

# Salvatore Cuomo

## List of Publications by Year in descending order

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152  
papers

1,863  
citations

304743

22  
h-index

361022

35  
g-index

155  
all docs

155  
docs citations

155  
times ranked

1493  
citing authors

#	ARTICLE	IF	CITATIONS
1	A survey on deep learning in medicine: Why, how and when?. Information Fusion, 2021, 66, 111-137.	19.1	188
2	IoT-based collaborative reputation system for associating visitors and artworks in a cultural scenario. Expert Systems With Applications, 2017, 79, 101-111.	7.6	80
3	The Role of Artificial Intelligence in Fighting the COVID-19 Pandemic. Information Systems Frontiers, 2021, 23, 1467-1497.	6.4	69
4	A revised scheme for real time ECG Signal denoising based on recursive filtering. Biomedical Signal Processing and Control, 2016, 27, 134-144.	5.7	56
5	An analytic framework using deep learning for prediction of traffic accident injury severity based on contributing factors. Accident Analysis and Prevention, 2021, 160, 106322.	5.7	51
6	Decision Making in IoT Environment through Unsupervised Learning. IEEE Intelligent Systems, 2020, 35, 27-35.	4.0	50
7	Reconstruction of implicit curves and surfaces via RBF interpolation. Applied Numerical Mathematics, 2017, 116, 157-171.	2.1	48
8	Exploring Unsupervised Learning Techniques for the Internet of Things. IEEE Transactions on Industrial Informatics, 2020, 16, 2621-2628.	11.3	46
9	A Regularized MRI Image Reconstruction based on Hessian Penalty Term on CPU/GPU Systems. Procedia Computer Science, 2013, 18, 2643-2646.	2.0	43
10	A network-based method with privacy-preserving for identifying influential providers in large healthcare service systems. Future Generation Computer Systems, 2020, 109, 293-305.	7.5	42
11	Implications of deep learning for the automation of design patterns organization. Journal of Parallel and Distributed Computing, 2018, 117, 256-266.	4.1	39
12	3D Data Denoising via Nonlocal Means Filter by Using Parallel GPU Strategies. Computational and Mathematical Methods in Medicine, 2014, 2014, 1-14.	1.3	38
13	A numerical approach to nonlinear two-point boundary value problems for ODEs. Computers and Mathematics With Applications, 2008, 55, 2476-2489.	2.7	36
14	A machine learning approach for IoT cultural data. Journal of Ambient Intelligence and Humanized Computing, 2024, 15, 1715-1726.	4.9	35
15	Julia language in machine learning: Algorithms, applications, and open issues. Computer Science Review, 2020, 37, 100254.	15.3	35
16	Enabling multimedia aware vertical handover Management in Internet of Things based heterogeneous wireless networks. Multimedia Tools and Applications, 2017, 76, 25919-25941.	3.9	32
17	Effects of increasing CREB-dependent transcription on the storage and recall processes in a hippocampal CA1 microcircuit. Hippocampus, 2014, 24, 165-177.	1.9	30
18	Computation of the inverse Laplace transform based on a collocation method which uses only real values. Journal of Computational and Applied Mathematics, 2007, 198, 98-115.	2.0	29

