

# Tomasz Rymarczyk

## List of Publications by Year in descending order

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152  
papers

1,217  
citations

361045

20  
h-index

414034

32  
g-index

159  
all docs

159  
docs citations

159  
times ranked

452  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Non-Destructive System Based on Electrical Tomography and Machine Learning to Analyze the Moisture of Buildings. <i>Sensors</i> , 2018, 18, 2285.	2.1	94
2	Logistic Regression for Machine Learning in Process Tomography. <i>Sensors</i> , 2019, 19, 3400.	2.1	88
3	Comparison of Selected Machine Learning Algorithms for Industrial Electrical Tomography. <i>Sensors</i> , 2019, 19, 1521.	2.1	71
4	Application of neural reconstruction of tomographic images in the problem of reliability of flood protection facilities. <i>Eksploracja I Niezawodnosc</i> , 2018, 20, 425-434.	1.1	66
5	Practical Implementation of Electrical Tomography in a Distributed System to Examine the Condition of Objects. <i>IEEE Sensors Journal</i> , 2017, 17, 8166-8186.	2.4	49
6	Increasing the Reliability of Flood Embankments with Neural Imaging Method. <i>Applied Sciences (Switzerland)</i> , 2018, 8, 1457.	1.3	48
7	The Use of Time-Frequency Moments as Inputs of LSTM Network for ECG Signal Classification. <i>Electronics (Switzerland)</i> , 2020, 9, 1452.	1.8	48
8	Applying industrial tomography to control and optimization flow systems. <i>Open Physics</i> , 2018, 16, 332-345.	0.8	46
9	Using electrical impedance tomography to monitoring flood banks. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2014, 45, 489-494.	0.3	43
10	New electrical tomographic method to determine dampness in historical buildings. <i>Archives of Electrical Engineering</i> , 2016, 65, 273-283.	1.0	43
11	Maintenance of industrial reactors supported by deep learning driven ultrasound tomography. <i>Eksploracja I Niezawodnosc</i> , 2020, 22, 138-147.	1.1	43
12	New methods to determine moisture areas by electrical impedance tomography. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2016, 52, 79-87.	0.3	41
13	Implementation of electrical impedance tomography for analysis of building moisture conditions. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , 2018, 37, 1837-1861.	0.5	32
14	Innovative methods of neural reconstruction for tomographic images in maintenance of tank industrial reactors. <i>Eksploracja I Niezawodnosc</i> , 2019, 21, 261-267.	1.1	30
15	Quality Assessment of the Neural Algorithms on the Example of EIT-UST Hybrid Tomography. <i>Sensors</i> , 2020, 20, 3324.	2.1	28
16	USING NEURAL NETWORKS AND DEEP LEARNING ALGORITHMS IN ELECTRICAL IMPEDANCE TOMOGRAPHY. <i>Informatyka Automatyka Pomiary W Gospodarce I Ochronie Środowiska</i> , 2017, 7, 99-102.	0.2	26
17	A Quantitative Ultrasonic Travel-Time Tomography to Investigate Liquid Elaborations in Industrial Processes. <i>Sensors</i> , 2019, 19, 5117.	2.1	25
18	Comparison of Machine Learning Methods in Electrical Tomography for Detecting Moisture in Building Walls. <i>Energies</i> , 2021, 14, 2777.	1.6	25

