

# Mats Ingemar Pettersson

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5574970/publications.pdf>

Version: 2024-02-01

142  
papers

1,469  
citations

430442

18  
h-index

433756

31  
g-index

142  
all docs

142  
docs citations

142  
times ranked

861  
citing authors

#	ARTICLE	IF	CITATIONS
1	False Alarm Reduction in Wavelength-Resolution SAR Change Detection Schemes by Using a Convolutional Neural Network. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	1.4	9
2	CNN-Based Change Detection Algorithm for Wavelength-Resolution SAR Images. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	1.4	9
3	Sidelobe Control for Bistatic SAR Imaging. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	1.4	1
4	Robust Rayleigh Regression Method for SAR Image Processing in Presence of Outliers. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-12.	2.7	0
5	Neyman-Pearson Criterion-Based Change Detection Methods for Wavelength-Resolution SAR Image Stacks. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	1.4	4
6	Fourier Transform of SAR Data Cube and 3-D Range Migration Algorithm. IEEE Transactions on Aerospace and Electronic Systems, 2022, 58, 2584-2591.	2.6	2
7	Tilt Phenomenon in Bistatic SAR Image. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	1.4	1
8	Non-Cooperative SAR Automatic Target Recognition Based on Scattering Centers Models. Sensors, 2022, 22, 1293.	2.1	6
9	Signal Reconstruction Using Bi-LSTM for Automotive Radar Interference Mitigation. , 2022, , .		4
10	Interpolation Methods with Phase Control for Backprojection of Complex-Valued SAR Data. Sensors, 2022, 22, 4941.	2.1	2
11	Autoregressive Model-Based Signal Reconstruction for Automotive Radar Interference Mitigation. IEEE Sensors Journal, 2021, 21, 6575-6586.	2.4	23
12	Vehicle Detection in Aerial Images Based on 3D Depth Maps and Deep Neural Networks. IEEE Access, 2021, 9, 8381-8391.	2.6	21
13	New Forms of Likelihood Ratio Test for SAR Change Detection. IEEE Access, 2021, 9, 127906-127916.	2.6	1
14	A Wavelength-Resolution SAR Change Detection Method Based on Image Stack through Robust Principal Component Analysis. Remote Sensing, 2021, 13, 833.	1.8	8
15	Using A Sliding Window Phase Matching Method for Imaging of GNSS Radio Occultation Signals. Remote Sensing, 2021, 13, 970.	1.8	2
16	Supervised Detection of Ionospheric Scintillation in Low-Latitude Radio Occultation Measurements. Remote Sensing, 2021, 13, 1690.	1.8	6
17	Changing flight heading during pass to enhance SAR change detection performance. IET Radar, Sonar and Navigation, 2021, 15, 817-826.	0.9	0
18	Terahertz Three-Dimensional SAR Imaging Using Time- and Frequency-Domain Algorithms. , 2021, , .		2

#	ARTICLE	IF	CITATIONS
19	Interpolation Methods for SAR Backprojection at THz Frequencies. , 2021, , .		1
20	Change detection method for intensity VHF wavelength-resolution SAR images. , 2021, , .		0
21	A Statistical Analysis for Wavelength-Resolution SAR Image Stacks. IEEE Geoscience and Remote Sensing Letters, 2020, 17, 227-231.	1.4	13
22	GNSS Radio Occultation Simulation Using Multiple Phase Screen Orbit Sampling. IEEE Geoscience and Remote Sensing Letters, 2020, 17, 1323-1327.	1.4	4
23	Wavelength-Resolution SAR Change Detection Using Bayesâ€™ Theorem. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2020, 13, 5560-5568.	2.3	7
24	Evaluation of Ionospheric Scintillation in GNSS Radio Occultation Measurements and Simulations. Radio Science, 2020, 55, e2019RS006996.	0.8	5
25	Change Detection in UWB SAR Images Based on Robust Principal Component Analysis. Remote Sensing, 2020, 12, 1916.	1.8	15
26	Conventional SAR Change Detection Using Methods for Non-conventional SAR. , 2020, , .		0
27	Change Detection in Aerial Images Using Three-Dimensional Feature Maps. Remote Sensing, 2020, 12, 1404.	1.8	2
28	Experimental Evaluation of Adaptive Beamforming for Automotive Radar Interference Suppression. , 2020, , .		3
29	Wavelength-Resolution SAR Ground Scene Prediction Based on Image Stack. Sensors, 2020, 20, 2008.	2.1	10
30	Adjustable Contrast Enhancement Using Fast Piecewise Linear Histogram Equalization. , 2020, , .		3
31	Incoherent Change Detection Methods for Wavelength-Resolution SAR Image Stacks Based on Masking Techniques. , 2020, , .		0
32	Enhancing Conventional SAR Change Detection Performance with Apodization. , 2020, , .		0
33	Change detection in UWB VHF SAR images exploiting flight heading diversity through robust principal component analysis. , 2020, , .		0
34	Unsupervised Automatic Target Detection for Multitemporal SAR Images based on Adaptive K-means Algorithm. , 2020, , .		0
35	Change Detection and Signature Classification for SAR GMTI. , 2020, , .		1
36	GIP test for Automotive FMCW interference Detection and Suppression. , 2020, , .		4

