Silvia Caro

List of Publications by Year
in descending order

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Version: 2024-02-01

50 papers	1,223 citations	411340 20 h-index	445137 33 g-index
50 all docs	50 docs citations	50 times ranked	1025 citing authors

#	Article	IF	Citations
1	Evaluation of the use of a HiMA binder to extend the durability of porous friction courses (PFC). International Journal of Pavement Engineering, 2023, 24, .	2.2	2
2	Coupled effects of ageing and moisture on the fracture properties of Permeable Friction Courses (PFC). International Journal of Pavement Engineering, 2022, 23, 972-984.	2.2	6
3	Investigating the performance-related properties of crumb rubber modified bitumen using rheology-based tests. International Journal of Pavement Engineering, 2022, 23, 877-887.	2.2	16
4	Predictive quantitative model for assessing the asphalt-aggregate adhesion quality based on aggregate chemistry. Road Materials and Pavement Design, 2022, 23, 1523-1543.	2.0	10
5	Random generation of 2D PFC microstructures through DEM gravimetric methods. Road Materials and Pavement Design, 2022, 23, 925-941.	2.0	11
6	Environmental effects on the rheological properties of fine warm RAP-foamed bitumen mixtures using SATS conditioning protocol. International Journal of Pavement Engineering, 2021, 22, 1273-1283.	2.2	4
7	Analysis of water flow in an asphalt pavement surface layer with different thicknesses and different permeability coefficients. Road Materials and Pavement Design, 2021, 22, 82-100.	2.0	6
8	Feasibility of the use of nonlinear solitary waves for the nondestructive measurement of Young's modulus of rocks and compacted materials. Transportation Geotechnics, 2021, 26, 100437.	2.0	9
9	Computational evaluation of long-term ravelling susceptibility of Permeable Friction Courses (PFC). Construction and Building Materials, 2021, 291, 123306.	3.2	6
10	Understanding the influence of temperature and frequency on the fatigue resistance of bitumen. Construction and Building Materials, 2021, 296, 123754.	3.2	4
11	Comparative evaluation of ageing effects on the properties of regular and highly polymer modified asphalt binders. Construction and Building Materials, 2021, 302, 124163.	3.2	20
12	Effect of foaming technique and mixing temperature on the rheological characteristics of fine RAP-foamed bitumen mixtures. Road Materials and Pavement Design, 2020, 21, 2143-2159.	2.0	8
13	Variability of the mechanical properties of Reclaimed Asphalt Pavement (RAP) obtained from different sources. Construction and Building Materials, 2020, 230, 116968.	3.2	35
14	Study of the influence of the loading rate on the fracture behaviour of asphalt mixtures and asphalt mortars. Construction and Building Materials, 2020, 262, 120037.	3.2	25
15	A novel procedure to determine shear dynamic modulus and damping ratio for partial saturated compacted fine-grained soils. Soil Dynamics and Earthquake Engineering, 2020, 131, 106029.	1.9	11
16	Numerical assessment of the structural contribution of porous friction courses (PFC). Construction and Building Materials, 2019, 225, 754-764.	3.2	10
17	Influence of filler properties on the rheological, cryogenic, fatigue and rutting performance of mastics. Construction and Building Materials, 2019, 227, 116974.	3.2	27
18	Impact of the chemical composition of aggregates on the adhesion quality and durability of asphalt-aggregate systems. Construction and Building Materials, 2019, 216, 661-672.	3.2	48

