

David J Field

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.

40
papers

12,479
citations

25
h-index

43
g-index

43
ext. papers

14,585
ext. citations

3.7
avg, IF

6.62
L-index

| # | Paper | IF | Citations |
|----|---|------|-----------|
| 40 | Emergence of simple-cell receptive field properties by learning a sparse code for natural images. <i>Nature</i> , 1996 , 381, 607-9 | 50.4 | 3599 |
| 39 | Sparse coding with an overcomplete basis set: a strategy employed by V1?. <i>Vision Research</i> , 1997 , 37, 3311-25 | 2.1 | 2196 |
| 38 | Relations between the statistics of natural images and the response properties of cortical cells. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 1987 , 4, 2379-94 | 1.8 | 1968 |
| 37 | Contour integration by the human visual system: evidence for a local "association field". <i>Vision Research</i> , 1993 , 33, 173-93 | 2.1 | 1365 |
| 36 | Sparse coding of sensory inputs. <i>Current Opinion in Neurobiology</i> , 2004 , 14, 481-7 | 7.6 | 895 |
| 35 | What Is the Goal of Sensory Coding?. <i>Neural Computation</i> , 1994 , 6, 559-601 | 2.9 | 847 |
| 34 | How close are we to understanding v1?. <i>Neural Computation</i> , 2005 , 17, 1665-99 | 2.9 | 351 |
| 33 | Visual sensitivity, blur and the sources of variability in the amplitude spectra of natural scenes. <i>Vision Research</i> , 1997 , 37, 3367-83 | 2.1 | 183 |
| 32 | Statistical regularities of art images and natural scenes: spectra, sparseness and nonlinearities. <i>Spatial Vision</i> , 2007 , 21, 149-64 | | 110 |
| 31 | What is constant in contrast constancy? The effects of scaling on the perceived contrast of bandpass patterns. <i>Vision Research</i> , 1995 , 35, 739-56 | 2.1 | 91 |
| 30 | Contour integration in strabismic amblyopia: the sufficiency of an explanation based on positional uncertainty. <i>Vision Research</i> , 1997 , 37, 3145-61 | 2.1 | 87 |
| 29 | Is the spatial deficit in strabismic amblyopia due to loss of cells or an uncalibrated disarray of cells?. <i>Vision Research</i> , 1994 , 34, 3397-406 | 2.1 | 86 |
| 28 | Local contrast in natural images: normalisation and coding efficiency. <i>Perception</i> , 2000 , 29, 1041-55 | 1.2 | 82 |
| 27 | Normative Visual Development: efficient coding principles for adult V1 predict properties of LGN waves prior to eye opening. <i>BMC Neuroscience</i> , 2010 , 11, | 3.2 | 78 |
| 26 | The role of "contrast enhancement" in the detection and appearance of visual contours. <i>Vision Research</i> , 1998 , 38, 783-7 | 2.1 | 61 |
| 25 | Variations in intensity statistics for representational and abstract art, and for art from the Eastern and Western hemispheres. <i>Perception</i> , 2008 , 37, 1341-52 | 1.2 | 61 |
| 24 | Can the theory of "whitening" explain the center-surround properties of retinal ganglion cell receptive fields?. <i>Vision Research</i> , 2006 , 46, 2901-13 | 2.1 | 60 |

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| 23 | Contour integration across depth. <i>Vision Research</i> , 1995 , 35, 1699-711 | 2.1 | 43 |
| 22 | Estimates of the information content and dimensionality of natural scenes from proximity distributions. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2007 , 24, 922-41 | 1.8 | 40 |
| 21 | Sensitivity to contrast histogram differences in synthetic wavelet-textures. <i>Vision Research</i> , 2001 , 41, 585-98 | 2.1 | 40 |
| 20 | What The Statistics Of Natural Images Tell Us About Visual Coding 1989 , | | 35 |
| 19 | What image properties regulate eye growth?. <i>Current Biology</i> , 2006 , 16, 687-91 | 6.3 | 33 |
| 18 | Innate visual learning through spontaneous activity patterns. <i>PLoS Computational Biology</i> , 2008 , 4, e1000137 | | 32 |
| 17 | Local masking in natural images: a database and analysis. <i>Journal of Vision</i> , 2014 , 14, 22 | 0.4 | 28 |
| 16 | Mapping the similarity space of paintings: Image statistics and visual perception. <i>Visual Cognition</i> , 2010 , 18, 559-573 | 1.8 | 27 |
| 15 | Does spatial invariance result from insensitivity to change?. <i>Journal of Vision</i> , 2007 , 7, 11.1-13 | 0.4 | 16 |
| 14 | Statistical regularities of art images and natural scenes: Spectra, sparseness and nonlinearities. <i>Spatial Vision</i> , 2008 , 21, 149-164 | | 15 |
| 13 | Conjectures regarding the nonlinear geometry of visual neurons. <i>Vision Research</i> , 2016 , 120, 74-92 | 2.1 | 10 |
| 12 | Local edge statistics provide information regarding occlusion and nonocclusion edges in natural scenes. <i>Journal of Vision</i> , 2014 , 14, | 0.4 | 9 |
| 11 | Global nonlinear compression of natural luminances in painted art 2008 , | | 9 |
| 10 | Method for estimating the relative contribution of phase and power spectra to the total information in natural-scene patches. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2012 , 29, 55-67 | 1.8 | 7 |
| 9 | Selectivity, hyperselectivity, and the tuning of V1 neurons. <i>Journal of Vision</i> , 2017 , 17, 9 | 0.4 | 6 |
| 8 | Towards a state-space geometry of neural responses to natural scenes: A steady-state approach. <i>NeuroImage</i> , 2019 , 201, 116027 | 7.9 | 3 |
| 7 | Learning efficient linear codes for natural images: the roles of sparseness, overcompleteness, and statistical independence 1996 , | | 3 |
| 6 | Wavelets, blur, and the sources of variability in the amplitude spectra of natural scenes 1996 , 2657, 108 | | 2 |

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| 5 | Measuring the Information Content of Visually-Evoked Neuroelectric Activity. <i>Journal of Vision</i> , 2019 , 19, 48c | 0.4 | 1 |
| 4 | On the Role of LGN/V1 Spontaneous Activity as an Innate Learning Pattern for Visual Development. <i>Frontiers in Physiology</i> , 2021 , 12, 695431 | 4.6 | 0 |
| 3 | Dynamic Electrode-to-Image (DETI) mapping reveals the human brain's spatiotemporal code of visual information. <i>PLoS Computational Biology</i> , 2021 , 17, e1009456 | 5 | 0 |
| 2 | A geometric state-space framework reveals the evoked potential topography of the visual field. <i>Journal of Vision</i> , 2020 , 20, 1652 | 0.4 | |
| 1 | Revealing the cortical transformations of real-world scenes using dynamic electrode-to-image (DETI) mapping. <i>Journal of Vision</i> , 2021 , 21, 2641 | 0.4 | |