

# Alfred O Hero

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

140  
papers

3,080  
citations

26  
h-index

51  
g-index

163  
ext. papers

4,011  
ext. citations

4.6  
avg, IF

5.62  
L-index

#	Paper	IF	Citations
140	Gene expression signatures diagnose influenza and other symptomatic respiratory viral infections in humans. <i>Cell Host and Microbe</i> , <b>2009</b> , 6, 207-17	23.4	287
139	Nonlinear Unmixing of Hyperspectral Images: Models and Algorithms. <i>IEEE Signal Processing Magazine</i> , <b>2014</b> , 31, 82-94	9.4	257
138	Shrinkage Algorithms for MMSE Covariance Estimation. <i>IEEE Transactions on Signal Processing</i> , <b>2010</b> , 58, 5016-5029	4.8	224
137	Temporal dynamics of host molecular responses differentiate symptomatic and asymptomatic influenza a infection. <i>PLoS Genetics</i> , <b>2011</b> , 7, e1002234	6	141
136	A host transcriptional signature for presymptomatic detection of infection in humans exposed to influenza H1N1 or H3N2. <i>PLoS ONE</i> , <b>2013</b> , 8, e52198	3.7	121
135	Dynamic Stochastic Blockmodels for Time-Evolving Social Networks. <i>IEEE Journal on Selected Topics in Signal Processing</i> , <b>2014</b> , 8, 552-562	7.5	116
134	. <i>IEEE Sensors Journal</i> , <b>2011</b> , 11, 3064-3075	4	108
133	A Dictionary Approach to Electron Backscatter Diffraction Indexing. <i>Microscopy and Microanalysis</i> , <b>2015</b> , 21, 739-52	0.5	97
132	An Information-Based Approach to Sensor Management in Large Dynamic Networks. <i>Proceedings of the IEEE</i> , <b>2007</b> , 95, 978-999	14.3	77
131	Quantum-inspired computational imaging. <i>Science</i> , <b>2018</b> , 361,	33.3	71
130	Estimating epistemic and aleatory uncertainties during hydrologic modeling: An information theoretic approach. <i>Water Resources Research</i> , <b>2013</b> , 49, 2253-2273	5.4	61
129	A Survey of Stochastic Simulation and Optimization Methods in Signal Processing. <i>IEEE Journal on Selected Topics in Signal Processing</i> , <b>2016</b> , 10, 224-241	7.5	57
128	On Local Intrinsic Dimension Estimation and Its Applications. <i>IEEE Transactions on Signal Processing</i> , <b>2010</b> , 58, 650-663	4.8	49
127	Image matching using alpha-entropy measures and entropic graphs. <i>Signal Processing</i> , <b>2005</b> , 85, 277-296	4.4	47
126	Hub Discovery in Partial Correlation Graphs. <i>IEEE Transactions on Information Theory</i> , <b>2012</b> , 58, 6064-6078	8.8	46
125	Detection of the Number of Signals Using the Benjamini-Hochberg Procedure. <i>IEEE Transactions on Signal Processing</i> , <b>2007</b> , 55, 2497-2508	4.8	42
124	Assessing and safeguarding network resilience to nodal attacks. <i>IEEE Communications Magazine</i> , <b>2014</b> , 52, 138-143	9.1	41