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19	A GPU-accelerated parallel K-means algorithm. Computers and Electrical Engineering, 2019, 75, 262-274.	4.8	29
20	A Cultural Heritage Case Study of Visitor Experiences Shared on a Social Network. , 2015, , .		28
21	A revised scheme to compute horizontal covariances in an oceanographic 3D-VAR assimilation system. Journal of Computational Physics, 2015, 284, 631-647.	3.8	28
22	A Novel O ( n ) Numerical Scheme for ECG Signal Denoising. Procedia Computer Science, 2015, 51, 775-784.	2.0	28
23	Predictive Analytics for Smart Parking: A Deep Learning Approach in Forecasting of IoT Data. ACM Transactions on Internet Technology, 2021, 21, 1-21.	4.4	26
24	A machine learning-enhanced biosensor for mercury detection based on an hydrophobin chimera. Biosensors and Bioelectronics, 2022, 196, 113696.	10.1	26
25	EEG signal analysis for epileptic seizures detection by applying Data Mining techniques. Internet of Things (Netherlands), 2021, 14, 100048.	7.7	24
26	Comparison of Estimating Missing Values in IoT Time Series Data Using Different Interpolation Algorithms. International Journal of Parallel Programming, 2020, 48, 534-548.	1.5	23
27	Piecewise Hermite interpolation via barycentric coordinates. Ricerche Di Matematica, 2015, 64, 303-319.	1.0	21
28	Numerical regularization of a real inversion formula based on the Laplace transform's eigenfunction expansion of the inverse function. Inverse Problems, 2007, 23, 713-731.	2.0	20
29	Precision medicine and machine learning towards the prediction of the outcome of potential celiac disease. Scientific Reports, 2021, 11, 5683.	3.3	20
30	Efficient method for identifying influential vertices in dynamic networks using the strategy of local detection and updating. Future Generation Computer Systems, 2019, 91, 10-24.	7.5	17
31	A class of piecewise interpolating functions based on barycentric coordinates. Ricerche Di Matematica, 2014, 63, 87-102.	1.0	16
32	Visiting Styles in an Art Exhibition Supported by a Digital Fruition System. , 2015, , .		16
33	Toward a Multi-level Parallel Framework on GPU Cluster with PetSC-CUDA for PDE-based Optical Flow Computation. Procedia Computer Science, 2015, 51, 170-179.	2.0	16
34	A predictive Decision Support System (DSS) for a microalgae production plant based on Internet of Things paradigm. Concurrency Computation Practice and Experience, 2018, 30, e4476.	2.2	16
35	A GPU-Parallel Algorithm for ECG Signal Denoising Based on the NLM Method. , 2016, , .		14
36	A GPU parallel implementation of the Local Principal Component Analysis overcomplete method for DW image denoising. , 2016, , .		14

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37	Special issue on bio-medical signal processing for smarter mobile healthcare using big data analytics. Journal of Ambient Intelligence and Humanized Computing, 2019, 10, 3739-3745.	4.9	14
38	A computational scheme to predict dynamics in IoT systems by using particle filter. Concurrency Computation Practice and Experience, 2017, 29, e4101.	2.2	13
39	Performance Evaluation of GPU-Accelerated Spatial Interpolation Using Radial Basis Functions for Building Explicit Surfaces. International Journal of Parallel Programming, 2018, 46, 963-991.	1.5	13
40	Serious Games and In-Cloud Data Analytics for the Virtualization and Personalization of Rehabilitation Treatments. IEEE Transactions on Industrial Informatics, 2019, 15, 517-526.	11.3	13
41	The numerical solution of fractional differential equations using the Volterra integral equation method based on thin plate splines. Engineering With Computers, 2019, 35, 1391-1408.	6.1	13
42	A novel triangle-based method for scattered data interpolation. Applied Mathematical Sciences, 0, 8, 6717-6724.	0.1	13
43	Visitor Dynamics in a Cultural Heritage Scenario. , 2015, , .		13
44	A GPU Algorithm in a Distributed Computing System for 3D MRI Denoising. , 2015, , .		11
45	An application of the one-factor HullWhite model in an IoT financial scenario. Sustainable Cities and Society, 2018, 38, 18-20.	10.4	11
46	ARBF: adaptive radial basis function interpolation algorithm for irregularly scattered point sets. Soft Computing, 2020, 24, 17693-17704.	3.6	11
47	Numerical Effects of the Gaussian Recursive Filters in Solving Linear Systems in the 3Dvar Case Study. Numerical Mathematics, 2017, 10, 520-540.	1.3	10
48	Reproducing dynamics related to an Internet of Things framework: A numerical and statistical approach. Journal of Parallel and Distributed Computing, 2018, 118, 359-368.	4.1	10
49	Harnessing sliding-window execution semantics for parallel stream processing. Journal of Parallel and Distributed Computing, 2018, 116, 74-88.	4.1	10
50	Pricing estimation of a barrier option in an IoT scenario. Future Generation Computer Systems, 2020, 110, 407-412.	7.5	10
51	A K-iterated scheme for the first-order Gaussian recursive filter with boundary conditions. , 0, , .		9
52	Modification of TV-ROF denoising model based on Split Bregman iterations. Applied Mathematics and Computation, 2017, 315, 453-467.	2.2	9
53	On GPUâ€™s CUDA as preprocessing of fuzzy-rough data reduction by means of singular value decomposition. Soft Computing, 2018, 22, 1525-1532.	3.6	9
54	A deep learning approach for facility patient attendance prediction based on medical booking data. Scientific Reports, 2020, 10, 14623.	3.3	9