#	ARTICLE	IF	CITATIONS
37	Sub-mm Resolution Indoor THz Range and SAR Imaging of Concealed Object. , 2020, , .		5
38	A Detector for Wavelength Resolution SAR Incoherent Change Detection. , 2019, , .		2
39	Rayleigh Regression Model for Ground Type Detection in SAR Imagery. IEEE Geoscience and Remote Sensing Letters, 2019, 16, 1660-1664.	1.4	14
40	Vehicle speed measurement model for video-based systems. Computers and Electrical Engineering, 2019, 76, 238-248.	3.0	32
41	Wavelength-resolution SAR Change Detection with Changing Flight Heading During Passes. , 2019, , .		0
42	Stability in Sar Change Detection Results Using Bivariate Rayleigh Distribution For Statistical Hypothesis Test. , 2019, , .		5
43	A Measurement Campaign in Harbor to Detect Changes of Activities. , 2019, , .		3
44	A Change Detection Algorithm for Sar Images Based on Logistic Regression. , 2019, , .		7
45	Bivariate Gamma Distribution for Wavelength-Resolution SAR Change Detection. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 473-481.	2.7	25
46	Comparison of the Rayleigh and K-Distributions for Application in Incoherent Change Detection. IEEE Geoscience and Remote Sensing Letters, 2019, 16, 756-760.	1.4	13
47	Discrimination Algorithm for False Alarm Reduction in SAR Incoherent Change Detection. , 2019, , .		0
48	Derivation of Bistatic SAR Resolution Equations Based on Backprojection. IEEE Geoscience and Remote Sensing Letters, 2018, 15, 694-698.	1.4	11
49	Analysis of reflections in GNSS radio occultation measurements using the phase matching amplitude. Atmospheric Measurement Techniques, 2018, 11, 569-580.	1.2	5
50	Design of A Video-Based Vehicle Speed Measurement System - An Uncertainty Approach. , 2018, , .		0
51	Vehicle Classification Based on Multiple Fuzzy C-Means Clustering Using Dimensions and Speed Features. Procedia Computer Science, 2018, 126, 1344-1350.	1.2	19
52	A hybrid GMTI method for reliable detection results in SAR images. , 2018, , .		1
53	Two-Dimensional Data Conversion for One-Dimensional Adaptive Noise Canceller in Low-Frequency SAR Change Detection. IEEE Transactions on Aerospace and Electronic Systems, 2018, 54, 2611-2618.	2.6	0
54	Adaptive digital beamforming for interference suppression in automotive FMCW radars. , 2018, , .		27

#	ARTICLE	IF	CITATIONS
55	Range migration algorithm for bistatic SAR. , 2018, , .		0
56	Comparing reflection signatures in radio occultation measurements using the full spectrum inversion and phase matching methods. , 2018, , .		0
57	Autoregressive model for multi-pass SAR change detection based on image stacks. , 2018, , .		4
58	Moving Target Focusing in SAR Image With Known Normalized Relative Speed. IEEE Transactions on Aerospace and Electronic Systems, 2017, 53, 854-861.	2.6	11
59	Wavelength-resolution SAR change detection with constant false alarm rate. , 2017, , .		4
60	False Alarm Reduction in Wavelength-Resolution SAR Change Detection Using Adaptive Noise Canceler. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 591-599.	2.7	32
61	Measurement of traffic flows with SAR " Field test on the swedish road network. , 2017, , .		2
62	A simulation study of the effect of ionospheric vertical gradients on the neutral bending angle error for GNSS radio occultation. , 2017, , .		0
63	Determining the refractivity at the bottom of the atmosphere using radio occultation. , 2017, , .		0
64	A CFAR optimization for low frequency UWB SAR change detection algorithms. , 2017, , .		1
65	Incoherent detection of man-made objects obscured by foliage in forest area. , 2017, , .		2
66	Measurement of Rank and Other Properties of Direct and Scattered Signals. International Journal of Antennas and Propagation, 2016, 2016, 1-17.	0.7	1
67	Change detection in aerial images using a Kendall's TAU distance pattern correlation. , 2016, , .		2
68	Local detection of moving target by focusing in SAR images. , 2016, , .		2
69	Likelihood ratio test for incoherent wavelength-resolution SAR change detection. , 2016, , .		11
70	Experimental results on focusing moving targets in TerraSAR-X and TanDEM-X images. , 2016, , .		3
71	The Stability of UWB Low-Frequency SAR Images. IEEE Geoscience and Remote Sensing Letters, 2016, 13, 1114-1118.	1.4	23
72	Fast Backprojection Algorithms Based on Subapertures and Local Polar Coordinates for General Bistatic Airborne SAR Systems. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 2706-2712.	2.7	24

