38, 336-344.	3.8	24
63	A new methodology for numerical simulation of geothermal down-hole heat exchangers. Applied Thermal Engineering, 2012, 48, 225-236.	3.0	40
64	Temperature and residence time of the combustion products in a waste-to-energy plant. Fuel, 2012, 102, 92-105.	3.4	23
65	Three-dimensional simulation of heat and mass transport phenomena in planar SOFCs. International Journal of Hydrogen Energy, 2011, 36, 10288-10301.	3.8	28
66	Metrological analysis of the measurement system for a micro-cogenerative SOFC module. International Journal of Hydrogen Energy, 2011, 36, 10228-10234.	3.8	12
67	Efficient three-dimensional FEM based algorithm for the solution of convection in partly porous domains. International Journal of Heat and Mass Transfer, 2011, 54, 4495-4506.	2.5	32
68	A stable explicit fractional step procedure for the solution of heat and fluid flow through interfaces between saturated porous media and free fluids in presence of high source terms. International Journal for Numerical Methods in Engineering, 2010, 83, 671-692.	1.5	25
69	A novel single domain approach for numerical modelling solid oxide fuel cells. International Journal of Numerical Methods for Heat and Fluid Flow, 2010, 20, 587-612.	1.6	19
70	High Rayleigh Number Laminar-Free Convection in Cavities: New Benchmark Solutions. Numerical Heat Transfer, Part B: Fundamentals, 2010, 58, 73-97.	0.6	39
71	A novel single domain approach for numerical modelling Solid Oxide Fuel Cells (SOFCs). International Journal of Numerical Methods for Heat and Fluid Flow, 2010, 20, .	1.6	3
72	4 The finite element method: discretization and application to heat convection problems. Developments in Heat Transfer, 2010, , 129-170.	0.1	3

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73	Numerical analysis of the thermo-fluid-dynamic field in the combustion chamber of an incinerator plant. Energy, 2009, 34, 2075-2086.	4.5	20
74	Numerical simulation of mass and energy transport phenomena in solid oxide fuel cells. Energy, 2009, 34, 2033-2041.	4.5	42
75	Artificial Compressibility-Based CBS Scheme for the Solution of the Generalized Porous Medium Model. Numerical Heat Transfer, Part B: Fundamentals, 2009, 55, 196-218.	0.6	20
76	A robust model and numerical approach for solving solid oxide fuel cell (SOFC) problems. International Journal of Numerical Methods for Heat and Fluid Flow, 2008, 18, 811-834.	1.6	27
77	Analysis of Temperature and Residence Time of the Exhausts in the Combustion Chamber of an Incinerator Plant. , 2008, , .		0
78	A Numerical Model for Solid Oxide Fuel Cells. , 2006, , 293.		0
79	Explicit and semi-implicit CBS procedures for incompressible viscous flows. International Journal for Numerical Methods in Engineering, 2006, 66, 1618-1640.	1.5	55
80	Laminar and turbulent flow calculations through a model human upper airway using unstructured meshes. Communications in Numerical Methods in Engineering, 2006, 23, 1057-1069.	1.3	33
81	Forced convection heat transfer from solder balls on a printed circuit board using the characteristic based split (CBS) scheme. International Journal of Numerical Methods for Heat and Fluid Flow, 2005, 15, 73-95.	1.6	18
82	An elasto-plastic model of thermal contact conductance between nominally flat surfaces in vacuum. International Communications in Heat and Mass Transfer, 2003, 30, 921-930.	2.9	4
83	Experimental and Theoretical Modeling of the Effective Thermal Conductivity of Rough Steel Spheroid Packed Beds. Journal of Heat Transfer, 2003, 125, 693-702.	1.2	41
84	Microscopic and macroscopic approach for natural convection in enclosures filled with fluid saturated porous medium. International Journal of Numerical Methods for Heat and Fluid Flow, 2003, 13, 862-886.	1.6	39
85	Flow conditioners efficiency a comparison based on numerical approach. Flow Measurement and Instrumentation, 2002, 13, 1-11.	1.0	22
86	Natural convection in porous mediumâ€fluid interface problems â€•A finite element analysis by using the CBS procedure. International Journal of Numerical Methods for Heat and Fluid Flow, 2001, 11, 473-490.	1.6	47
87	A metrological analysis of a (Direct Digital Control) DDC-based air conditioning system. Energy and Buildings, 1999, 29, 155-166.	3.1	6
88	Characteristicâ€based–split (CBS) algorithm for incompressible flow problems with heat transfer. International Journal of Numerical Methods for Heat and Fluid Flow, 1998, 8, 969-990.	1.6	85