

Renato Cardoso Mesquita

List of Publications by Year in descending order

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104
papers

1,125
citations

567281

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26
g-index

104
all docs

104
docs citations

104
times ranked

755
citing authors

#	ARTICLE	IF	CITATIONS
1	Sensing and coverage for a network of heterogeneous robots. , 2008, , .		192
2	Swarm Coordination Based on Smoothed Particle Hydrodynamics Technique. IEEE Transactions on Robotics, 2013, 29, 383-399.	10.3	76
3	Simultaneous Coverage and Tracking (SCAT) of Moving Targets with Robot Networks. Springer Tracts in Advanced Robotics, 2009, , 85-99.	0.4	66
4	Moving least square reproducing kernel method for electromagnetic field computation. IEEE Transactions on Magnetics, 1999, 35, 1372-1375.	2.1	49
5	Control of swarms based on Hydrodynamic models. , 2008, , .		43
6	A Meshless Method for Electromagnetic Field Computation Based on the Multiquadric Technique. IEEE Transactions on Magnetics, 2007, 43, 1281-1284.	2.1	41
7	Free-Space Materials Characterization by Reflection and Transmission Measurements using Frequency-by-Frequency and Multi-Frequency Algorithms. Electronics (Switzerland), 2018, 7, 260.	3.1	40
8	Fluids in Electrostatic Fields: An Analogy for Multirobot Control. IEEE Transactions on Magnetics, 2007, 43, 1765-1768.	2.1	34
9	The element-free Galerkin method in three-dimensional electromagnetic problems. IEEE Transactions on Magnetics, 2006, 42, 711-714.	2.1	32
10	The Meshless Local Petrovâ€“Galerkin Method in Two-Dimensional Electromagnetic Wave Analysis. IEEE Transactions on Antennas and Propagation, 2012, 60, 1957-1968.	5.1	32
11	A Meshless Local Petrovâ€“Galerkin Method for Three-Dimensional Scalar Problems. IEEE Transactions on Magnetics, 2011, 47, 1214-1217.	2.1	26
12	Robot navigation based on electrostatic field computation. IEEE Transactions on Magnetics, 2006, 42, 1459-1462.	2.1	24
13	Robot Navigation in Multi-terrain Outdoor Environments. International Journal of Robotics Research, 2009, 28, 685-700.	8.5	23
14	New Approach to Robust<tex>\$ cal D\$</tex>-Stability Analysis of Linear Time-Invariant Systems With Polytope-Bounded Uncertainty. IEEE Transactions on Automatic Control, 2006, 51, 1709-1714.	5.7	20
15	â„“ ₂ and â„“ ₁ -guaranteed cost computation of uncertain linear systems. IET Control Theory and Applications, 2007, 1, 201-209.	2.1	20
16	Cable parameter variation due to skin and proximity effects: Determination by means of Finite Element Analysis. , 2009, , .		20
17	Induction Machines Modeling With Meshless Methods. IEEE Transactions on Magnetics, 2012, 48, 847-850.	2.1	20
18	An object-oriented finite-element program for electromagnetic field computation. IEEE Transactions on Magnetics, 1994, 30, 3618-3621.	2.1	18

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19	Algorithm 860. ACM Transactions on Mathematical Software, 2006, 32, 609-621.	2.9	15
20	Imposing boundary conditions in the meshless local Petrov-Galerkin method. IET Science, Measurement and Technology, 2008, 2, 387-394.	1.6	15
21	Improving the Mixed Formulation for Meshless Local Petrov-Galerkin Method. IEEE Transactions on Magnetics, 2010, 46, 2907-2910.	2.1	14
22	Cable Parameter Calculation for Typical Industrial Installation Methods and High-Frequency Studies. IEEE Transactions on Industry Applications, 2018, 54, 3919-3927.	4.9	14
23	New strategy for robust stability analysis of discrete-time uncertain systems. Systems and Control Letters, 2007, 56, 516-524.	2.3	13
24	Efficient algorithms and data structures for element-free Galerkin method. IEEE Transactions on Magnetics, 2006, 42, 659-662.	2.1	12
25	An incomplete gauge formulation for 3D nodal finite-element magnetostatics. IEEE Transactions on Magnetics, 1992, 28, 1044-1047.	2.1	11
26	3D finite element solution of induction heating problems with efficient time-stepping. IEEE Transactions on Magnetics, 1991, 27, 4065-4068.	2.1	10
27	Meshless Local Petrov-Galerkin Approach in Solving Microwave Guide Problems. IEEE Transactions on Magnetics, 2011, 47, 1526-1529.	2.1	10
28	A fuzzy genetic algorithm for automatic orthogonal graph drawing. Applied Soft Computing Journal, 2012, 12, 1379-1389.	7.2	10
29	Calculating the Band Structure of Photonic Crystals Through the Meshless Local Petrov-Galerkin (MLPG) Method and Periodic Shape Functions. IEEE Transactions on Magnetics, 2012, 48, 551-554.	2.1	10
30	Meshfree analysis of electromagnetic wave scattering from conducting targets: Formulation and computations. Computers and Structures, 2017, 184, 36-52.	4.4	10
31	Periodic boundary conditions in element free Galerkin method. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2009, 28, 922-934.	0.9	9
32	Application of Local Point Interpolation Method to Electromagnetic Problems With Material Discontinuities Using a New Visibility Criterion. IEEE Transactions on Magnetics, 2012, 48, 615-618.	2.1	9
33	Additional properties of the incomplete gauge formulation for 3-D nodal finite-element magnetostatics. IEEE Transactions on Magnetics, 1994, 30, 2861-2864.	2.1	8
34	The Nonconforming Point Interpolation Method Applied to Electromagnetic Problems. IEEE Transactions on Magnetics, 2012, 48, 619-622.	2.1	8
35	On Computing Complex Navigation Functions. , 0, , .		7
36	A Modified Meshless Local Petrov-Galerkin Applied to Electromagnetic Axisymmetric Problems. IEEE Transactions on Magnetics, 2014, 50, 513-516.	2.1	7