123	Covariance Estimation in High Dimensions Via Kronecker Product Expansions. <i>IEEE Transactions on Signal Processing</i> , <b>2013</b> , 61, 5347-5360	4.8	41
122	Empirically Estimable Classification Bounds Based on a Nonparametric Divergence Measure. <i>IEEE Transactions on Signal Processing</i> , <b>2016</b> , 64, 580-591	4.8	39
121	Large-Scale Correlation Screening. <i>Journal of the American Statistical Association</i> , <b>2011</b> , 106, 1540-1552	2.8	38
120	Decomposable Principal Component Analysis. <i>IEEE Transactions on Signal Processing</i> , <b>2009</b> , 57, 4369-4377	4.8	35
119	Deep Community Detection. <i>IEEE Transactions on Signal Processing</i> , <b>2015</b> , 63, 5706-5719	4.8	32
118	Collaborative 20 Questions for Target Localization. <i>IEEE Transactions on Information Theory</i> , <b>2014</b> , 60, 2233-2252	2.8	31
117	An individualized predictor of health and disease using paired reference and target samples. <i>BMC Bioinformatics</i> , <b>2016</b> , 17, 47	3.6	29
116	On Convergence of Kronecker Graphical Lasso Algorithms. <i>IEEE Transactions on Signal Processing</i> , <b>2013</b> , 61, 1743-1755	4.8	29
115	Ensemble estimators for multivariate entropy estimation. <i>IEEE Transactions on Information Theory</i> , <b>2013</b> , 59, 4374-4388	2.8	29
114	Robust Linear Spectral Unmixing Using Anomaly Detection. <i>IEEE Transactions on Computational Imaging</i> , <b>2015</b> , 1, 74-85	4.5	26
113	Identifying Solar Flare Precursors Using Time Series of SDO/HMI Images and SHARP Parameters. <i>Space Weather</i> , <b>2019</b> , 17, 1404-1426	3.7	26
112	A deep learning architecture for metabolic pathway prediction. <i>Bioinformatics</i> , <b>2020</b> , 36, 2547-2553	7.2	25
111	A Genomic Signature of Influenza Infection Shows Potential for Presymptomatic Detection, Guiding Early Therapy, and Monitoring Clinical Responses. <i>Open Forum Infectious Diseases</i> , <b>2016</b> , 3, ofw007	1	24
110	Fiber Tract Clustering on Manifolds With Dual Rooted-Graphs <b>2007</b> ,		24
109	Recursive $\ell_{1,\infty}$ Group Lasso. <i>IEEE Transactions on Signal Processing</i> , <b>2012</b> , 60, 3978-3987	4.8	23
108	Image registration methods in high-dimensional space. <i>International Journal of Imaging Systems and Technology</i> , <b>2006</b> , 16, 130-145	2.5	23
107	Phase Transitions in Spectral Community Detection. <i>IEEE Transactions on Signal Processing</i> , <b>2015</b> , 63, 4339-4347	4.8	22
106	Robust Spectral Unmixing of Sparse Multispectral Lidar Waveforms Using Gamma Markov Random Fields. <i>IEEE Transactions on Computational Imaging</i> , <b>2017</b> , 3, 658-670	4.5	21

105	Empirical Non-Parametric Estimation of the Fisher Information. <i>IEEE Signal Processing Letters</i> , <b>2015</b> , 22, 988-992	3.2	21
104	Local Fiedler vector centrality for detection of deep and overlapping communities in networks <b>2014</b> ,		21
103	Distributed Covariance Estimation in Gaussian Graphical Models. <i>IEEE Transactions on Signal Processing</i> , <b>2012</b> , 60, 211-220	4.8	21
102	Covariance Estimation in Decomposable Gaussian Graphical Models. <i>IEEE Transactions on Signal Processing</i> , <b>2010</b> , 58, 1482-1492	4.8	21
101	On Measure Transformed Canonical Correlation Analysis. <i>IEEE Transactions on Signal Processing</i> , <b>2012</b> , 60, 4570-4585	4.8	21
100	Multilayer Spectral Graph Clustering via Convex Layer Aggregation: Theory and Algorithms. <i>IEEE Transactions on Signal and Information Processing Over Networks</i> , <b>2017</b> , 3, 553-567	2.8	20
99	Ensemble estimation of multivariate f-divergence <b>2014</b> ,		19
98	Robust Kronecker Product PCA for Spatio-Temporal Covariance Estimation. <i>IEEE Transactions on Signal Processing</i> , <b>2015</b> , 63, 6368-6378	4.8	19
97	Efficient learning of sparse, distributed, convolutional feature representations for object recognition <b>2011</b> ,		17
96	Hyperspectral Image Unmixing Using a Multiresolution Sticky HDP. <i>IEEE Transactions on Signal Processing</i> , <b>2012</b> , 60, 1656-1671	4.8	16
95	On Decentralized Estimation With Active Queries. <i>IEEE Transactions on Signal Processing</i> , <b>2015</b> , 63, 2610-2622	4.8	15
94	Multistage Adaptive Estimation of Sparse Signals. <i>IEEE Journal on Selected Topics in Signal Processing</i> , <b>2013</b> , 7, 783-796	7.5	15
93	The Ontology of Biological and Clinical Statistics (OBSCS) for standardized and reproducible statistical analysis. <i>Journal of Biomedical Semantics</i> , <b>2016</b> , 7, 53	2.2	14
92	A multidimensional shrinkage-thresholding operator <b>2009</b> ,		14
91	Two-Stage Multiscale Search for Sparse Targets. <i>IEEE Transactions on Signal Processing</i> , <b>2011</b> , 59, 2331-2341	4.8	13
90	Multimodal Event Detection in Twitter Hashtag Networks. <i>Journal of Signal Processing Systems</i> , <b>2018</b> , 90, 185-200	1.4	12
89	Multi-centrality graph spectral decompositions and their application to cyber intrusion detection <b>2016</b> ,		12
88	Genome Architecture Mediates Transcriptional Control of Human Myogenic Reprogramming. <i>IScience</i> , <b>2018</b> , 6, 232-246	6.1	12

