Gian Luca Morini

List of Publications by Year
in descending order

141 papers	3,261 citations	159585 30 h-index	175258 52 g-index
145 all docs	145 docs citations	145 times ranked	2060 citing authors

#	Article	IF	Citations
1	Single-phase convective heat transfer in microchannels: a review of experimental results. International Journal of Thermal Sciences, 2004, 43, 631-651.	4.9	585
2	Viscous heating in liquid flows in micro-channels. International Journal of Heat and Mass Transfer, 2005, 48, 3637-3647.	4.8	160
3	A symmetric solution for velocity profile in laminar flow through rectangular ducts. International Communications in Heat and Mass Transfer, 1994, 21, 469-475.	5.6	113
4	Scaling Effects for Liquid Flows in Microchannels. Heat Transfer Engineering, 2006, 27, 64-73.	1.9	110
5	The rarefaction effect on the friction factor of gas flow in microchannels. Superlattices and Microstructures, 2004, 35, 587-599.	3.1	108
6	Seasonal performance evaluation of electric air-to-water heat pump systems. Applied Thermal Engineering, 2015, 90, 1072-1081.	6.0	64
7	SLIP FLOW IN RECTANGULAR MICROTUBES. Microscale Thermophysical Engineering, 1998, 2, 273-282.	1.2	63
8	LAMINAR-TO-TURBULENT FLOW TRANSITION IN MICROCHANNELS. Microscale Thermophysical Engineering, 2004, 8, 15-30.	1.2	63
9	The Role of the Viscous Dissipation in Heated Microchannels. Journal of Heat Transfer, 2007, 129, 308-318.	2.1	62
10	Empirical validation and modelling of a naturally ventilated rainscreen faÃ§ade building. Energy and Buildings, 2011, 43, 853-863.	6.7	61
11	Analytical determination of the temperature distribution and Nusselt numbers in rectangular ducts with constant axial heat flux. International Journal of Heat and Mass Transfer, 2000, 43, 741-755.	4.8	58
12	New technologies for an effective energy retrofit of hospitals. Applied Thermal Engineering, 2006, 26, 161-169.	6.0	55
13	Using viscous heating to determine the friction factor in microchannels â€“ An experimental validation. Experimental Thermal and Fluid Science, 2006, 30, 725-731.	2.7	55
14	Nusselt numbers in laminar flow for H2 boundary conditions. International Journal of Heat and Mass Transfer, 1996, 39, 1165-1174.	4.8	53
15	A critical review of the measurement techniques for the analysis of gas microflows through microchannels. Experimental Thermal and Fluid Science, 2011, 35, 849-865.	2.7	53
16	Influence of Outdoor Air Conditions on the Air Source Heat Pumps Performance. Energy Procedia, 2014, 45, 653-662.	1.8	52
17	Dynamic modelling and energy performance analysis of an innovative dual-source heat pump system. Applied Thermal Engineering, 2018, 142, 745-759.	6.0	50
18	Experimental Analysis of Pressure Drop and Laminar to Turbulent Transition for Gas Flows in Smooth Microtubes. Heat Transfer Engineering, 2007, 28, 670-679.	1.9	45

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19	Energy Audit of an Industrial Site: A Case Study. Energy Procedia, 2014, 45, 424-433.	1.8	44
20	On-off cycling losses of reversible air-to-water heat pump systems as a function of the unit power modulation capacity. Energy Conversion and Management, 2019, 196, 966-978.	9.2	43
21	A criterion for experimental validation of slip-flow models for incompressible rarefied gases through microchannels. Microfluidics and Nanofluidics, 2005, 1, 190-196.	2.2	42
22	Experimental analysis of the summer thermal performances of a naturally ventilated rainscreen faÃ§ade building. Energy and Buildings, 2014, 72, 280-287.	6.7	42
23	Laminar Liquid Flow Through Silicon Microchannels. Journal of Fluids Engineering, Transactions of the ASME, 2004, 126, 485-489.	1.5	42
