

# Elise C Fear

## List of Publications by Year in descending order

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117  
papers

3,910  
citations

201674

27  
h-index

123424

61  
g-index

118  
all docs

118  
docs citations

118  
times ranked

1964  
citing authors

#	ARTICLE	IF	CITATIONS
1	Microwave Imaging of the Breast: Consistency of Measurements Over Time. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2022, 6, 61-67.	3.4	3
2	Microwave Tomography for Hydration Assessment in Newborn Cattle: In Silico Proof of Concept. , 2022, , .		0
3	Evaluating Performance of Microwave Image Reconstruction Algorithms: Extracting Tissue Types with Segmentation Using Machine Learning. Journal of Imaging, 2021, 7, 5.	3.0	5
4	Microwave Imaging for Monitoring Patients Post-Radiation Treatment: an initial investigation. , 2021, , .		3
5	New Resolution Enhancement Approach for Tissue Sensitive Adaptive Radar (TSAR). , 2021, , .		1
6	MWSegEvalâ€”An image analysis toolbox for microwave breast images. SoftwareX, 2021, 15, 100728.	2.6	2
7	Data-adaptive filtering approach for microwave breast imaging: consistency of volunteer scans. , 2021, , .		1
8	Tomographic Approach to Human Hydration Assessment: In Silico Proof-of-Concept. , 2021, , .		1
9	Microwave Hydration Monitoring: System Assessment Using Fasting Volunteers. Sensors, 2021, 21, 6949.	3.8	6
10	Breast tissue mimicking phantoms for combined ultrasound and microwave imaging. Physics in Medicine and Biology, 2021, 66, 245011.	3.0	6
11	Assessing Patient-Specific Microwave Breast Imaging in Clinical Case Studies. Sensors, 2021, 21, 8048.	3.8	3
12	Fork-shape Wideband Monopoles for Microwave Imaging. , 2021, , .		0
13	Study of the Dielectric Properties of Artificial Sweat Mixtures at Microwave Frequencies. Biosensors, 2020, 10, 62.	4.7	12
14	An Institutional Self-Study of Text-Matching Software in a Canadian Graduate-Level Engineering Program. Journal of Academic Ethics, 2020, 18, 263-282.	2.2	8
15	Flexible Patch Antennas on Filter Paper Substrate for Biosensing Applications. , 2020, , .		2
16	Feasibility Study of Hydration Monitoring Using Microwavesâ€”Part 2: Measurements of Athletes. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2019, 3, 300-307.	3.4	10
17	Feasibility Study of Hydration Monitoring Using Microwavesâ€”Part 1: A Model of Microwave Property Changes With Dehydration. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2019, 3, 292-299.	3.4	14
18	Incorporation of Ultrasonic Prior Information for Improving Quantitative Microwave Imaging of Breast. IEEE Journal on Multiscale and Multiphysics Computational Techniques, 2019, 4, 98-110.	2.2	39

#	ARTICLE	IF	CITATIONS
19	Engineering Approaches to Assessing Hydration Status. IEEE Reviews in Biomedical Engineering, 2018, 11, 233-248.	18.0	28
20	Metrics for Assessing the Similarity of Microwave Breast Imaging Scans of Healthy Volunteers. IEEE Transactions on Medical Imaging, 2018, 37, 1788-1798.	8.9	10
21	Automated 3D method for the construction of flexible and reconfigurable numerical breast models from MRI scans. Medical and Biological Engineering and Computing, 2018, 56, 1027-1040.	2.8	20
22	A Picosecond Pulse generator Using SRD diodes: Design, Analysis, and Measurements. , 2018, , .		11
23	Anthropomorphic breast model repository for research and development of microwave breast imaging technologies. Scientific Data, 2018, 5, 180257.	5.3	10
24	Conformal and Disposable Antenna-Based Sensor for Non-Invasive Sweat Monitoring. Sensors, 2018, 18, 4088.	3.8	26
25	An Inexpensive Ultrawideband Radar for High-Resolution Applications. , 2018, , .		2
26	Breast Imaging with Multiphysics Prior for Improved Tumour Detection and Localization. , 2018, , .		2
27	Tissue-Type Imaging for Ultrasound-Prior Microwave Inversion. , 2018, , .		4
28	Supporting Advanced Breast Imaging Research Through Reconfigurable Numerical Breast Models. , 2018, , .		0
29	Evaluation of Image Reconstruction Algorithms for Confocal Microwave Imaging: Application to Patient Data. Sensors, 2018, 18, 1678.	3.8	62
30	Adaptive Monostatic System for Measuring Microwave Reflections from the Breast. Sensors, 2018, 18, 1340.	3.8	19
31	Proof-of-Concept of the Incorporation of Ultrasound-Derived Structural Information Into Microwave Radar Imaging. IEEE Journal on Multiscale and Multiphysics Computational Techniques, 2018, 3, 129-139.	2.2	29
32	Can geophysical-inspired signal analysis sharpen the image of the brain's neural response to a task?. , 2018, , .		0
33	Integrating prior information into microwave tomography part 2: Impact of errors in prior information on microwave tomography image quality. Medical Physics, 2017, 44, 6482-6503.	3.0	23
34	Integrating prior information into microwave tomography Part 1: Impact of detail on image quality. Medical Physics, 2017, 44, 6461-6481.	3.0	38
35	Bulk permittivity variations in the human breast over the menstrual cycle. , 2017, , .		3
36	Immersion medium independent microwave breast imaging. , 2017, , .		1