87	Universal phase transition in community detectability under a stochastic block model. <i>Physical Review E</i> , <b>2015</b> , 91, 032804	2.4	11
86	Solar Flare Intensity Prediction With Machine Learning Models. <i>Space Weather</i> , <b>2020</b> , 18, e2020SW002440	4.7	11
85	Improving convergence of divergence functional ensemble estimators <b>2016</b> ,		11
84	Marginal Likelihoods for Distributed Parameter Estimation of Gaussian Graphical Models. <i>IEEE Transactions on Signal Processing</i> , <b>2014</b> , 62, 5425-5438	4.8	11
83	Sparse Image Reconstruction using Sparse Priors <b>2006</b> ,		11
82	Nasopharyngeal Protein Biomarkers of Acute Respiratory Virus Infection. <i>EBioMedicine</i> , <b>2017</b> , 17, 172-181	1.8	10
81	Node removal vulnerability of the largest component of a network <b>2013</b> ,		10
80	A Primer on Zeroth-Order Optimization in Signal Processing and Machine Learning: Principals, Recent Advances, and Applications. <i>IEEE Signal Processing Magazine</i> , <b>2020</b> , 37, 43-54	9.4	10
79	Computerized analysis of the 12-lead electrocardiogram to identify epicardial ventricular tachycardia exit sites. <i>Heart Rhythm</i> , <b>2014</b> , 11, 1966-73	6.7	9
78	<b>2017</b> ,		9
77	Bounds on Variance for Unimodal Distributions. <i>IEEE Transactions on Information Theory</i> , <b>2017</b> , 63, 6936-6949	6.9	9
76	LOCALLY-ADAPTIVE SIMILARITY METRIC FOR DEFORMABLE MEDICAL IMAGE REGISTRATION <b>2012</b> , 2012, 728-731	1.5	9
75	Multistage adaptive estimation of sparse signals <b>2012</b> ,		9
74	Information Preserving Component Analysis: Data Projections for Flow Cytometry Analysis. <i>IEEE Journal on Selected Topics in Signal Processing</i> , <b>2009</b> , 3, 148-158	7.5	9
73	USING DIRECTED INFORMATION TO BUILD BIOLOGICALLY RELEVANT INFLUENCE NETWORKS <b>2007</b> ,		9
72	Ensemble Estimation of Information Divergence. <i>Entropy</i> , <b>2018</b> , 20,	2.8	9
71	Measure-Transformed Quasi-Maximum Likelihood Estimation. <i>IEEE Transactions on Signal Processing</i> , <b>2017</b> , 65, 748-763	4.8	8
70	Scalable Mutual Information Estimation Using Dependence Graphs <b>2019</b> ,		8

