# Yoann Altmann

List of Publications by Year
in descending order

| 92 papers | 2,290 citations | 304743<br>22 h-index | 233421<br>45 g-index |
|---|---|---|---|
| 92 all docs | 92 docs citations | 92 times ranked | 1338 citing authors |

| # | Article | IF | Citations |
|---|---------|----|-----------|
| 1 | Nonlinear Unmixing of Hyperspectral Images Using a Generalized Bilinear Model. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 4153-4162. | 6.3 | 329 |
| 2 | Supervised Nonlinear Spectral Unmixing Using a Postnonlinear Mixing Model for Hyperspectral Imagery. IEEE Transactions on Image Processing, 2012, 21, 3017-3025. | 9.8 | 190 |
| 3 | Quantum-inspired computational imaging. Science, 2018, 361, . | 12.6 | 134 |
| 4 | Real-time 3D reconstruction from single-photon lidar data using plug-and-play point cloud denoisers. Nature Communications, 2019, 10, 4984. | 12.8 | 123 |
| 5 | Unsupervised Post-Nonlinear Unmixing of Hyperspectral Images Using a Hamiltonian Monte Carlo Algorithm. IEEE Transactions on Image Processing, 2014, 23, 2663-2675. | 9.8 | 110 |
| 6 | Lidar Waveform-Based Analysis of Depth Images Constructed Using Sparse Single-Photon Data. IEEE Transactions on Image Processing, 2016, 25, 1935-1946. | 9.8 | 110 |
| 7 | Nonlinear Spectral Unmixing of Hyperspectral Images Using Gaussian Processes. IEEE Transactions on Signal Processing, 2013, 61, 2442-2453. | 5.3 | 91 |
| 8 | Residual Component Analysis of Hyperspectral Imagesâ€"Application to Joint Nonlinear Unmixing and Nonlinearity Detection. IEEE Transactions on Image Processing, 2014, 23, 2148-2158. | 9.8 | 84 |
| 9 | High-resolution depth profiling using a range-gated CMOS SPAD quanta image sensor. Optics Express, 2018, 26, 5541. | 3.4 | 75 |
| 10 | Bayesian 3D Reconstruction of Complex Scenes from Single-Photon Lidar Data. SIAM Journal on Imaging Sciences, 2019, 12, 521-550. | 2.2 | 70 |
| 11 | Advances in Single-Photon Lidar for Autonomous Vehicles: Working Principles, Challenges, and Recent Advances. IEEE Signal Processing Magazine, 2020, 37, 62-71. | 5.6 | 66 |
| 12 | Unmixing hyperspectral images using the generalized bilinear model. , 2011, , . | | 44 |
| 13 | A Comparison of Nonlinear Mixing Models for Vegetated Areas Using Simulated and Real Hyperspectral Data. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 1869-1878. | 4.9 | 42 |
| 14 | Robust Linear Spectral Unmixing Using Anomaly Detection. IEEE Transactions on Computational Imaging, 2015, 1, 74-85. | 4.4 | 41 |
| 15 | Linear and Nonlinear Unmixing in Hyperspectral Imaging. Data Handling in Science and Technology, 2016, 30, 185-224. | 3.1 | 38 |
| 16 | Nonlinearity Detection in Hyperspectral Images Using a Polynomial Post-Nonlinear Mixing Model. IEEE Transactions on Image Processing, 2013, 22, 1267-1276. | 9.8 | 35 |
| 17 | Restoration of intensity and depth images constructed using sparse single-photon data. , 2016, , . | | 34 |
| 18 | Seeing around corners with edge-resolved transient imaging. Nature Communications, 2020, 11, 5929. | 12.8 | 33 |

