Francisco Arándiga

List of Publications by Year
in descending order

51	844	16	28
papers	citations	h-index (516561)	g-index (501076)

52	52	52	341
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Nonlinear multiscale decompositions: The approach of A. Harten. Numerical Algorithms, 2000, 23, 175-216.	1.1	116
2	Analysis of WENO Schemes for Full and Global Accuracy. SIAM Journal on Numerical Analysis, 2011, 49, 893-915.	1.1	91
3	Tensor product multiresolution analysis with error control for compact image representation. Signal Processing, 2002, 82, 587-608.	2.1	63
4	Data Compression with ENO Schemes: A Case Study. Applied and Computational Harmonic Analysis, 2001, 11, 273-288.	1.1	51
5	Approximation of piecewise smooth functions and images by edge-adapted (ENO-EA) nonlinear multiresolution techniques. Applied and Computational Harmonic Analysis, 2008, 24, 225-250.	1.1	50
6	Interpolation and Approximation of Piecewise Smooth Functions. SIAM Journal on Numerical Analysis, 2005, 43, 41-57.	1.1	45
7	Multiresolution Based on Weighted Averages of the Hat Function I: Linear Reconstruction Techniques. SIAM Journal on Numerical Analysis, 1998, 36, 160-203.	1.1	41
8	Point-Value WENO Multiresolution Applications to Stable Image Compression. Journal of Scientific Computing, 2010, 43, 158-182.	1.1	40
9	Multiresolution Based on Weighted Averages of the Hat Function II: Nonlinear Reconstruction Techniques. SIAM Journal of Scientific Computing, 1998, 20, 1053-1093.	1.3	28
10	Adaptive interpolation of images. Signal Processing, 2003, 83, 459-464.	2.1	27
11	A Spatial-Temporal Model for the Evolution of the COVID-19 Pandemic in Spain Including Mobility. Mathematics, 2020, 8, 1677.	1.1	26
12	Morse Description and Geometric Encoding of Digital Elevation Maps. IEEE Transactions on Image Processing, 2004, 13, 1245-1262.	6.0	25
13	Weights Design For Maximal Order WENO Schemes. Journal of Scientific Computing, 2014, 60, 641-659.	1.1	22
14	Weighted ENO interpolation and applications. Communications in Nonlinear Science and Numerical Simulation, 2004, 9, 187-195.	1.7	20
15	Stability Through Synchronization in Nonlinear Multiscale Transformations. SIAM Journal of Scientific Computing, 2007, 29, 265-289.	1.3	19
16	Discrete multiresolution based on hermite interpolation: computing derivatives. Communications in Nonlinear Science and Numerical Simulation, 2004, 9, 263-273.	1.7	17
17	Edge detection insensitive to changes of illumination in the image. Image and Vision Computing, 2010, 28, 553-562.	2.7	17
18	A nonlinear algorithm for monotone piecewise bicubic interpolation. Applied Mathematics and Computation, 2016, 272, 100-113.	1.4	14

