Domingos Xavier Viegas

List of Publications by Year
in descending order

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85 papers	2,298 citations	201674 27 h-index	233421 45 g-index
87 all docs	87 docs citations	87 times ranked	2099 citing authors

#	Article	IF	Citations
1	Estimating live fine fuels moisture content using meteorologically-based indices. International Journal of Wildland Fire, 2001, 10, 223.	2.4	134
2	Analysis of forest fire fatalities in Southern Europe: Spain, Portugal, Greece and Sardinia (Italy). International Journal of Wildland Fire, 2019, 28, 85.	2.4	113
3	FireStation â€" an integrated software system for the numerical simulation of fire spread on complex topography. Environmental Modelling and Software, 2002, 17, 269-285.	4.5	109
4	Smoke emissions from biomass burning in a Mediterranean shrubland. Atmospheric Environment, 2010, 44, 3024-3033.	4.1	103
5	Slope and wind effects on fire propagation. International Journal of Wildland Fire, 2004, 13, 143.	2.4	102
6	Estimation of shrub height for fuel-type mapping combining airborne LiDAR and simultaneous color infrared ortho imaging. International Journal of Wildland Fire, 2007, 16, 341.	2.4	97
7	Multiple eyes in the skies - Architecture and perception issues in the comets unmanned air vehicles project. IEEE Robotics and Automation Magazine, 2005, 12, 46-57.	2.0	93
8	Modelling the effect of fire-exclusion and prescribed fire on wildfire size in Mediterranean ecosystems. Ecological Modelling, 2005, 183, 397-409.	2.5	90
9	Eruptive Behaviour of Forest Fires. Fire Technology, 2011, 47, 303-320.	3.0	81
10	A Relationship Between Rainfall and Burned Area for Portugal. International Journal of Wildland Fire, 1994, 4, 11.	2.4	68
11	Forest fire propagation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 1998, 356, 2907-2928.	3.4	66
12	Parametric study of an eruptive fire behaviour model. International Journal of Wildland Fire, 2006, 15, 169.	2.4	63
13	Fire spread in canyons. International Journal of Wildland Fire, 2004, 13, 253.	2.4	59
14	On the existence of a steady state regime for slope and wind driven fires. International Journal of Wildland Fire, 2004, 13, 101.	2.4	58
15	A Mathematical Model For Forest Fires Blowup. Combustion Science and Technology, 2004, 177, 27-51.	2.3	51
16	Monitoring of firefighters exposure to smoke during fire experiments in Portugal. Environment International, 2010, 36, 736-745.	10.0	50
17	Experimental and numerical simulation of flow around two-dimensional hills. Journal of Wind Engineering and Industrial Aerodynamics, 1995, 54-55, 173-181.	3.9	48
18	Fire weather risk assessment under climate change using a dynamical downscaling approach. Environmental Modelling and Software, 2011, 26, 1123-1133.	4.5	44

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19	Wildland Smoke Exposure Values and Exhaled Breath Indicators in Firefighters. Journal of Toxicology and Environmental Health - Part A: Current Issues, 2012, 75, 831-843.	2.3	43
20	Prediction of building interference effects on pedestrian level comfort. Journal of Wind Engineering and Industrial Aerodynamics, 2002, 90, 305-319.	3.9	41
21	Characterization of flame radiosity in shrubland fires. Combustion and Flame, 2011, 158, 1970-1976.	5.2	36
22	Thermal behaviour simulation of the passenger compartment of vehicles. International Journal of Vehicle Design, 2000, 24, 372.	0.3	35
23	Shelter effect on a row of coal piles to prevent wind erosion. Journal of Wind Engineering and Industrial Aerodynamics, 1988, 29, 145-154.	3.9	34
24	Ignition of Mediterranean Fuel Beds by Several Types of Firebrands. Fire Technology, 2014, 50, 61-77.	3.0	32
25	Fire whirls in forest fires: An experimental analysis. Fire Safety Journal, 2017, 87, 37-48.	3.1	31
26	Analysis of the physical processes associated with junction fires at laboratory and field scales. International Journal of Wildland Fire, 2018, 27, 52.	2.4	31
27	Study of the jump fire produced by the interaction of two oblique fire fronts. Part 1. Analytical model and validation with no-slope laboratory experiments. International Journal of Wildland Fire, 2012, 21, 843.	2.4	30
28	Upslope spread of a linear flame front over a pine needle fuel bed: The role of convection cooling. Proceedings of the Combustion Institute, 2015, 35, 2691-2698.	3.9	30
29	NUMERICAL SIMULATION OF TURBULENT FLOW AND FIRE PROPAGATION IN COMPLEX TOPOGRAPHY. Numerical Heat Transfer; Part A: Applications, 1995, 27, 229-253.	2.1	27
30	Wind tunnel simulation of the flow around two-dimensional hills. Journal of Wind Engineering and Industrial Aerodynamics, 1991, 38, 109-122.	3.9	25
31	Fire line rotation as a mechanism for fire spread on a uniform slope. International Journal of Wildland Fire, 2002, 11, 11.	2.4	25
32	Chapter 21 Fire Danger and Fire Behavior Modeling Systems in Australia, Europe, and North America. Developments in Environmental Science, 2008, 8, 471-497.	0.5	22
33	Flammability limits of biogenic volatile organic compounds emitted by fire-heated vegetation (Rosmarinus officinalis) and their potential link with accelerating forest fires in canyons: A Froude-scaling approach. Journal of Fire Sciences, 2014, 32, 316-327.	2.0	22
34	Laboratory fire spread analysis using visual and infrared images. International Journal of Wildland Fire, 2006, 15, 179.	2.4	21
35	Behaviour of slope and wind backing fires. International Journal of Wildland Fire, 2015, 24, 1085.	2.4	18
36	Multi-UAV Experiments: Application to Forest Fires. , 2007, , 207-228.		18