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55	Path prediction in IoT systems through Markov Chain algorithm. Future Generation Computer Systems, 2020, 109, 210-217.	7.5	9
56	A virtual assistant in cultural heritage scenarios. Concurrency Computation Practice and Experience, 2021, 33, e5331.	2.2	9
57	A parallel PDE-based numerical algorithm for computing the Optical Flow in hybrid systems. Journal of Computational Science, 2017, 22, 228-236.	2.9	8
58	A computational method for the European option price in an Internet of Things framework. Future Generation Computer Systems, 2020, 107, 730-735.	7.5	8
59	Lessons learned from longitudinal modeling of mobile-equipped visitors in a complex museum. Neural Computing and Applications, 2020, 32, 7785-7801.	5.6	8
60	A stable meshfree PDE solver for source-type flows in porous media. Applied Numerical Mathematics, 2020, 149, 30-42.	2.1	8
61	Data Science for the Internet of Things. IEEE Internet of Things Journal, 2020, 7, 4342-4346.	8.7	8
62	Physics-informed neural networks approach for 1D and 2D Gray-Scott systems. Advanced Modeling and Simulation in Engineering Sciences, 2022, 9, .	1.7	8
63	Error analysis of a Collocation method for numerically inverting a Laplace transform in case of real samples. Journal of Computational and Applied Mathematics, 2007, 210, 149-158.	2.0	7
64	A framework for ECG denoising for mobile devices. , 2015, , .		7
65	A Stochastic Method for Financial IoT Data. Procedia Computer Science, 2016, 98, 491-496.	2.0	7
66	On the Longitudinal Dispersion in Conservative Transport Through Heterogeneous Porous Formations at Finite Peclet Numbers. Water Resources Research, 2017, 53, 8614-8625.	4.2	7
67	Social network data analysis and mining applications for the Internet of Data. Concurrency Computation Practice and Experience, 2018, 30, e4527.	2.2	7
68	An inverse Bayesian scheme for the denoising of ECG signals. Journal of Network and Computer Applications, 2018, 115, 48-58.	9.1	7
69	Accelerating multi-dimensional interpolation using moving least-squares on the GPU. Concurrency Computation Practice and Experience, 2018, 30, e4904.	2.2	7
70	A numerical scheme for solving a class of logarithmic integral equations arisen from two-dimensional Helmholtz equations using local thin plate splines. Applied Mathematics and Computation, 2019, 356, 157-172.	2.2	7
71	Greeks computation in the option pricing problem by means of RBF-PU methods. Journal of Computational and Applied Mathematics, 2020, 376, 112882.	2.0	7
72	Data analysis and mining of traffic features based on taxi GPS trajectories: A case study in Beijing. Concurrency Computation Practice and Experience, 2021, 33, e5332.	2.2	7

