Miguel A HernÃ¡ndez-VerÃ³n

List of Publications by Year
in descending order

139 papers	2,114 citations	257450 24 h-index	276875 41 g-index
140 all docs	140 docs citations	140 times ranked	288 citing authors

#	Article	IF	Citations
1	An acceleration of Newton's method: Super-Halley method. Applied Mathematics and Computation, 2001, 117, 223-239.	2.2	126
2	Chebyshev's approximation algorithms and applications. Computers and Mathematics With Applications, 2001, 41, 433-445.	2.7	113
3	A modified Chebyshevâ€™s iterative method with at least sixth order of convergence. Applied Mathematics and Computation, 2008, 206, 164-174.	2.2	92
4	Modification of the Kantorovich assumptions for semilocal convergence of the Chebyshev method. Journal of Computational and Applied Mathematics, 2000, 126, 131-143.	2.0	89
5	New iterations of R-order four with reduced computational cost. BIT Numerical Mathematics, 2009, 49, 325-342.	2.0	80
6	On the R-order of the Halley method. Journal of Mathematical Analysis and Applications, 2005, 303, 591-601.	1.0	71
7	An optimization of Chebyshevâ€™s method. Journal of Complexity, 2009, 25, 343-361.	1.3	63
8	A uniparametric family of iterative processes for solving nondifferentiable equations. Journal of Mathematical Analysis and Applications, 2002, 275, 821-834.	1.0	62
9	Generalized differentiability conditions for Newton's method. IMA Journal of Numerical Analysis, 2002, 22, 187-205.	2.9	59
10	Accessibility Of Solutions By Newton's Method. International Journal of Computer Mathematics, 1995, 57, 239-247.	1.8	53
11	Semilocal convergence of the secant method under mild convergence conditions of differentiability. Computers and Mathematics With Applications, 2002, 44, 277-285.	2.7	51
12	The Newton Method for Operators with HÃ¶lder Continuous First Derivative. Journal of Optimization Theory and Applications, 2001, 109, 631-648.	1.5	50
13	Dynamics of a new family of iterative processes for quadratic polynomials. Journal of Computational and Applied Mathematics, 2010, 233, 2688-2695.	2.0	50
14	On a characterization of some Newton-like methods of R-order at least three. Journal of Computational and Applied Mathematics, 2005, 183, 53-66.	2.0	48
15	A family of chebyshev-halley type methods. International Journal of Computer Mathematics, 1993, 47, 59-63.	1.8	44
16	On Halley-type iterations with free second derivative. Journal of Computational and Applied Mathematics, 2004, 170, 455-459.	2.0	43
17	Newton-type methods of high order and domains of semilocal and global convergence. Applied Mathematics and Computation, 2009, 214, 142-154.	2.2	42
18	On the semilocal convergence of efficient Chebyshevâ€“Secant-type methods. Journal of Computational and Applied Mathematics, 2011, 235, 3195-3206.	2.0	42

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19	Solving a special case of conservative problems by Secant-like methods. Applied Mathematics and Computation, 2005, 169, 926-942.	2.2	34
20	Majorizing sequences for Newtonâ€™s method from initial value problems. Journal of Computational and Applied Mathematics, 2012, 236, 2246-2258.	2.0	28
21	Semilocal convergence of a sixth order iterative method for quadratic equations. Applied Numerical Mathematics, 2012, 62, 833-841.	2.1	28
22	Halley's method for operators with unbounded second derivative. Applied Numerical Mathematics, 2007, 57, 354-360.	2.1	27
23	On Iterative Methods with Accelerated Convergence for Solving Systems of Nonlinear Equations. Journal of Optimization Theory and Applications, 2011, 151, 163-174.	1.5	27
24	New Kantorovich-Type Conditions for Halley's Method. Applied Numerical Analysis and Computational Mathematics, 2005, 2, 70-77.	0.6	26
25	On Steffensenâ€™s method on Banach spaces. Journal of Computational and Applied Mathematics, 2013, 249, 9-23.	2.0	26
26	On the R-order of convergence of Newton's method under mild differentiability conditions. Journal of Computational and Applied Mathematics, 2006, 197, 53-61.	2.0	24
27	An improvement of the region of accessibility of Chebyshevâ€™s method from Newtonâ€™s method. Mathematics of Computation, 2009, 78, 1613-1627.	2.1	23
28	On the local convergence study for an efficient k-step iterative method. Journal of Computational and Applied Mathematics, 2018, 343, 753-761.	2.0	22
29	A modification of the classical Kantorovich conditions for Newton's method. Journal of Computational and Applied Mathematics, 2001, 137, 201-205.	2.0	20
30	On the semilocal convergence of a three steps Newton-type iterative process under mild convergence conditions. Numerical Algorithms, 2015, 70, 377-392.	1.9	20
31	New identities in the Catalan triangle. Journal of Mathematical Analysis and Applications, 2008, 341, 52-61.	1.0	19
32	A variant of the Newtonâ€“Kantorovich theorem for nonlinear integral equations of mixed Hammerstein type. Applied Mathematics and Computation, 2012, 218, 9536-9546.	2.2	18
33	On an efficient ‹mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si5.gif" display="inline" overflow="scroll"›‹mml:mi›k‹/mml:mi›‹/mml:math›-step iterative method for nonlinear equations. Journal of Computational and Applied Mathematics, 2016, 302, 258-271.	2.0	18
34	Analysing the efficiency of some modifications of the secant method. Computers and Mathematics With Applications, 2012, 64, 2066-2073.	2.7	17
35	On the efficiency of two variants of Kurchatovâ€™s method for solving nonlinear systems. Numerical Algorithms, 2013, 64, 685-698.	1.9	16
36	On the global convergence of Chebyshev's iterative method. Journal of Computational and Applied Mathematics, 2008, 220, 17-21.	2.0	15

