

Raffaele Solimene

List of Publications by Year in descending order

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139
papers

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citations

279798

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41
g-index

141
all docs

141
docs citations

141
times ranked

1129
citing authors

#	ARTICLE	IF	CITATIONS
1	Through-Wall Imaging via a Linear Inverse Scattering Algorithm. IEEE Geoscience and Remote Sensing Letters, 2007, 4, 513-517.	3.1	151
2	Performance Analysis of Time-Reversal MUSIC. IEEE Transactions on Signal Processing, 2015, 63, 2650-2662.	5.3	117
3	Three-Dimensional Through-Wall Imaging Under Ambiguous Wall Parameters. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 1310-1317.	6.3	95
4	Ground Clutter Removal in GPR Surveys. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 792-798.	4.9	91
5	SAR Imaging Algorithms and Some Unconventional Applications: A unified mathematical overview. IEEE Signal Processing Magazine, 2014, 31, 90-98.	5.6	89
6	A Multiarrray Tomographic Approach for Through-Wall Imaging. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 1192-1199.	6.3	85
7	Sparse Reconstruction From GPR Data With Applications to Rebar Detection. IEEE Transactions on Instrumentation and Measurement, 2011, 60, 1070-1079.	4.7	78
8	A COTS-Based Microwave Imaging System for Breast-Cancer Detection. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 804-814.	4.0	59
9	Front Wall Clutter Rejection Methods in TWI. IEEE Geoscience and Remote Sensing Letters, 2014, 11, 1158-1162.	3.1	52
10	In-depth resolution for a strip source in the Fresnel zone. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2001, 18, 352.	1.5	49
11	Localization of the Interfaces of a Slab Hidden Behind a Wall. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 2471-2482.	6.3	41
12	Microwave bone imaging: a preliminary scanning system for proof-of-concept. Healthcare Technology Letters, 2016, 3, 218-221.	3.3	39
13	Sampling approach for singular system computation of a radiation operator. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2019, 36, 353.	1.5	39
14	TWI for an Unknown Symmetric Lossless Wall. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 2876-2886.	6.3	38
15	A SIMPLE STRATEGY TO DETECT CHANGES IN THROUGH THE WALL IMAGING. Progress in Electromagnetics Research M, 2009, 7, 1-13.	0.9	36
16	Three-Dimensional Microwave Tomography by a 2-D Slice-Based Reconstruction Algorithm. IEEE Geoscience and Remote Sensing Letters, 2007, 4, 556-560.	3.1	35
17	Ground Penetrating Radar Subsurface Imaging of Buried Objects. , 2010, , .		32
18	Breast cancer detection using interferometric MUSIC: Experimental and numerical assessment. Medical Physics, 2014, 41, 103101.	3.0	32

