

J Scott Tyo

List of Publications by Year in descending order

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162
papers

3,947
citations

185998

28
h-index

128067

60
g-index

163
all docs

163
docs citations

163
times ranked

1946
citing authors

#	ARTICLE	IF	CITATIONS
1	Review of passive imaging polarimetry for remote sensing applications. <i>Applied Optics</i> , 2006, 45, 5453.	2.1	1,249
2	Design of optimal polarimeters: maximization of signal-to-noise ratio and minimization of systematic error. <i>Applied Optics</i> , 2002, 41, 619.	2.1	277
3	Noise equalization in Stokes parameter images obtained by use of variable-retardance polarimeters. <i>Optics Letters</i> , 2000, 25, 1198.	1.7	162
4	Interpolation strategies for reducing IFOV artifacts in microgrid polarimeter imagery. <i>Optics Express</i> , 2009, 17, 9112.	1.7	136
5	Objective Measures of Tropical Cyclone Structure and Intensity Change From Remotely Sensed Infrared Image Data. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2008, 46, 3574-3580.	2.7	104
6	Total elimination of sampling errors in polarization imagery obtained with integrated microgrid polarimeters. <i>Optics Letters</i> , 2009, 34, 3187.	1.7	102
7	An overview of polarimetric sensing techniques and technology with applications to different research fields. <i>Proceedings of SPIE</i> , 2014, , .	0.8	69
8	Spectrally adaptive infrared photodetectors with bias-tunable quantum dots. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2004, 21, 7.	0.9	66
9	Variable-retardance, Fourier-transform imaging spectropolarimeters for visible spectrum remote sensing. <i>Applied Optics</i> , 2001, 40, 1450.	2.1	65
10	Generalized channeled polarimetry. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2014, 31, 1013.	0.8	63
11	Satellite-Derived Tropical Cyclone Intensity in the North Pacific Ocean Using the Deviation-Angle Variance Technique. <i>Weather and Forecasting</i> , 2014, 29, 505-516.	0.5	62
12	Radiometrically accurate scene-based nonuniformity correction for array sensors. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2003, 20, 1890.	0.8	61
13	Estimating Tropical Cyclone Intensity from Infrared Image Data. <i>Weather and Forecasting</i> , 2011, 26, 690-698.	0.5	60
14	Band limited data reconstruction in modulated polarimeters. <i>Optics Express</i> , 2011, 19, 14976.	1.7	57
15	Tropical Cyclone Intensity Estimation in the North Atlantic Basin Using an Improved Deviation Angle Variance Technique. <i>Weather and Forecasting</i> , 2012, 27, 1264-1277.	0.5	56
16	Generalized algebraic scene-based nonuniformity correction algorithm. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2005, 22, 239.	0.8	52
17	When is polarimetric imaging preferable to intensity imaging for target detection?. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2011, 28, 46.	0.8	50
18	The effects of thermal equilibrium and contrast in LWIR polarimetric images. <i>Optics Express</i> , 2007, 15, 15161.	1.7	45