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37	An object-oriented data structure for a 3-D electromagnetic field computation program preprocessor. IEEE Transactions on Magnetics, 1996, 32, 1449-1452.	2.1	6
38	Fully continuous vector fields for mobile robot navigation on sequences of discrete triangular regions. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	6
39	Face-Based Gradient Smoothing Point Interpolation Method Applied to 3-D Electromagnetics. IEEE Transactions on Magnetics, 2014, 50, 537-540.	2.1	6
40	A variable local relaxation technique in nonlinear problems. IEEE Transactions on Magnetics, 1995, 31, 1733-1736.	2.1	5
41	Data management in finite element analysis programs using object-oriented techniques. IEEE Transactions on Magnetics, 1996, 32, 1445-1448.	2.1	5
42	Object-oriented design of finite element calculations with respect to coupled problems. IEEE Transactions on Magnetics, 2000, 36, 1677-1681.	2.1	5
43	Remeshing Driven by Smooth-Surface Approximation of Mesh Nodes. IEEE Transactions on Magnetics, 2007, 43, 1541-1544.	2.1	5
44	A Local Boundary Integral Equation (LBIE) Method in 2D electromagnetic wave scattering, and a meshless discretization approach. , 2009, , .		5
45	An integral meshless-based approach in electromagnetic scattering. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2010, 29, 1464-1473.	0.9	5
46	2-D Scattering Integral Field Equation Solution Through an IMLS Meshless-Based Approach. IEEE Transactions on Magnetics, 2010, 46, 2783-2786.	2.1	5
47	Edge Meshless Method Applied to Vector Electromagnetic Problems. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	5
48	Design of the artificial magnetic conductors with meander line elements: reduction in the first and second resonant frequencies. Materials Research Express, 2017, 4, 075801.	1.6	5
49	An object oriented data structure for field analysis. IEEE Transactions on Magnetics, 1998, 34, 3403-3406.	2.1	4
50	Treatment of material discontinuity in meshless methods for EM problems using interpolating moving least squares. , 2008, , .		4
51	On Delaunay refinement for curved geometries. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2010, 29, 1596-1605.	0.9	4
52	Meshless Local Petrov-Galerkin in solving microwave guide problems. , 2010, , .		4
53	Meshless local Petrov-Galerkin (MLPG) methods in quantum mechanics. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2011, 30, 1763-1776.	0.9	4
54	A Parallel Remeshing Method. IEEE Transactions on Magnetics, 2011, 47, 1202-1205.	2.1	4

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55	Frequency selective surface using meander line inclusions. Journal of Electromagnetic Waves and Applications, 2018, 32, 1440-1447.	1.6	4
56	H&inf>/inf>Guaranteed Cost Computation for Uncertain Time-Delay Systems. , 0, , .		3
57	Cable parameter determination focusing on proximity effect inclusion using finite element analysis. , 2009, , .		3
58	A Meshless Local Boundary Integral Equation method for three dimensional scalar problems. , 2010, , .		3
59	Axisymmetric electromagnetic resonant cavities solution by a meshless local Petrov-Galerkin method. , 2011, , .		3
60	Point interpolation methods based on weakened-weak formulations. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 2013, 12, 506-523.	0.7	3
61	Enhancing the Bandwidth of Electromagnetic Cloaks Using Multi-Objective Optimization. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	3
62	Study of the Influence of Underground Power Line Shielding Techniques on Its Power Capability. Journal of Control, Automation and Electrical Systems, 2017, 28, 541-551.	2.0	3
63	Cable parameter calculation for typical industrial installation methods and high-frequency studies. , 2017, , .		3
64	New vectorial H (curl) shape functions for the edge meshless method. IET Science, Measurement and Technology, 2018, 12, 821-828.	1.6	3
65	Nodal Meshless Method With Vectorial Shape Functions Based on H(Curl). IEEE Transactions on Magnetics, 2021, 57, 1-4.	2.1	3
66	Robot Navigation in Multi-terrain Outdoor Environments. Springer Tracts in Advanced Robotics, 2008, , 331-342.	0.4	3
67	The method of finite spheres in acoustic wave propagation through nonhomogeneous media: Inf-sup stability conditions. Vietnam Journal of Mechanics, 2020, 42, 209-237.	0.5	3
68	Remeshing Driven by Smooth Surface Approximation of Mesh Nodes. , 0, , .		2
69	The Unimoment Method and a meshless local boundary integral equation (LBIE) approach in 2D Electromagnetic wave scattering. , 2009, , .		2
70	A framework for meshless methods using generic programming. , 2010, , .		2
71	Analysis of monopole antenna over a ground plane by a Meshless Local Petrov-Galerkin method. , 2012, , .		2
72	CUDA Approach for Meshless Local Petrov-Galerkin Method. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	2

