Emiliano Cristiani

List of Publications by Year
in descending order

45 papers	999 citations	471509 17 h-index	434195 31 g-index
45 all docs	45 docs citations	45 times ranked	571 citing authors

#	Article	IF	Citations
1	Multiscale Modeling of Granular Flows with Application to Crowd Dynamics. Multiscale Modeling and Simulation, 2011, 9, 155-182.	1.6	169
2	Multiscale Modeling of Pedestrian Dynamics. Modeling, Simulation and Applications, 2014, , .	1.3	129
3	Invisible Control of Self-Organizing Agents Leaving Unknown Environments. SIAM Journal on Applied Mathematics, 2016, 76, 1683-1710.	1.8	80
4	Modeling Rationality to Control Self-Organization of Crowds: An Environmental Approach. SIAM Journal on Applied Mathematics, 2015, 75, 605-629.	1.8	47
5	Fast Semi-Lagrangian Schemes for the Eikonal Equation and Applications. SIAM Journal on Numerical Analysis, 2007, 45, 1979-2011.	2.3	46
6	Handling obstacles in pedestrian simulations: Models and optimization. Applied Mathematical Modelling, 2017, 45, 285-302.	4.2	46
7	A Fast Marching Method forÂHamilton-Jacobi Equations Modeling Monotone Front Propagations. Journal of Scientific Computing, 2009, 39, 189-205.	2.3	43
8	A Patchy Dynamic Programming Scheme for a Class of Hamilton--Jacobi--Bellman Equations. SIAM Journal of Scientific Computing, 2012, 34, A2625-A2649.	2.8	38
9	Initialization of the Shooting Method viaÂtheÂHamilton-Jacobi-Bellman Approach. Journal of Optimization Theory and Applications, 2010, 146, 321-346.	1.5	36
10	Effects of anisotropic interactions on the structure of animal groups. Journal of Mathematical Biology, 2011, 62, 569-588.	1.9	36
11	Perspective Shape from Shading: Ambiguity Analysis and Numerical Approximations. SIAM Journal on Imaging Sciences, 2012, 5, 311-342.	2.2	36
12	Managing crowded museums: Visitors flow measurement, analysis, modeling, and optimization. Journal of Computational Science, 2021, 53, 101357.	2.9	31
13	Modeling self-organization in pedestrians and animal groups from macroscopic and microscopic viewpoints. Modeling and Simulation in Science, Engineering and Technology, 2010, , 337-364.	0.6	28
14	A level set based method for fixing overhangs in 3D printing. Applied Mathematical Modelling, 2017, 44, 446-455.	4.2	28
15	An adaptive domain-decomposition technique for parallelization of the fast marching method. Applied Mathematics and Computation, 2011, 218, 32-44.	2.2	20
16	Understanding Human Mobility Flows from Aggregated Mobile Phone Data. IFAC-PapersOnLine, 2018, 51, 25-30.	0.9	20
17	On the micro-to-macro limit for first-order traffic flow models on networks. Networks and Heterogeneous Media, 2016, 11, 395-413.	1.1	17
18	An Efficient Data Structure and Accurate Scheme toÂSolve Front Propagation Problems. Journal of Scientific Computing, 2010, 42, 251-273.	2.3	15

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19	Can Local Single-Pass Methods Solve Any Stationary Hamilton--Jacobi--Bellman Equation?. SIAM Journal of Scientific Computing, 2014, 36, A570-A587.	2.8	15
20	Mathematical Models and Methods for Crowd Dynamics Control. Modeling and Simulation in Science, Engineering and Technology, 2020, , 159-197.	0.6	14
21	Robust design optimization for egressing pedestrians in unknown environments. Applied Mathematical Modelling, 2019, 72, 553-568.	4.2	13
22	An easy-to-use algorithm for simulating traffic flow on networks: Theoretical study. Networks and Heterogeneous Media, 2014, 9, 519-552.	1.1	13
23	Reducing Complexity of Multiagent Systems with Symmetry Breaking: An Application to Opinion Dynamics with Polls. Multiscale Modeling and Simulation, 2018, 16, 528-549.	1.6	12
24	How can macroscopic models reveal self-organization in traffic flow?. , 2012, , .		10
25	An all-leader agent-based model for turning and flocking birds. Journal of Mathematical Biology, 2021, 83, 45.	1.9	8
26	An easy-to-use algorithm for simulating traffic flow on networks: Numerical experiments. Discrete and Continuous Dynamical Systems - Series S, 2014, 7, 379-394.	1.1	8
27	Empirical Research on Pedestriansâ€™ Behavior and Crowd Dynamics. Journal of Advanced Transportation, 2019, 2019, 1-2.	1.7	5
28	Understanding Mass Transfer Directions via Data-Driven Models with Application to Mobile Phone Data. SIAM Journal on Applied Dynamical Systems, 2020, 19, 1372-1391.	1.6	5
29	Blending Brownian motion and heat equation. Journal of Coupled Systems and Multiscale Dynamics, 2015, 3, 351-356.	0.2	5
30	Two algorithms for a fully coupled and consistently macroscopic PDE-ODEsystem modeling a moving bottleneck on a road. Mathematics in Engineering, 2018, 1, 55-83.	0.9	4
31	Blended numerical schemes for the advection equation and conservation laws. ESAIM: Mathematical Modelling and Numerical Analysis, 2017, 51, 997-1019.	1.9	3
32	Comparing comparisons between vehicular traffic states in microscopic and macroscopic firstâ€•order models. Mathematical Methods in the Applied Sciences, 2019, 42, 918-934.	2.3	3
33	An interface-free multi-scale multi-order model for traffic flow. Discrete and Continuous Dynamical Systems - Series B, 2019, 24, 6189-6207.	0.9	3
34	Sensitivity analysis of the LWR model for traffic forecast on large networks using Wasserstein distance. Communications in Mathematical Sciences, 2018, 16, 123-144.	1.0	3
35	Numerical schemes for advanced reflectance models for Shape from Shading. , 2011, , .		2
36	An Overview of the Modeling of Crowd Dynamics. Modeling, Simulation and Applications, 2014, , 73-107.	1.3	2

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37	Multiscale Modeling by Time-Evolving Measures. Modeling, Simulation and Applications, 2014, , 109-135.	1.3	2
38	Macroscopic and Multi-Scale Models for Multi-Class Vehicular Dynamics with Uneven Space Occupancy: A Case Study. Axioms, 2021, 10, 102.	1.9	2
39	An Introduction to the Modeling of Crowd Dynamics. Modeling, Simulation and Applications, 2014, , 3-27.	1.3	1
40	Two Semi-Lagrangian Fast Methods for Hamilton-Jacobi-Bellman Equations. IFIP Advances in Information and Communication Technology, 2014, , 74-84.	0.7	1
41	Two Fast Marching Methods for Hamiltonâ€“Jacobi Equations. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1025001-1025002.	0.2	0
42	Basic Theory of Measure-Based Models. Modeling, Simulation and Applications, 2014, , 137-168.	1.3	0
43	Psychological Insights. Modeling, Simulation and Applications, 2014, , 53-69.	1.3	0
44	Generalizations of the Multiscale Approach. Modeling, Simulation and Applications, 2014, , 195-219.	1.3	0
45	Problems and Simulations. Modeling, Simulation and Applications, 2014, , 29-52.	1.3	0