#	ARTICLE	IF	CITATIONS
73	Iterative Change Detection Algorithm for Low-Frequency UWB SAR. , 2016, , .		1
74	SAR image statistics and adaptive signal processing for change detection. Proceedings of SPIE, 2015, , .	0.8	2
75	Empirical-statistical analysis of amplitude SAR images for change detection algorithms. , 2015, , .		3
76	Experimental results on change detection based on Bayes probability theorem. , 2015, , .		3
77	Fast-Time and Slow-Time Space-Time Adaptive Processing for bistatic radar interference suppression. , 2015, , .		2
78	Imaging of Oil-Well Perforations Using UWB Synthetic Aperture Radar. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 4510-4520.	2.7	38
79	Performance of moving target parameter estimation using SAR. IEEE Transactions on Aerospace and Electronic Systems, 2015, 51, 1191-1202.	2.6	4
80	Doppler and cross-range resolutions in bistatic forward-looking SAR imaging. , 2015, , .		7
81	Nyquist Sampling Requirements for Polar Grids in Bistatic Time-Domain Algorithms. IEEE Transactions on Signal Processing, 2015, 63, 457-465.	3.2	26
82	On bistatic forward-looking SAR imaging. , 2014, , .		3
83	A method to implement SAR slow-time step in beamforming stage of fast backprojection algorithm. , 2014, , .		1
84	A three-dimensional displaced phase center antenna condition for clutter cancellation. , 2014, , .		1
85	SAR resolution enhancement with circular aperture in theory and empirical scenario. , 2014, , .		3
86	Ground moving target detection and estimation by using dual speed SAR platform. , 2014, , .		1
87	Two-Dimensional Spectrum for BiSAR Derivation Based on Lagrange Inversion Theorem. IEEE Geoscience and Remote Sensing Letters, 2014, 11, 1210-1214.	1.4	9
88	Suppression of Clutter in Multichannel SAR GMTI. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 4005-4013.	2.7	43
89	Fast Time-Domain Algorithms for UWB Bistatic SAR Processing. IEEE Transactions on Aerospace and Electronic Systems, 2013, 49, 1982-1994.	2.6	35
90	A Modified TEM Horn Antenna Customized for Oil Well Monitoring Applications. IEEE Transactions on Antennas and Propagation, 2013, 61, 5902-5909.	3.1	17

#	ARTICLE	IF	CITATIONS
91	The capability of time- and frequency-domain algorithms for bistatic SAR processing. Proceedings of SPIE, 2013, , .	0.8	1
92	Another possibility to focus moving targets by normalized relative speed in UWB SAR. Proceedings of SPIE, 2013, , .	0.8	0
93	Phase Error Calculation for Fast Time-Domain Bistatic SAR Algorithms. IEEE Transactions on Aerospace and Electronic Systems, 2013, 49, 631-639.	2.6	17
94	Auxiliary beam terrain-scattered interference suppression: reflection system and radar performance. IET Radar, Sonar and Navigation, 2013, 7, 836-847.	0.9	0
95	Moving target focusing with Normalized Relative Speed in azimuth-invariant bistatic SAR. , 2013, , .		2
96	Ground moving target detection and estimation with different SAR linear flight tracks. , 2013, , .		2
97	A TEM horn antenna with non-uniform expansion for oil well monitoring. , 2012, , .		0
98	SAR imaging in ground plane using Fast Backprojection for mono- and bistatic cases. , 2012, , .		12
99	The availability of fast time-domain algorithms for circular SAR data processing. , 2012, , .		6
100	Studying CSAR systems using IRF-CSAR. , 2012, , .		7
101	Moving Target Relative Speed Estimation and Refocusing in Synthetic Aperture Radar Images. IEEE Transactions on Aerospace and Electronic Systems, 2012, 48, 2426-2436.	2.6	40
102	On Synthetic Aperture Radar Azimuth and Range Resolution Equations. IEEE Transactions on Aerospace and Electronic Systems, 2012, 48, 1764-1769.	2.6	18
103	Space time adaptive processing for moving target detection and imaging in bistatic SAR. , 2011, , .		10
104	Fast backprojection algorithm for UWB bistatic SAR. , 2011, , .		14
105	Fast factorized backprojection algorithm for UWB SAR image reconstruction. , 2011, , .		7
106	2D apodization in UWB SAR using linear filtering. , 2011, , .		5
107	Experimental Results of Passive Imaging of Moving Continuous Broadband Sound Sources Within a Sensor Field. IEEE Journal of Oceanic Engineering, 2011, 36, 25-36.	2.1	3
108	Detection of Moving Targets by Focusing in UWB SAR—Theory and Experimental Results. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 3799-3815.	2.7	92