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73	Analysis of the Out-of-Plane Coordinate Transformation to Obtain Anisotropic Layered Cloaks. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	2
74	Meshless Vector Radial Basis Functions With Weak Forms. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	2
75	Design of Non-Singular Two-Dimensional Layered Cloaks Mapped from Small Areas. IEEE Transactions on Magnetics, 2017, , 1-1.	2.1	2
76	Node-to-Node Realization of Meshless Local Petrov Galerkin (MLPG) Fully in GPU. IEEE Access, 2019, 7, 151539-151557.	4.2	2
77	Acoustic scattering in nonhomogeneous media and the problem of discontinuous gradients: Analysis and inf-sup stability in the method of finite spheres. International Journal for Numerical Methods in Engineering, 2021, 122, 3141-3170.	2.8	2
78	Imposing boundary conditions in the meshless local Petrov Galerkin method. , 2008, , .		2
79	Use of reduced 3D hexahedral edge elements for 2D TE waveguides and vector potential problems. IEEE Transactions on Magnetics, 1994, 30, 3749-3752.	2.1	1
80	Convergence properties of magnetostatic formulations. IEEE Transactions on Magnetics, 1994, 30, 2869-2872.	2.1	1
81	A Meshless Method for Electromagnetic Field Computation Based on the Multiquadric Technique. , 0, , .		1
82	A hybrid genetic algorithm for automatic graph drawing based on the topology-shape-metric approach.. , 2010, , .		1
83	An efficient parallel remeshing method. , 2010, , .		1
84	Edge meshless method applied to vector electromagnetic problems. , 2016, , .		1
85	A flexible procedure to avoid the boundary materials singularities in 2D transformation-based cloaks. Journal of Electromagnetic Waves and Applications, 2019, 33, 286-295.	1.6	1
86	Smoothed particle electromagnetics with boundary absorbing condition using perfectly matched layers. , 2008, , .		1
87	Nodal and Divergence-Conforming Boundary-Element Methods Applied to Electromagnetic Scattering Problems. IEEE Transactions on Magnetics, 2004, 40, 1053-1056.	2.1	0
88	Fluids, Particles, and Multiple Robots in Electrostatic Fields. , 0, , .		0
89	2D scattering analysis through meshless methods: A comparison between two different shape function schemes. , 2009, , .		0
90	Field-circuit coupling with Element-Free Galerkin Method. , 2010, , .		0

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91	A multiobjective genetic algorithm for automatic orthogonal graph drawing. , 2011, , .		0
92	Electromagnetic axisymmetric analysis of monopole antenna over a perfectly electric ground plane by a Meshless Local Petrov-Galerkin method. , 2011, , .		0
93	Boundary recovery for conforming Delaunay triangulation of curved complexes. , 2011, , .		0
94	Boundary recovery for conforming Delaunay triangulation of curved complexes. IET Science, Measurement and Technology, 2012, 6, 324.	1.6	0
95	Design of non-singular two-dimensional layered cloaks mapped from small areas. , 2016, , .		0
96	Hybrid natural element " Boundary element method applied to solve electromagnetic scattering problem. , 2016, , .		0
97	Meshless vector radial basis functions with weak forms. , 2016, , .		0
98	Analysis of electric field distribution on artificial magnetic conductor: Via bowtie shape. , 2017, , .		0
99	Influence of permittivity and substrate thickness for miniaturization of artificial magnetic conductor. , 2017, , .		0
100	Hybrid nonsingular mappings in the multi-objective design of a transverse-magnetic reduced cloak. Journal of Electromagnetic Waves and Applications, 2021, 35, 220-232.	1.6	0
101	Creating higher order vector shape functions based on H(curl) for the edge meshless method. Journal of Electromagnetic Waves and Applications, 2021, 35, 1511-1528.	1.6	0
102	Electric field distribution on surface of the artificial magnetic conductor: miniaturization process. , 2017, , .		0
103	Multiclass multistep discontinuous Galerkin discretisation for multiscale electromagnetic wave propagation simulations. IET Science, Measurement and Technology, 2019, 13, 97-102.	1.6	0
104	GPU Finite Element Method Computation Strategy Without Mesh Coloring. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 2020, 19, 252-264.	0.7	0