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19	Role of diversity on the singular values of linear scattering operators: the case of strip objects. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2013, 30, 2266.	1.5	30
20	RF breast cancer detection employing a noncharacterized vivaldi antenna and a MUSIC-inspired algorithm. International Journal of RF and Microwave Computer-Aided Engineering, 2013, 23, 598-609.	1.2	29
21	A Novel CS-TSVD Strategy to Perform Data Reduction in Linear Inverse Scattering Problems. IEEE Geoscience and Remote Sensing Letters, 2012, 9, 881-885.	3.1	27
22	INTERFEROMETRIC TIME REVERSAL MUSIC FOR SMALL SCATTERER LOCALIZATION. Progress in Electromagnetics Research, 2012, 131, 243-258.	4.4	27
23	Resolution limits in inverse source problem for strip currents not in Fresnel zone. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2019, 36, 826.	1.5	27
24	Number of degrees of freedom of the radiated field over multiple bounded domains. Optics Letters, 2007, 32, 3113.	3.3	23
25	On the Singular Spectrum of the Radiation Operator for Multiple and Extended Observation Domains. International Journal of Antennas and Propagation, 2013, 2013, 1-10.	1.2	23
26	Radar Imaging Through a Building Corner. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 6750-6761.	6.3	23
27	Inverse source in the near field: the case of a strip current. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2018, 35, 755.	1.5	23
28	Multimodal Breast Phantoms for Microwave, Ultrasound, Mammography, Magnetic Resonance and Computed Tomography Imaging. Sensors, 2020, 20, 2400.	3.8	23
29	INFORMATION CONTENT IN INVERSE SOURCE WITH SYMMETRY AND SUPPORT PRIORS. Progress in Electromagnetics Research C, 2018, 80, 39-54.	0.9	22
30	Comparison of Noncoherent Linear Breast Cancer Detection Algorithms Applied to a 2-D Numerical Model. IEEE Antennas and Wireless Propagation Letters, 2013, 12, 853-856.	4.0	21
31	Sparse Tomographic Inverse Scattering Approach for Through-the-Wall Radar Imaging. IEEE Transactions on Instrumentation and Measurement, 2012, 61, 3340-3350.	4.7	20
32	Inverse source in the presence of a reflecting plane for the strip case. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2014, 31, 2814.	1.5	20
33	Depth resolution in strip current reconstructions in near non-reactive zone. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2019, 36, 975.	1.5	20
34	Metric entropy in linear inverse scattering. Advanced Electromagnetics, 2016, 5, 46.	1.0	20
35	TWI EXPERIMENTAL RESULTS BY A LINEAR INVERSE SCATTERING APPROACH. Progress in Electromagnetics Research, 2009, 91, 259-272.	4.4	19
36	3D SLICED TOMOGRAPHIC INVERSE SCATTERING EXPERIMENTAL RESULTS. Progress in Electromagnetics Research, 2010, 105, 1-13.	4.4	19

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37	A low-cost, fast, and accurate microwave imaging system for breast cancer detection. , 2015, , .		19
38	Inverse scattering in the presence of a reflecting plane. Journal of Optics (United Kingdom), 2016, 18, 025603.	2.2	19
39	Localizing Thin Metallic Cylinders by a 2.5-D Linear Distributional Approach: Experimental Results. IEEE Transactions on Antennas and Propagation, 2008, 56, 2630-2637.	5.1	18
40	Beamforming and holography image formation methods: an analytic study. Optics Express, 2016, 24, 9077.	3.4	18
41	Efficient Planar Near-Field Measurements for Radiation Pattern Evaluation by a Warping Strategy. IEEE Access, 2021, 9, 62255-62265.	4.2	17
42	In-depth resolution from multifrequency Born fields scattered by a dielectric strip in the Fresnel zone. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2002, 19, 1234.	1.5	16
43	Passive Multiarray Image Fusion for RF Tomography by Opportunistic Sources. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 641-645.	3.1	16
44	Linear Array Antenna Diagnostics Through a MUSIC Algorithm. IEEE Access, 2019, 7, 176952-176959.	4.2	16
45	Near-Field <i>Transverse</i> Resolution in Planar Source Reconstructions. IEEE Transactions on Antennas and Propagation, 2021, 69, 4836-4845.	5.1	16
46	DETECTING POINT-LIKE SOURCES OF UNKNOWN FREQUENCY SPECTRA. Progress in Electromagnetics Research B, 2013, 50, 347-364.	1.0	15
47	Near-Field Warping Sampling Scheme for Broad-Side Antenna Characterization. Electronics (Switzerland), 2020, 9, 1047.	3.1	15
48	Resolution in two-dimensional tomographic reconstructions in the Fresnel zone from Born scattered fields. Journal of Optics, 2004, 6, 529-536.	1.5	14
49	Three-Dimensional Through-Wall Sensing of Moving Targets Using Passive Multistatic Radars. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 141-148.	4.9	14
50	Localizing a buried planar perfect electric conducting interface by multi-view data. Journal of Optics, 2008, 10, 015010.	1.5	13
51	Entropy-Based Clutter Rejection for Intrawall Diagnostics. International Journal of Geophysics, 2012, 2012, 1-7.	1.1	13
52	MUSIC algorithms for rebar detection. Journal of Geophysics and Engineering, 2013, 10, 064006.	1.4	13
53	On the singular spectrum of radiation operators in the non-reactive zone: the case of strip sources. Journal of Optics (United Kingdom), 2015, 17, 025605.	2.2	13
54	LARGE LINEAR RANDOM SYMMETRIC ARRAYS. Progress in Electromagnetics Research M, 2016, 52, 67-77.	0.9	13