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|---|---------|----|-----------|
| 19 | Collaborative sparse regression using spatially correlated supports - Application to hyperspectral unmixing. IEEE Transactions on Image Processing, 2015, 24, 5800-5811. | 9.8 | 32 |
| 20 | Robust Spectral Unmixing of Sparse Multispectral Lidar Waveforms Using Gamma Markov Random Fields. IEEE Transactions on Computational Imaging, 2017, 3, 658-670. | 4.4 | 30 |
| 21 | Bayesian Nonlinear Hyperspectral Unmixing With Spatial Residual Component Analysis. IEEE Transactions on Computational Imaging, 2015, 1, 174-185. | 4.4 | 28 |
| 22 | Ultralow-light-level color image reconstruction using high-efficiency plasmonic metasurface mosaic filters. Optica, 2020, 7, 632. | 9.3 | 28 |
| 23 | Bilinear models for nonlinear unmixing of hyperspectral images. , 2011, , . | | 25 |
| 24 | Wavelength-time coding for multispectral 3D imaging using single-photon LiDAR. Optics Express, 2018, 26, 30146. | 3.4 | 25 |
| 25 | Characterization and modelling of inter-core coupling in coherent fiber bundles. Optics Express, 2017, 25, 11932. | 3.4 | 24 |
| 26 | Comparative study of sampling strategies for sparse photon multispectral lidar imaging: towards mosaic filter arrays. Journal of Optics (United Kingdom), 2017, 19, 094006. | 2.2 | 23 |
| 27 | Supervised nonlinear spectral unmixing using a polynomial post nonlinear model for hyperspectral imagery. , 2011, , . | | 20 |
| 28 | Spectral Unmixing of Multispectral Lidar Signals. IEEE Transactions on Signal Processing, 2015, 63, 5525-5534. | 5.3 | 20 |
| 29 | Robust Bayesian target detection algorithm for depth imaging from sparse single-photon data. IEEE Transactions on Computational Imaging, 2016, , 1-1. | 4.4 | 19 |
| 30 | A Bayesian Approach to Denoising of Single-Photon Binary Images. IEEE Transactions on Computational Imaging, 2017, 3, 460-471. | 4.4 | 19 |
| 31 | Bayesian 3D Reconstruction of Subsampled Multispectral Single-Photon Lidar Signals. IEEE Transactions on Computational Imaging, 2020, 6, 208-220. | 4.4 | 19 |
| 32 | Fast Online 3D Reconstruction of Dynamic Scenes From Individual Single-Photon Detection Events. IEEE Transactions on Image Processing, 2020, 29, 2666-2675. | 9.8 | 19 |
| 33 | Automated Detection of Uninformative Frames in Pulmonary Optical Endomicroscopy. IEEE Transactions on Biomedical Engineering, 2017, 64, 87-98. | 4.2 | 17 |
| 34 | Spectral classification of sparse photon depth images. Optics Express, 2018, 26, 5514. | 3.4 | 17 |
| 35 | Sampling from a multivariate Gaussian distribution truncated on a simplex: A review. , 2014, , . | | 14 |
| 36 | Observation of laser pulse propagation in optical fibers with a SPAD camera. Scientific Reports, 2017, 7, 43302. | 3.3 | 14 |

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|---|---------|-----|-----------|
| 37 | High-speed particle detection and tracking in microfluidic devices using event-based sensing. Lab on A Chip, 2020, 20, 3024-3035. | 6.0 | 14 |
| 38 | Deconvolution and Restoration of Optical Endomicroscopy Images. IEEE Transactions on Computational Imaging, 2018, 4, 194-205. | 4.4 | 13 |
| 39 | Range Estimation from Single-Photon Lidar Data Using a Stochastic Em Approach. , 2018, , . | | 13 |
| 40 | A Hierarchical Bayesian Approach to Neutron Spectrum Unfolding With Organic Scintillators. IEEE Transactions on Nuclear Science, 2019, 66, 2265-2274. | 2.0 | 13 |
| 41 | Fast tracking of hidden objects with single-pixel detectors. Electronics Letters, 2017, 53, 1005-1008. | 1.0 | 12 |
| 42 | Hypersphere Fitting From Noisy Data Using an EM Algorithm. IEEE Signal Processing Letters, 2021, 28, 314-318. | 3.6 | 12 |
| 43 | Robust 3D Reconstruction of Dynamic Scenes From Single-Photon Lidar Using Beta-Divergences. IEEE Transactions on Image Processing, 2021, 30, 1716-1727. | 9.8 | 11 |
| 44 | Target detection for depth imaging using sparse single-photon data. , 2016, , . | | 10 |
| 45 | Efficient Range Estimation and Material Quantification from Multispectral Lidar Waveforms. , 2016, , . | | 9 |
| 46 | Multifractal Analysis of Multivariate Images Using Gamma Markov Random Field Priors. SIAM Journal on Imaging Sciences, 2018, 11, 1294-1316. | 2.2 | 9 |
| 47 | Quantitative imaging and automated fuel pin identification for passive gamma emission tomography. Scientific Reports, 2021, 11, 2442. | 3.3 | 9 |
| 48 | Joint spectral clustering and range estimation for 3D scene reconstruction using multispectral lidar waveforms. , 2016, , . | | 8 |
| 49 | Probabilistic Generative Model for Hyperspectral Unmixing Accounting for Endmember Variability. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-15. | 6.3 | 7 |
| 50 | Deep Generative Model for Spatial–Spectral Unmixing With Multiple Endmember Priors. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-14. | 6.3 | 7 |
| 51 | Nonlinear unmixing of hyperspectral images using a generalized bilinear model. , 2011, , . | | 6 |
| 52 | A post nonlinear mixing model for hyperspectral images unmixing. , 2011, , . | | 6 |
| 53 | Joint range estimation and spectral classification for 3D scene reconstruction using multispectral Lidar waveforms. , 2016, , . | | 6 |
| 54 | Expectation-propagation Algorithms for Linear Regression with Poisson Noise: Application to Photon-limited Spectral Unmixing. , 2019, , . | | 6 |

