

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	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
2	User Study Comparing Linearity and Orthogonalization for Polarimetric Visualizations. IEEE Access, 2022, 10, 28308-28321.	2.6	0
3	Nonseparable modulation strategy for channeled spatiotemporal Stokes polarimeters. Applied Optics, 2021, 60, 735.	0.9	2
4	Transcending conventional snapshot polarimeter performance via neuromorphically adaptive filters. Optics Express, 2021, 29, 17758.	1.7	8
5	Structured and unstructured modulation and reconstruction of DoFP image data. , 2021, , .		0
6	Machine learning based adaptive channel filter in multi-domain modulated polarimeter. , 2021, , .		0
7	Deep learning based adaptive filtering technique for spectral-temporally modulated channeled spectropolarimetry. , 2021, , .		0
8	Spectral-temporal channeled spectropolarimetry using deep-learning-based adaptive filtering. Optics Letters, 2021, 46, 4394.	1.7	7
9	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
10	Short-Term Tropical Cyclone Intensity Forecasting from Satellite Imagery Based on the Deviation Angle Variance Technique. Weather and Forecasting, 2020, 35, 285-298.	0.5	5
11	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
12	Spectral-temporal hybrid modulation for channeled spectropolarimetry. Applied Optics, 2020, 59, 9359.	0.9	10
13	Structured decomposition of a multi-snapshot nine-reconstructables Mueller matrix polarimeter. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2020, 37, 890.	0.8	5
14	Development of an equivalent circuit model approach to the design of dense arrays of electrically small antennas. , 2020, , .		2
15	Non-separable modulation for channeled spatio-temporal Stokes polarimeters. , 2020, , .		0
16	Differentially Fed High-Power Microwave Antennas Using Capacitively Coupled Hyperband Inverters. IEEE Transactions on Antennas and Propagation, 2019, 67, 5203-5211.	3.1	1
17	Quantifying the Contribution of Tropical Cyclones to the Earth's Outgoing Radiation. , 2019, , .		1
18	The Influence of Satellite Observation Angle on Tropical Cyclone Intensity Estimation using the Deviation Angle Variance Technique. , 2019, , .		0

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19	Review of visualization methods for passive polarization imaging. <i>Optical Engineering</i> , 2019, 58, 1.	0.5	16
20	Imaging dynamic scenes with a spatio-temporally channeled polarimeter. <i>Optics Express</i> , 2019, 27, 28423.	1.7	14
21	Special Section Guest Editorial: Polarization: Systems, Measurement, Analysis, and Remote Sensing. <i>Optical Engineering</i> , 2019, 58, 1.	0.5	0
22	Improving performance of PEM-based partial Mueller matrix polarimeters. , 2019, , .		2
23	Using electrically-small HPEM antenna array elements to divide power and shape aperture fields. , 2018, , .		1
24	Channeled spatio-temporal Stokes polarimeters. <i>Optics Letters</i> , 2018, 43, 2768.	1.7	19
25	Optimal bandwidth and systematic error of full-Stokes micropolarizer arrays. <i>Applied Optics</i> , 2018, 57, 2327.	0.9	23
26	Perceptually uniform color space for visualizing trivariate linear polarization imaging data. <i>Optics Letters</i> , 2018, 43, 2426.	1.7	10
27	Overview of visualization strategies for polarimetric imaging data. , 2018, , .		2
28	Channel-first design of modulated polarimeters. , 2018, , .		2
29	Multi-carrier channeled polarimetry for photoelastic modulator systems. <i>Optics Letters</i> , 2018, 43, 5789.	1.7	7
30	Compact, Backward-Radiating Helical Antenna for Mesoband High-Power Applications. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2017, 16, 1699-1702.	2.4	4
31	Focal plane filter array engineering I: rectangular lattices. <i>Optics Express</i> , 2017, 25, 11954.	1.7	17
32	Optimal bandwidth micropolarizer arrays. <i>Optics Letters</i> , 2017, 42, 458.	1.7	32
33	Moving towards more intuitive display strategies for polarimetric image data. , 2017, , .		2
34	A fast Stokes polarimeter: preliminary design. , 2017, , .		2
35	Polarization-color mapping strategies: catching up with color theory. , 2017, , .		1
36	A nine-channeled partial Mueller matrix polarimeter. , 2017, , .		1