24	Friction characteristics of compressible gas flows in microtubes. Experimental Thermal and Fluid Science, 2006, 30, 733-744.	2.7	41
25	Sizing effects on the energy performance of reversible air-source heat pumps for office buildings. Applied Thermal Engineering, 2017, 114, 1073-1081.	6.0	38
26	Greenhouse gas reduction and primary energy savings via adoption of a fuel cell hybrid plant in a hospital. Applied Thermal Engineering, 2004, 24, 383-400.	6.0	37
27	Thermal conductivity measurement of insulating innovative building materials by hot plate and heat flow meter devices: A Round Robin Test. International Journal of Thermal Sciences, 2019, 139, 25-35.	4.9	36
28	Laminar counterflow parallel-plate heat exchangers: Exact and approximate solutions. International Journal of Heat and Mass Transfer, 2010, 53, 4885-4898.	4.8	34
29	Laminar, transitional and turbulent friction factors for gas flows in smooth and rough microtubes. International Journal of Thermal Sciences, 2010, 49, 248-255.	4.9	33
30	Influence of sizing strategy and control rules on the energy saving potential of heat pump hybrid systems in a residential building. Energy Conversion and Management, 2021, 235, 114022.	9.2	32
31	Friction factor in micropipe gas flow under laminar, transition and turbulent flow regime. International Journal of Heat and Fluid Flow, 2009, 30, 814-822.	2.4	28
32	Experimental analysis of the influence of wall axial conduction on gas-to-gas micro heat exchanger effectiveness. International Journal of Heat and Mass Transfer, 2014, 69, 17-25.	4.8	27
33	Generation of Newtonian and non-Newtonian droplets in silicone oil flow by means of a micro cross-junction. International Journal of Multiphase Flow, 2018, 105, 202-216.	3.4	27
34	Thermal performance of silicon micro heat-sinks with electrokinetically-driven flows. International Journal of Thermal Sciences, 2006, 45, 955-961.	4.9	26
35	Advances in Propylene Polymerization with MgCl2 Supported Catalysts. , 1995, , 413-425.		26
36	Experimental Analysis of Gas Micro-Convection Through Commercial Microtubes. Experimental Heat Transfer, 2012, 25, 151-171.	3.2	25

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37	Dynamic Simulation of Solar Thermal Collectors for Domestic Hot Water Production. Energy Procedia, 2015, 82, 630-636.	1.8	25
38	Experimental characterization of a micro cross-junction as generator of Newtonian and non-Newtonian droplets in silicone oil flow at low Capillary numbers. Experimental Thermal and Fluid Science, 2019, 103, 191-200.	2.7	25
39	Analysis of laminar-to-turbulent transition for isothermal gas flows in microchannels. Microfluidics and Nanofluidics, 2009, 7, 181-190.	2.2	24
40	Guidelines for the Determination of Single-Phase Forced Convection Coefficients in Microchannels. Journal of Heat Transfer, 2013, 135, .	2.1	24
41	Experimental Analysis of Microconvective Heat Transfer in the Laminar and Transitional Regions. Experimental Heat Transfer, 2009, 23, 73-93.	3.2	23
42	The simulation of transients in thermal plant. Part I: Mathematical model. Applied Thermal Engineering, 2007, 27, 2138-2144.	6.0	22
43	Conductive heat transfer in a rarefied polyatomic gas confined between coaxial cylinders. International Journal of Heat and Mass Transfer, 2014, 79, 378-389.	4.8	22
44	Uncertainty assessment in friction factor measurements as a tool to design experimental set-ups. International Journal of Thermal Sciences, 2009, 48, 282-289.	4.9	19