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73	Influence of Some Parameters on Visiting Style Classification in a Cultural Heritage Case Study. Smart Innovation, Systems and Technologies, 2016, , 567-576.	0.6	7
74	A Biologically Inspired Model for Analyzing Behaviours in Social Network Community and Cultural Heritage Scenario. , 2014, , .		6
75	Mimic Visiting Styles by Using a Statistical Approach in a Cultural Event Case Study. Procedia Computer Science, 2016, 98, 449-454.	2.0	6
76	Classify Visitor Behaviours in a Cultural Heritage Exhibition. Communications in Computer and Information Science, 2016, , 17-28.	0.5	6
77	Remarks on a computational estimator for the barrier option pricing in an IoT scenario. Procedia Computer Science, 2017, 113, 513-518.	2.0	6
78	A Semi-Automatic Numerical Algorithm for Turing Patterns Formation in a Reaction-Diffusion Model. IEEE Access, 2018, 6, 4720-4724.	4.2	6
79	A (multi) GPU iterative reconstruction algorithm based on Hessian penalty term for sparse MRI. International Journal of Grid and Utility Computing, 2018, 9, 139.	0.2	6
80	Computational error bounds for Laplace transform inversion based on smoothing splines. Applied Mathematics and Computation, 2020, 383, 125376.	2.2	6
81	An error estimate of Gaussian Recursive Filter in 3Dvar problem. , 0, , .		6
82	A Clustering-based Approach for a Finest Biological Model Generation Describing Visitor Behaviours in a Cultural Heritage Scenario. , 2014, , .		6
83	Analysis of a data-flow in a financial IoT system. Procedia Computer Science, 2017, 113, 508-512.	2.0	5
84	Parallel Approaches for Data Mining in the Internet of Things Realm. International Journal of Parallel Programming, 2018, 46, 807-811.	1.5	5
85	MeshCleaner: A Generic and Straightforward Algorithm for Cleaning Finite Element Meshes. International Journal of Parallel Programming, 2018, 46, 565-583.	1.5	5
86	A simple and generic paradigm for creating complex networks using the strategy of vertex selecting-and-pairing. Future Generation Computer Systems, 2019, 100, 994-1004.	7.5	5
87	Validation Approaches for a Biological Model Generation Describing Visitor Behaviours in a Cultural Heritage Scenario. Communications in Computer and Information Science, 2015, , 154-168.	0.5	5
88	A Performance Evaluation of A Parallel Biological Network Microcircuit in Neuron. International Journal of Distributed and Parallel Systems, 2013, 4, 15-31.	0.3	4
89	Applying Mining Techniques to Analyze Vestibular Data. Procedia Computer Science, 2016, 98, 467-472.	2.0	4
90	Parallel Implementation of a Machine Learning Algorithm on GPU. International Journal of Parallel Programming, 2018, 46, 923-942.	1.5	4