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37	Extremely compact radiating systems for mesoband high power electromagnetics. , 2016, , .		0
38	Estimation of errors in partial Mueller matrix polarimeter calibration. Proceedings of SPIE, 2016, , .	0.8	0
39	Bounds on the microanalyzer array assumption. , 2016, , .		2
40	Design of channeled partial Mueller matrix polarimeters. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2016, 33, 1060.	0.8	6
41	The Use of the Deviation Angle Variance Technique on Geostationary Satellite Imagery to Estimate Tropical Cyclone Size Parameters. Weather and Forecasting, 2016, 31, 1625-1642.	0.5	30
42	Chairs' welcome. , 2016, , .		0
43	Tunable Electrically Small Conical Folded Dipole Antenna Used as a Mesoband High-Power Microwave Source. IEEE Antennas and Wireless Propagation Letters, 2016, 15, 1614-1617.	2.4	7
44	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
45	Adapting the HSV polarization-color mapping for regions with low irradiance and high polarization. Optics Letters, 2016, 41, 4759.	1.7	31
46	Tropical Cyclogenesis Detection in the North Pacific Using the Deviation Angle Variance Technique. Weather and Forecasting, 2015, 30, 1663-1672.	0.5	9
47	Spectral density response functions for modulated polarimeters. Applied Optics, 2015, 54, 9490.	2.1	7
48	Determination of the polarization states of an arbitrary polarized terahertz beam: Vectorial vortex analysis. Scientific Reports, 2015, 5, 9416.	1.6	26
49	Structured decomposition design of partial Mueller matrix polarimeters. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2015, 32, 1302.	0.8	21
50	Automatic Tracking of Pregenesis Tropical Disturbances Within the Deviation Angle Variance System. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 254-258.	1.4	7
51	Satellite-Derived Tropical Cyclone Intensity in the North Pacific Ocean Using the Deviation-Angle Variance Technique. Weather and Forecasting, 2014, 29, 505-516.	0.5	62
52	Noise, error, and bandwidth in polarimeters. Proceedings of SPIE, 2014, , .	0.8	0
53	Generalized channeled polarimetry. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2014, 31, 1013.	0.8	63
54	Compact EZ antenna arrays for field management in HPM applications. , 2014, , .		2

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55	Feedback-integrated scene cancellation scene-based nonuniformity correction algorithm. Journal of Electronic Imaging, 2014, 23, 023005.	0.5	9
56	An overview of polarimetric sensing techniques and technology with applications to different research fields. Proceedings of SPIE, 2014, , .	0.8	69
57	Improving feedback-integrated scene cancellation nonuniformity correction through optimal selection of available camera motion. Journal of Electronic Imaging, 2014, 23, 053014.	0.5	4
58	An Electrically Small Conical Folded Dipole Antenna for Use as a Compact, Self-Resonant Mesoband High-Power Microwave Source. IEEE Transactions on Antennas and Propagation, 2014, 62, 5960-5967.	3.1	11
59	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
60	Generation of achromatic, uniform-phase, radially polarized beams. Optics Express, 2014, 22, 3306.	1.7	24
61	Modeling of self-compensating wideband antennas for peer-to-peer communications in distributed sensing arrays. , 2013, , .		0
62	SWIR active polarization imaging for material identification. , 2013, , .		9
63	Compact, dual-frequency electrically small antennas for an HPM radiating system. , 2013, , .		0
64	Electrically small folded helix antennas for use as self-resonant, mesoband Hpm sources. , 2013, , .		0
65	Relating transverse ray error and light fields in plenoptic camera images. , 2013, , .		1
66	Evaluation of Mueller matrix of achromatic axially symmetric wave plate. , 2013, , .		1
67	Tropical Cyclone Intensity Estimation in the North Atlantic Basin Using an Improved Deviation Angle Variance Technique. Weather and Forecasting, 2012, 27, 1264-1277.	0.5	56
68	Generalized van Cittert-Zernike theorem for the cross-spectral density matrix of quasi-homogeneous planar electromagnetic sources. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2012, 29, 1939.	0.8	18
69	Role of the null space of the DRM in the performance of modulated polarimeters. Optics Letters, 2012, 37, 1097.	1.7	20
70	Depth measurements through controlled aberrations of projected patterns. Optics Express, 2012, 20, 6561.	1.7	4
71	Analysis and compression of plenoptic camera images with Zernike polynomials. Proceedings of SPIE, 2012, , .	0.8	4
72	Compact antenna concepts for mesoband HPM applications. , 2012, , .		1

