

Elise C Fear

List of Publications by Year in descending order

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Version: 2024-02-01

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 | 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 |
| 2 | Enhancing breast tumor detection with near-field imaging. IEEE Microwave Magazine, 2002, 3, 48-56. | 0.8 | 491 |
| 3 | 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 |
| 4 | 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 |
| 5 | 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 |
| 6 | 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 |
| 7 | Microwave Imaging of the Breast. Technology in Cancer Research and Treatment, 2005, 4, 69-82. | 1.9 | 83 |
| 8 | Modeling assemblies of biological cells exposed to electric fields. IEEE Transactions on Biomedical Engineering, 1998, 45, 1259-1271. | 4.2 | 75 |
| 9 | Tissue sensing adaptive radar for breast cancer detection: study of immersion liquids. Electronics Letters, 2005, 41, 113. | 1.0 | 72 |
| 10 | 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 |
| 11 | 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 |
| 12 | Evaluation of Image Reconstruction Algorithms for Confocal Microwave Imaging: Application to Patient Data. Sensors, 2018, 18, 1678. | 3.8 | 62 |
| 13 | BREAST IMAGING USING MICROWAVE TOMOGRAPHY WITH RADAR-BASED TISSUE-REGIONS ESTIMATION. Progress in Electromagnetics Research, 2014, 149, 161-171. | 4.4 | 53 |
| 14 | Dielectric-filled slotline bowtie antenna for breast cancer detection. Electronics Letters, 2005, 41, 388. | 1.0 | 45 |
| 15 | Laser Surface Estimation for Microwave Breast Imaging Systems. IEEE Transactions on Biomedical Engineering, 2011, 58, 1193-1199. | 4.2 | 44 |
| 16 | Breast Surface Estimation for Radar-Based Breast Imaging Systems. IEEE Transactions on Biomedical Engineering, 2008, 55, 1678-1686. | 4.2 | 43 |
| 17 | Exploring Joint Tissues With Microwave Imaging. IEEE Transactions on Microwave Theory and Techniques, 2010, 58, 2307-2313. | 4.6 | 43 |
| 18 | Guest Editorial: Special Cluster on Microwave Medical Imaging. IEEE Antennas and Wireless Propagation Letters, 2012, 11, 1592-1597. | 4.0 | 41 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 19 | 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 |
| 20 | 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 |
| 21 | Integrating prior information into microwave tomography Part 1: Impact of detail on image quality. Medical Physics, 2017, 44, 6461-6481. | 3.0 | 38 |
| 22 | Crossâ€­Eivaldi antenna for breast tumor detection. Microwave and Optical Technology Letters, 2009, 51, 275-280. | 1.4 | 37 |
| 23 | Measurement and Analysis of Microwave Frequency Signals Transmitted through the Breast. International Journal of Biomedical Imaging, 2012, 2012, 1-11. | 3.9 | 36 |
| 24 | Shielded UWB Sensor for Biomedical Applications. IEEE Antennas and Wireless Propagation Letters, 2012, 11, 1614-1617. | 4.0 | 30 |
| 25 | 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 |
| 26 | Engineering Approaches to Assessing Hydration Status. IEEE Reviews in Biomedical Engineering, 2018, 11, 233-248. | 18.0 | 28 |
| 27 | Tumor Response Estimation in Radar-Based Microwave Breast Cancer Detection. IEEE Transactions on Biomedical Engineering, 2008, 55, 2801-2811. | 4.2 | 27 |
| 28 | Regional estimation of the dielectric properties of inhomogeneous objects using near-field reflection data. Inverse Problems, 2012, 28, 075001. | 2.0 | 27 |
| 29 | 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 |
| 30 | Contact Geometry Affects Lesion Formation in Radio-Frequency Cardiac Catheter Ablation. PLoS ONE, 2013, 8, e73242. | 2.5 | 26 |
| 31 | Conformal and Disposable Antenna-Based Sensor for Non-Invasive Sweat Monitoring. Sensors, 2018, 18, 4088. | 3.8 | 26 |
| 32 | Estimating the Effective Permittivity for Reconstructing Accurate Microwave-Radar Images. PLoS ONE, 2016, 11, e0160849. | 2.5 | 26 |
| 33 | 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 |
| 34 | Surface Estimation for Microwave Imaging. Sensors, 2017, 17, 1658. | 3.8 | 25 |
| 35 | 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 |
| 36 | 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 |