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19	Electrical tomography system for Innovative Imaging and Signal Analysis. Przegląd Elektrotechniczny, 2019, 1, 135-138.	0.1	25
20	Historical Buildings Dampness Analysis Using Electrical Tomography and Machine Learning Algorithms. Energies, 2021, 14, 1307.	1.6	23
21	Electrical impedance tomography in 3D flood embankments testing " elastic net approach. Transactions of the Institute of Measurement and Control, 2020, 42, 680-690.	1.1	18
22	Area monitoring using the ERT method with multisensor electrodes. Przegląd Elektrotechniczny, 2019, 1, 155-158.	0.1	16
23	An Ultrasound Tomography Method for Monitoring CO2 Capture Process Involving Stirring and CaCO3 Precipitation. Sensors, 2021, 21, 6995.	2.1	16
24	A Triple-Modality Ultrasound Computed Tomography Based on Full-Waveform Data for Industrial Processes. IEEE Sensors Journal, 2021, 21, 20896-20909.	2.4	12
25	Wearable mobile measuring device based on electrical tomography. Przegląd Elektrotechniczny, 2019, 1, 213-216.	0.1	10
26	Comparison of Machine Learning Methods for Image Reconstruction Using the LSTM Classifier in Industrial Electrical Tomography. Energies, 2021, 14, 7269.	1.6	10
27	Optimising the use of Machine learning algorithms in electrical tomography of building Walls: Pixel oriented ensemble approach. Measurement: Journal of the International Measurement Confederation, 2022, 188, 110581.	2.5	9
28	Ultrasonic Time-of-Flight Computed Tomography for Investigation of Batch Crystallisation Processes. Sensors, 2021, 21, 639.	2.1	8
29	Implementation Image Analysis and Optimization Techniques in e-Medicus System. Przegląd Elektrotechniczny, 2018, 1, 95-98.	0.1	8
30	Machine Learning and Deterministic Approach to the Reflective Ultrasound Tomography. Energies, 2021, 14, 7549.	1.6	8
31	The Concept of Using LSTM to Detect Moisture in Brick Walls by Means of Electrical Impedance Tomography. Energies, 2021, 14, 7617.	1.6	7
32	Application of Electrical Tomography Imaging Using Machine Learning Methods for the Monitoring of Flood Embankments Leaks. Energies, 2021, 14, 8081.	1.6	7
33	Object Analysis Using Machine Learning to Solve Inverse Problem in Electrical Impedance Tomography. , 2018, , .		6
34	Logistic Regression Application to Image Reconstruction in UST. , 2019, , .		6
35	Applying the logistic regression in electrical impedance tomography to analyze conductivity of the examined objects. International Journal of Applied Electromagnetics and Mechanics, 2021, 64, S235-S252.	0.3	6
36	The use of elastic net and neural networks in industrial process tomography. Przegląd Elektrotechniczny, 2019, 1, 61-64.	0.1	6

#	ARTICLE	IF	CITATIONS
37	Convergence error exploration for electrical impedance tomography problems with open and closed domains. , 2018, , .		5
38	Hybrid Sensor for Detection of Objects Using Radio Tomography. , 2019, , .		5
39	A concept of the air quality monitoring system in the city of Lublin with machine learning methods to detect data outliers. MATEC Web of Conferences, 2019, 252, 03009.	0.1	5
40	Electrical Capacitance Tomography and Optical Detection in Quality Control System. Przegląd Elektrotechniczny, 2017, 1, 213-216.	0.1	5
41	Moisture Wall Inspection Using Electrical Tomography Measurements. Przegląd Elektrotechniczny, 2018, 1, 99-102.	0.1	5
42	Implementation of the LARS method to solve the inverse problem in electrical tomography. Przegląd Elektrotechniczny, 2018, 1, 148-151.	0.1	5
43	Object detection using radio imaging tomography and tomographic sensors. Przegląd Elektrotechniczny, 2020, 1, 184-187.	0.1	5
44	Image reconstruction in ultrasound transmission tomography using the Fermat's Principle. Przegląd Elektrotechniczny, 2020, 1, 188-191.	0.1	5
45	Logistic Regression with Wave Preprocessing to Solve Inverse Problem in Industrial Tomography for Technological Process Control. Energies, 2021, 14, 8116.	1.6	5
46	Implementation of Block-Wise-Transform-Reduction Method for Image Reconstruction in Ultrasound Transmission Tomography. , 2021, , .		4
47	A NEW CONCEPT OF DISCRETIZATION MODEL FOR IMAGING IMPROVING IN ULTRASOUND TRANSMISSION TOMOGRAPHY. Informatyka Automatyka Pomiary W Gospodarce I Ochronie Środowiska, 2019, 9, 48-51.	0.2	4
48	Tomographic data acquisition systems for building condition analysis. , 2017, , .		3
49	Advanced tomographic platform for real-time image reconstruction and biomedical signal analysis. , 2018, , .		3
50	Multi Frequency Electrical Tomography with Re-configurable Excitation Waveforms. , 2019, , .		3
51	RayIntegration methods for real-time reconstruction using a compact measuring device. , 2019, , .		3
52	Application of the Fresnel zone and Free-space Path for image reconstruction in radio tomography. , 2019, , .		3
53	Wearable sensor array for biopotential measurements. , 2019, , .		3
54	ECT Measurement System with Optical Detection for Quality Control of Flow Process. Przegląd Elektrotechniczny, 2016, 1, 159-162.	0.1	3

