

# Toni Pujol

## List of Publications by Year in descending order

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74  
papers

1,389  
citations

394421

19  
h-index

377865

34  
g-index

74  
all docs

74  
docs citations

74  
times ranked

942  
citing authors

#	ARTICLE	IF	CITATIONS
1	The second law of thermodynamics and the global climate system: A review of the maximum entropy production principle. <i>Reviews of Geophysics</i> , 2003, 41, .	23.0	320
2	A method to assess the fuel economy of automotive thermoelectric generators. <i>Applied Energy</i> , 2018, 222, 42-58.	10.1	62
3	Palaeolithic Populations and Waves of Advance. <i>Cambridge Archaeological Journal</i> , 2004, 14, 53-61.	0.9	59
4	Transient behavior under a normalized driving cycle of an automotive thermoelectric generator. <i>Applied Energy</i> , 2017, 206, 1282-1296.	10.1	56
5	Progress in front propagation research. <i>Reports on Progress in Physics</i> , 2008, 71, 086001.	20.1	53
6	Modelling the Neolithic Transition in the Near East and Europe. <i>American Antiquity</i> , 2012, 77, 203-219.	1.1	46
7	Feasibility study on a vehicular thermoelectric generator coupled to an exhaust gas heater to improve aftertreatment's efficiency in cold-starts. <i>Applied Thermal Engineering</i> , 2020, 167, 114702.	6.0	41
8	Fuel economy analysis under a WLTP cycle on a mid-size vehicle equipped with a thermoelectric energy recovery system. <i>Energy</i> , 2019, 179, 306-314.	8.8	37
9	Pressure drop across sand and recycled glass media used in micro irrigation filters. <i>Biosystems Engineering</i> , 2015, 137, 55-63.	4.3	35
10	Numerical analysis of the effects of electrical and thermal configurations of thermoelectric modules in large-scale thermoelectric generators. <i>Applied Energy</i> , 2018, 229, 264-280.	10.1	32
11	The Consequence of Maximum Thermodynamic Efficiency in Daisyworld. <i>Journal of Theoretical Biology</i> , 2002, 217, 53-60.	1.7	29
12	Experimental Study of the Effects of Side-Edge Burning in the Downward Flame Spread of Thin Solid Fuels. <i>Combustion Science and Technology</i> , 2012, 184, 489-504.	2.3	25
13	Dispersal probability distributions and the wave-front speed problem. <i>Physical Review E</i> , 2002, 65, 041109.	2.1	24
14	Electrically tunable thermal conductivity in thermoelectric materials: Active and passive control. <i>Applied Energy</i> , 2015, 154, 709-717.	10.1	24
15	Using Computational Fluid Dynamics to Predict Head Losses in the Auxiliary Elements of a Microirrigation Sand Filter. <i>Transactions of the ASABE</i> , 2011, 54, 1367-1376.	1.1	23
16	Hydraulic performance of an ancient Spanish watermill. <i>Renewable Energy</i> , 2010, 35, 387-396.	8.9	22
17	Development of a new underdrain for improving the efficiency of microirrigation sand media filters. <i>Agricultural Water Management</i> , 2017, 179, 296-305.	5.6	22
18	Modelling and analysis of longitudinal thermoelectric energy harvesters considering series-parallel interconnection effect. <i>Energy</i> , 2017, 129, 59-69.	8.8	21