#	Article	IF	Citations
19	Image compression based on a multi-directional map-dependent algorithm. Applied and Computational Harmonic Analysis, 2007, 23, 181-197.	1.1	11
20	Multiresolution Standard Form of a Matrix. SIAM Journal on Numerical Analysis, 1996, 33, 417-434.	1.1	10
21	Lossless and near-lossless image compression based on multiresolution analysis. Journal of Computational and Applied Mathematics, 2013, 242, 70-81.	1.1	10
22	Generalized wavelets design using Kernel methods. Application to signal processing. Journal of Computational and Applied Mathematics, 2013, 250, 1-15.	1.1	9
23	Cell-average multiresolution based on local polynomial regression. Application to image processing. Applied Mathematics and Computation, 2014, 245, 1-16.	1.4	9
24	On the Order of Nonuniform Monotone Cubic Hermite Interpolants. SIAM Journal on Numerical Analysis, 2013, 51, 2613-2633.	1.1	8
25	Reconstructions that combine interpolation with least squares fitting. Applied Numerical Mathematics, 2015, 97, 30-41.	1.2	8
26	The PCHIP subdivision scheme. Applied Mathematics and Computation, 2016, 272, 28-40.	1.4	8
27	On the reconstruction of discontinuous functions using multiquadric RBF–WENO local interpolation techniques. Mathematics and Computers in Simulation, 2020, 176, 4-24.	2.4	8
28	Fast Multiresolution Algorithms for Solving Linear Equations: A Comparative Study. SIAM Journal of Scientific Computing, 1995, 16, 581-600.	1.3	7
29	Learning-based multiresolution transforms with application to image compression. Signal Processing, 2013, 93, 2474-2484.	2.1	7
30	Vector cell-average multiresolution based on Hermite interpolation. Advances in Computational Mathematics, 2007, 28, 1-22.	0.8	6
31	A new class of non-linear monotone Hermite interpolants. Advances in Computational Mathematics, 2013, 39, 289-309.	0.8	6
32	Third-order accurate monotone cubic Hermite interpolants. Applied Mathematics Letters, 2019, 94, 73-79.	1.5	5
33	Adaptive rational interpolation for point values. Journal of Computational and Applied Mathematics, 2019, 349, 212-224.	1.1	4
34	Monotone cubic spline interpolation for functions with a strong gradient. Applied Numerical Mathematics, 2022, 172, 591-607.	1.2	4
35	Approximations of positive operators and continuity of the spectral radius II. Mathematische Zeitschrift, 1992, 209, 547-558.	0.4	3
36	Non-separable two-dimensional weighted ENO interpolation. Applied Numerical Mathematics, 2012, 62, 975-987.	1.2	2

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37	Weighted-Power p Nonlinear Subdivision Schemes. Lecture Notes in Computer Science, 2012, , 109-129.	1.0	2
38	Multiresolution approach to the approximation of the leading eigenelements of some neutron transport operators. Transport Theory and Statistical Physics, 1996, 25, 121-149.	0.4	1
39	Lossless and near-lossless image compression based on multiresolution analysis. , 2005, , .		1
40	Adaptive rational interpolation for cell-average. Applied Mathematics Letters, 2020, 107, 106393.	1.5	1
41	Design of Multiresolution Operators Using Statistical Learning Tools: Application to Compression of Signals. Lecture Notes in Computer Science, 2012, , 94-108.	1.0	1
42	Morse Description and Geometric Encoding of Digital Elevation Maps. , 2003, , 303-312.		1
43	Cell average image transform algorithms with exact error control. Numerical Algorithms, 2015, 69, 75-93.	1.1	0
44	Non-separable local polynomial regression cell-average multiresolution operators. Application to compression of images. Journal of the Franklin Institute, 2016, 353, 670-687.	1.9	0
45	Non-consistent cell-average multiresolution operators with application to image processing. Applied Mathematics and Computation, 2016, 272, 208-222.	1.4	0
46	Generalizing the ENO-DB2p transform using the inverse wavelet transform. Numerical Algorithms, 2017, 74, 175-198.	1.1	0
47	Signal Denoising with Hartenâ€™s Multiresolution Using Interpolation and Least Squares Fitting. SEMA SIMAI Springer Series, 2014, , 137-145.	0.4	0
48	Non-linear Local Polynomial Regression Multiresolution Methods Using $$\ell ^1$$ â„" 1 -norm Minimization with Application to Signal Processing. Lecture Notes in Computer Science, 2015, , 16-31.	1.0	0
49	Reconstructions that Combine Cell Average Interpolation with Least Squares Fitting. Applied Mathematics and Information Sciences, 2016, 10, 173-184.	0.7	0
50	Cell-Average Multiwavelets Based on Hermite Interpolation. , 2006, , 654-661.		0
51	Adaptive interpolation with maximum order close to discontinuities. Applied Mathematics and Computation, 2022, 418, 126795.	1.4	0