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55	NONDESTRUCTIVE METHOD TO DETERMINE MOISTURE AREA IN HISTORICAL BUILDING. Informatyka Automatyka Pomiary W Gospodarce I Ochronie Środowiska, 2017, 7, 68-71.	0.2	3
56	Minimization of Objective Function in Electrical Impedance Tomography by Topological Derivative. Przegląd Elektrotechniczny, 2019, 1, 139-142.	0.1	3
57	Mutual Information and Delay Embeddings in Polysomnography Studies. , 2019, , .		2
58	Construction of Ultrasonic Reflection Tomograph for Analysis of Technological Processes. , 2019, , .		2
59	Inverse Problem Solution for Model with Lungs and Heart in EIT. , 2019, , .		2
60	Analysis and Monitoring of Flood Embankments Through Image Reconstruction Based on Electrical Impedance Tomography. , 2019, , .		2
61	Examination of Moisture Condition of Buildings Using Electrical Tomography. , 2019, , .		2
62	Improving the Dependability of the ECG Signal for Classification of Heart Diseases. , 2020, , .		2
63	Tomographic Measuring Sensors System for Analysis and Visualization of Technological Processes. , 2020, , .		2
64	Electrical Tomography Reconstruction Using Reconfigurable Waveforms in a FPGA. Sensors, 2021, 21, 3272.	2.1	2
65	The concept of the technological process control using a distributed industrial tomography system. Przegląd Elektrotechniczny, 2018, 1, 168-171.	0.1	2
66	Detection of seepages in flood embankments using the ElasticNET method. Przegląd Elektrotechniczny, 2019, 1, 159-162.	0.1	2
67	Construction of the SmartEIT tomograph based on electrical impedance tomography. Przegląd Elektrotechniczny, 2020, 1, 46-49.	0.1	2
68	Ultrasonic tomography for reflection and transmission wave analysis. Przegląd Elektrotechniczny, 2020, 1, 172-175.	0.1	2
69	Waveform-Reconfigurable Emitter Design for Multi Frequency Electrical Tomography. Przegląd Elektrotechniczny, 2020, 1, 166-169.	0.1	2
70	Topological Methods to Determine Damages of Flood Embankments. Przegląd Elektrotechniczny, 2016, 1, 155-158.	0.1	2
71	e-Medicus System to Segmentation and Analysis Medical Images. Przegląd Elektrotechniczny, 2017, 1, 199-202.	0.1	2
72	Efektywny algorytm obrazowania w tomografii ultradźwiękowej i radiowej dla zagadnień dwuwymiarowych. Przegląd Elektrotechniczny, 2018, 1, 64-71.	0.1	2

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73	Industrial processes control with the use of a neural tomographic algorithm. Przegląd Elektrotechniczny, 2019, 1, 98-101.	0.1	2
74	A hybrid tomography for assessing the moisture level of walls and building condition. Przegląd Elektrotechniczny, 2019, 1, 102-105.	0.1	2
75	ANALYSIS OF DATA FROM MEASURING SENSORS FOR PREDICTION IN PRODUCTION PROCESS CONTROL SYSTEMS. Informatyka Automatyka Pomiary W Gospodarce I Ochronie Āsrodowiska, 2019, 9, 26-29.	0.2	2
76	Dedicated algorithm based on discrete cosine transform for the analysis of industrial processes using ultrasound tomography. , 2020, , .		2
77	Machine learning pathology detection with a body surface potential mapping. , 2020, , .		2
78	Image Reconstruction and Compression in Ultrasound Tomography Using Discrete Cosine Transform. , 2021, , .		2
79	A 4-D Ultrasound Tomography for Industrial Process Reactors Investigation. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-14.	2.4	2
80	DESIGN OF INNOVATIVE MEASUREMENT SYSTEMS IN ULTRASONIC TOMOGRAPHY. Informatyka Automatyka Pomiary W Gospodarce I Ochronie Āsrodowiska, 2022, 12, 38-42.	0.2	2
81	Applying ECT solution to control and optimization test flow system. , 2017, , .		1
82	Applying Machine Learning Algorithms to Solve Inverse Problems in Electrical Tomography. MATEC Web of Conferences, 2018, 210, 02016.	0.1	1
83	Using Statistical Algorithms for Image Reconstruction in EIT. MATEC Web of Conferences, 2018, 210, 02017.	0.1	1
84	Analysis of Leaks in Flood Embankments Using Deterministic Methods and Computational Intelligence Algorithms. , 2018, , .		1
85	Hybrid tomographic device for acquisition of electrical tomography data. , 2018, , .		1
86	Comparison of the inverse problem solutions for a 2D damp wall multilayer and nonhomogenous models. , 2018, , .		1
87	Image reconstruction methods in radio and ultrasound tomography. , 2018, , .		1
88	Solving inverse problem for electrical impedance tomography using topological derivative and level set method. , 2018, , .		1
89	Application of logistic regression to image reconstruction in EIT. , 2019, , .		1
90	Next Generation of Hybrid Tomograph for Acquisition of Measurement Data. , 2019, , .		1