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19	Effects of Design Parameters on Fuel Economy and Output Power in an Automotive Thermoelectric Generator. <i>Energies</i> , 2018, 11, 3274.	3.1	21
20	States of maximum entropy production in a one-dimensional vertical model with convective adjustment. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 2002, 54, 363-369.	1.7	19
21	Reducing energy requirements for sand filtration in microirrigation: Improving the underdrain and packing. <i>Biosystems Engineering</i> , 2015, 140, 67-78.	4.3	18
22	An experimental and analytical study to analyze hydraulic behavior of nozzle-type underdrains in porous media filters. <i>Agricultural Water Management</i> , 2013, 126, 64-74.	5.6	17
23	Experimental study of the channel effect on the flame spread over thin solid fuels. <i>Fire Safety Journal</i> , 2015, 71, 162-173.	3.1	17
24	Extremal principle of entropy production in the climate system. <i>Quarterly Journal of the Royal Meteorological Society</i> , 1999, 125, 79-90.	2.7	16
25	Nox emissions reduction analysis in a diesel Euro VI Heavy Duty vehicle using a thermoelectric generator and an exhaust heater. <i>Fuel</i> , 2021, 301, 121029.	6.4	16
26	Validation of a fuel economy prediction method based on thermoelectric energy recovery for mid-size vehicles. <i>Applied Thermal Engineering</i> , 2019, 153, 768-778.	6.0	15
27	Runaway Greenhouse Effect in a Semigray Radiative-Convective Model. <i>Journals of the Atmospheric Sciences</i> , 2002, 59, 2801-2810.	1.7	15
28	Several-temperature systems: extended irreversible thermodynamics and thermal wavefront propagation. <i>Journal of Physics A</i> , 2000, 33, 6953-6973.	1.6	14
29	States of maximum entropy production in a one-dimensional vertical model with convective adjustment. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 2022, 54, 363.	1.7	13
30	Time-delayed fronts from biased random walks. <i>New Journal of Physics</i> , 2007, 9, 234-234.	2.9	13
31	Eddy Heat Diffusivity at Maximum Dissipation in a Radiative-convective One-dimensional Climate Model. <i>Journal of the Meteorological Society of Japan</i> , 2003, 81, 305-315.	1.8	13
32	Analytical investigation of the atmospheric radiation limits in semigray atmospheres in radiative equilibrium. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 2003, 55, 328-337.	1.7	12
33	Bernoulli correction to viscous losses: Radial flow between two parallel discs. <i>American Journal of Physics</i> , 2008, 76, 730-737.	0.7	12
34	Effects of the underdrain design on the pressure drop in sand filters. <i>Biosystems Engineering</i> , 2016, 150, 1-9.	4.3	12
35	Net Power Coefficient of Vertical and Horizontal Wind Turbines with Crossflow Runners. <i>Energies</i> , 2018, 11, 110.	3.1	12
36	High hydraulic performance in horizontal waterwheels. <i>Renewable Energy</i> , 2010, 35, 2543-2551.	8.9	11

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37	Power and Fuel Economy of a Radial Automotive Thermoelectric Generator: Experimental and Numerical Studies. <i>Energies</i> , 2018, 11, 2720.	3.1	11
38	Second differential of the entropy as a criterion for the stability in low-dimensional climate models. <i>Quarterly Journal of the Royal Meteorological Society</i> , 1999, 125, 91-106.	2.7	10
39	Hydraulic efficiency of horizontal waterwheels: Laboratory data and CFD study for upgrading a western Himalayan watermill. <i>Renewable Energy</i> , 2015, 83, 576-586.	8.9	10
40	Extremal climatic states simulated by a 2-dimensional model Part I: Sensitivity of the model and present state. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 2000, 52, 422-439.	1.7	9
41	Structural and magnetic properties of a nanocrystalline Fe <sub>75</sub> Nb <sub>10</sub> Si <sub>5</sub> B <sub>10</sub> alloy produced by mechanical alloying. <i>Materials Letters</i> , 2008, 62, 1673-1676.	2.6	9
42	Learning hydraulic turbomachinery with computational fluid dynamics (CFD) codes. <i>Computer Applications in Engineering Education</i> , 2013, 21, 684-690.	3.4	9
43	Energy Balance Models of Downward Combustion of Parallel Thin Solid Fuels and Comparison to Experiments. <i>Combustion Science and Technology</i> , 2013, 185, 1820-1837.	2.3	8
44	Effect of wand-type underdrains on the hydraulic performance of pressurised sand media filters. <i>Biosystems Engineering</i> , 2020, 192, 176-187.	4.3	8
45	Flame front speed and onset of instability in the burning of inclined thin solid fuel samples. <i>Physical Review E</i> , 2013, 88, 063019.	2.1	7
46	The effect of atmospheric absorption of sunlight on the runaway greenhouse point. <i>Journal of Geophysical Research</i> , 2002, 107, ACL 5-1-ACL 5-7.	3.3	6
47	Consequences of inter-specific competition among multiple adaptive species in Daisyworld. <i>Theoretical and Applied Climatology</i> , 2005, 81, 137-147.	2.8	6
48	Bounds for the speed of combustion flames: The effect of mass diffusion. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2008, 387, 1987-1998.	2.6	6
49	Bounds for Downward Flame Spread Rate in Solid Fuels and Comparison to Experiments. <i>Combustion Science and Technology</i> , 2011, 183, 1083-1106.	2.3	6
50	Numerical study of the effects of pod, wand and spike type underdrain systems in pressurised sand filters. <i>Biosystems Engineering</i> , 2020, 200, 338-352.	4.3	6
51	Effects of Module Spatial Distribution on the Energy Efficiency and Electrical Output of Automotive Thermoelectric Generators. <i>Energies</i> , 2021, 14, 2232.	3.1	6
52	Assessment of Different Pressure Drop-Flow Rate Equations in a Pressurized Porous Media Filter for Irrigation Systems. <i>Water (Switzerland)</i> , 2021, 13, 2179.	2.7	6
53	The repowering of vertical axis water mills preserving their cultural heritage: techno-economic analysis with water wheels and Turgo turbines. <i>Journal of Cultural Heritage Management and Sustainable Development</i> , 2023, 13, 269-287.	0.9	6
54	Greenhouse gases and climatic states of minimum entropy production. <i>Journal of Geophysical Research</i> , 1999, 104, 24257-24263.	3.3	5

