Raffaele Solimene

List of Publications by Year
in descending order

139 papers	2,240 citations	279487 23 h-index	276539 41 g-index
141 all docs	141 docs citations	141 times ranked	1129 citing authors

#	Article	IF	Citations
1	Spatial Sampling in Monostatic Radar Imaging. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	1.4	12
2	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.	2.3	9
3	Sensor Arrangement in Through-the Wall Radar Imaging. IEEE Open Journal of Antennas and Propagation, 2022, 3, 333-341.	2.5	9
4	A PSF Approach to Far Field Discretization for Conformal Sources. IEEE Access, 2022, 10, 23394-23407.	2.6	3
5	Spectral Methods for Response Enhancement of Microwave Resonant Sensors in Continuous Non-Invasive Blood Glucose Monitoring. Bioengineering, 2022, 9, 156.	1.6	9
6	Robustness for the Starting Point of Two Iterative Methods for Fitting Debye or Coleâ€“Cole Models to a Dielectric Permittivity Spectrum. Applied Sciences (Switzerland), 2022, 12, 5698.	1.3	3
7	Statistically Thinned Array Antennas for Simultaneous Multibeam Applications. IEEE Access, 2022, 10, 60230-60240.	2.6	5
8	Spatial sensor arrangement in Through-the Wall radar imaging: Numerical results. , 2022, , .		1
9	Sensor Arrangement in Monostatic Subsurface Radar Imaging. IEEE Open Journal of Antennas and Propagation, 2021, 2, 3-13.	2.5	10
10	Field Synthesis of High Directivity Beams for Conformal Sources. IEEE Open Journal of Antennas and Propagation, 2021, 2, 439-452.	2.5	2
11	Global Characterization of Linear Statistically Thinned Antenna Arrays. IEEE Access, 2021, 9, 119629-119640.	2.6	6
12	Incoherent Radar Imaging for Breast Cancer Detection and Experimental Validation against 3D Multimodal Breast Phantoms. Journal of Imaging, 2021, 7, 23.	1.7	10
13	Microwave imaging via a migration algorithm and effective spatial sampling. , 2021, , .		0
14	Experimental Validation of a Microwave Imaging Method for Shallow Buried Target Detection by Under-Sampled Data and a Non-Cooperative Source. Sensors, 2021, 21, 5148.	2.1	2
15	Scattered Far-Field Sampling in Multi-Static Multi-Frequency Configuration. Sensors, 2021, 21, 4724.	2.1	7
16	Near-Field Transverse Resolution in Planar Source Reconstructions. IEEE Transactions on Antennas and Propagation, 2021, 69, 4836-4845.	3.1	16
17	Scattered field data collection in multi-static/ multi-frequency radar imaging. , 2021, , .		1
18	Electromagnetic Field Imaging in Arbitrary Scattering Environments. IEEE Transactions on Computational Imaging, 2021, 7, 224-233.	2.6	1

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19	Efficient Planar Near-Field Measurements for Radiation Pattern Evaluation by a Warping Strategy. IEEE Access, 2021, 9, 62255-62265.	2.6	17
20	Sampling approach for the discretization of scattering operator in inhomogeneous medium. , 2021, , .		0
21	A Forward-Backward Iterative Procedure for Improving the Resolution of Resonant Microwave Sensors. Electronics (Switzerland), 2021, 10, 2930.	1.8	3
22	Comparing two Fitting Algorithms for Determining the Coleâ€“Cole Parameters in Blood Glucose Problems. , 2021, 11, .		1
23	Near-Field Warping Sampling Scheme for Broad-Side Antenna Characterization. Electronics (Switzerland), 2020, 9, 1047.	1.8	15
24	Multimodal Breast Phantoms for Microwave, Ultrasound, Mammography, Magnetic Resonance and Computed Tomography Imaging. Sensors, 2020, 20, 2400.	2.1	23
25	TRANSVERSE RESOLUTION IN MICROWAVE IMAGING FOR STRIP OBJECTS BURIED IN A HALF-SPACE MEDIUM. Progress in Electromagnetics Research M, 2020, 88, 145-157.	0.5	13
26	Image-Based RCS Estimation from Near-Field Data. Journal of Imaging, 2019, 5, 61.	1.7	1
27	Subsurface Detection of Shallow Targets by Undersampled Multifrequency Data and a Non-Cooperative Source. Applied Sciences (Switzerland), 2019, 9, 5383.	1.3	12
28	Half-space impact in multi-monostatic linear inverse scattering: numerical results. , 2019, , .		0
29	Linear Array Antenna Diagnostics Through a MUSIC Algorithm. IEEE Access, 2019, 7, 176952-176959.	2.6	16
30	Valid angle criterion and radiation pattern estimation via singular value decomposition for planar scanning. IET Microwaves, Antennas and Propagation, 2019, 13, 2342-2348.	0.7	12
31	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.	0.8	39
32	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.	0.8	27
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.	0.8	20
34	Microwave imaging through an unknown wall by a MIMO configuration and SVD approach. , 2019, , .		1
35	Unequally excited generalised random binned antenna arrays. IET Microwaves, Antennas and Propagation, 2019, 13, 2531-2538.	0.7	5
36	Inverse Source Problem for a Host Medium Having Pointlike Inhomogeneities. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 5148-5159.	2.7	7