45	Climate Influence on Seasonal Performances of Air-to-water Heat Pumps for Heating. Energy Procedia, 2015, 81, 100-107.	1.8	19
46	Nusselt Numbers in Rectangular Ducts With Laminar Viscous Dissipation. Journal of Heat Transfer, 1999, 121, 1083-1087.	2.1	18
47	Low-Frequency Instabilities in the Operation of Metallic Multi-Microchannel Evaporators. Heat Transfer Engineering, 2007, 28, 834-841.	1.9	18
48	Single-Phase Laminar Forced Convection in Microchannels With Rounded Corners. Heat Transfer Engineering, 2011, 32, 1108-1116.	1.9	18
49	Electro-osmotic heat transfer in elliptical microchannels under H1 boundary condition. International Journal of Thermal Sciences, 2013, 72, 92-101.	4.9	18
50	The Effect on the Nusselt Number of the Nonlinear Axial Temperature Distribution of Gas Flows Through Microtubes. Heat Transfer Engineering, 2014, 35, 159-170.	1.9	18
51	Dilute gas flows through elliptic microchannels under H2 boundary conditions. International Journal of Heat and Mass Transfer, 2014, 71, 376-385.	4.8	18
52	Exact solution for the conjugate fluidâ€“fluid problem in the thermal entrance region of laminar counterflow heat exchangers. International Journal of Heat and Mass Transfer, 2011, 54, 490-499.	4.8	17
53	Design and Experimental Investigation of a Gas-to-Gas Counter-Flow Micro Heat Exchanger. Experimental Heat Transfer, 2014, 27, 340-359.	3.2	17
54	A method for the choice of the optimal balance-point temperature of air-to-water heat pumps for heating. Sustainable Cities and Society, 2014, 12, 85-91.	10.4	16

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55	Dynamic Simulation of Outdoor Swimming Pool Solar Heating. Energy Procedia, 2015, 81, 1-10.	1.8	15
56	Transient response of non-thermal equilibrium packed beds. International Journal of Engineering Science, 1999, 37, 179-188.	5.0	14
57	The evaluation of the effective thermal conductivity of metal-foam loaded phase change materials. Journal of Energy Storage, 2022, 51, 104450.	8.1	14
58	The simulation of transients in thermal plant. Part II: Applications. Applied Thermal Engineering, 2008, 28, 244-251.	6.0	13
59	Effects of the channel geometry and of the fluid composition on the performances of DC electro-osmotic pumps. International Journal of Thermal Sciences, 2012, 55, 114-121.	4.9	13
60	Annual Performances of Reversible Air Source Heat Pumps for Space Conditioning. Energy Procedia, 2015, 78, 1123-1128.	1.8	13
61	BESTEST and EN ISO 52016 Benchmarking of ALMABuild, a New Open-Source Simulink Tool for Dynamic Energy Modelling of Buildings. Energies, 2019, 12, 2938.	3.1	13
62	A Comparison of Data Reduction Methods for Average Friction Factor Calculation of Adiabatic Gas Flows in Microchannels. Micromachines, 2019, 10, 171.	2.9	13
63	Numerical investigation of the influence of heat emitters on the local thermal comfort in a room. Building Simulation, 2019, 12, 395-410.	5.6	13
64	Data reduction of average friction factor of gas flow through adiabatic micro-channels. International Journal of Heat and Mass Transfer, 2019, 129, 427-431.	4.8	13
65	Laminar viscous dissipation in rectangular ducts. International Communications in Heat and Mass Transfer, 1998, 25, 551-560.	5.6	12
66	A Life Cycle Analysis of roof integrated photovoltaic systems. International Journal of Environmental Technology and Management, 2007, 7, 134.	0.2	12
67	Wall conduction effects in laminar counterflow parallel-plate heat exchangers. International Journal of Heat and Mass Transfer, 2014, 70, 939-953.	4.8	12
68	Preliminary Energy Audit of the Historical Building of the School of Engineering and Architecture of Bologna. Energy Procedia, 2015, 81, 64-73.	1.8	12