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37	Experimental analysis of fire spread across a two-dimensional ridge under wind conditions. International Journal of Wildland Fire, 2015, 24, 1008.	2.4	17
38	On the use of Irwin and Preston wall shear stress probes in turbulent incompressible flows with pressure gradients. Journal of Wind Engineering and Industrial Aerodynamics, 1996, 64, 15-29.	3.9	16
39	Full-scale measurements for evaluation of coal dust release from train wagons with two different shelter covers. Journal of Wind Engineering and Industrial Aerodynamics, 2003, 91, 1271-1283.	3.9	16
40	Effect of particle orientation and of flow velocity on the combustibility of Pinus pinaster and Eucalyptus globulus firebrand material. International Journal of Wildland Fire, 2011, 20, 946.	2.4	16
41	Combustibility of a mixture of live and dead fuel components. International Journal of Wildland Fire, 2013, 22, 992.	2.4	16
42	Effect of Canyons on a Fire Propagating Laterally Over Slopes. Frontiers in Mechanical Engineering, 2019, 5, .	1.8	15
43	Influence of Convectively Driven Flows in the Course of a Large Fire in Portugal: The Case of PedrÃ³gÃ£o Grande. Atmosphere, 2022, 13, 414.	2.3	15
44	Impact of the pinewood nematode, Bursaphelenchus xylophilus, on gross calorific value and chemical composition of Pinus pinaster woody biomass. European Journal of Forest Research, 2012, 131, 1025-1033.	2.5	14
45	An erosion technique for the measurement of the shear stress field on a flat plate. Journal of Physics E: Scientific Instruments, 1986, 19, 625-630.	0.7	12
46	External forced convection around a circular cylinder near a plane boundary. International Journal of Heat and Mass Transfer, 1988, 31, 47-53.	4.8	12
47	A comparative analysis of the use of NOAAâ€AVHRR NDVI and FWI data for forest fire risk assessment. International Journal of Remote Sensing, 2008, 29, 5677-5687.	2.9	12
48	Local-scale modelling system to simulate smoke dispersion. International Journal of Wildland Fire, 2007, 16, 196.	2.4	12
49	Estimation of the radiation extinction coefficient of natural fuel beds. International Journal of Wildland Fire, 2004, 13, 65.	2.4	11
50	Preliminary Analysis of Slope and Fuel Bed Effect on Jump Behavior in Forest Fires. Procedia Engineering, 2013, 62, 1032-1039.	1.2	11
51	Fire downwind a flat surface entering a canyon by lateral spread. Fire Safety Journal, 2021, 122, 103349.	3.1	11
52	Numerical prediction of size, mass, temperature and trajectory of cylindrical wind-driven firebrands. International Journal of Wildland Fire, 2014, 23, 698.	2.4	10
53	Fire effects on the seed bank of three Mediterranean shrubs: implications for fire management. Plant Ecology, 2016, 217, 1235-1246.	1.6	10
54	Fire intensity reduction in straw fuel beds treated with a long-term retardant. Fire Safety Journal, 2011, 46, 41-47.	3.1	9