69	Direct Estimation of Density Functionals Using a Polynomial Basis. <i>IEEE Transactions on Signal Processing</i> , <b>2018</b> , 66, 558-572	4.8	8
68	Immunophenotypic signatures of benign and dysplastic granulopoiesis by cytomic profiling. <i>Cytometry Part B - Clinical Cytometry</i> , <b>2011</b> , 80, 282-90	3.4	8
67	Word Spotting in Bitmapped Fax Documents. <i>Information Retrieval</i> , <b>2000</b> , 2, 207-226	1.8	8
66	A Hierarchical Bayesian Approach to Neutron Spectrum Unfolding With Organic Scintillators. <i>IEEE Transactions on Nuclear Science</i> , <b>2019</b> , 66, 2265-2274	1.7	7
65	Direct estimation of information divergence using nearest neighbor ratios <b>2017</b> ,		7
64	Information theoretic structure learning with confidence <b>2017</b> ,		7
63	Measure transformed canonical correlation analysis with application to financial data <b>2012</b> ,		7
62	Network sensor management for tracking and localization <b>2007</b> ,		7
61	Information extraction from large multi-layer social networks <b>2015</b> ,		6
60	Unequal Error Protection Querying Policies for the Noisy 20 Questions Problem. <i>IEEE Transactions on Information Theory</i> , <b>2018</b> , 64, 1105-1131	2.8	6
59	Quickest Detection for Changes in Maximal kNN Coherence of Random Matrices. <i>IEEE Transactions on Signal Processing</i> , <b>2018</b> , 66, 4490-4503	4.8	6
58	Social Collaborative Retrieval. <i>IEEE Journal on Selected Topics in Signal Processing</i> , <b>2014</b> , 8, 680-689	7.5	6
57	Robust spectral unmixing for anomaly detection <b>2014</b> ,		6
56	Principal component analysis in decomposable Gaussian graphical models <b>2009</b> ,		6
55	Optimal Sequential Energy Allocation for Inverse Problems. <i>IEEE Journal on Selected Topics in Signal Processing</i> , <b>2007</b> , 1, 67-78	7.5	6
54	On Tests for Global Maximum of the Log-Likelihood Function. <i>IEEE Transactions on Information Theory</i> , <b>2007</b> , 53, 2510-2525	2.8	6
53	Image patch analysis of sunspots and active regions. <i>Journal of Space Weather and Space Climate</i> , <b>2016</b> , 6, A3	2.5	6
52	Part-Level Convolutional Neural Networks for Pedestrian Detection Using Saliency and Boundary Box Alignment. <i>IEEE Access</i> , <b>2019</b> , 7, 23027-23037	3.5	5

51	Image patch analysis of sunspots and active regions. <i>Journal of Space Weather and Space Climate</i> , <b>2016</b> , 6, A2	2.5	5
50	Analysis of a privacy-preserving PCA algorithm using random matrix theory <b>2016</b> ,		5
49	Phase Transitions and a Model Order Selection Criterion for Spectral Graph Clustering. <i>IEEE Transactions on Signal Processing</i> , <b>2018</b> , 66, 3407-3420	4.8	5
48	. <i>IEEE Transactions on Information Theory</i> , <b>2017</b> , 63, 698-714	2.8	5
47	Meta learning of bounds on the Bayes classifier error <b>2015</b> ,		5
46	Construction of Abdominal Probabilistic Atlases and Their Value in Segmentation of Normal Organs in Abdominal CT Scans. <i>IEICE Transactions on Information and Systems</i> , <b>2010</b> , E93-D, 2291-2301	0.6	5
45	Numerically Stable Binary Gradient Coding <b>2020</b> ,		5
44	THE INTRINSIC VALUE OF HFO FEATURES AS A BIOMARKER OF EPILEPTIC ACTIVITY. <i>Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing</i> , <b>2016</b> , 2016, 6290-6294	1.6	5
43	The Three-Terminal Interactive Lossy Source Coding Problem. <i>IEEE Transactions on Information Theory</i> , <b>2017</b> , 63, 532-562	2.8	4
42	Multi-Functional Sensing for Swarm Robots Using Time Sequence Classification: HoverBot, an Example. <i>Frontiers in Robotics and AI</i> , <b>2018</b> , 5, 55	2.8	4
41	Adaptive spectrum sensing and estimation <b>2013</b> ,		4
40	Low separation rank covariance estimation using Kronecker product expansions <b>2013</b> ,		4
39	Training in multiple-antenna Rician fading wireless channels with deterministic specular component. <i>IEEE Transactions on Wireless Communications</i> , <b>2007</b> , 6, 110-119	9.6	4
38	Resolution Limits for the Noisy Non-Adaptive 20 Questions Problem. <i>IEEE Transactions on Information Theory</i> , <b>2021</b> , 67, 2055-2073	2.8	4
37	Shortest path through random points. <i>Annals of Applied Probability</i> , <b>2016</b> , 26,	2	4
36	Assessment of the Feasibility of Using Noninvasive Wearable Biometric Monitoring Sensors to Detect Influenza and the Common Cold Before Symptom Onset. <i>JAMA Network Open</i> , <b>2021</b> , 4, e2128534 <sup>10.4</sup>		4
35	Learning to Classify With Possible Sensor Failures. <i>IEEE Transactions on Signal Processing</i> , <b>2017</b> , 65, 836-849		3
34	Identifying Influential Links for Event Propagation on Twitter: A Network of Networks Approach. <i>IEEE Transactions on Signal and Information Processing Over Networks</i> , <b>2019</b> , 5, 139-151	2.8	3