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73	An Efficient, Electrically Small, Three-Dimensional Magnetic EZ Antenna for HPM Applications. IEEE Transactions on Plasma Science, 2012, 40, 3037-3045.	0.6	20
74	Classification using active polarimetry. Proceedings of SPIE, 2012, , .	0.8	19
75	Task-specific snapshot Mueller matrix channeled spectropolarimeter optimization. Proceedings of SPIE, 2012, , .	0.8	8
76	Generalized van Cittert-Zernike theorem for the cross-spectral density matrix of quasi-homogeneous planar electromagnetic sources. , 2012, , .		0
77	Adaptive strategy for demosaicing microgrid polarimeter imagery. , 2011, , .		7
78	Systems description of measurement and reconstruction of microgrid polarimeters. , 2011, , .		1
79	When is polarimetric imaging preferable to intensity imaging for target detection?. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 46.	0.8	50
80	Forecasting Post-Extratropical Transition Outcomes for Tropical Cyclones Using Support Vector Machine Classifiers. Journal of Atmospheric and Oceanic Technology, 2011, 28, 709-719.	0.5	5
81	Band limited data reconstruction in modulated polarimeters. Optics Express, 2011, 19, 14976.	1.7	57
82	3D astigmatic depth sensing camera. Proceedings of SPIE, 2011, , .	0.8	0
83	Frequency-domain scene-based non-uniformity correction and application to microgrid polarimeters. , 2011, , .		4
84	Hyperspectral measurement of the scattering of polarized light by skin. Proceedings of SPIE, 2011, , .	0.8	6
85	Spatio-temporal modulated polarimetry. , 2011, , .		15
86	Generation and radiation of high-power mesoband waveforms using quarter-wave switched oscillators. , 2011, , .		1
87	Estimating Tropical Cyclone Intensity from Infrared Image Data. Weather and Forecasting, 2011, 26, 690-698.	0.5	60
88	Reconstruction Strategies for Modulated Polarimeters. , 2011, , .		2
89	Interaction Between Geometric Parameters and Output Waveforms in High-Power Quarter-Wave Oscillators. IEEE Transactions on Plasma Science, 2010, 38, 1124-1131.	0.6	29
90	Detecting Tropical Cyclone Genesis From Remotely Sensed Infrared Image Data. IEEE Geoscience and Remote Sensing Letters, 2010, 7, 826-830.	1.4	37