#	ARTICLE	IF	CITATIONS
109	Ultrawideband Chirp Scaling Algorithm. IEEE Geoscience and Remote Sensing Letters, 2010, 7, 281-285.	1.4	14
110	RFI Suppression in Ultrawideband SAR Using an Adaptive Line Enhancer. IEEE Geoscience and Remote Sensing Letters, 2010, 7, 694-698.	1.4	44
111	An approach to suppress RFI in ultrawideband low frequency SAR. , 2010, , .		8
112	Application of the moving target detection by focusing technique in civil traffic monitoring. , 2010, , .		3
113	An Impulse Response Function for Evaluation of UWB SAR Imaging. IEEE Transactions on Signal Processing, 2010, 58, 3927-3932.	3.2	49
114	Moving target refocusing algorithm for synthetic aperture radar images. , 2010, , .		4
115	Integrating space-time processing into time-domain backprojection process for detection and imaging moving objects. , 2010, , .		4
116	QoE-based Cross-Layer Design of Mobile Video Systems: Challenges and Concepts. , 2009, , .		8
117	Properties of ambiguity functions for weighted pulse trains with Oppermann sequences. , 2009, , .		3
118	On Objectives of Instructional Laboratories, Individual Assessment, and Use of Collaborative Remote Laboratories. IEEE Transactions on Learning Technologies, 2009, 2, 263-274.	2.2	165
119	Fast Detection of Moving Targets by Focusing in UWB low frequency SAR. , 2009, , .		2
120	Cross-ambiguity function of weighted pulse trains with Oppermann sequences. , 2009, , .		2
121	Lower bounds of moving target estimation in low frequency UWB SAR. , 2008, , .		1
122	A Comparison between Fast Factorized Backprojection and Frequency-Domain Algorithms in UWB Lowfrequency SAR. , 2008, , .		14
123	Moving Target Detection by Focusing for Frequency Domain Algorithms in UWB Low Frequency SAR. , 2008, , .		12
124	On integrated radar and communication systems using Oppermann sequences. , 2008, , .		61
125	A comparative study of the polar version with the subimage version of Fast Factorized Backprojection in UWB SAR. , 2008, , .		3
126	Performance Assessment of Polyphase Pulse Compression Codes. , 2008, , .		12



#	ARTICLE	IF	CITATIONS
127	Moving Target Relative Speed Estimation in the Presence of Strong Stationary Surrounding Using a Single Antenna UWB SAR System. , 2008, , .		1
128	Definition on SAR image quality measurements for UWB SAR. , 2008, , .		17
129	Remote Access of Computer Controlled Experiments. International Journal of Online Engineering, 2008, 4, .	0.5	4
130	Optimum relative speed discretisation for detection of moving objects in wide band SAR. IET Radar, Sonar and Navigation, 2007, 1, 213.	0.9	14
131	Speed estimation experiments for ground moving targets in UWB SAR. , 2007, , .		3
132	Experimental results on moving target detection by focusing in UWB low frequency SAR. , 2007, , .		7
133	Four-dimensional discretization for detection of moving objects in Wide Band SAR. , 2007, , .		4
134	Relative Speed Step Size in SAR processing for Moving Target Detection. , 2006, , .		0
135	Passive scattered array positioning method for underwater acoustic source. , 2006, , .		4
136	Detection of moving targets in wideband SAR. IEEE Transactions on Aerospace and Electronic Systems, 2004, 40, 780-796.	2.6	56
137	<title>The VHF/UHF-band LORA SAR and GMTI system</title>. , 2003, , .		14
138	Extraction of moving ground targets by a bistatic ultra-wideband SAR. IET Radar, Sonar & Navigation, 2001, 148, 35.	2.1	17
139	<title>Simulations of ground moving target indication in an ultrawideband and wide-beam SAR system</title>. , 1999, , .		1
140	SAR observations of Arctic freeze-up compared to SSM/I during ARCTIC'91. International Journal of Remote Sensing, 1996, 17, 2603-2624.	1.3	5
141	Comparison between whitened generalized cross correlation and adaptive filter for time delay estimation with scattered arrays for passive positioning of moving targets in Baltic Sea shallow waters. , 0, , .		9
142	Detection and imaging of moving targets in wide band SAS using fast time backprojection combined with space time processing. , 0, , .		9