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19	Dead pixel replacement in LWIR microgrid polarimeters. <i>Optics Express</i> , 2007, 15, 7596.	1.7	43
20	Hybrid division of aperture/division of a focal-plane polarimeter for real-time polarization imagery without an instantaneous field-of-view error. <i>Optics Letters</i> , 2006, 31, 2984.	1.7	42
21	Design and optimization of partial Mueller matrix polarimeters. <i>Applied Optics</i> , 2010, 49, 2326.	2.1	38
22	Detecting Tropical Cyclone Genesis From Remotely Sensed Infrared Image Data. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2010, 7, 826-830.	1.4	37
23	Optimizing imaging polarimeters constructed with imperfect optics. <i>Applied Optics</i> , 2006, 45, 5497.	2.1	36
24	Canonical Correlation Feature Selection for Sensors With Overlapping Bands: Theory and Application. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2008, 46, 3346-3358.	2.7	34
25	Enhancement of the point-spread function for imaging in scattering media by use of polarization-difference imaging. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2000, 17, 1.	0.8	33
26	Optimal bandwidth micropolarizer arrays. <i>Optics Letters</i> , 2017, 42, 458.	1.7	32
27	Adapting the HSV polarization-color mapping for regions with low irradiance and high polarization. <i>Optics Letters</i> , 2016, 41, 4759.	1.7	31
28	The Use of the Deviation Angle Variance Technique on Geostationary Satellite Imagery to Estimate Tropical Cyclone Size Parameters. <i>Weather and Forecasting</i> , 2016, 31, 1625-1642.	0.5	30
29	Interaction Between Geometric Parameters and Output Waveforms in High-Power Quarter-Wave Oscillators. <i>IEEE Transactions on Plasma Science</i> , 2010, 38, 1124-1131.	0.6	29
30	Demonstration of Bias-Controlled Algorithmic Tuning of Quantum Dots in a Well (DWELL) MidIR Detectors. <i>IEEE Journal of Quantum Electronics</i> , 2009, 45, 674-683.	1.0	28
31	Determination of the polarization states of an arbitrary polarized terahertz beam: Vectorial vortex analysis. <i>Scientific Reports</i> , 2015, 5, 9416.	1.6	26
32	Polarization components analysis for invariant discrimination. <i>Applied Optics</i> , 2007, 46, 8364.	2.1	25
33	Determination of a Consistent Time for the Extratropical Transition of Tropical Cyclones. Part I: Examination of Existing Methods for Finding "ET Time". <i>Monthly Weather Review</i> , 2010, 138, 4328-4343.	0.5	24
34	Generation of achromatic, uniform-phase, radially polarized beams. <i>Optics Express</i> , 2014, 22, 3306.	1.7	24
35	Optimal bandwidth and systematic error of full-Stokes micropolarizer arrays. <i>Applied Optics</i> , 2018, 57, 2327.	0.9	23
36	Statistical adaptive sensing by detectors with spectrally overlapping bands. <i>Applied Optics</i> , 2006, 45, 7224.	2.1	22

#	ARTICLE	IF	CITATIONS
37	Spatial and Spatiotemporal Projection Pursuit Techniques to Predict the Extratropical Transition of Tropical Cyclones. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2007, 45, 418-425.	2.7	21
38	Structured decomposition design of partial Mueller matrix polarimeters. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2015, 32, 1302.	0.8	21
39	Role of the null space of the DRM in the performance of modulated polarimeters. <i>Optics Letters</i> , 2012, 37, 1097.	1.7	20
40	An Efficient, Electrically Small, Three-Dimensional Magnetic EZ Antenna for HPM Applications. <i>IEEE Transactions on Plasma Science</i> , 2012, 40, 3037-3045.	0.6	20
41	Determination of a Consistent Time for the Extratropical Transition of Tropical Cyclones. Part II: Potential Vorticity Metrics. <i>Monthly Weather Review</i> , 2010, 138, 4344-4361.	0.5	19
42	Classification using active polarimetry. <i>Proceedings of SPIE</i> , 2012, , .	0.8	19
43	Channeled spatio-temporal Stokes polarimeters. <i>Optics Letters</i> , 2018, 43, 2768.	1.7	19
44	<title>Imaging spectropolarimeters for use in visible and infrared remote sensing</title>. , 1999, , .		18
45	Generalized van Cittert-Zernike theorem for the cross-spectral density matrix of quasi-homogeneous planar electromagnetic sources. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2012, 29, 1939.	0.8	18
46	Image processing methods to compensate for IFOV errors in microgrid imaging polarimeters. , 2006, , .		17
47	Focal plane filter array engineering I: rectangular lattices. <i>Optics Express</i> , 2017, 25, 11954.	1.7	17
48	Polarization in Remote Sensing--introduction. <i>Applied Optics</i> , 2006, 45, 5451.	2.1	16
49	Review of visualization methods for passive polarization imaging. <i>Optical Engineering</i> , 2019, 58, 1.	0.5	16
50	Spatio-temporal modulated polarimetry. , 2011, , .		15
51	Imaging dynamic scenes with a spatio-temporally channeled polarimeter. <i>Optics Express</i> , 2019, 27, 28423.	1.7	14
52	Data interpretation for spectral sensors with correlated bands. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2007, 24, 2864.	0.8	13
53	Evaluation and display of polarimetric image data using long-wave cooled microgrid focal plane arrays. , 2006, , .		11
54	An Electrically Small Conical Folded Dipole Antenna for Use as a Compact, Self-Resonant Mesoband High-Power Microwave Source. <i>IEEE Transactions on Antennas and Propagation</i> , 2014, 62, 5960-5967.	3.1	11