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91	Uncertainty Quantification of Unsteady Flows Generated by Line-Sources Through Heterogeneous Geological Formations. SIAM-ASA Journal on Uncertainty Quantification, 2020, 8, 807-825.	2.0	4
92	A Modification of Weeks's™ Method for Numerical Inversion of the Laplace Transform in the Real Case Based on Automatic Differentiation. Lecture Notes in Computational Science and Engineering, 2008, , 45-54.	0.3	4
93	Remarks on the numerical approximation of Dirac delta functions. Results in Applied Mathematics, 2021, 12, 100200.	1.3	4
94	A CUBLAS-CUDA Implementation of PCG Method of an Ocean Circulation Model. , 2011, , .		3
95	Some numerical enhancements in a data assimilation scheme. , 2013, , .		3
96	Local principal component analysis overcomplete method: A GPU parallel implementation combining shared and global memories. , 2016, , .		3
97	A novel Split Bregman algorithm for MRI denoising task in an e-Health system. , 2016, , .		3
98	A second order derivative scheme based on Bregman algorithm class. AIP Conference Proceedings, 2016, , .	0.4	3
99	Traditional and Deep Learning Approaches to Information and Influence Propagation in Social Networks. , 2018, , .		3
100	CudaCHPre2D: A straightforward preprocessing approach for accelerating 2D convex hull computations on the GPU. Concurrency Computation Practice and Experience, 2020, 32, e5229.	2.2	3
101	Comparative investigation of GPU-accelerated triangle-triangle intersection algorithms for collision detection. Multimedia Tools and Applications, 2020, , 1.	3.9	3
102	A generic paradigm for mining human mobility patterns based on the GPS trajectory data using complex network analysis. Concurrency Computation Practice and Experience, 2021, 33, e5335.	2.2	3
103	On best constants in Hardy inequalities with a remainder term. Nonlinear Analysis: Theory, Methods & Applications, 2011, 74, 5784-5792.	1.1	2
104	A social network framework for the Carolina software. , 2012, , .		2
105	An inverse preconditioner for a free surface ocean circulation model. , 2012, , .		2
106	Numerical Remarks on the Estimation of the Option Price. , 2016, , .		2
107	Some error bounds for K-iterated Gaussian recursive filters. AIP Conference Proceedings, 2016, , .	0.4	2
108	Computational issues in linear multistep method particle filtering. AIP Conference Proceedings, 2016, , .	0.4	2

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109	GPU Profiling of Singular Value Decomposition in OLPCA Method for Image Denoising. Lecture Notes on Data Engineering and Communications Technologies, 2017, , 707-716.	0.7	2
110	Data mining techniques for vestibular data classification. International Journal of Internet Technology and Secured Transactions, 2017, 7, 51.	0.4	2
111	Remarks on a financial inverse problem by means of Monte Carlo Methods. Journal of Physics: Conference Series, 2017, 904, 012012.	0.4	2
112	Data-Driven Approaches to Predict States in a Food Technology Case Study. , 2018, , .		2
113	On a Class of Integrals Useful to Solve Wellâ€Type Flows in Heterogeneous Porous Formations. Water Resources Research, 2019, 55, 5147.	4.2	2
114	RBF methods in a Stochastic Volatility framework for Greeks computation. Journal of Computational and Applied Mathematics, 2020, 380, 112987.	2.0	2
115	Unsupervised learning on multimedia data: a Cultural Heritage case study. Multimedia Tools and Applications, 2020, 79, 34429-34442.	3.9	2
116	Adaptive RBF Interpolation for Estimating Missing Values in Geographical Data. Lecture Notes in Computer Science, 2020, , 122-130.	1.3	2
117	An Efficient Localized Meshless Method Based on the Spaceâ€Time Gaussian RBF for High-Dimensional Space Fractional Wave and Damped Equations. Axioms, 2021, 10, 259.	1.9	2
118	An unsupervised learning framework for marketneutral portfolio. Expert Systems With Applications, 2022, 192, 116308.	7.6	2
119	An adaptive threshold algorithm for detection of pulse radar signals. , 2008, , .		1
120	Parallel Tools for Simulating the Depolarization Block on a Neural Model. Procedia Computer Science, 2015, 51, 745-754.	2.0	1
121	Numerical approaches to model perturbation fire in turing pattern formations. AIP Conference Proceedings, 2017, , .	0.4	1
122	Nonlinear Galerkin methods for a system of PDEs with Turing instabilities. Calcolo, 2018, 55, 1.	1.1	1
123	A GPU parallel optimised blockwise NLM algorithm in a distributed computing system. International Journal of High Performance Computing and Networking, 2018, 11, 304.	0.4	1
124	A Parallel Implementation of the Hestenes-Jacobi-One-Sides Method Using GPU-CUDA. , 2018, , .		1
125	Special issue on video and imaging systems for critical engineering applications [SI 1096]. Multimedia Tools and Applications, 2020, 79, 8327-8335.	3.9	1
126	Special issue on realâ€time behavioral monitoring in IoT applications using big data analytics. Concurrency Computation Practice and Experience, 2021, 33, e5529.	2.2	1