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37	Solving non-differentiable equations by a new one-point iterative method with memory. Journal of Complexity, 2012, 28, 48-58.	1.3	15
38	Semilocal convergence of secant-like methods for differentiable and nondifferentiable operator equations. Journal of Mathematical Analysis and Applications, 2013, 398, 100-112.	1.0	15
39	A modification of the classic conditions of Newtonâ€“Kantorovich for Newtonâ€™s method. Mathematical and Computer Modelling, 2013, 57, 584-594.	2.0	15
40	Approximation of inverse operators by a new family of high-order iterative methods. Numerical Linear Algebra With Applications, 2014, 21, 629-644.	1.6	15
41	Semilocal convergence of a k-step iterative process and its application for solving a special kind of conservative problems. Numerical Algorithms, 2017, 76, 309-331.	1.9	15
42	Calculus of nth roots and third order iterative methods. Nonlinear Analysis: Theory, Methods & Applications, 2001, 47, 2875-2880.	1.1	13
43	A NEWTON-LIKE METHOD FOR SOLVING SOME BOUNDARY VALUE PROBLEMS. Numerical Functional Analysis and Optimization, 2002, 23, 791-805.	1.4	12
44	General Study of Iterative Processes of R-Order at Least Three under Weak Convergence Conditions. Journal of Optimization Theory and Applications, 2007, 133, 163-177.	1.5	12
45	Solving nonlinear integral equations of Fredholm type with high order iterative methods. Journal of Computational and Applied Mathematics, 2011, 236, 1449-1463.	2.0	12
46	On a Steffensen-like method for solving nonlinear equations. Calcolo, 2016, 53, 171-188.	1.1	12
47	Domains of global convergence for Newtonâ€™s method from auxiliary points. Applied Mathematics Letters, 2018, 85, 48-56.	2.7	12
48	A modification of Newton's method for nondifferentiable equations. Journal of Computational and Applied Mathematics, 2004, 164-165, 409-417.	2.0	11
49	Accelerated convergence in Newton's method for approximating square roots. Journal of Computational and Applied Mathematics, 2005, 177, 225-229.	2.0	11
50	Fourth-order iterations for solving Hammerstein integral equations. Applied Numerical Mathematics, 2009, 59, 1149-1158.	2.1	11
51	On the local convergence of Newtonâ€™s method under generalized conditions of Kantorovich. Applied Mathematics Letters, 2013, 26, 566-570.	2.7	11
52	A semilocal convergence result for Newtonâ€™s method under generalized conditions of Kantorovich. Journal of Complexity, 2014, 30, 309-324.	1.3	11
53	On the Local Convergence of a Third Order Family of Iterative Processes. Algorithms, 2015, 8, 1121-1128.	2.1	11
54	Enlarging the domain of starting points for Newtonâ€™s method under center conditions on the first FrÃ©chet-derivative. Journal of Complexity, 2016, 33, 89-106.	1.3	10