69	Convective Heat Transfer in Elliptical Microchannels Under Slip Flow Regime and H1 Boundary Conditions. Journal of Heat Transfer, 2016, 138, .	2.1	12
70	Experimental Determination of the 2D Velocity Laminar Profile in Glass Microchannels using Î¼PIV. Energy Procedia, 2014, 45, 538-547.	1.8	11
71	Summer Performances of Reversible Air-to-water Heat Pumps with Heat Recovery for Domestic Hot Water Production. Energy Procedia, 2015, 78, 1117-1122.	1.8	11
72	Flow patterns of an airâ€“water mixture at the exit of a micro T-junction. Experimental Thermal and Fluid Science, 2015, 67, 62-69.	2.7	11

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73	Hydraulic and thermal design of a gas microchannel heat exchanger. Journal of Physics: Conference Series, 2012, 362, 012023.	0.4	10
74	Shear work contribution to convective heat transfer of dilute gases in slip flow regime. European Journal of Mechanics, B/Fluids, 2017, 64, 60-68.	2.5	10
75	Numerical and Experimental Study of Microchannel Performance on Flow Maldistribution. Micromachines, 2020, 11, 323.	2.9	10
76	Average Friction Factor for Laminar Gas Flow in Microtubes. CFD Letters, 2020, 12, 22-30.	0.8	10
77	Laminar heat transfer between parallel plates as the limiting solution for the rectangular duct. International Communications in Heat and Mass Transfer, 1996, 23, 555-562.	5.6	9
78	Transient laminar natural convection along rectangular ducts. International Journal of Heat and Mass Transfer, 2001, 44, 4703-4710.	4.8	9
79	Viscous Dissipation as Scaling Effect for Liquid Flows in Microchannels (Keynote). , 2005, , 93.		9
80	Laminar counterflow parallel-plate heat exchangers: An exact solution including axial and transverse wall conduction effects. International Journal of Heat and Mass Transfer, 2017, 104, 1229-1245.	4.8	9
81	The Role of Emitters, Heat Pump Size, and Building Massive Envelope Elements on the Seasonal Energy Performance of Heat Pump-Based Heating Systems. Energies, 2020, 13, 5098.	3.1	9
82	On the role of axial wall conduction in mini/micro counterflow heat exchangers. International Journal of Heat and Mass Transfer, 2018, 116, 840-857.	4.8	8
83	Design and Simulation of a Wireless SAWâ€“Pirani Sensor with Extended Range and Sensitivity. Sensors, 2019, 19, 2421.	3.8	7
84	A Hybrid Numerical Methodology Based on CFD and Porous Medium for Thermal Performance Evaluation of Gas to Gas Micro Heat Exchanger. Micromachines, 2020, 11, 218.	2.9	7
85	Experimental Investigation on the Pressure Drop of Air Flows Through Aluminum and Nickel-Chromium Metallic Foams for HVAC Applications. Energies, 2020, 13, 172.	3.1	7
86	The developing Nusselt numbers for slug flow in rectangular ducts. International Journal of Heat and Mass Transfer, 1998, 41, 2799-2807.	4.8	6
87	Thermal characteristics of slug flow in rectangular ducts. International Journal of Thermal Sciences, 1999, 38, 148-159.	4.9	6
88	Experimental and numerical investigation of forced convection of subsonic gas flows in microtubes. International Journal of Heat and Mass Transfer, 2014, 78, 732-740.	4.8	6
89	Energy Performance Assessment of the Heating System Refurbishment on a School Building in Modena, Italy. Energy Procedia, 2016, 101, 948-955.	1.8	6
90	The Thermal Entrance Length Problem for Slug Flow in Rectangular Ducts. Journal of Heat Transfer, 1996, 118, 979-982.	2.1	5

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91	Experimental Investigation of the Compressibility Effects on the Friction Factor of Gas Flows in Microtubes. , 2006, , 411.		5