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37	On the Number of Independent Equations in Phase Retrieval Problem: Numerical Results in Circular Case. , 2018, , .		4
38	Optimal choice of measurement points in near field: numerical results. , 2018, , .		2
39	Source's symmetries and priors: the effect on information content of radiated field. , 2018, , .		1
40	STUDY OF UNEQUALLY-EXCITED RANDOM ANTENNA ARRAYS FOR BEAM SHAPING. Progress in Electromagnetics Research C, 2018, 85, 129-140.	0.6	3
41	INFORMATION CONTENT IN INVERSE SOURCE WITH SYMMETRY AND SUPPORT PRIORS. Progress in Electromagnetics Research C, 2018, 80, 39-54.	0.6	22
42	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.	0.8	23
43	Unequallyâ€excited linear totally random antenna arrays for multiâ€beam patterns. IET Microwaves, Antennas and Propagation, 2018, 12, 1671-1678.	0.7	9
44	Back-propagation imaging by exploiting multipath from point scatterers. Inverse Problems, 2017, 33, 105010.	1.0	3
45	A COTS-Based Microwave Imaging System for Breast-Cancer Detection. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 804-814.	2.7	59
46	Kolmogorov entropy in linear inverse problems. , 2017, , .		0
47	Information content, NDF and resolution in linear inverse problems. , 2017, , .		1
48	On the singular spectrum of the radiation operator in near reactive zone. , 2017, , .		1
49	Data-driven linearizing approach in inverse scattering. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2017, 34, 1561.	0.8	6
50	GENERALISED RANDOM BINNED ANTENNA ARRAYS. Progress in Electromagnetics Research C, 2017, 78, 129-143.	0.6	11
51	Microwave Imaging for Breast Cancer Detection: A COTS-Based Prototype. Lecture Notes in Electrical Engineering, 2017, , 25-34.	0.3	0
52	LARGE LINEAR RANDOM SYMMETRIC ARRAYS. Progress in Electromagnetics Research M, 2016, 52, 67-77.	0.5	13
53	COMPARING DIFFERENT SCHEMES FOR RANDOM ARRAYS. Progress in Electromagnetics Research B, 2016, 71, 107-118.	0.7	12
54	A Strategy for Reconstructing Simple Shapes From Undersampled Backscattered Data. IEEE Geoscience and Remote Sensing Letters, 2016, 13, 1757-1761.	1.4	8

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55	A combined approach for shape reconstruction from under-sampled data. , 2016, , .		0
56	Single-frequency subsurface remote sensing via a non-cooperative source. Journal of Electromagnetic Waves and Applications, 2016, 30, 1147-1161.	1.0	8
57	Back-projection source reconstruction in the presence of point scatterers. Journal of Optics (United) Tj ETQq1 1 0.784314 rgBT /Over	1.0	3
58	Beamforming and holography image formation methods: an analytic study. Optics Express, 2016, 24, 9077.	1.7	18
59	A Singular Value Decomposition approach for Microwave holography imaging of the breast: A feasibility study. , 2016, , .		1
60	Microwave bone imaging: a preliminary scanning system for proofâ€ofâ€concept. Healthcare Technology Letters, 2016, 3, 218-221.	1.9	39
61	Inverse scattering in the presence of a reflecting plane. Journal of Optics (United Kingdom), 2016, 18, 025603.	1.0	19
62	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.	2.3	14
63	Metric entropy in linear inverse scattering. Advanced Electromagnetics, 2016, 5, 46.	0.7	20
64	Comparison between different decorrelation techniques in vital sign detection. Advanced Electromagnetics, 2016, 5, 53.	0.7	5
65	Comparing Two Approaches for Point-Like Scatterer Detection. International Journal of Antennas and Propagation, 2015, 2015, 1-10.	0.7	1
66	A low-cost, fast, and accurate microwave imaging system for breast cancer detection. , 2015, , .		19
67	Passive Multiarray Image Fusion for RF Tomography by Opportunistic Sources. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 641-645.	1.4	16
68	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.	1.0	13
69	Performance Analysis of Time-Reversal MUSIC. IEEE Transactions on Signal Processing, 2015, 63, 2650-2662.	3.2	117
70	Fault detection in dielectric grid scatterers. Optics Express, 2015, 23, 8200.	1.7	11
71	Enhancing TSVD-distrubutional method by passive PEC grid. , 2014, , .		0
72	Resolution enhancement in TSVD reconstructions by using passive grid. , 2014, , .		0