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55	On two highâ€order families of frozen Newtonâ€type methods. Numerical Linear Algebra With Applications, 2018, 25, e2126.	1.6	10
56	A family of newton type iterative processes. International Journal of Computer Mathematics, 1994, 51, 205-214.	1.8	9
57	On a new multiparametric family of Newton-like methods. Applied Numerical Analysis and Computational Mathematics, 2005, 2, 78-88.	0.6	9
58	An extension of Ganderâ€™s result for quadratic equations. Journal of Computational and Applied Mathematics, 2010, 234, 960-971.	2.0	9
59	On a new family of highâ€order iterative methods for the matrix pth root. Numerical Linear Algebra With Applications, 2015, 22, 585-595.	1.6	9
60	Nonlinear Fredholm integral equations and majorant functions. Numerical Algorithms, 2019, 82, 1303-1323.	1.9	9
61	The Ulm method under mild differentiability conditions. Numerische Mathematik, 2008, 109, 193-207.	1.9	8
62	CONSTRUCTION OF DERIVATIVE-FREE ITERATIVE METHODS FROM CHEBYSHEV'S METHOD. Analysis and Applications, 2013, 11, 1350009.	2.2	8
63	A general semilocal convergence result for Newtonâ€™s method under centered conditions for the second derivative. ESAIM: Mathematical Modelling and Numerical Analysis, 2013, 47, 149-167.	1.9	8
64	A family of iterative methods that uses divided differences of first and second orders. Numerical Algorithms, 2015, 70, 571-589.	1.9	8
65	On the ball of convergence of secant-like methods for non-differentiable operators. Applied Mathematics and Computation, 2016, 273, 506-512.	2.2	8
66	On the local convergence of a Newtonâ€“Kurchatov-type method for non-differentiable operators. Applied Mathematics and Computation, 2017, 304, 1-9.	2.2	8
67	How to Obtain Global Convergence Domains via Newtonâ€™s Method for Nonlinear Integral Equations. Mathematics, 2019, 7, 553.	2.2	8
68	A note on a modification of Moser's method. Journal of Complexity, 2008, 24, 185-197.	1.3	7
69	A modification of Cauchy's method for quadratic equations. Journal of Mathematical Analysis and Applications, 2008, 339, 954-969.	1.0	7
70	Increasing the applicability of Steffensen's method. Journal of Mathematical Analysis and Applications, 2014, 418, 1062-1073.	1.0	7
71	A Steffensen type method of two steps in Banach spaces with applications. Journal of Computational and Applied Mathematics, 2016, 291, 317-331.	2.0	7
72	On the Domain of Starting Points of Newtonâ€™s Method Under Center Lipschitz Conditions. Mediterranean Journal of Mathematics, 2016, 13, 2287-2300.	0.8	7

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73	On a Newton-Kurchatov-type Iterative Process. Numerical Functional Analysis and Optimization, 2016, 37, 65-79.	1.4	7
74	Application of iterative processes of R-order at least three to operators with unbounded second derivative. Applied Mathematics and Computation, 2007, 185, 737-747.	2.2	6
75	Improving the efficiency index of one-point iterative processes. Journal of Computational and Applied Mathematics, 2009, 223, 879-892.	2.0	6
76	On some one-point hybrid iterative methods. Nonlinear Analysis: Theory, Methods & Applications, 2010, 72, 587-601.	1.1	6
77	Variants of a classic Traubâ€™s result. Computers and Mathematics With Applications, 2010, 60, 2899-2908.	2.7	6
78	Starting points for Newtonâ€™s method under a center Lipschitz condition for the second derivative. Journal of Computational and Applied Mathematics, 2018, 330, 721-731.	2.0	6
79	Existence, localization and approximation of solution of symmetric algebraic Riccati equations. Computers and Mathematics With Applications, 2018, 76, 187-203.	2.7	6
80	A modification of the convergence conditions for Picard's iteration. Computational and Applied Mathematics, 2004, 23, .	1.3	5
81	High order algorithms for approximatingnth roots. International Journal of Computer Mathematics, 2004, 81, 1001-1014.	1.8	5
82	Chebyshev-Secant-type Methods for Non-differentiable Operators. Milan Journal of Mathematics, 2013, 81, 25-35.	1.1	5
83	A Traub type result for one-point iterative methods with memory. Analysis and Applications, 2014, 12, 323-340.	2.2	5
84	How to Improve the Domain of Starting Points for Steffensen's Method. Studies in Applied Mathematics, 2014, 132, 354-380.	2.4	5
85	A study of optimization for Steffensen-type methods with frozen divided differences. SeMA Journal, 2015, 70, 23-46.	2.0	5
86	The majorant principle applied to Hammerstein integral equations. Applied Mathematics Letters, 2018, 75, 50-58.	2.7	5
87	Improved Iterative Solution of Linear Fredholm Integral Equations of Second Kind via Inverse-Free Iterative Schemes. Mathematics, 2020, 8, 1747.	2.2	5
88	Solving a Boundary Value Problem by a Newton-Like Method. International Journal of Computer Mathematics, 2002, 79, 1113-1120.	1.8	4
89	On the efficiency index of one-point iterative processes. Numerical Algorithms, 2007, 46, 35-44.	1.9	4
90	Toward a unified theory for third R-order iterative methods for operators with unbounded second derivative. Applied Mathematics and Computation, 2009, 215, 2248-2261.	2.2	4