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37	Surface Estimation for Microwave Imaging. Sensors, 2017, 17, 1658.	3.8	25
38	An Analysis of the Assumptions Inherent to Near-Field Beamforming for Biomedical Applications. IEEE Transactions on Computational Imaging, 2017, 3, 953-965.	4.4	16
39	ANTENNA CALIBRATION METHOD FOR DIELECTRIC PROPERTY ESTIMATION OF BIOLOGICAL TISSUES AT MICROWAVE FREQUENCIES. Progress in Electromagnetics Research, 2017, 158, 73-87.	4.4	7
40	DATA PRECONDITIONING WITH GABOR NONSTATIONARY DECONVOLUTION FOR RADAR IMAGING OF HIGHLY DISSIPATIVE AND DISPERSIVE MEDIA. Progress in Electromagnetics Research B, 2017, 72, 169-195.	1.0	1
41	Monitoring the heart with ultra-wideband microwave signals: evaluation with a semi-dynamic heart model. Biomedical Physics and Engineering Express, 2016, 2, 035011.	1.2	4
42	Average breast permittivity measurements: Preliminary results from current patient study. , 2016, , .		6
43	Estimating bulk dielectric properties of biological tissues at microwave frequencies. , 2016, , .		4
44	Optimizing microwave-radar imaging parameters. , 2016, , .		2
45	System for Bulk Dielectric Permittivity Estimation of Breast Tissues at Microwave Frequencies. IEEE Transactions on Microwave Theory and Techniques, 2016, 64, 3001-3009.	4.6	38
46	Evaluating the impact of breast model complexity on microwave imaging signals. , 2016, , .		3
47	Techniques for breast surface reconstruction with applications. , 2016, , .		1
48	Evaluating impact of errors in prior information on performance of microwave tomography. , 2016, , .		1
49	Estimating the Effective Permittivity for Reconstructing Accurate Microwave-Radar Images. PLoS ONE, 2016, 11, e0160849.	2.5	26
50	Dielectric permittivity estimation of biological tissues using sensor array technology. , 2015, , .		5
51	Iterative refinement of fibroglandular region with microwave breast imaging. , 2015, , .		2
52	A semi-dynamic heart model for UWB microwave transmission simulations and hardware evaluation. Biomedical Physics and Engineering Express, 2015, 1, 045005.	1.2	1
53	ANTENNA APERTURE LOCALIZATION FOR ARRIVAL TIME CORRECTION USING FIRST-BREAK. Progress in Electromagnetics Research B, 2015, 62, 105-120.	1.0	5
54	Average dielectric properties of the human breast from ultra wide band transmission measurements. , 2015, , .		1