#	ARTICLE	IF	CITATIONS
91	Monitoring the natural environment with the use of IoT based system. , 2019, , .		1
92	Wire-Mesh Sensor for Invasive Imaging of Vertical and Horizontal Flows of Liquids and Gases. , 2019, , .		1
93	Combining Body Surface Potential Mapping with ECG Analysis. , 2019, , .		1
94	Intelligent Sensor Platform for Multi-Source Data Analysis for Monitoring and Control of Technological Systems. , 2019, , .		1
95	Tomographic image correction with noise reduction algorithms. MATEC Web of Conferences, 2019, 252, 09001.	0.1	1
96	Implementation of Fermat'S Principle for Detection of Anomalies in Ultrasound Transmission Tomography. , 2019, , .		1
97	Innovative Methods of Tomographic Image Reconstruction Based on Machine Learning to Improve Monitoring and optimization in Industrial Processes. , 2019, , .		1
98	Analysis of historical wall dampness using electrical tomography measuring system. International Journal of Applied Electromagnetics and Mechanics, 2019, 59, 1257-1265.	0.3	1
99	Process Analysis with Electrical Impedance and Capacitance Tomography Data. , 2019, , .		1
100	Application of a regressive neural network with autoencoder for monochromatic images in ultrasound tomography. , 2019, , .		1
101	Handwriting with sound-speed imaging using ultrasound computed tomography.. , 2021, , 1-1.		1
102	Application of multi-source data for process analysis in electrical tomography. Przegląd Elektrotechniczny, 2019, 1, 194-197.	0.1	1
103	Effective algorithm for tomography imaging in threedimensional problems. Przegląd Elektrotechniczny, 2019, 1, 117-120.	0.1	1
104	Application of Gaussian Kernel with Regard to Correlations for Image Reconstruction in Electrical Tomography. Przegląd Elektrotechniczny, 2019, 1, 57-60.	0.1	1
105	Image reconstruction by solving the inverse problem in ultrasonic transmission tomography system. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2021, 40, 238-266.	0.5	1
106	Analysis of vertical and horizontal flows of liquids and gases through a wire-mesh sensor. Przegląd Elektrotechniczny, 2020, 1, 176-179.	0.1	1
107	A hybrid device for the acquisition of electrical tomography measurement data. Przegląd Elektrotechniczny, 2020, 1, 104-107.	0.1	1
108	The use of the autoencoder to improve images in ultrasound tomography. Przegląd Elektrotechniczny, 2020, 1, 162-165.	0.1	1

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109	Optimisation of Technological Processes by Solving Inverse Problem through Block-Wise-Transform-Reduction Method Using Open Architecture Sensor Platform. <i>Energies</i> , 2021, 14, 8295.	1.6	1
110	Monitoring of flood embankments through EIT machine ensemble learning. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2022, , 1-10.	0.3	1
111	Ensemble learning for monitoring process in electrical impedance tomography. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2022, , 1-10.	0.3	1
112	ON PRECISION ACOUSTIC WAVE CALCULATION IN A FREQUENCY DOMAIN. <i>Informatyka Automatyka Pomiary W Gospodarce I Ochronie Āšrodowiska</i> , 2022, 12, 64-68.	0.2	1
113	Identification of moisture inside walls in buildings using machine learning and ensemble methods. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2022, 69, 375-388.	0.3	1
114	Reconstruction of conductivity distribution in electrical impedance tomography by topological derivative. , 2017, , .		0
115	Measuring system based on electrical tomography for monitoring of landfills and flood embankments. , 2017, , .		0
116	Distributed systems for acquisition and analysis of multi-source data in industrial and medical tomography. , 2018, , .		0
117	The use of a neural controller to disinfect water with ultraviolet light. , 2018, , .		0
118	The use of a neural controller in masonry tomography. , 2018, , .		0
119	Detection analysis of flood embankment by electrical impedance tomography. , 2018, , .		0
120	Implementation 3D level set method to solve inverse problem in EIT. , 2018, , .		0
121	Application of least angle regression methods for image reconstruction in EIT. , 2018, , .		0
122	Localization and navigation based on radio tomographic imaging in beacon technology. , 2018, , .		0
123	Quality control system for data acquisition and image reconstruction with smart hybrid ECT device. , 2018, , .		0
124	Optimization Approach for Image Forming in Ultrasound Transmission Tomography (UTT): Real Data Case. <i>Mathematical Problems in Engineering</i> , 2019, 2019, 1-11.	0.6	0
125	Distributed system for long-term monitoring of cardiopulmonary activity. , 2019, , .		0
126	A Nondestructive Distributed Sensor System for Imaging in Industrial Tomography. , 2019, , .		0