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55	TRANSVERSE RESOLUTION IN MICROWAVE IMAGING FOR STRIP OBJECTS BURIED IN A HALF-SPACE MEDIUM. Progress in Electromagnetics Research M, 2020, 88, 145-157.	0.9	13
56	Localization of a planar perfect-electric-conducting interface embedded in a half-space. Journal of Optics, 2006, 8, 10-16.	1.5	12
57	Some Remarks on Time-Reversal MUSIC for Two-Dimensional Thin PEC Scatterers. IEEE Geoscience and Remote Sensing Letters, 2014, 11, 1163-1167.	3.1	12
58	COMPARING DIFFERENT SCHEMES FOR RANDOM ARRAYS. Progress in Electromagnetics Research B, 2016, 71, 107-118.	1.0	12
59	Subsurface Detection of Shallow Targets by Undersampled Multifrequency Data and a Non-Cooperative Source. Applied Sciences (Switzerland), 2019, 9, 5383.	2.5	12
60	Spatial Sampling in Monostatic Radar Imaging. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	3.1	12
61	Valid angle criterion and radiation pattern estimation via singular value decomposition for planar scanning. IET Microwaves, Antennas and Propagation, 2019, 13, 2342-2348.	1.4	12
62	Fault detection in dielectric grid scatterers. Optics Express, 2015, 23, 8200.	3.4	11
63	GENERALISED RANDOM BINNED ANTENNA ARRAYS. Progress in Electromagnetics Research C, 2017, 78, 129-143.	0.9	11
64	Fault detection in metallic grid scattering. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 2588.	1.5	10
65	UWB breast cancer detection with numerical phantom and Vivaldi antenna. , 2011, , .		10
66	Estimation of Soil Permittivity in Presence of Antenna-Soil Interactions. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 805-812.	4.9	10
67	Sensor Arrangement in Monostatic Subsurface Radar Imaging. IEEE Open Journal of Antennas and Propagation, 2021, 2, 3-13.	3.7	10
68	Incoherent Radar Imaging for Breast Cancer Detection and Experimental Validation against 3D Multimodal Breast Phantoms. Journal of Imaging, 2021, 7, 23.	3.0	10
69	A Quadratic Model for Electromagnetic Subsurface Prospecting. AEU - International Journal of Electronics and Communications, 2003, 57, 33-46.	2.9	9
70	Multistaticâ€multiview resolution from Born fields for strips in Fresnel zone. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2004, 21, 1402.	1.5	9
71	Experimental Validation of a Linear Inverse Scattering TWI Algorithm by a SF-CW Radar. IEEE Antennas and Wireless Propagation Letters, 2010, 9, 506-509.	4.0	9
72	Unequallyâ€excited linear totally random antenna arrays for multiâ€beam patterns. IET Microwaves, Antennas and Propagation, 2018, 12, 1671-1678.	1.4	9