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55	A Compact Multi-Frequency, High Power Radiating System Combining Dual-Band, Electrically Small Magnetic EZ Antennas and Multi-Frequency Standing Wave Oscillator Sources. IEEE Transactions on Antennas and Propagation, 2014, 62, 3281-3289.	3.1	11
56	An algebraic restoration method for estimating fixed-pattern noise in infrared imagery from a video sequence. , 2004, , .		11
57	Radiometrically calibrated scene-based nonuniformity correction for infrared array sensors. , 2003, 4820, 359.		10
58	Sensing polarization with variable coherence tomography. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2008, 25, 2383.	0.8	10
59	Perceptually uniform color space for visualizing trivariate linear polarization imaging data. Optics Letters, 2018, 43, 2426.	1.7	10
60	Spectralâ€™temporal hybrid modulation for channeled spectropolarimetry. Applied Optics, 2020, 59, 9359.	0.9	10
61	SWIR active polarization imaging for material identification. , 2013, , .		9
62	Feedback-integrated scene cancellation scene-based nonuniformity correction algorithm. Journal of Electronic Imaging, 2014, 23, 023005.	0.5	9
63	Tropical Cyclogenesis Detection in the North Pacific Using the Deviation Angle Variance Technique. Weather and Forecasting, 2015, 30, 1663-1672.	0.5	9
64	Real-time implementation of matched filtering algorithms using adaptive focal-plane array technology. , 2004, , .		8
65	Quantum dot detectors for mid-infrared sensing: bias-controlled spectral tuning and matched filtering. , 2004, , .		8
66	Canonical correlation analysis for assessing the performance of adaptive spectral imagers. , 2005, , .		8
67	Mitigation of image artifacts in LWIR microgrid polarimeter images. , 2007, , .		8
68	Exploiting motion-based redundancy to enhance microgrid polarimeter imagery. Proceedings of SPIE, 2009, , .	0.8	8
69	Task-specific snapshot Mueller matrix channeled spectropolarimeter optimization. Proceedings of SPIE, 2012, , .	0.8	8
70	Integration and Operation of an Electrically Small Magnetic EZ Antenna With a High-Power Standing Wave Oscillator Source. IEEE Antennas and Wireless Propagation Letters, 2016, 15, 642-645.	2.4	8
71	Transcending conventional snapshot polarimeter performance via neuromorphically adaptive filters. Optics Express, 2021, 29, 17758.	1.7	8
72	Adaptive strategy for demosaicing microgrid polarimeter imagery. , 2011, , .		7

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73	Spectral density response functions for modulated polarimeters. <i>Applied Optics</i> , 2015, 54, 9490.	2.1	7
74	Automatic Tracking of Pregenesis Tropical Disturbances Within the Deviation Angle Variance System. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2015, 12, 254-258.	1.4	7
75	Tunable Electrically Small Conical Folded Dipole Antenna Used as a Mesoband High-Power Microwave Source. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2016, 15, 1614-1617.	2.4	7
76	Spectral-temporal channeled spectropolarimetry using deep-learning-based adaptive filtering. <i>Optics Letters</i> , 2021, 46, 4394.	1.7	7
77	Multi-carrier channeled polarimetry for photoelastic modulator systems. <i>Optics Letters</i> , 2018, 43, 5789.	1.7	7
78	Considerations in polarimeter design. , 2000, 4133, 65.		6
79	UWB Self-Compensating Antennas: Numerical Demonstration of the Electromagnetic Working Principle. <i>IEEE Transactions on Antennas and Propagation</i> , 2009, 57, 3736-3745.	3.1	6
80	Hyperspectral measurement of the scattering of polarized light by skin. <i>Proceedings of SPIE</i> , 2011, , .	0.8	6
81	Design of channeled partial Mueller matrix polarimeters. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2016, 33, 1060.	0.8	6
82	Modeling precision and accuracy of a LWIR microgrid array imaging polarimeter. , 2005, 5888, 227.		5
83	Generalized signal-to-noise ratio for spectral sensors with correlated bands. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2008, 25, 2528.	0.8	5
84	Designing partial Mueller matrix polarimeters. , 2009, , .		5
85	Development of a High-Voltage Tunable Source for Wideband and Mesoband Effects Testing. <i>IEEE Transactions on Plasma Science</i> , 2010, 38, 1450-1461.	0.6	5
86	Forecasting Post-Extratropical Transition Outcomes for Tropical Cyclones Using Support Vector Machine Classifiers. <i>Journal of Atmospheric and Oceanic Technology</i> , 2011, 28, 709-719.	0.5	5
87	Short-Term Tropical Cyclone Intensity Forecasting from Satellite Imagery Based on the Deviation Angle Variance Technique. <i>Weather and Forecasting</i> , 2020, 35, 285-298.	0.5	5
88	Structured decomposition of a multi-snapshot nine-reconstructables Mueller matrix polarimeter. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2020, 37, 890.	0.8	5
89	Statistics of target spectra in HSI scenes. , 2000, , .		4
90	Algorithm for radiometrically accurate nonuniformity correction with arbitrary scene motion. , 2003, , .		4