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73	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.	0.8	20
74	Breast cancer detection using interferometric MUSIC: Experimental and numerical assessment. Medical Physics, 2014, 41, 103101.	1.6	32
75	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.	2.3	10
76	Ground Clutter Removal in GPR Surveys. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 792-798.	2.3	91
77	On MSE performance of time-reversal MUSIC. , 2014, , .		6
78	Field penetration in MRI-based breast models: A numerical investigation. , 2014, , .		2
79	Radar Imaging Through a Building Corner. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 6750-6761.	2.7	23
80	Some Remarks on Time-Reversal MUSIC for Two-Dimensional Thin PEC Scatterers. IEEE Geoscience and Remote Sensing Letters, 2014, 11, 1163-1167.	1.4	12
81	SAR Imaging Algorithms and Some Unconventional Applications: A unified mathematical overview. IEEE Signal Processing Magazine, 2014, 31, 90-98.	4.6	89
82	Front Wall Clutter Rejection Methods in TWI. IEEE Geoscience and Remote Sensing Letters, 2014, 11, 1158-1162.	1.4	52
83	MUSIC algorithms for rebar detection. Journal of Geophysics and Engineering, 2013, 10, 064006.	0.7	13
84	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.	0.8	30
85	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.	0.8	29
86	MUSIC Algorithms for Grid Diagnostics. IEEE Geoscience and Remote Sensing Letters, 2013, 10, 226-230.	1.4	8
87	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.	2.4	21
88	On the Singular Spectrum of the Radiation Operator for Multiple and Extended Observation Domains. International Journal of Antennas and Propagation, 2013, 2013, 1-10.	0.7	23
89	DETECTING POINT-LIKE SOURCES OF UNKNOWN FREQUENCY SPECTRA. Progress in Electromagnetics Research B, 2013, 50, 347-364.	0.7	15
90	Accounting for Antenna in Half-Space Fresnel Coefficient Estimation. International Journal of Geophysics, 2012, 2012, 1-11.	0.4	1

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91	Entropy-Based Clutter Rejection for Intrawall Diagnostics. International Journal of Geophysics, 2012, 2012, 1-7.	0.4	13
92	Noninvasive Sensing Techniques 2012. International Journal of Geophysics, 2012, 2012, 1-2.	0.4	0
93	A single frequency method for duct detection in reinforced concrete. , 2012, , .		0
94	Sparse Tomographic Inverse Scattering Approach for Through-the-Wall Radar Imaging. IEEE Transactions on Instrumentation and Measurement, 2012, 61, 3340-3350.	2.4	20
95	A Novel CS-TSVD Strategy to Perform Data Reduction in Linear Inverse Scattering Problems. IEEE Geoscience and Remote Sensing Letters, 2012, 9, 881-885.	1.4	27
96	Wall characterization via TSVD in through-the-wall imaging. , 2012, , .		1
97	INTERFEROMETRIC TIME REVERSAL MUSIC FOR SMALL SCATTERER LOCALIZATION. Progress in Electromagnetics Research, 2012, 131, 243-258.	1.6	27
98	Fault detection in metallic grid scattering. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 2588.	0.8	10
99	UWB breast cancer detection with numerical phantom and Vivaldi antenna. , 2011, , .		10
100	DETERMINATION OF THE FRESNEL REFLECTION COEFFICIENT OF A HALF-SPACE FOR MEDIUM ESTIMATION PURPOSES. Progress in Electromagnetics Research B, 2011, 27, 61-82.	0.7	2
101	Determining Fresnel reflection coefficients in 3D halfâ€space geometry by GPR multistatic data. Near Surface Geophysics, 2011, 9, 265-276.	0.6	5
102	INVERSE SOURCE PROBLEM: A COMPARISON BETWEEN THE CASES OF ELECTRIC AND MAGNETIC SOURCES. Progress in Electromagnetics Research M, 2011, 20, 127-141.	0.5	2
103	A fast data acquisition and processing scheme for through-the-wall radar imaging. , 2011, , .		2
104	TWI for an Unknown Symmetric Lossless Wall. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 2876-2886.	2.7	38
105	Sparse Reconstruction From GPR Data With Applications to Rebar Detection. IEEE Transactions on Instrumentation and Measurement, 2011, 60, 1070-1079.	2.4	78
106	Intra-wall diagnostics via a microwave tomographic approach. Journal of Geophysics and Engineering, 2011, 8, S47-S53.	0.7	8
107	Shape reconstruction of 3D metallic objects via a physical optics distributional approach. AEU - International Journal of Electronics and Communications, 2010, 64, 142-151.	1.7	3
108	3D SLICED TOMOGRAPHIC INVERSE SCATTERING EXPERIMENTAL RESULTS. Progress in Electromagnetics Research, 2010, 105, 1-13.	1.6	19