33	Performance Guarantees for Adaptive Estimation of Sparse Signals. <i>IEEE Transactions on Information Theory</i> , <b>2015</b> , 61, 2043-2059	2.8	3
32	Kronecker graphical lasso <b>2012</b> ,		3
31	Robust Distributed Fixed-Time Economic Dispatch Under Time-Varying Topology <b>2021</b> , 5, 1183-1188		3
30	A performance guarantee for adaptive estimation of sparse signals <b>2013</b> ,		2
29	Part-level fully convolutional networks for pedestrian detection <b>2017</b> ,		2
28	Robust linear spectral unmixing using outlier detection <b>2015</b> ,		2
27	Multimodal factor analysis <b>2015</b> ,		2
26	Spatio-temporal analysis of Gaussian WSS processes via complex correlation and partial correlation screening <b>2013</b> ,		2
25	Practical recipes for the model order reduction, dynamical simulation and compressive sampling of large-scale open quantum systems. <i>New Journal of Physics</i> , <b>2009</b> , 11, 065002	2.9	2
24	Resolution Limits of Non-Adaptive Querying for Noisy 20 Questions Estimation <b>2020</b> ,		2
23	. <i>IEEE Transactions on Signal Processing</i> , <b>2021</b> , 69, 2939-2954	4.8	2
22	Fundamental Limits on Data Acquisition: Trade-offs Between Sample Complexity and Query Difficulty <b>2018</b> ,		2
21	Expectation-propagation for weak radionuclide identification at radiation portal monitors. <i>Scientific Reports</i> , <b>2020</b> , 10, 6811	4.9	1
20	Multilayer spectral graph clustering via convex layer aggregation <b>2016</b> ,		1
19	Similarity Function Tracking Using Pairwise Comparisons. <i>IEEE Transactions on Signal Processing</i> , <b>2017</b> , 65, 5635-5648	4.8	1
18	Adaptive search for sparse dynamic targets <b>2013</b> ,		1
17	A collaborative 20 questions model for target search with human-machine interaction <b>2013</b> ,		1
16	Performance bounds for sparse parametric covariance estimation in Gaussian models <b>2011</b> ,		1

15	The Power of Graph Convolutional Networks to Distinguish Random Graph Models <b>2020</b> ,		1
14	Achievable Resolution Limits for the Noisy Adaptive 20 Questions Problem <b>2021</b> ,		1
13	Geometric Estimation of Multivariate Dependency. <i>Entropy</i> , <b>2019</b> , 21,	2.8	1
12	Adaptive Multi-Channel Event Segmentation and Feature Extraction for Monitoring Health Outcomes. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2021</b> , 68, 2377-2388	5	1
11	. <i>IEEE Transactions on Information Theory</i> , <b>2021</b> , 67, 5963-5996	2.8	1
10	Multimodal Data Fusion in High-Dimensional Heterogeneous Datasets Via Generative Models. <i>IEEE Transactions on Signal Processing</i> , <b>2021</b> , 69, 5175-5188	4.8	1
9	RAILS: A Robust Adversarial Immune-Inspired Learning System. <i>IEEE Access</i> , <b>2022</b> , 10, 22061-22078	3.5	1
8	Learning to Bound the Multi-Class Bayes Error. <i>IEEE Transactions on Signal Processing</i> , <b>2020</b> , 68, 3793-3807	4.7	0
7	Fundamental Limits of Deep Graph Convolutional Networks for Graph Classification. <i>IEEE Transactions on Information Theory</i> , <b>2022</b> , 1-1	2.8	0
6	A data value metric for quantifying information content and utility. <i>Journal of Big Data</i> , <b>2021</b> , 8, 82	11.7	0
5	Convergence Rates for Empirical Estimation of Binary Classification Bounds. <i>Entropy</i> , <b>2019</b> , 21, 1144	2.8	0
4	Beyond optimization—supervised learning applications in relativistic laser-plasma experiments. <i>Physics of Plasmas</i> , <b>2021</b> , 28, 083102	2.1	0
3	Second-Order Asymptotically Optimal Outlier Hypothesis Testing. <i>IEEE Transactions on Information Theory</i> , <b>2022</b> , 1-1	2.8	0
2	Hoxa9 and Meis1 Bind Highly Conserved Elements Near Targets Regulated in Leukemia Cells.. <i>Blood</i> , <b>2008</b> , 112, 3362-3362	2.2	
1	Resolution Limits of Non-Adaptive 20 Questions Search for Multiple Targets. <i>IEEE Transactions on Information Theory</i> , <b>2022</b> , 1-1	2.8	