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91	An Ulm-type method with -order of convergence three. Nonlinear Analysis: Real World Applications, 2012, 13, 14-26.	1.7	4
92	Convergence of Newtonâ€™s method under Vertgeim conditions: new extensions using restricted convergence domains. Journal of Mathematical Chemistry, 2017, 55, 1392-1406.	1.5	4
93	On nonlinear Fredholm integral equations with nonâ€differentiable Nemytskii operator. Mathematical Methods in the Applied Sciences, 2020, 43, 7961-7976.	2.3	4
94	A generalization of the Kantorovich type assumptions for Halley's method. International Journal of Computer Mathematics, 2007, 84, 1771-1779.	1.8	3
95	Improving the domain of starting points for secant-like methods. Applied Mathematics and Computation, 2012, 219, 3677-3692.	2.2	3
96	On a family of high-order iterative methods under gamma conditions with applications in denoising. Numerische Mathematik, 2014, 127, 201-221.	1.9	3
97	On the Accessibility of Newtonâ€™s Method under a HÃ¶lder Condition on the First Derivative. Algorithms, 2015, 8, 514-528.	2.1	3
98	Convergence of Steffensenâ€™s method for non-differentiable operators. Numerical Algorithms, 2017, 75, 229-244.	1.9	3
99	On the Existence of Solutions of Nonlinear Fredholm Integral Equations from Kantorovichâ€™s Technique. Algorithms, 2017, 10, 89.	2.1	3
100	Solving Symmetric Algebraic Riccati Equations with High Order Iterative Schemes. Mediterranean Journal of Mathematics, 2018, 15, 1.	0.8	3
101	Majorizing Sequences for Nonlinear Fredholmâ€“Hammerstein Integral Equations. Studies in Applied Mathematics, 2018, 140, 270-297.	2.4	3
102	Numerical analysis for the quadratic matrix equations from a modification of fixedâ€point type. Mathematical Methods in the Applied Sciences, 2019, 42, 5856-5866.	2.3	3
103	A multistep Steffensenâ€type method for solving nonlinear systems of equations. Mathematical Methods in the Applied Sciences, 2020, 43, 7518-7536.	2.3	3
104	A Picard-Type Iterative Scheme for Fredholm Integral Equations of the Second Kind. Mathematics, 2021, 9, 83.	2.2	3
105	Iterative methods for computing the matrix square root. SeMA Journal, 2015, 70, 11-21.	2.0	2
106	A study of the influence of center conditions on the domain of parameters of Newtonâ€™s method by using recurrence relations. Advances in Computational Mathematics, 2017, 43, 1103-1129.	1.6	2
107	On the Efficiency of a Family of Steffensen-Like Methods with Frozen Divided Differences. Computational Methods in Applied Mathematics, 2017, 17, 187-199.	0.8	2
108	Improving the accessibility of Steffensenâ€™s method by decomposition of operators. Journal of Computational and Applied Mathematics, 2018, 330, 536-552.	2.0	2