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73	Response Sharpening of Resonant Sensors for Potential Applications in Blood Glucose Monitoring. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2022, 6, 287-293.	3.4	9
74	Sensor Arrangement in Through-the Wall Radar Imaging. IEEE Open Journal of Antennas and Propagation, 2022, 3, 333-341.	3.7	9
75	Spectral Methods for Response Enhancement of Microwave Resonant Sensors in Continuous Non-Invasive Blood Glucose Monitoring. Bioengineering, 2022, 9, 156.	3.5	9
76	Reconstructing the contour of metallic planar objects from only intensity scattered field data over a single plane. Optics Express, 2008, 16, 9468.	3.4	8
77	Imaging Small PEC Spheres by a Linear Δ Approach. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 3010-3018.	6.3	8
78	Intra-wall diagnostics via a microwave tomographic approach. Journal of Geophysics and Engineering, 2011, 8, S47-S53.	1.4	8
79	MUSIC Algorithms for Grid Diagnostics. IEEE Geoscience and Remote Sensing Letters, 2013, 10, 226-230.	3.1	8
80	A Strategy for Reconstructing Simple Shapes From Undersampled Backscattered Data. IEEE Geoscience and Remote Sensing Letters, 2016, 13, 1757-1761.	3.1	8
81	Single-frequency subsurface remote sensing via a non-cooperative source. Journal of Electromagnetic Waves and Applications, 2016, 30, 1147-1161.	1.6	8
82	Inverse Source Problem for a Host Medium Having Pointlike Inhomogeneities. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 5148-5159.	6.3	7
83	Scattered Far-Field Sampling in Multi-Static Multi-Frequency Configuration. Sensors, 2021, 21, 4724.	3.8	7
84	On MSE performance of time-reversal MUSIC. , 2014, , .		6
85	Data-driven linearizing approach in inverse scattering. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2017, 34, 1561.	1.5	6
86	Global Characterization of Linear Statistically Thinned Antenna Arrays. IEEE Access, 2021, 9, 119629-119640.	4.2	6
87	Determining Fresnel reflection coefficients in 3D half-space geometry by GPR multistatic data. Near Surface Geophysics, 2011, 9, 265-276.	1.2	5
88	Comparison between different decorrelation techniques in vital sign detection. Advanced Electromagnetics, 2016, 5, 53.	1.0	5
89	Unequally excited generalised random binned antenna arrays. IET Microwaves, Antennas and Propagation, 2019, 13, 2531-2538.	1.4	5
90	Statistically Thinned Array Antennas for Simultaneous Multibeam Applications. IEEE Access, 2022, 10, 60230-60240.	4.2	5

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91	Half-space estimation by time gating based strategy. , 2010, , .		4
92	On the Number of Independent Equations in Phase Retrieval Problem: Numerical Results in Circular Case. , 2018, , .		4
93	Equalization of the Antenna Pattern in Shape Reconstruction of Metallic Objects. IEEE Transactions on Antennas and Propagation, 2006, 54, 3865-3873.	5.1	3
94	Detection and localization of a slab by a linearlike $\hat{\Gamma}$ approach. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2007, 24, 2661.	1.5	3
95	Shape reconstruction of 3D metallic objects via a physical optics distributional approach. AEU - International Journal of Electronics and Communications, 2010, 64, 142-151.	2.9	3
96	Back-projection source reconstruction in the presence of point scatterers. Journal of Optics (United Kingdom), 2010, 11, 022202.	2.2	3
97	Back-propagation imaging by exploiting multipath from point scatterers. Inverse Problems, 2017, 33, 105010.	2.0	3
98	STUDY OF UNEQUALLY-EXCITED RANDOM ANTENNA ARRAYS FOR BEAM SHAPING. Progress in Electromagnetics Research C, 2018, 85, 129-140.	0.9	3
99	A Forward-Backward Iterative Procedure for Improving the Resolution of Resonant Microwave Sensors. Electronics (Switzerland), 2021, 10, 2930.	3.1	3
100	A PSF Approach to Far Field Discretization for Conformal Sources. IEEE Access, 2022, 10, 23394-23407.	4.2	3
101	Robustness for the Starting Point of Two Iterative Methods for Fitting Debye or Cole-Cole Models to a Dielectric Permittivity Spectrum. Applied Sciences (Switzerland), 2022, 12, 5698.	2.5	3
102	INVERSE SOURCE PROBLEM FROM THE KNOWLEDGE OF RADIATED FIELD OVER MULTIPLE RECTILINEAR DOMAINS. Progress in Electromagnetics Research M, 2009, 8, 131-141.	0.9	2
103	DETERMINATION OF THE FRESNEL REFLECTION COEFFICIENT OF A HALF-SPACE FOR MEDIUM ESTIMATION PURPOSES. Progress in Electromagnetics Research B, 2011, 27, 61-82.	1.0	2
104	INVERSE SOURCE PROBLEM: A COMPARISON BETWEEN THE CASES OF ELECTRIC AND MAGNETIC SOURCES. Progress in Electromagnetics Research M, 2011, 20, 127-141.	0.9	2
105	A fast data acquisition and processing scheme for through-the-wall radar imaging. , 2011, , .		2
106	Field penetration in MRI-based breast models: A numerical investigation. , 2014, , .		2
107	Optimal choice of measurement points in near field: numerical results. , 2018, , .		2
108	Field Synthesis of High Directivity Beams for Conformal Sources. IEEE Open Journal of Antennas and Propagation, 2021, 2, 439-452.	3.7	2