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55	Tumor tracking with microwave breast imaging using refined patient specific prior information. , 2015, , .		0
56	Immersion medium independent algorithm for breast microwave imaging. , 2015, , .		3
57	Gabor deconvolution: Attenuation function estimation based on frequency-dependent Q. , 2015, , .		0
58	Near field radar imaging in the frequency domain with application to patient data. , 2015, , .		2
59	A New Breast Phantom With a Durable Skin Layer for Microwave Breast Imaging. IEEE Transactions on Antennas and Propagation, 2015, 63, 1693-1700.	5.1	66
60	Average Dielectric Property Analysis of Complex Breast Tissue with Microwave Transmission Measurements. Sensors, 2015, 15, 1199-1216.	3.8	19
61	Evaluation of 3-D Acquisition Surfaces for Radar-Based Microwave Breast Imaging. IEEE Transactions on Antennas and Propagation, 2015, 63, 4910-4920.	5.1	27
62	BREAST IMAGING USING MICROWAVE TOMOGRAPHY WITH RADAR-BASED TISSUE-REGIONS ESTIMATION. Progress in Electromagnetics Research, 2014, 149, 161-171.	4.4	53
63	Biological tissues assesment using transmitted microwave signals. , 2014, , .		7
64	Stable and Flexible Materials to Mimic the Dielectric Properties of Human Soft Tissues. IEEE Antennas and Wireless Propagation Letters, 2014, 13, 599-602.	4.0	66
65	Breast cancer imaging using microwave tomography with radar-derived prior information. , 2014, , .		2
66	Estimating reflectivity by non-stationary deconvolution of ultra-wide band radar data: Application to microwave breast imaging. , 2014, , .		0
67	Development of axilla phantoms to aid breast cancer staging via sentinel lymph node detection. , 2014, , .		0
68	Beamforming in the frequency domain with applications to microwave breast imaging. , 2014, , .		5
69	Microwave Breast Imaging With a Monostatic Radar-Based System: A Study of Application to Patients. IEEE Transactions on Microwave Theory and Techniques, 2013, 61, 2119-2128.	4.6	349
70	Defining regions of interest for microwave imaging using near-field reflection data. IEEE Transactions on Microwave Theory and Techniques, 2013, 61, 2137-2145.	4.6	16
71	Characterizing the point spread function of a near field ultrawideband monostatic radar imaging system. , 2013, , .		1
72	A time- and temperature-stable complex breast phantom for microwave breast imaging. , 2013, , .		1

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73	A source wavelet deconvolution approach to improve the spatial resolution for radar-based breast imaging system. , 2013, , .		0
74	Contact Geometry Affects Lesion Formation in Radio-Frequency Cardiac Catheter Ablation. PLoS ONE, 2013, 8, e73242.	2.5	26
75	Semiautomated Multimodal Breast Image Registration. International Journal of Biomedical Imaging, 2012, 2012, 1-14.	3.9	4
76	Using X-Ray Mammograms to Assist in Microwave Breast Image Interpretation. International Journal of Biomedical Imaging, 2012, 2012, 1-11.	3.9	5
77	Measurement and Analysis of Microwave Frequency Signals Transmitted through the Breast. International Journal of Biomedical Imaging, 2012, 2012, 1-11.	3.9	36
78	Guest Editorial: Special Cluster on Microwave Medical Imaging. IEEE Antennas and Wireless Propagation Letters, 2012, 11, 1592-1597.	4.0	41
79	A skin response estimation and suppression technique for radar-based microwave breast imaging applications. , 2012, , .		5
80	Estimation of regional geometric and spatially averaged dielectric properties of an object. , 2012, , .		1
81	Regional estimation of the dielectric properties of inhomogeneous objects using near-field reflection data. Inverse Problems, 2012, 28, 075001.	2.0	27
82	Technique to Decompose Near-Field Reflection Data Generated From an Object Consisting of Thin Dielectric Layers. IEEE Transactions on Antennas and Propagation, 2012, 60, 3684-3692.	5.1	17
83	Shielded UWB Sensor for Biomedical Applications. IEEE Antennas and Wireless Propagation Letters, 2012, 11, 1614-1617.	4.0	30
84	NEIGHBORHOOD-BASED ALGORITHM TO FACILITATE THE REDUCTION OF SKIN REFLECTIONS IN RADAR-BASED MICROWAVE IMAGING. Progress in Electromagnetics Research B, 2012, 39, 115-139.	1.0	25
85	EXTRACTION OF INTERNAL SPATIAL FEATURES OF INHOMOGENEOUS DIELECTRIC OBJECTS USING NEAR-FIELD REFLECTION DATA. Progress in Electromagnetics Research, 2012, 122, 197-221.	4.4	7
86	Safety assessment of ultra-wideband antennas for microwave breast imaging. Bioelectromagnetics, 2012, 33, 215-225.	1.6	11
87	Catheter contact geometry affects lesion formation in radio-frequency cardiac catheter ablation. , 2011, 2011, 243-6.		3
88	Laser Surface Estimation for Microwave Breast Imaging Systems. IEEE Transactions on Biomedical Engineering, 2011, 58, 1193-1199.	4.2	44
89	Safety assessment of microwave breast imaging techniques: A comparison between two different approaches. , 2011, , .		2
90	Exploring Joint Tissues With Microwave Imaging. IEEE Transactions on Microwave Theory and Techniques, 2010, 58, 2307-2313.	4.6	43

