Andrea Toffolo

List of Publications by Year in descending order

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62 papers	1,801 citations	257357 24 h-index	265120 42 g-index
62 all docs	62 docs citations	62 times ranked	1589 citing authors

#	Article	IF	Citations
1	Genetic Diversity as an Objective in Multi-Objective Evolutionary Algorithms. Evolutionary Computation, 2003, 11, 151-167.	2.3	189
2	A multi-criteria approach for the optimal selection of working fluid and design parameters in Organic Rankine Cycle systems. Applied Energy, 2014, 121, 219-232.	5.1	180
3	An Organic Rankine Cycle off-design model for the search of the optimal control strategy. Energy, 2013, 58, 97-106.	4.5	164
4	Optimal Design of Horizontal-Axis Wind Turbines Using Blade-Element Theory and Evolutionary Computation. Journal of Solar Energy Engineering, Transactions of the ASME, 2002, 124, 357-363.	1.1	127
5	Optimization of multi-source complex district heating network, a case study. Energy, 2017, 126, 53-63.	4.5	80
6	Synthesis and parameter optimization of a combined sugar and ethanol production process integrated with a CHP system. Energy, 2011, 36, 3675-3690.	4.5	61
7	A method to separate the problem of heat transfer interactions in the synthesis of thermal systems. Energy, 2008, 33, 163-170.	4.5	57
8	Techno-economic study of a heat pump enhanced flue gas heat recovery for biomass boilers. Biomass and Bioenergy, 2014, 71, 12-22.	2.9	54
9	Numerical simulation of a hydrogen fuelled gas turbine combustor. International Journal of Hydrogen Energy, 2011, 36, 7993-8002.	3.8	52
10	Thermodynamic performance of a hybrid power generation system using biomass gasification and concentrated solar thermal processes. Applied Energy, 2015, 160, 664-672.	5.1	49
11	Microalgal growth, nitrogen uptake and storage, and dissolved oxygen production in a polyculture based-open pond fed with municipal wastewater in northern Sweden. Chemosphere, 2021, 276, 130122.	4.2	49
12	Simulation and analysis of a meshed district heating network. Energy Conversion and Management, 2016, 122, 63-73.	4.4	43
13	A synthesis/design optimization algorithm for Rankine cycle based energy systems. Energy, 2014, 66, 115-127.	4.5	41
14	Improving energy efficiency of sawmill industrial sites by integration with pellet and CHP plants. Applied Energy, 2013, 111, 791-800.	5.1	37
15	Parameter Setting for a Tubular SOFC Simulation Model. Journal of Energy Resources Technology, Transactions of the ASME, 2004, 126, 40-46.	1.4	35
16	An experimental investigation of the flow field pattern within the impeller of a cross-flow fan. Experimental Thermal and Fluid Science, 2004, 29, 53-64.	1.5	35
17	The HEATSEP method for the synthesis of thermal systems: An application to the S-Graz cycle. Energy, 2010, 35, 976-981.	4.5	35
18	The synthesis of cost optimal heat exchanger networks with unconstrained topology. Applied Thermal Engineering, 2009, 29, 3518-3528.	3.0	34

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19	On the theoretical link between design parameters and performance in cross-flow fans: a numerical and experimental study. Computers and Fluids, 2005, 34, 49-66.	1.3	33
20	SYNTHSEP: A general methodology for the synthesis of energy system configurations beyond superstructures. Energy, 2018, 147, 924-949.	4.5	30
21	Development of High-Performance Airfoils for Axial Flow Compressors Using Evolutionary Computation. Journal of Propulsion and Power, 2002, 18, 544-554.	1.3	29
22	Optimization of process integration in a Kraft pulp and paper mill â€“ Evaporation train and CHP system. Applied Energy, 2013, 107, 98-110.	5.1	25
23	Prediction of performance and emissions of a two-shaft gas turbine from experimental data. Applied Thermal Engineering, 2008, 28, 2405-2415.	3.0	24
24	Low computational cost CFD analysis of thermoacoustic oscillations. Applied Thermal Engineering, 2010, 30, 544-552.	3.0	24
25	Black liquor fractionation for biofuels production â€“ A techno-economic assessment. Bioresource Technology, 2014, 166, 508-517.	4.8	24
26	Design Optimization of a District Heating Network Expansion, a Case Study for the Town of Kiruna. Applied Sciences (Switzerland), 2017, 7, 488.	1.3	24
27	Calculation of the flow field and NO x emissions of a gas turbine combustor by a coarse computational fluid dynamics model. Energy, 2012, 45, 445-455.	4.5	21
28	Biomass-based gas use in Swedish iron and steel industry â€“ Supply chain and process integration considerations. Renewable Energy, 2020, 146, 2797-2811.	4.3	20
29	A Critical Review of the Thermoeconomic Diagnosis Methodologies for the Location of Causes of Malfunctions in Energy Systems. Journal of Energy Resources Technology, Transactions of the ASME, 2006, 128, 335-342.	1.4	19
30	A bottom-up study of biomass and electricity use in a fossil free Swedish industry. Energy, 2019, 167, 1019-1030.	4.5	18
31	A New Thermoeconomic Method for the Location of Causes of Malfunctions in Energy Systems. Journal of Energy Resources Technology, Transactions of the ASME, 2007, 129, 1-9.	1.4	17
32	Criteria for the decomposition of energy systems in local/global optimizations. Energy, 2010, 35, 1157-1163.	4.5	17
33	Towards Optimal Sustainable Energy Systems in Nordic Municipalities. Energies, 2020, 13, 290.	1.6	15
34	Experimental and numerical analyses to enhance the performance of a microturbine diffuser. Experimental Thermal and Fluid Science, 2006, 30, 427-440.	1.5	12
35	TSO-STO: A two-step approach to the optimal operation of heat storage systems with variable temperature tanks. Energy, 2012, 45, 366-374.	4.5	12
36	Superimposition of Elementary Thermodynamic Cycles and Separation of the Heat Transfer Section in Energy Systems Analysis. Journal of Energy Resources Technology, Transactions of the ASME, 2013, 135, .	1.4	12