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109	Experimental Validation of a Microwave Imaging Method for Shallow Buried Target Detection by Under-Sampled Data and a Non-Cooperative Source. <i>Sensors</i> , 2021, 21, 5148.	3.8	2
110	Localizing metallic small spheres by a linear distributional approach. , 2007, , .		1
111	Stability and resolution of two methods for small scatterer localization. , 2010, , .		1
112	Accounting for Antenna in Half-Space Fresnel Coefficient Estimation. <i>International Journal of Geophysics</i> , 2012, 2012, 1-11.	1.1	1
113	Wall characterization via TSVD in through-the-wall imaging. , 2012, , .		1
114	Comparing Two Approaches for Point-Like Scatterer Detection. <i>International Journal of Antennas and Propagation</i> , 2015, 2015, 1-10.	1.2	1
115	A Singular Value Decomposition approach for Microwave holography imaging of the breast: A feasibility study. , 2016, , .		1
116	Information content, NDF and resolution in linear inverse problems. , 2017, , .		1
117	On the singular spectrum of the radiation operator in near reactive zone. , 2017, , .		1
118	Source's symmetries and priors: the effect on information content of radiated field. , 2018, , .		1
119	Image-Based RCS Estimation from Near-Field Data. <i>Journal of Imaging</i> , 2019, 5, 61.	3.0	1
120	Scattered field data collection in multi-static/ multi-frequency radar imaging. , 2021, , .		1
121	Electromagnetic Field Imaging in Arbitrary Scattering Environments. <i>IEEE Transactions on Computational Imaging</i> , 2021, 7, 224-233.	4.4	1
122	In-depth resolution from multi-frequency Born fields in the Fresnel zone. , 2001, , .		1
123	Microwave imaging through an unknown wall by a MIMO configuration and SVD approach. , 2019, , .		1
124	Comparing two Fitting Algorithms for Determining the Coleâ€Cole Parameters in Blood Glucose Problems. , 2021, 11, .		1
125	Spatial sensor arrangement in Through-the Wall radar imaging: Numerical results. , 2022, , .		1
126	Depth-resolving power in Fresnel and near zone. , 2000, 4123, 194.		0

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127	SVD analysis of the multi-view scattering operator in 1D inverse problems. , 2007, , .		0
128	Localization of small PEC spheres by multiview/single-frequency data. Near Surface Geophysics, 2008, 6, 371-379.	1.2	0
129	3D shape reconstruction of PEC scatterers by PO vectorial formulation. , 2009, , .		0
130	Noninvasive Sensing Techniques 2012. International Journal of Geophysics, 2012, 2012, 1-2.	1.1	0
131	A single frequency method for duct detection in reinforced concrete. , 2012, , .		0
132	Enhancing TSVD-distributonal method by passive PEC grid. , 2014, , .		0
133	Resolution enhancement in TSVD reconstructions by using passive grid. , 2014, , .		0
134	A combined approach for shape reconstruction from under-sampled data. , 2016, , .		0
135	Kolmogorov entropy in linear inverse problems. , 2017, , .		0
136	Half-space impact in multi-monostatic linear inverse scattering: numerical results. , 2019, , .		0
137	Microwave imaging via a migration algorithm and effective spatial sampling. , 2021, , .		0
138	Sampling approach for the discretization of scattering operator in inhomogeneous medium. , 2021, , .		0
139	Microwave Imaging for Breast Cancer Detection: A COTS-Based Prototype. Lecture Notes in Electrical Engineering, 2017, , 25-34.	0.4	0