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109	Extending the choice of starting points for Newton's method. Mathematical Methods in the Applied Sciences, 2020, 43, 8042-8050.	2.3	2
110	Region of accessibility for a class of Newton-type iterations. Proyecciones, 1998, 17, 71-76.	0.3	2
111	A New Third-Order Iterative Processfor Solving Nonlinear Equations. Monatshefte Fur Mathematik, 2001, 133, 131-142.	0.9	1
112	On a Moserâ€“Steffensen Type Method for Nonlinear Systems of Equations. Mediterranean Journal of Mathematics, 2016, 13, 4109-4128.	0.8	1
113	A Unified Convergence Analysis for Some Two-Point Type Methods for Nonsmooth Operators. Mathematics, 2019, 7, 701.	2.2	1
114	The Newtonian Operator and Global Convergence Balls for Newtonâ€™s Method. Mathematics, 2020, 8, 1074.	2.2	1
115	On High-Order Iterative Schemes for the Matrix pth Root Avoiding the Use of Inverses. Mathematics, 2021, 9, 144.	2.2	1
116	ENLARGING THE CONVERGENCE DOMAIN OF SECANT-LIKE METHODS FOR EQUATIONS. Taiwanese Journal of Mathematics, 2015, 19, .	0.4	1
117	Methods with prefixed order for approximating square roots with global and general convergence. Applied Mathematics and Computation, 2007, 194, 346-353.	2.2	0
118	How to Apply Newtonâ€™s Method to Operators with Unbounded Second Derivative. , 2011, , .		0
119	An hybrid method that improves the accessibility of Steffensenâ€™s method. Numerical Algorithms, 2014, 66, 241-267.	1.9	0
120	A Qualitative Analysis of a Family of Newton-Like Iterative Process with R-Order of Convergence At Least Three. SEMA SIMAI Springer Series, 2016, , 173-210.	0.7	0
121	The Theory of Kantorovich for Newtonâ€™s Method: Conditions on the Second Derivative. SEMA SIMAI Springer Series, 2016, , 113-145.	0.7	0
122	Expanding the Applicability of Some High Order HouseholÃ¶lder-Like Methods. Algorithms, 2017, 10, 64.	2.1	0
123	Extending the domain of starting points for Newtonâ€™s method under conditions on the second derivative. Journal of Computational and Applied Mathematics, 2018, 340, 1-10.	2.0	0
124	Toward a general theory of point to point iterative processes free of derivatives with quadratic convergence. AIP Conference Proceedings, 2018, , .	0.4	0
125	On an Inverse Free Steffensen-Type Method for the Approximation of Stiff Differential Equations. Numerical Functional Analysis and Optimization, 2019, 40, 119-133.	1.4	0
126	On the Chandrasekhar integral equation. Computational and Mathematical Methods, 2021, 3, e1150.	0.8	0

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127	On an efficient modification of the Chebyshev method. Computational and Mathematical Methods, 0, , .	0.8	0
128	An Ulm-Type Inverse-Free Iterative Scheme for Fredholm Integral Equations of Second Kind. Symmetry, 2021, 13, 1957.	2.2	0
129	A Modification of the Lipschitz Condition in the Newtonâ€“Kantorovich Theorem. Zeitschrift Fur Analysis Und Ihre Anwendung, 2016, 35, 309-331.	0.6	0
130	Convergence conditions on the k-th derivative of the operator. Frontiers in Mathematics, 2017, , 83-125.	0.3	0
131	Convergence conditions on the first derivative of the operator. Frontiers in Mathematics, 2017, , 127-159.	0.3	0
132	Convergence conditions on the second derivative of the operator. Frontiers in Mathematics, 2017, , 39-81.	0.3	0
133	An improvement of derivative-free point-to-point iterative processes with central divided differences. International Journal of Nonlinear Sciences and Numerical Simulation, 2022, .	1.0	0
134	How to Increase the Accessibility of Newtonâ€™s Method for Operators With Center-Lipschitz Continuous First Derivative. Numerical Functional Analysis and Optimization, 0, , 1-14.	1.4	0
135	Location of Solutions of Fredholmâ€“Nemytskii Integral Equations from a Whittaker-Type Operator. Mediterranean Journal of Mathematics, 2022, 19, 1.	0.8	0
136	Toward a unified theory of inverse-free two-step point-to-point iterative processes. AIP Conference Proceedings, 2022, , .	0.4	0
137	An Algorithm Derivative-Free to Improve the Steffensen-Type Methods. Symmetry, 2022, 14, 4.	2.2	0
138	About a fixedâ€pointâ€type transformation to solve quadratic matrix equations using the Krasnoselskij method. Mathematical Methods in the Applied Sciences, 0, , .	2.3	0
139	Location, Separation and Approximation of Solutions for Quadratic Matrix Equations. Foundations, 2022, 2, 457-474.	1.3	0