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|---|---------|-----|-----------|
| 55 | Expectation-Maximization Based Approach to 3D Reconstruction From Single-Waveform Multispectral Lidar Data. IEEE Transactions on Computational Imaging, 2020, 6, 1033-1043. | 4.4 | 6 |
| 56 | Compressive hyperspectral imaging in the molecular fingerprint band. Optics Express, 2022, 30, 17340. | 3.4 | 6 |
| 57 | Bayesian bacterial detection using irregularly sampled optical endomicroscopy images. Medical Image Analysis, 2019, 57, 18-31. | 11.6 | 5 |
| 58 | On fast object detection using single-photon lidar data. , 2019, , . | | 5 |
| 59 | Expectation-propagation for weak radionuclide identification at radiation portal monitors. Scientific Reports, 2020, 10, 6811. | 3.3 | 4 |
| 60 | Resource-efficient adaptive Bayesian tracking of magnetic fields with a quantum sensor. Journal of Physics Condensed Matter, 2021, 33, 195801. | 1.8 | 4 |
| 61 | Simultaneous multiâ€spectral, singleâ€photon fluorescence imaging using a plasmonic colour filter array. Journal of Biophotonics, 2021, 14, e202000505. | 2.3 | 4 |
| 62 | Sparse Linear Spectral Unmixing of Hyperspectral Images Using Expectation-Propagation. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-13. | 6.3 | 4 |
| 63 | Patch-Based Image Restoration Using Expectation Propagation. SIAM Journal on Imaging Sciences, 2022, 15, 192-227. | 2.2 | 4 |
| 64 | Unsupervised nonlinear unmixing of hyperspectral images using Gaussian processes. , 2012, , . | | 3 |
| 65 | Detecting nonlinear mixtures in hyperspectral images. , 2012, , . | | 3 |
| 66 | Robust Unmixing Algorithms for Hyperspectral Imagery. , 2016, , . | | 3 |
| 67 | Enhancing the recovery of a temporal sequence of images using joint deconvolution. Scientific Reports, 2018, 8, 5257. | 3.3 | 3 |
| 68 | A novel algorithm for the identification of dirac impulses from filtered noisy measurements. Signal Processing, 2019, 162, 268-281. | 3.7 | 3 |
| 69 | Residual component analysis of hyperspectral images for joint nonlinear unmixing and nonlinearity detection. , 2014, , . | | 2 |
| 70 | Robust linear spectral unmixing using outlier detection. , 2015, , . | | 2 |
| 71 | Robust Markov Random Field outlier detection and removal in subsampled images. , 2016, , . | | 2 |
| 72 | Restoration of depth and intensity images using a graph laplacian regularization. , 2017, , . | | 2 |

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|---|---------|-----|-----------|
| 73 | Bayesian Activity Estimation and Uncertainty Quantification of Spent Nuclear Fuel Using Passive Gamma Emission Tomography. Journal of Imaging, 2021, 7, 212. | 3.0 | 2 |
| 74 | Characterising cross-coupling in coherent fibre bundles. , 2019, , . | | 2 |
| 75 | Semi-Supervised Gaussian Mixture Variational Autoencoder for Pulse Shape Discrimination. , 2022, , . | | 2 |
| 76 | Deconvolution of Irregularly Subsampled Images. , 2018, , . | | 1 |
| 77 | Edge-Resolved Transient Imaging: Performance Analyses, Optimizations, and Simulations. , 2021, , . | | 1 |
| 78 | Single-photon lidar used in extreme imaging scenarios. , 2021, , . | | 1 |
| 79 | Underwater depth imaging using time-correlated single-photon counting at video frame rates. , 2019, , . | | 1 |
| 80 | Sparse Spectral Unmixing of Hyperspectral Images using Expectation-Propagation. , 2020, , . | | 1 |
| 81 | Robust Hypersphere Fitting from Noisy Data Using an EM Algorithm. , 2021, , . | | 1 |
| 82 | Nonlinear spectral unmixing of hyperspectral images using residual component analysis. , 2014, , . | | 0 |
| 83 | Nonlinear unmixing of vegetated areas: A model comparison based on simulated and real hyperspectral data. , 2014, , . | | 0 |
| 84 | Linear spectral unmixing using collaborative sparse regression and correlated supports. , 2015, , . | | 0 |
| 85 | Nonlinear spectral unmixing using residual component analysis and a Gamma Markov random field. , 2015, , . | | 0 |
| 86 | Unsupervised restoration of subsampled images constructed from geometric and binomial data. , 2017, , . | | 0 |
| 87 | ANOMALY DETECTION WITH HIGH RESOLUTION HYPERSPECTRAL OBSERVATIONS. , 2018, , . | | 0 |
| 88 | Three-Dimensional Imaging Under Extreme Conditions Using Single-Photon Counting. , 2018, , . | | 0 |
| 89 | Robust Linear Regression and Anomaly Detection in the Presence of Poisson Noise Using Expectation-Propagation. Lecture Notes in Mechanical Engineering, 2021, , 143-158. | 0.4 | 0 |
| 90 | Attenuation and Scattering Correction in Passive Gamma Emission Tomography Reconstruction. , 2020, , . | | 0 |

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|---|---------|----|-----------|
| 91 | Compressive Spectroscopic Long-Wave Infrared Imaging. , 2021, , . | | 0 |
| 92 | Blind deconvolution of images corrupted by Gaussian noise using Expectation Propagation. , 2021, , . | | 0 |