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37	Integrating the processes of a Kraft pulp and paper mill and its supply chain. Energy Conversion and Management, 2015, 103, 300-310.	4.4	12
38	Energy Supply Potentials in the Northern Counties of Finland, Norway and Sweden towards Sustainable Nordic Electricity and Heating Sectors: A Review. Energies, 2018, 11, 751.	1.6	12
39	Integration of an Electrolysis Unit for Producer Gas Conditioning in a Bio-Synthetic Natural Gas Plant. Journal of Energy Resources Technology, Transactions of the ASME, 2019, 141, .	1.4	11
40	Integrated SNG Production in a Typical Nordic Sawmill. Energies, 2016, 9, 333.	1.6	10
41	A New Thermoeconomic Method for the Location of Causes of Malfunctions in Energy Systems. , 2003, , 355.		7
42	On Cross-Flow Fan Theoretical Performance and Efficiency Curves: An Energy Loss Analysis on Experimental Data. Journal of Fluids Engineering, Transactions of the ASME, 2004, 126, 743-751.	0.8	5
43	Experimental analysis of a motorbike high speed racing engine. Applied Energy, 2010, 87, 1641-1650.	5.1	5
44	Towards a Reduction of Compressor Blade Dynamic Loading by Means of Rotor-Stator Interaction Optimization. , 2002, , .		5
45	Fuzzy Expert Systems for the Diagnosis of Component and Sensor Faults in Complex Energy Systems. Journal of Energy Resources Technology, Transactions of the ASME, 2009, 131, .	1.4	4
46	Numerical and Experimental Analysis of the Temperature Distribution in a Hydrogen Fuelled Combustor for a 10 MW Gas Turbine. Journal of Engineering for Gas Turbines and Power, 2011, 133, .	0.5	4
47	Analysis of the natural acoustic modes of a gas turbine combustor using isothermal CFD simulations. Applied Thermal Engineering, 2017, 126, 489-499.	3.0	4
48	Electrolysis Assisted Biomass Gasification for Liquid Fuels Production. Frontiers in Energy Research, 0, 10, .	1.2	4
49	Axial-Flow Compressor Model Based on a Cascade Stacking Technique and Neural Networks. , 2002, , 793.		3
50	A Critical Review of the Thermoeconomic Diagnosis Methodologies for the Location of Causes of Malfunctions in Energy Systems. , 2003, , 345.		3
51	On the nature of the heat transfer feasibility constraint in the optimal synthesis/design of complex energy systems. Energy, 2012, 41, 236-243.	4.5	3
52	Methodological aspects in synthesis of combined sugar and ethanol production plant. Energy, 2012, 41, 165-174.	4.5	3
53	On the Benefits of Separating the Heat Transfer Section and Analyzing Elementary Thermodynamic Cycles in Energy Systems Analysis. , 2008, , .		3
54	A Global and a Local Approach With Evolutionary Algorithms to Locate Malfunction Causes in Energy Systems. Journal of Energy Resources Technology, Transactions of the ASME, 2009, 131, .	1.4	2

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55	Multi-Objective Synthesis Optimization of Heat Exchanger Networks With Arbitrary Topology. , 2008, , .		1
56	Using Experimental Data for Predicting Performance and Emissions of a Real Gas Turbine Plant. , 2002, , .		1
57	The Characteristic Curve Method in Energy Systems Diagnosis: Analysis of Uncertainties in a Real Plant. , 2005, , .		1
58	Fuzzy Expert Systems for the Diagnosis of Component and Sensor Faults in Complex Energy Systems. , 2007, , 237.		0
59	Numerical and Experimental Analysis of the Temperature Distribution in a Hydrogen Fuelled Combustor for a 10 MW Gas Turbine. , 2010, , .		0
60	Optimum Choice of Energy System Configuration and Storages for a Proper Match between Energy Conversion and Demands. Energies, 2019, 12, 3957.	1.6	0
61	Locating Causes of Malfunctions in Energy Systems With Evolutionary Algorithms: A Global and a Local Approach. , 2006, , .		0
62	Evolutionary Multi-Objective Optimization in Energy Conversion Systems. , 0, , 333-363.		0