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91	TEM horn antenna for near-field microwave imaging. Microwave and Optical Technology Letters, 2010, 52, 1164-1170.	1.4	11
92	Antenna Evaluation for Ultra-Wideband Microwave Imaging. International Journal of Antennas and Propagation, 2010, 2010, 1-8.	1.2	17
93	Balanced Antipodal Vivaldi Antenna With Dielectric Director for Near-Field Microwave Imaging. IEEE Transactions on Antennas and Propagation, 2010, 58, 2318-2326.	5.1	334
94	Microwave imaging of the knee: Application to ligaments and tendons. , 2009, , .		8
95	Enhanced directivity of a tapered slot antenna for near-field imaging. , 2009, , .		4
96	Microwave imaging of the knee: On sensitivity, resolution and multiple tears detection.. , 2009, , .		12
97	An Improved Technique to Predict the Time-of-Arrival of a Tumor Response in Radar-Based Breast Imaging. IEEE Transactions on Biomedical Engineering, 2009, 56, 1200-1208.	4.2	19
98	Cross-Vivaldi antenna for breast tumor detection. Microwave and Optical Technology Letters, 2009, 51, 275-280.	1.4	37
99	Design of dielectric immersed tapered slotline antenna for radar-based microwave breast imaging. Microwave and Optical Technology Letters, 2009, 51, 633-638.	1.4	14
100	Antenna performance for ultra-wideband microwave imaging. , 2009, , .		4
101	Breast Surface Estimation for Radar-Based Breast Imaging Systems. IEEE Transactions on Biomedical Engineering, 2008, 55, 1678-1686.	4.2	43
102	Tumor Response Estimation in Radar-Based Microwave Breast Cancer Detection. IEEE Transactions on Biomedical Engineering, 2008, 55, 2801-2811.	4.2	27
103	Reduction of skin reflections in radar-based microwave breast imaging. , 2008, 2008, 21-4.		9
104	Robust approach to skin location estimation for radar-based breast imaging systems. , 2008, 2008, 5837-41.		2
105	A technique to predict the time-of-arrival of a tumor response corrupted by clutter. , 2008, 2008, 3520-5.		1
106	Tissue sensing adaptive radar for breast cancer detection: skin outline creation on a complex simulated hemispherical breast model. , 2007, , .		5
107	Tumor Estimation In Tissue Sensing Adaptive Radar (TSAR) Signals. , 2007, , .		4
108	Tissue Sensing Adaptive Radar for Breast Cancer Detection—Experimental Investigation of Simple Tumor Models. IEEE Transactions on Microwave Theory and Techniques, 2005, 53, 3312-3319.	4.6	221

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109	Tissue sensing adaptive radar for breast cancer detection: study of immersion liquids. Electronics Letters, 2005, 41, 113.	1.0	72
110	Preliminary Investigation of Breast Tumor Detection Using Cross-Vivaldi Antenna. , 2005, 2005, 6691-4.		2
111	Microwave Imaging of the Breast. Technology in Cancer Research and Treatment, 2005, 4, 69-82.	1.9	83
112	Dielectric-filled slotline bowtie antenna for breast cancer detection. Electronics Letters, 2005, 41, 388.	1.0	45
113	Experimental feasibility study of confocal microwave imaging for breast tumor detection. IEEE Transactions on Microwave Theory and Techniques, 2003, 51, 887-892.	4.6	127
114	Enhancing breast tumor detection with near-field imaging. IEEE Microwave Magazine, 2002, 3, 48-56.	0.8	491
115	Confocal microwave imaging for breast cancer detection: localization of tumors in three dimensions. IEEE Transactions on Biomedical Engineering, 2002, 49, 812-822.	4.2	740
116	<title>Microwave detection of breast tumors: comparison of skin subtraction algorithms</title>. , 2000, 4129, 207.		7
117	Modeling assemblies of biological cells exposed to electric fields. IEEE Transactions on Biomedical Engineering, 1998, 45, 1259-1271.	4.2	75