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|----|---|-----|-----------|
| 37 | 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 |
| 38 | Average Dielectric Property Analysis of Complex Breast Tissue with Microwave Transmission Measurements. Sensors, 2015, 15, 1199-1216. | 3.8 | 19 |
| 39 | Adaptive Monostatic System for Measuring Microwave Reflections from the Breast. Sensors, 2018, 18, 1340. | 3.8 | 19 |
| 40 | Antenna Evaluation for Ultra-Wideband Microwave Imaging. International Journal of Antennas and Propagation, 2010, 2010, 1-8. | 1.2 | 17 |
| 41 | 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 |
| 42 | 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 |
| 43 | 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 |
| 44 | 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 |
| 45 | Feasibility Study of Hydration Monitoring Using Microwaves—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 |
| 46 | Microwave imaging of the knee: On sensitivity, resolution and multiple tears detection.. , 2009, , . | | 12 |
| 47 | Study of the Dielectric Properties of Artificial Sweat Mixtures at Microwave Frequencies. Biosensors, 2020, 10, 62. | 4.7 | 12 |
| 48 | TEM horn antenna for near-field microwave imaging. Microwave and Optical Technology Letters, 2010, 52, 1164-1170. | 1.4 | 11 |
| 49 | Safety assessment of ultra-wideband antennas for microwave breast imaging. Bioelectromagnetics, 2012, 33, 215-225. | 1.6 | 11 |
| 50 | A Picosecond Pulse generator Using SRD diodes: Design, Analysis, and Measurements. , 2018, , . | | 11 |
| 51 | 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 |
| 52 | Anthropomorphic breast model repository for research and development of microwave breast imaging technologies. Scientific Data, 2018, 5, 180257. | 5.3 | 10 |
| 53 | Feasibility Study of Hydration Monitoring Using Microwaves—Part 2: Measurements of Athletes. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2019, 3, 300-307. | 3.4 | 10 |
| 54 | Reduction of skin reflections in radar-based microwave breast imaging. , 2008, 2008, 21-4. | | 9 |

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| 55 | Microwave imaging of the knee: Application to ligaments and tendons. , 2009, , . | | 8 |
| 56 | 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 |
| 57 | <title>Microwave detection of breast tumors: comparison of skin subtraction algorithms</title>. , 2000, 4129, 207. | | 7 |
| 58 | 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 |
| 59 | Biological tissues assesment using transmitted microwave signals. , 2014, , . | | 7 |
| 60 | ANTENNA CALIBRATION METHOD FOR DIELECTRIC PROPERTY ESTIMATION OF BIOLOGICAL TISSUES AT MICROWAVE FREQUENCIES. Progress in Electromagnetics Research, 2017, 158, 73-87. | 4.4 | 7 |
| 61 | Average breast permittivity measurements: Preliminary results from current patient study. , 2016, , . | | 6 |
| 62 | Microwave Hydration Monitoring: System Assessment Using Fasting Volunteers. Sensors, 2021, 21, 6949. | 3.8 | 6 |
| 63 | Breast tissue mimicking phantoms for combined ultrasound and microwave imaging. Physics in Medicine and Biology, 2021, 66, 245011. | 3.0 | 6 |
| 64 | Tissue sensing adaptive radar for breast cancer detection: skin outline creation on a complex simulated hemispherical breast model. , 2007, , . | | 5 |
| 65 | Using X-Ray Mammograms to Assist in Microwave Breast Image Interpretation. International Journal of Biomedical Imaging, 2012, 2012, 1-11. | 3.9 | 5 |
| 66 | A skin response estimation and suppression technique for radar-based microwave breast imaging applications. , 2012, , . | | 5 |
| 67 | Beamforming in the frequency domain with applications to microwave breast imaging. , 2014, , . | | 5 |
| 68 | Dielectric permittivity estimation of biological tissues using sensor array technology. , 2015, , . | | 5 |
| 69 | ANTENNA APERTURE LOCALIZATION FOR ARRIVAL TIME CORRECTION USING FIRST-BREAK. Progress in Electromagnetics Research B, 2015, 62, 105-120. | 1.0 | 5 |
| 70 | Evaluating Performance of Microwave Image Reconstruction Algorithms: Extracting Tissue Types with Segmentation Using Machine Learning. Journal of Imaging, 2021, 7, 5. | 3.0 | 5 |
| 71 | Tumor Estimation In Tissue Sensing Adaptive Radar (TSAR) Signals. , 2007, , . | | 4 |
| 72 | Enhanced directivity of a tapered slot antenna for near-field imaging. , 2009, , . | | 4 |