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91	Field management for a self-breakdown switched oscillator. , 2010, , .		2
92	Determination of a Consistent Time for the Extratropical Transition of Tropical Cyclones. Part I: Examination of Existing Methods for Finding "ET Time": Monthly Weather Review, 2010, 138, 4328-4343.	0.5	24
93	Determination of a Consistent Time for the Extratropical Transition of Tropical Cyclones. Part II: Potential Vorticity Metrics. Monthly Weather Review, 2010, 138, 4344-4361.	0.5	19
94	Design and optimization of partial Mueller matrix polarimeters. Applied Optics, 2010, 49, 2326.	2.1	38
95	Development of a High-Voltage Tunable Source for Wideband and Mesoband Effects Testing. IEEE Transactions on Plasma Science, 2010, 38, 1450-1461.	0.6	5
96	The Effect of Calibration Error on Polarimetric Reconstruction in Microgrid Polarimetric Imagery. , 2010, , .		0
97	Polarimetric diffraction tomography. Digest / IEEE Antennas and Propagation Society International Symposium, 2009, , .	0.0	0
98	Total elimination of sampling errors in polarization imagery obtained with integrated microgrid polarimeters. Optics Letters, 2009, 34, 3187.	1.7	102
99	Interpolation strategies for reducing IFOV artifacts in microgrid polarimeter imagery. Optics Express, 2009, 17, 9112.	1.7	136
100	UWB Self-Compensating Antennas: Numerical Demonstration of the Electromagnetic Working Principle. IEEE Transactions on Antennas and Propagation, 2009, 57, 3736-3745.	3.1	6
101	Demonstration of Bias-Controlled Algorithmic Tuning of Quantum Dots in a Well (DWELL) MidIR Detectors. IEEE Journal of Quantum Electronics, 2009, 45, 674-683.	1.0	28
102	Scene-based adaptive spectral sensing systems based on quantum dots infrared photodetectors. Proceedings of SPIE, 2009, , .	0.8	0
103	Exploiting motion-based redundancy to enhance microgrid polarimeter imagery. Proceedings of SPIE, 2009, , .	0.8	8
104	Designing partial Mueller matrix polarimeters. , 2009, , .		5
105	Examining IFOV error and demodulation strategies for infrared microgrid polarimeter imagery. Proceedings of SPIE, 2009, , .	0.8	0
106	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
107	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, 2528.	0.8	5
108	Self-Compensating Antenna Concept for a Dispersionless UWB Propagation Channel. IEEE Transactions on Antennas and Propagation, 2008, 56, 1491-1494.	3.1	4

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109	Canonical Correlation Feature Selection for Sensors With Overlapping Bands: Theory and Application. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 3346-3358.	2.7	34
110	Objective Measures of Tropical Cyclone Structure and Intensity Change From Remotely Sensed Infrared Image Data. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 3574-3580.	2.7	104
111	Polarization visual enhancement technique for LWIR microgrid polarimeter imagery. , 2008, , .		2
112	Numerical analysis of a self-compensating antenna. , 2008, , .		0
113	Signal to Noise Ratio for Spectral Sensors with Overlapping Bands. , 2008, , .		0
114	Target Detection With Partial Mueller Polarimeters. , 2008, , .		1
115	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
116	Designing a dispersionless UWB channel with two identical antennas. , 2007, , .		0
117	Performance Limitations of Transmission Line Oscillators for High Power Mesoband Sources. , 2007, , .		2
118	Laser polarimeter as an invariant monitor. Proceedings of SPIE, 2007, , .	0.8	1
119	Mitigation of image artifacts in LWIR microgrid polarimeter images. , 2007, , .		8
120	Motion-based nonuniformity correction in DoFP polarimeters. Proceedings of SPIE, 2007, , .	0.8	0
121	Design of a hybrid division of aperture/division of focal plane polarimeter. , 2007, , .		1
122	Using polarized variable coherence tomography to estimate polarimetric BRDF from monostatic data. Proceedings of SPIE, 2007, , .	0.8	0
123	Data interpretation for spectral sensors with correlated bands. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2007, 24, 2864.	0.8	13
124	Dead pixel replacement in LWIR microgrid polarimeters. Optics Express, 2007, 15, 7596.	1.7	43
125	The effects of thermal equilibrium and contrast in LWIR polarimetric images. Optics Express, 2007, 15, 15161.	1.7	45
126	Polarization components analysis for invariant discrimination. Applied Optics, 2007, 46, 8364.	2.1	25