92	Experimental analysis of heat transfer between a heated wire and a rarefied gas in an annular gap with high diameter ratio. Journal of Physics: Conference Series, 2012, 362, 012028.	0.4	5
93	Viscous Dissipation. , 2013, , 1-15.		5
94	Electro-osmotic flows inside triangular microchannels. Journal of Physics: Conference Series, 2014, 501, 012026.	0.4	5
95	Microfluidic water-assisted trap focusing method for ultra-large volume injection in reversed-phase nano-liquid chromatography coupled to electron ionization tandem-mass spectrometry. Journal of Chromatography A, 2020, 1627, 461421.	3.7	5
96	Laminar, Transitional and Turbulent Friction Factors for Gas Flows in Smooth and Rough Microtubes. , 2008, , .		4
97	Numerical Investigation of Viscous Dissipation in Elliptic Microducts. Journal of Physics: Conference Series, 2014, 547, 012023.	0.4	4
98	Check-in and Control Activities on the Energy Performance Certificates in Emilia-Romagna (Italy). Energy Procedia, 2014, 45, 434-442.	1.8	4
99	Micro Droplets of non-Newtonian Solutions in Silicone Oil Flow through a Hydrophobic Micro Cross-Junction. Journal of Physics: Conference Series, 2017, 923, 012021.	0.4	4
100	The Challenge to Measure Single-phase Convective Heat Transfer Coefficients in Microchannels. Heat Transfer Engineering, 2019, 40, 695-710.	1.9	4
101	Toward a Compact Wireless Surface Acoustic Wave Pirani Microsensor with Extended Range and Sensitivity. Heat Transfer Engineering, 2021, 42, 565-578.	1.9	4
102	Numerical analysis of electro-osmotic flows through elliptic microchannels. Houille Blanche, 2013, 99, 42-49.	0.3	4
103	Experimental Investigation on Latent Thermal Energy Storages (LTESs) Based on Pure and Copper-Foam-Loaded PCMs. Energies, 2022, 15, 4894.	3.1	4
104	Experimental uncertainties analysis as a tool for friction factor determination in microchannels. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2008, 222, 817-827.	2.1	3
105	The Rules of Single-Phase Forced Convection in Microchannels. , 2012, , .		3
106	Determination of droplet contours in liquid-liquid flows within microchannels. Journal of Physics: Conference Series, 2015, 655, 012028.	0.4	3
107	Sensitivity to shear stress of non-encapsulated thermochromic liquid crystal (TLC) particles for microfluidic applications. Microfluidics and Nanofluidics, 2016, 20, 1.	2.2	3
108	Effect of aspect ratio and inlet manifold shape on the laminar-to-turbulent transition of gas flow in rectangular microchannels. Experiments in Fluids, 2021, 62, 1.	2.4	3

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109	Use of the Î¼PIV technique for an indirect determination of the microchannel cross-section passage geometry. Journal of Physics: Conference Series, 2014, 501, 012027.	0.4	2
110	The modelling of reverse defrosting cycles of air-to-water heat pumps with TRNSYS. E3S Web of Conferences, 2019, 111, 01063.	0.5	2
111	On the influence of hydronic distribution loop on energy performance and indoor thermal comfort for air-to-water heat pump systems in residential buildings. AIP Conference Proceedings, 2019, , .	0.4	2
112	Generation of Newtonian droplets in Newtonian and non-Newtonian carrier flows in micro T-junctions under opposed-flow configuration. Journal of Non-Newtonian Fluid Mechanics, 2020, 281, 104297.	2.4	2
113	Experimental validation of a two equation RANS transitional turbulence model for compressible microflows. International Journal of Heat and Fluid Flow, 2020, 86, 108711.	2.4	2
114	Convection forcÃ©e de liquides en rÃ©gime laminaire dans des micro-canaux en silicium. Houille Blanche, 2006, 92, 20-25.	0.3	2