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19	Influence of the morphology of the cracking zone on the fracture energy of HMA materials. Materials and Structures/Materiaux Et Constructions, 2019, 52, 1.	1.3	3
20	Advanced characterisation of cement-stabilised lateritic soils to be used as road materials. International Journal of Pavement Engineering, 2019, 20, 1425-1434.	2.2	20
21	Mechanical response of asphalt mixtures under partial saturation conditions. Road Materials and Pavement Design, 2019, 20, 1291-1305.	2.0	7
22	Influence of material heterogeneity in the fracture of asphalt mixtures. International Journal of Pavement Engineering, 2019, 20, 747-760.	2.2	11
23	Influence of different sources of microstructural heterogeneity on the degradation of asphalt mixtures. International Journal of Pavement Engineering, 2018, 19, 9-23.	2.2	13
24	Analysis of natural stone block pavements in urban shared areas. Case Studies in Construction Materials, 2018, 8, 498-506.	0.8	14
25	Numerical modelling of ravelling in porous friction courses (PFC). Road Materials and Pavement Design, 2018, 19, 668-689.	2.0	20
26	Influence of aggregate morphology on the mechanical performance of asphalt mixtures. Road Materials and Pavement Design, 2018, 19, 972-991.	2.0	39
27	Differences in asphalt binder variability quantified through traditional and advanced laboratory testing. Construction and Building Materials, 2018, 176, 500-508.	3.2	8
28	Modelling moisture-mechanical damage in asphalt mixtures using random microstructures and a continuum damage formulation. Road Materials and Pavement Design, 2017, 18, 1-21.	2.0	18
29	A new approach for the advanced mechanical characterisation of asphalt mixtures using the hollow cylinder methodology. Measurement: Journal of the International Measurement Confederation, 2017, 103, 333-342.	2.5	12
30	Technical and economic evaluation of lighting and pavement in Italian road tunnels. Tunnelling and Underground Space Technology, 2017, 65, 42-52.	3.0	52
31	Evaluation of the degradation of fine asphalt-aggregate mixtures containing high reclaimed asphalt pavement contents. Road Materials and Pavement Design, 2017, 18, 91-107.	2.0	23
32	Influence of relative humidity and saturation degree in the mechanical properties of Hot Mix Asphalt (HMA) materials. Construction and Building Materials, 2017, 153, 807-815.	3.2	9
33	Evaluation of bitumen modification with crumb rubber obtained through a high pressure water jet (HPWJ) process. Construction and Building Materials, 2017, 151, 682-691.	3.2	9
34	Comparative â€œfrom Cradle to Gateâ€•Life Cycle Assessments of Hot Mix Asphalt (HMA) Materials. Sustainability, 2017, 9, 400.	1.6	42
35	Mix design, performance and maintenance of Permeable Friction Courses (PFC) in the United States: State of the Art. Construction and Building Materials, 2016, 111, 358-367.	3.2	71
36	Studying the impact of biomodifiers produced from agroindustrial wastes on asphalt binders. Construction and Building Materials, 2016, 126, 369-380.	3.2	24

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37	Methodology to characterise non-standard asphalt materials using DMA testing: application to natural asphalt mixtures. International Journal of Pavement Engineering, 2015, 16, 1-10.	2.2	34
38	Studying the effect of microstructural properties on the mechanical degradation of asphalt mixtures. Construction and Building Materials, 2015, 93, 70-83.	3.2	46
39	Incorporating the heterogeneity of asphalt mixtures in flexible pavements subjected to moisture diffusion. International Journal of Pavement Engineering, 2015, 16, 432-444.	2.2	16
40	A micromechanical model to evaluate the impact of air void content and connectivity in the oxidation of asphalt mixtures. Construction and Building Materials, 2014, 61, 181-190.	3.2	22
41	Effects of air voids variability on the thermo-mechanical response of asphalt mixtures. International Journal of Pavement Engineering, 2014, 15, 110-121.	2.2	8
42	Probabilistic modeling of air void variability of asphalt mixtures in flexible pavements. Construction and Building Materials, 2014, 61, 138-146.	3.2	29
43	Methodology for Modeling the Uncertainty of Material Properties in Asphalt Pavements. Journal of Materials in Civil Engineering, 2014, 26, 440-448.	1.3	22
44	Assessment of the effect of mineral filler on asphaltâ€“aggregate interfaces based on thermodynamic properties. Construction and Building Materials, 2012, 28, 599-606.	3.2	84
45	Analysis of moisture damage susceptibility of warm mix asphalt (WMA) mixtures based on Dynamic Mechanical Analyzer (DMA) testing and a fracture mechanics model. Construction and Building Materials, 2012, 35, 460-467.	3.2	48
46	Stochastic micromechanical model of the deterioration of asphalt mixtures subject to moisture diffusion processes. International Journal for Numerical and Analytical Methods in Geomechanics, 2011, 35, 1079-1097.	1.7	18
47	Micromechanical modeling of the influence of material properties on moisture-induced damage in asphalt mixtures. Construction and Building Materials, 2010, 24, 1184-1192.	3.2	62
48	Experimental Measurement and Numerical Simulation of Water Vapor Diffusion through Asphalt Pavement Materials. Journal of Materials in Civil Engineering, 2010, 22, 588-598.	1.3	65
49	Coupled Micromechanical Model of Moisture-Induced Damage in Asphalt Mixtures. Journal of Materials in Civil Engineering, 2010, 22, 380-388.	1.3	57
50	Probabilistic Analysis of Fracture in Asphalt Mixtures Caused by Moisture Damage. Transportation Research Record, 2008, 2057, 28-36.	1.0	59