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55	Extremal climatic states simulated by a 2-dimensional model. Part I: Sensitivity of the model and present state. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 2000, 52, 422-439.	1.7	5
56	Effect of initial conditions on the speed of reaction-diffusion fronts. <i>Physical Review E</i> , 2003, 67, 016213.	2.1	5
57	Analytical expressions for the flame front speed in the downward combustion of thin solid fuels and comparison to experiments. <i>Physical Review E</i> , 2011, 84, 026306.	2.1	5
58	Entropy Production In Thermodynamic Climate Models. <i>Journal of Non-Equilibrium Thermodynamics</i> , 1998, 23, .	4.2	4
59	Extremal climatic states simulated by a 2-dimensional model Part II: Different climatic scenarios. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 2000, 52, 440-454.	1.7	4
60	The speed of reaction-diffusion wavefronts in nonsteady media. <i>Journal of Physics A</i> , 2003, 36, 3983-3993.	1.6	4
61	Generalized analytical expressions for the burning velocity in a combustion model with non-constant transport coefficients and several specific heats. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2009, 388, 4959-4972.	2.6	4
62	Extended thermodynamics of heat transport and energy equilibration in radiative systems. <i>Journal of Physics A</i> , 1999, 32, 3095-3104.	1.6	3
63	Effects of the non-gray absorption in a simple radiative equilibrium model. <i>Planetary and Space Science</i> , 2002, 50, 1049-1054.	1.7	3
64	Hydraulic power of slow-rotating waterwheels: a novel analytical approximation. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2011, 225, 1495-1506.	2.1	3
65	Impactful engineering education through sustainable energy collaborations with public and private entities. <i>International Journal of Sustainability in Higher Education</i> , 2019, 20, 393-407.	3.1	3
66	Electrical Generation of a Ground-Level Solar Thermoelectric Generator: Experimental Tests and One-Year Cycle Simulation. <i>Energies</i> , 2020, 13, 3407.	3.1	3
67	Extremal climatic states simulated by a 2-dimensional model. Part II: Different climatic scenarios. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 2000, 52, 440-454.	1.7	2
68	Effects of convection on the removal of the multiplicity of stable states in one-dimensional vertical models. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2004, 130, 945-961.	2.7	2
69	Analytical Model for the Downward Flame Spread over a Thermally Thin Fuel into an Opposed Flow. <i>Combustion Science and Technology</i> , 2013, 185, 794-816.	2.3	2
70	Environmental Assessment of Underdrain Designs for Granular Media Filters in Drip Irrigation Systems. <i>Agriculture (Switzerland)</i> , 2022, 12, 810.	3.1	2
71	Periodic Solutions in Low-Dimensional Climatic Models. <i>Journal of Climate</i> , 1999, 12, 325-333.	3.2	1
72	HYDRODYNAMIC BEHAVIOUR OF THE UNDERDRAINS IN MICROIRRIGATION SAND MEDIA FILTERS USING CFD SOFTWARE. <i>Acta Horticulturae</i> , 2013, , 85-89.	0.2	1

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73	Extremal principle of entropy production in the climate system. Quarterly Journal of the Royal Meteorological Society, 1999, 125, 79-90.	2.7	1
74	Evaluation of the front leakage flow in a low-specific-speed centrifugal pump. , 2009, , 273-275.		1