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55	Equilibrium moisture content and timelag of dead Pinus pinaster needles. International Journal of Wildland Fire, 2014, 23, 721.	2.4	9
56	The Kornati fire accident â€“ eruptive fire in relatively low fuel load herbaceous fuel conditions. , 2008, , .		9
57	Analysis of Fire Hazard in Campsite Areas. Fire Technology, 2017, 53, 553-575.	3.0	8
58	FOREST FIRE SPREAD MODELS: THE LOCAL QUASI-EQUILIBRIUM APPROACH. Combustion Science and Technology, 2006, 178, 2115-2143.	2.3	7
59	Linear model for spread rate and mass loss rate for mixed-size fuel beds. International Journal of Wildland Fire, 2010, 19, 531.	2.4	6
60	Near-source grid-based measurement of CO and PM2.5 concentration during a full-scale fire experiment in southern European shrubland. Atmospheric Environment, 2016, 145, 19-28.	4.1	6
61	Some Thoughts on the Wind and Slope Effects on Fire Propagation. International Journal of Wildland Fire, 1994, 4, 63.	2.4	6
62	Fireline Rotation Analysis. Combustion Science and Technology, 2009, 181, 1495-1525.	2.3	5
63	Impacts of Fire on Society: Extreme Fire Propagation Issues. , 2009, , 97-109.		5
64	Fire ROS Calculator: A Tool to Measure the Rate of Spread of a Propagating Wildfire in a Laboratory Setting. Journal of Open Research Software, 2019, 7, 24.	5.9	5
65	On the suitability of the use of normalized difference vegetation index for forest fire risk assessment. International Journal of Remote Sensing, 2006, 27, 5095-5102.	2.9	4
66	Acoustic and thermal characterization of a forest fire event. Proceedings of SPIE, 2008, , .	0.8	4
67	A volatile organic compounds flammability approach for accelerating forest fires. , 2010, , .		4
68	A Protection for LPG Domestic Cylinders at Wildland-Urban Interface Fire. Fire, 2022, 5, 63.	2.8	4
69	Tank Fire in an Atmospheric Boundary Layer. Combustion Science and Technology, 1984, 41, 31-41.	2.3	3
70	Zigzag shape of the fire front. International Journal of Wildland Fire, 2007, 16, 763.	2.4	3
71	Generalized Byram's formula for arbitrary fire front geometries. International Journal of Thermal Sciences, 2016, 110, 222-228.	4.9	3
72	Ignition of Fuel Beds by Cigarettes: A Conceptual Model to Assess Fuel Bed Moisture Content and Wind Velocity Effect on the Ignition Time and Probability. Fire, 2021, 4, 35.	2.8	3

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73	Generalization of the fire line rotation model to curved fire lines. International Journal of Wildland Fire, 2006, 15, 447.	2.4	3
74	Interaction between two parallel fire fronts under different wind conditions. International Journal of Wildland Fire, 2022, 31, 492-506.	2.4	3
75	Characterization of Laboratory-Scale Fires Propagating Under the Effect of a Long-Term Retardant. Combustion Science and Technology, 2010, 182, 1083-1103.	2.3	2
76	Combustion of eucalyptus bark firebrands in varying flow incidence and velocity conditions. International Journal of Wildland Fire, 2013, 22, 980.	2.4	2
77	Angular variation of fire rate of spread. International Journal of Wildland Fire, 2013, 22, 970.	2.4	2
78	Acoustic characterization of a forest fire event. WIT Transactions on Ecology and the Environment, 2008, , .	0.0	1
79	Monitoring fire-fightersâ€™ smoke exposure and related health effects during Gestosa experimental fires. , 2010, , .		1
80	Fire Danger Harmonization Based on the Fire Weather Index for Transboundary Events between Portugal and Spain. Atmosphere, 2021, 12, 1087.	2.3	0
81	An innovative approach to forest fires detection and monitoring: the EU-FIRE project. WIT Transactions on the Built Environment, 2009, , .	0.0	0
82	Rainfall effects on fine forest fuels moisture content. , 0, , 1256-1263.		0
83	Fine forest fuels moisture content monitoring in Central Portugal: a long term experiment. , 0, , 1133-1141.		0
84	Numerical simulation of the tree higro-thermal response in forest fire environment. WEENTECH Proceedings in Energy, 2020, , 57-65.	0.0	0
85	Faixas de GestÃ£o de CombustÃveis. , 0, , .		0