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|----|--|-----|-----------|
| 73 | Antenna performance for ultra-wideband microwave imaging. , 2009, , . | | 4 |
| 74 | Semiautomated Multimodal Breast Image Registration. International Journal of Biomedical Imaging, 2012, 2012, 1-14. | 3.9 | 4 |
| 75 | 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 |
| 76 | Estimating bulk dielectric properties of biological tissues at microwave frequencies. , 2016, , . | | 4 |
| 77 | Tissue-Type Imaging for Ultrasound-Prior Microwave Inversion. , 2018, , . | | 4 |
| 78 | Catheter contact geometry affects lesion formation in radio-frequency cardiac catheter ablation. , 2011, 2011, 243-6. | | 3 |
| 79 | Immersion medium independent algorithm for breast microwave imaging. , 2015, , . | | 3 |
| 80 | Evaluating the impact of breast model complexity on microwave imaging signals. , 2016, , . | | 3 |
| 81 | Bulk permittivity variations in the human breast over the menstrual cycle. , 2017, , . | | 3 |
| 82 | 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 |
| 83 | Microwave Imaging for Monitoring Patients Post-Radiation Treatment: an initial investigation. , 2021, , . | | 3 |
| 84 | Assessing Patient-Specific Microwave Breast Imaging in Clinical Case Studies. Sensors, 2021, 21, 8048. | 3.8 | 3 |
| 85 | Preliminary Investigation of Breast Tumor Detection Using Cross-Vivaldi Antenna. , 2005, 2005, 6691-4. | | 2 |
| 86 | Robust approach to skin location estimation for radar-based breast imaging systems. , 2008, 2008, 5837-41. | | 2 |
| 87 | Safety assessment of microwave breast imaging techniques: A comparison between two different approaches. , 2011, , . | | 2 |
| 88 | Breast cancer imaging using microwave tomography with radar-derived prior information. , 2014, , . | | 2 |
| 89 | Iterative refinement of fibroglandular region with microwave breast imaging. , 2015, , . | | 2 |
| 90 | Near field radar imaging in the frequency domain with application to patient data. , 2015, , . | | 2 |

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| 91 | Optimizing microwave-radar imaging parameters. , 2016, , . | | 2 |
| 92 | An Inexpensive Ultrawideband Radar for High-Resolution Applications. , 2018, , . | | 2 |
| 93 | Breast Imaging with Multiphysics Prior for Improved Tumour Detection and Localization. , 2018, , . | | 2 |
| 94 | MWSegEvalâ€”An image analysis toolbox for microwave breast images. SoftwareX, 2021, 15, 100728. | 2.6 | 2 |
| 95 | Flexible Patch Antennas on Filter Paper Substrate for Biosensing Applications. , 2020, , . | | 2 |
| 96 | A technique to predict the time-of-arrival of a tumor response corrupted by clutter. , 2008, 2008, 3520-5. | | 1 |
| 97 | Estimation of regional geometric and spatially averaged dielectric properties of an object. , 2012, , . | | 1 |
| 98 | Characterizing the point spread function of a near field ultrawideband monostatic radar imaging system. , 2013, , . | | 1 |
| 99 | A time- and temperature-stable complex breast phantom for microwave breast imaging. , 2013, , . | | 1 |
| 100 | A semi-dynamic heart model for UWB microwave transmission simulations and hardware evaluation. Biomedical Physics and Engineering Express, 2015, 1, 045005. | 1.2 | 1 |
| 101 | Average dielectric properties of the human breast from ultra wide band transmission measurements. , 2015, , . | | 1 |
| 102 | Techniques for breast surface reconstruction with applications. , 2016, , . | | 1 |
| 103 | Evaluating impact of errors in prior information on performance of microwave tomography. , 2016, , . | | 1 |
| 104 | Immersion medium independent microwave breast imaging. , 2017, , . | | 1 |
| 105 | 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 |
| 106 | New Resolution Enhancement Approach for Tissue Sensitive Adaptive Radar (TSAR). , 2021, , . | | 1 |
| 107 | Data-adaptive filtering approach for microwave breast imaging: consistency of volunteer scans. , 2021, , . | | 1 |
| 108 | Tomographic Approach to Human Hydration Assessment: In Silico Proof-of-Concept. , 2021, , . | | 1 |

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| 109 | A source wavelet deconvolution approach to improve the spatial resolution for radar-based breast imaging system. , 2013, , . | | 0 |
| 110 | Estimating reflectivity by non-stationary deconvolution of ultra-wide band radar data: Application to microwave breast imaging. , 2014, , . | | 0 |
| 111 | Development of axilla phantoms to aid breast cancer staging via sentinel lymph node detection. , 2014, , . | | 0 |
| 112 | Tumor tracking with microwave breast imaging using refined patient specific prior information. , 2015, , . | | 0 |
| 113 | Gabor deconvolution: Attenuation function estimation based on frequency-dependent Q. , 2015, , . | | 0 |
| 114 | Supporting Advanced Breast Imaging Research Through Reconfigurable Numerical Breast Models. , 2018, , . | | 0 |
| 115 | Can geophysical-inspired signal analysis sharpen the image of the brain's neural response to a task?. , 2018, , . | | 0 |
| 116 | Fork-shape Wideband Monopoles for Microwave Imaging. , 2021, , . | | 0 |
| 117 | Microwave Tomography for Hydration Assessment in Newborn Cattle: In Silico Proof of Concept. , 2022, , . | | 0 |