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127	Solving 3-D Grayâ€“Scott Systems with Variable Diffusion Coefficients on Surfaces by Closest Point Method with RBF-FD. Mathematics, 2021, 9, 924.	2.2	1
128	The &#147;INNOVAMBIENTE&#148; Project: An Interdisciplinary Approach Integrating Natural Science, Mathematics and Computer Science. , 2009, , .		0
129	Mobile learning for clinical practice guidelines implementation. , 2013, , .		0
130	Preface to the special session Numerical and computational methods in data analysis and classification. AIP Conference Proceedings, 2016, , .	0.4	0
131	A Numerical Approach for Assigning a Reputation to Users of an IoT Framework. Procedia Computer Science, 2016, 98, 455-460.	2.0	0
132	Track and Workshop Program Chair Messages. , 2016, , .		0
133	Collaborative reputation systems in a cultural heritage scenario. AIP Conference Proceedings, 2016, , .	0.4	0
134	Some remarks on the numerical solution of parabolic partial differential equations. AIP Conference Proceedings, 2017, , .	0.4	0
135	Visitor Assistant Tools Based on Machine Learning Approaches in Cultural Heritage Contexts. , 2017, , .		0
136	IoT application for the estimation of option price. International Journal of Internet Technology and Secured Transactions, 2017, 7, 21.	0.4	0
137	A class of universal approximators of real continuous functions revisited. Ricerche Di Matematica, 2018, 67, 729-738.	1.0	0
138	Guest Editorial for Programming Models and Algorithms for Data Analysis in HPC Systems. International Journal of Parallel Programming, 2018, 46, 505-507.	1.5	0
139	Effect of Spatial Decomposition on the Efficiency of k Nearest Neighbors Search in Spatial Interpolation. Lecture Notes in Computer Science, 2019, , 667-679.	1.3	0
140	Guest Editorial: Special Issue on Emerging Technology for Software Define Network Enabled Internet of Things. International Journal of Parallel Programming, 2020, 48, 157-161.	1.5	0
141	Effects of spatial decomposition on the efficiency of <i>k</i>NN search in spatial interpolations. International Journal of Parallel, Emergent and Distributed Systems, 2022, 37, 103-121.	1.0	0
142	A note on the numerical resolution of Heston PDEs. Ricerche Di Matematica, 2020, 69, 501-508.	1.0	0
143	Special issue on deep learning for emerging big multimedia super-resolution. Multimedia Systems, 2021, 27, 581-587.	4.7	0
144	Slide Test Maker An Educational Software Tool for Test Composition. Lecture Notes in Computer Science, 2012, , 249-257.	1.3	0

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145	An interdisciplinary laboratory in mathematics and music. Applied Mathematical Sciences, 0, 8, 6709-6716.	0.1	0
146	A New Approach to the Quadrature Rules with Gaussian Weights and Nodes. Applied Mathematics and Information Sciences, 2014, 8, 2095-2102.	0.5	0
147	A Mathematical Formulation for Estimating Age Levels in the Carolina Curriculum. , 2015, , .		0
148	Handling Uncertainty in Clustering Art-Exhibition Visiting Styles. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2017, , 54-63.	0.3	0
149	Self and social network behaviours of users in cultural spaces. International Journal of Computational Science and Engineering, 2018, 16, 265.	0.5	0
150	A (multi) GPU iterative reconstruction algorithm based on Hessian penalty term for sparse MRI. International Journal of Grid and Utility Computing, 2018, 9, 139.	0.2	0
151	Remarks of Social Data Mining Applications in the Internet of Data. Lecture Notes on Data Engineering and Communications Technologies, 2019, , 944-951.	0.7	0
152	A Travelling Wave Solution for Nonlinear Colloid Facilitated Mass Transport in Porous Media. Lecture Notes in Computer Science, 2020, , 103-108.	1.3	0