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91	Feature selection for spectral sensors with overlapping noisy spectral bands. , 2006, 6233, 819.		4
92	Self-Compensating Antenna Concept for a Dispersionless UWB Propagation Channel. IEEE Transactions on Antennas and Propagation, 2008, 56, 1491-1494.	3.1	4
93	Frequency-domain scene-based non-uniformity correction and application to microgrid polarimeters. , 2011, , .		4
94	Depth measurements through controlled aberrations of projected patterns. Optics Express, 2012, 20, 6561.	1.7	4
95	Analysis and compression of plenoptic camera images with Zernike polynomials. Proceedings of SPIE, 2012, , .	0.8	4
96	Improving feedback-integrated scene cancellation nonuniformity correction through optimal selection of available camera motion. Journal of Electronic Imaging, 2014, 23, 053014.	0.5	4
97	Compact, Backward-Radiating Helical Antenna for Mesoband High-Power Applications. IEEE Antennas and Wireless Propagation Letters, 2017, 16, 1699-1702.	2.4	4
98	Relation between system optimization and systematic errors in Stokes vector polarimeters. , 2002, 4481, 22.		3
99	Combatting infrared focal plane array nonuniformity noise in imaging polarimeters. , 2005, 5888, 148.		3
100	Classification of hyperspectral spatial/spectral patterns using Gauss-Markov random fields. , 2006, , .		3
101	Influence of Satellite Observation Angle to Tropical Cyclone Intensity Estimation Using the Deviation Angle Variance Technique. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 3703-3710.	2.7	3
102	Performance Limitations of Transmission Line Oscillators for High Power Mesoband Sources. , 2007, , .		2
103	Polarization visual enhancement technique for LWIR microgrid polarimeter imagery. , 2008, , .		2
104	Field management for a self-breakdown switched oscillator. , 2010, , .		2
105	Compact EZ antenna arrays for field management in HPM applications. , 2014, , .		2
106	Bounds on the microanalyzer array assumption. , 2016, , .		2
107	Nonseparable modulation strategy for channeled spatiotemporal Stokes polarimeters. Applied Optics, 2021, 60, 735.	0.9	2
108	A Satellite-Based Remote-Sensing Framework to Quantify the Upwelling Radiation Due to Tropical Cyclones. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 5488-5500.	2.3	2

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109	Moving towards more intuitive display strategies for polarimetric image data. , 2017, , .		2
110	A fast Stokes polarimeter: preliminary design. , 2017, , .		2
111	Overview of visualization strategies for polarimetric imaging data. , 2018, , .		2
112	Channel-first design of modulated polarimeters. , 2018, , .		2
113	Reconstruction Strategies for Modulated Polarimeters. , 2011, , .		2
114	Improving performance of PEM-based partial Mueller matrix polarimeters. , 2019, , .		2
115	Development of an equivalent circuit model approach to the design of dense arrays of electrically small antennas. , 2020, , .		2
116	Development of an invariant display strategy for spectral imagery. , 2000, 4132, 147.		1
117	<title>Increase in the prompt radiated field from an IRA by aperture design techniques</title>. , 2001, , .		1
118	Extending optimization to active Mueller polarimeters. , 2002, , .		1
119	Generalized algebraic algorithm for scene-based nonuniformity correction. , 2004, 5556, 122.		1
120	Laser polarimeter as an invariant monitor. Proceedings of SPIE, 2007, , .	0.8	1
121	Design of a hybrid division of aperture/division of focal plane polarimeter. , 2007, , .		1
122	Systems description of measurement and reconstruction of microgrid polarimeters. , 2011, , .		1
123	Generation and radiation of high-power mesoband waveforms using quarter-wave switched oscillators. , 2011, , .		1
124	Compact antenna concepts for mesoband HPM applications. , 2012, , .		1
125	Relating transverse ray error and light fields in plenoptic camera images. , 2013, , .		1
126	Evaluation of Mueller matrix of achromatic axially symmetric wave plate. , 2013, , .		1