115	Experimental measurements of thermalâ€“hydraulic performance of aluminum-foam water-to-air heat exchangers for a HVAC application. Applied Thermal Engineering, 2022, 213, 118716.	6.0	2
116	Experimental Investigation on Thermal Performance of Gas-to-Gas Micro Heat Exchanger With Three Flow Arrangements. , 2013, , .		1
117	Effects of Fabrication Imperfections on Fully Developed Flow in Rectangular Micro-Channels. , 2015, , .		1
118	Planned energy-efficient retrofitting of a residential building in Italy. Future Cities and Environment, 2017, 1, 3.	1.6	1
119	Experimental characterization of a silicone oil-in-water droplet generator based on a micro T-junction. Journal of Physics: Conference Series, 2017, 796, 012039.	0.4	1
120	Effects of the room temperature sensor position and radiator sizing on indoor thermal comfort and energy performances. E3S Web of Conferences, 2019, 111, 01006.	0.5	1
121	Influence of Concentration and Number of Image Pairs in Î¼-PIV Experiments. , 2007, , .		1
122	THE DESIGN OF MINI/MICRO HEAT EXCHANGERS: A WORLD OF OPPORTUNITIES AND CONSTRAINTS. , 2018, , .		1
123	Numerical analysis of compact air condensers. Heat Recovery Systems & CHP, 1994, 14, 535-547.	0.3	0
124	Optimization of Metallic Multi-Microchannel Array Evaporators. , 2006, , 1165.		0
125	Experimental Analysis of Laminar-to-Turbulent Transition for Gas Flows in Smooth Microtubes. , 2006, , 419.		0
126	Assessing Uncertainties in Friction Factor Measurement as a Tool in Devising Experimental Set-Ups. , 2007, , .		0

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127	Experimental Analysis of Gas Flow Forced Convection in Microtubes. , 2011, , .		0
128	Transitional and Turbulent Convective Heat Transfer of Compressible Gas Flows Through Microtubes. , 2012, , .		0
129	Experimental analysis of heat conduction in a high diameter ratio annular gap filled with a rarefied gas. Journal of Physics: Conference Series, 2012, 395, 012020.	0.4	0
130	Selected papers from the 2nd European conference on microfluidics: Î¼Fluâ€™10. Microsystem Technologies, 2012, 18, 149-150.	2.0	0
131	Selected papers from the 3rdEuropean Conference on Microfluidics - Î¼Flu'12. Experimental Heat Transfer, 2014, 27, 313-315.	3.2	0
132	Selected papers from the third European Conference on Microfluidics: ÂµFluâ€™12. Microfluidics and Nanofluidics, 2014, 16, 997-998.	2.2	0
133	Selected papers from the 3rd European Conference on Microfluidics: ÂµFluâ€™12. Microsystem Technologies, 2015, 21, 497-498.	2.0	0
134	Corrigendum to â€œShear work contribution to convective heat transfer of dilute gases in slip flow regimeâ€ [Eur. J. Mech. B Fluids 64 (2017) 60â€“68]. European Journal of Mechanics, B/Fluids, 2018, 72, 467-470.	2.5	0
135	ALMABuild as a design tool for the analysis of the effect of the occupant behaviour on the energy building consumptions. AIP Conference Proceedings, 2019, , .	0.4	0
136	Editorial for the Special Issue â€œSelected Papers from the ISTEGIMâ€™19â€”Thermal Effects in Gas Flow in Microscaleâ€. Micromachines, 2020, 11, 879.	2.9	0
137	Numerical modelling of droplet formation in a micro cross-junction. , 2021, , .		0
138	NUMERICAL ANALYSIS OF CHANNEL GEOMETRY AND FLUID BULK COMPOSITION INFLUENCE ON THE PERFORMANCE OF DC ELECTRO-OSMOTIC MICRO AND NANO PUMPS. , 2011, , .		0
139	Pressure-Driven Single-Phase Liquid Flows. , 2013, , 1-23.		0
140	Viscous Heating. , 2013, , 1-11.		0
141	Experimental Analysis of Gas Forced Convective Heat Transfer in Microtubes under H and T Thermal Boundary Conditions. , 2014, , .		0