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109	Ground Penetrating Radar Subsurface Imaging of Buried Objects. , 2010, , .		32
110	Experimental Validation of a Linear Inverse Scattering TWI Algorithm by a SF-CW Radar. IEEE Antennas and Wireless Propagation Letters, 2010, 9, 506-509.	2.4	9
111	Stability and resolution of two methods for small scatterer localization. , 2010, , .		1
112	Half-space estimation by time gating based strategy. , 2010, , .		4
113	INVERSE SOURCE PROBLEM FROM THE KNOWLEDGE OF RADIATED FIELD OVER MULTIPLE RECTILINEAR DOMAINS. Progress in Electromagnetics Research M, 2009, 8, 131-141.	0.5	2
114	A SIMPLE STRATEGY TO DETECT CHANGES IN THROUGH THE WALL IMAGING. Progress in Electromagnetics Research M, 2009, 7, 1-13.	0.5	36
115	3D shape reconstruction of PEC scatterers by PO vectorial formulation. , 2009, , .		0
116	Three-Dimensional Through-Wall Imaging Under Ambiguous Wall Parameters. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 1310-1317.	2.7	95
117	TWI EXPERIMENTAL RESULTS BY A LINEAR INVERSE SCATTERING APPROACH. Progress in Electromagnetics Research, 2009, 91, 259-272.	1.6	19
118	Reconstructing the contour of metallic planar objects from only intensity scattered field data over a single plane. Optics Express, 2008, 16, 9468.	1.7	8
119	Imaging Small PEC Spheres by a Linear $delta$ Approach. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 3010-3018.	2.7	8
120	Localizing Thin Metallic Cylinders by a 2.5-D Linear Distributional Approach: Experimental Results. IEEE Transactions on Antennas and Propagation, 2008, 56, 2630-2637.	3.1	18
121	A Multiarray Tomographic Approach for Through-Wall Imaging. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 1192-1199.	2.7	85
122	Localizing a buried planar perfect electric conducting interface by multi-view data. Journal of Optics, 2008, 10, 015010.	1.5	13
123	Localization of small PEC spheres by multiview/singleâ€frequency data. Near Surface Geophysics, 2008, 6, 371-379.	0.6	0
124	SVD analysis of the multi-view scattering operator in 1D inverse problems. , 2007, , .		0
125	Localizing metallic small spheres by a linear distributional approach. , 2007, , .		1
126	Number of degrees of freedom of the radiated field over multiple bounded domains. Optics Letters, 2007, 32, 3113.	1.7	23

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127	Detection and localization of a slab by a linearlike Î´ approach. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2007, 24, 2661.	0.8	3
128	Three-Dimensional Microwave Tomography by a 2-D Slice-Based Reconstruction Algorithm. IEEE Geoscience and Remote Sensing Letters, 2007, 4, 556-560.	1.4	35
129	Localization of the Interfaces of a Slab Hidden Behind a Wall. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 2471-2482.	2.7	41
130	Through-Wall Imaging via a Linear Inverse Scattering Algorithm. IEEE Geoscience and Remote Sensing Letters, 2007, 4, 513-517.	1.4	151
131	Localization of a planar perfect-electric-conducting interface embedded in a half-space. Journal of Optics, 2006, 8, 10-16.	1.5	12
132	Equalization of the Antenna Pattern in Shape Reconstruction of Metallic Objects. IEEE Transactions on Antennas and Propagation, 2006, 54, 3865-3873.	3.1	3
133	Resolution in two-dimensional tomographic reconstructions in the Fresnel zone from Born scattered fields. Journal of Optics, 2004, 6, 529-536.	1.5	14
134	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.	0.8	9
135	A Quadratic Model for Electromagnetic Subsurface Prospecting. AEU - International Journal of Electronics and Communications, 2003, 57, 33-46.	1.7	9
136	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.	0.8	16
137	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.	0.8	49
138	In-depth resolution from multi-frequency Born fields in the Fresnel zone. , 2001, , .		1
139	Depth-resolving power in Fresnel and near zone. , 2000, 4123, 194.		0