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127	Using electrically-small HPEM antenna array elements to divide power and shape aperture fields. , 2018, , .		1
128	Differentially Fed High-Power Microwave Antennas Using Capacitively Coupled Hyperband Inverters. IEEE Transactions on Antennas and Propagation, 2019, 67, 5203-5211.	3.1	1
129	Quantifying the Contribution of Tropical Cyclones to the Earth's Outgoing Radiation. , 2019, , .		1
130	Target Detection With Partial Mueller Polarimeters. , 2008, , .		1
131	Polarization-color mapping strategies: catching up with color theory. , 2017, , .		1
132	A nine-channeled partial Mueller matrix polarimeter. , 2017, , .		1
133	Development of an Equivalent Circuit Model for the Design of Array of Electrically Small Antennas. IEEE Transactions on Antennas and Propagation, 2023, 71, 381-392.	3.1	1
134	Application of principal-components-based invariant display strategy to wide-area hyperspectral data. , 2002, , .		0
135	Automated polarization characterization system. , 2005, , .		0
136	Analyzing spectral sensors with highly overlapping bands. , 2006, , .		0
137	Designing a dispersionless UWB channel with two identical antennas. , 2007, , .		0
138	Motion-based nonuniformity correction in DoFP polarimeters. Proceedings of SPIE, 2007, , .	0.8	0
139	Using polarized variable coherence tomography to estimate polarimetric BRDF from monostatic data. Proceedings of SPIE, 2007, , .	0.8	0
140	Numerical analysis of a self-compensating antenna. , 2008, , .		0
141	Signal to Noise Ratio for Spectral Sensors with Overlapping Bands. , 2008, , .		0
142	Polarimetric diffraction tomography. Digest / IEEE Antennas and Propagation Society International Symposium, 2009, , .	0.0	0
143	Scene-based adaptive spectral sensing systems based on quantum dots infrared photodetectors. Proceedings of SPIE, 2009, , .	0.8	0
144	Examining IFOV error and demodulation strategies for infrared microgrid polarimeter imagery. Proceedings of SPIE, 2009, , .	0.8	0

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145	3D astigmatic depth sensing camera. Proceedings of SPIE, 2011, , .	0.8	0
146	Modeling of self-compensating wideband antennas for peer-to-peer communications in distributed sensing arrays. , 2013, , .		0
147	Compact, dual-frequency electrically small antennas for an HPM radiating system. , 2013, , .		0
148	Electrically small folded helix antennas for use as self-resonant, mesoband Hpm sources. , 2013, , .		0
149	Noise, error, and bandwidth in polarimeters. Proceedings of SPIE, 2014, , .	0.8	0
150	Extremely compact radiating systems for mesoband high power electromagnetics. , 2016, , .		0
151	Estimation of errors in partial Mueller matrix polarimeter calibration. Proceedings of SPIE, 2016, , .	0.8	0
152	Chairs' welcome. , 2016, , .		0
153	The Influence of Satellite Observation Angle on Tropical Cyclone Intensity Estimation using the Deviation Angle Variance Technique. , 2019, , .		0
154	Structured and unstructured modulation and reconstruction of DoFP image data. , 2021, , .		0
155	Machine learning based adaptive channel filter in multi-domain modulated polarimeter. , 2021, , .		0
156	Deep learning based adaptive filtering technique for spectralâ€“temporally modulated channeled spectropolarimetry. , 2021, , .		0
157	Generalized signal-to-noise ratio for spectral sensors with correlated bands. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2008, 25, 2541.	0.8	0
158	The Effect of Calibration Error on Polarimetric Reconstruction in Microgrid Polarimetric Imagery. , 2010, , .		0
159	Generalized van Cittert-Zernike theorem for the cross-spectral density matrix of quasi-homogeneous planar electromagnetic sources. , 2012, , .		0
160	Special Section Guest Editorial: Polarization: Systems, Measurement, Analysis, and Remote Sensing. Optical Engineering, 2019, 58, 1.	0.5	0
161	Non-separable modulation for channeled spatio-temporal Stokes polarimeters. , 2020, , .		0
162	User Study Comparing Linearity and Orthogonalization for Polarimetric Visualizations. IEEE Access, 2022, 10, 28308-28321.	2.6	0