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127	Spatial and Spatiotemporal Projection Pursuit Techniques to Predict the Extratropical Transition of Tropical Cyclones. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 418-425.	2.7	21
128	Hybrid division of aperture/division of a focal-plane polarimeter for real-time polarization imagery without an instantaneous field-of-view error. Optics Letters, 2006, 31, 2984.	1.7	42
129	Polarization in Remote Sensing--introduction. Applied Optics, 2006, 45, 5451.	2.1	16
130	Review of passive imaging polarimetry for remote sensing applications. Applied Optics, 2006, 45, 5453.	2.1	1,249
131	Optimizing imaging polarimeters constructed with imperfect optics. Applied Optics, 2006, 45, 5497.	2.1	36
132	Statistical adaptive sensing by detectors with spectrally overlapping bands. Applied Optics, 2006, 45, 7224.	2.1	22
133	Classification of hyperspectral spatial/spectral patterns using Gauss-Markov random fields. , 2006, , .		3
134	Feature selection for spectral sensors with overlapping noisy spectral bands. , 2006, 6233, 819.		4
135	Analyzing spectral sensors with highly overlapping bands. , 2006, , .		0
136	Image processing methods to compensate for IFOV errors in microgrid imaging polarimeters. , 2006, , .		17
137	Evaluation and display of polarimetric image data using long-wave cooled microgrid focal plane arrays. , 2006, , .		11
138	Combatting infrared focal plane array nonuniformity noise in imaging polarimeters. , 2005, 5888, 148.		3
139	Canonical correlation analysis for assessing the performance of adaptive spectral imagers. , 2005, , .		8
140	Automated polarization characterization system. , 2005, , .		0
141	Modeling precision and accuracy of a LWIR microgrid array imaging polarimeter. , 2005, 5888, 227.		5
142	Generalized algebraic scene-based nonuniformity correction algorithm. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2005, 22, 239.	0.8	52
143	Real-time implementation of matched filtering algorithms using adaptive focal-plane array technology. , 2004, , .		8
144	Generalized algebraic algorithm for scene-based nonuniformity correction. , 2004, 5556, 122.		1

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145	Spectrally adaptive infrared photodetectors with bias-tunable quantum dots. Journal of the Optical Society of America B: Optical Physics, 2004, 21, 7.	0.9	66
146	Quantum dot detectors for mid-infrared sensing: bias-controlled spectral tuning and matched filtering. , 2004, , .		8
147	An algebraic restoration method for estimating fixed-pattern noise in infrared imagery from a video sequence. , 2004, , .		11
148	Radiometrically accurate scene-based nonuniformity correction for array sensors. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2003, 20, 1890.	0.8	61
149	Algorithm for radiometrically accurate nonuniformity correction with arbitrary scene motion. , 2003, , .		4
150	Radiometrically calibrated scene-based nonuniformity correction for infrared array sensors. , 2003, 4820, 359.		10
151	Application of principal-components-based invariant display strategy to wide-area hyperspectral data. , 2002, , .		0
152	Relation between system optimization and systematic errors in Stokes vector polarimeters. , 2002, 4481, 22.		3
153	Extending optimization to active Mueller polarimeters. , 2002, , .		1
154	Design of optimal polarimeters: maximization of signal-to-noise ratio and minimization of systematic error. Applied Optics, 2002, 41, 619.	2.1	277
155	Variable-retardance, Fourier-transform imaging spectropolarimeters for visible spectrum remote sensing. Applied Optics, 2001, 40, 1450.	2.1	65
156	<title>Increase in the prompt radiated field from an IRA by aperture design techniques</title>. , 2001, , .		1
157	Statistics of target spectra in HSI scenes. , 2000, , .		4
158	<title>Considerations in polarimeter design</title>. , 2000, 4133, 65.		6
159	Development of an invariant display strategy for spectral imagery. , 2000, 4132, 147.		1
160	Enhancement of the point-spread function for imaging in scattering media by use of polarization-difference imaging. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2000, 17, 1.	0.8	33
161	Noise equalization in Stokes parameter images obtained by use of variable-retardance polarimeters. Optics Letters, 2000, 25, 1198.	1.7	162
162	<title>Imaging spectropolarimeters for use in visible and infrared remote sensing</title>. , 1999, , .		18