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127	Applying Multi-sensor Electrodes for Image Reconstruction by Machine Learning Methods. , 2019, , .		0
128	Electrical Tomography System for Acquisition and Monitoring of Geospatial Areas. , 2019, , .		0
129	Prototype of Miniature Electrical Impedance Tomograph SmartEIT Cooperating with Raspberry Pi Platform. , 2019, , .		0
130	Tomographic Ultrasonic Sensors in Industrial Applications. Przegląd Elektrotechniczny, 2021, 1, 168-171.	0.1	0
131	Using Electrical Resistance Tomography to Detect Leaks in Landfills. Przegląd Elektrotechniczny, 2017, 1, 157-160.	0.1	0
132	THE CHANCES OF PRECISION ENHANCE FOR ULTRASONIC IMAGING. Informatyka Automatyka Pomiary W Gospodarce I Ochronie Środowiska, 2018, 8, 19-24.	0.2	0
133	Monitoring of flood embankments with the use of tomographic systems with distributed architecture. Przegląd Elektrotechniczny, 2018, 1, 172-175.	0.1	0
134	The Use of Artificial Neural Networks in Tomographic Reconstruction of Soil Embankments. Advances in Intelligent Systems and Computing, 2019, , 104-112.	0.5	0
135	Ultrasound tomography measuring system for acquisition and analysis data. Przegląd Elektrotechniczny, 2019, 1, 113-116.	0.1	0
136	EIT detection methods of damage in landfills and flood embankments. Przegląd Elektrotechniczny, 2019, 1, 53-56.	0.1	0
137	Image Forming in Ultrasound Transmission Tomography (UTT) by Optimization Method. , 2019, , .		0
138	Using Electrical Tomography for Remote Monitoring Cardiopulmonary State of Patients by Complementary Investigation Techniques. , 2019, , .		0
139	Inverse Problem for Identifying Parameters Describing Data Field in Ultrasonographic Transmission Tomography. , 2019, , .		0
140	Machine learning in image reconstruction by multi-sensor electrodes. Przegląd Elektrotechniczny, 2019, 1, 190-193.	0.1	0
141	CONSTRUCTION OF AN ULTRASONIC TOMOGRAPH FOR ANALYSIS OF TECHNOLOGICAL PROCESSES IN THE FIELD OF REFLECTION AND TRANSMISSION WAVES. Informatyka Automatyka Pomiary W Gospodarce I Ochronie Środowiska, 2019, 9, 43-47.	0.2	0
142	The use of LSTM networks in the detection of outliers in IoTbased air quality monitoring systems. Przegląd Elektrotechniczny, 2020, 1, 93-96.	0.1	0
143	Implementing deterministic methods to solve the inverse problem for the model with lungs and heart in the EIT. Przegląd Elektrotechniczny, 2020, 1, 127-130.	0.1	0
144	Analysis of geospatial areas using electrical resistance tomography. Przegląd Elektrotechniczny, 2020, 1, 42-45.	0.1	0

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145	Moisture analysis of building walls using tomographic measurements. Przegląd Elektrotechniczny, 2020, 1, 108-111.	0.1	0
146	Pseudo Random Binary Sequence Excitation for Electrical Impedance Tomography. , 2021, , .		0
147	Cyber-Physical System for Collecting Data on Moisture Inside the Walls of Buildings. , 2021, , .		0
148	Analysis of multi-source data for monitoring and control of intelligent technological systems. Przegląd Elektrotechniczny, 2020, 1, 97-100.	0.1	0
149	Wearable sensor for biopotential measurements of patients' health monitoring. Przegląd Elektrotechniczny, 2020, 1, 101-104.	0.1	0
150	Electrical activity with ECG analysis for Body Surface Potential Mapping. Przegląd Elektrotechniczny, 2020, 1, 146-149.	0.1	0
151	APPLICATION OF CONVOLUTIONAL NEURAL NETWORKS IN WALL MOISTURE IDENTIFICATION BY EIT METHOD. Informatyka Automatyka Pomiary W Gospodarce I Ochronie Środowiska, 2022, 12, 20-23.	0.2	0
152	CAŁKI OSOBLIWE W METODZIE ELEMENTARNEJ BRZEGOWYCH DLA WYKORZYSTANIA HELMHOLTZA SFORMULOWANEGO W PRZESTRZENI CZĘSTOTLIWOŚCI. Informatyka Automatyka Pomiary W Gospodarce I Ochronie Środowiska, 2021, 11, 4-8.	0.2	0