Beatrice Paternoster

List of Publications by Year
in descending order

103 papers	1,620 citations	236925 25 h-index	361022 35 g-index
107 all docs	107 docs citations	107 times ranked	262 citing authors

#	Article	IF	Citations
1	Multivalue Collocation Methods for Ordinary and Fractional Differential Equations. Mathematics, 2022, 10, 185.	2.2	6
2	Stiffness ratio and the diffusion of fake news. AIP Conference Proceedings, 2022, , .	0.4	1
3	Semi-implicit multivalue almost collocation methods. AIP Conference Proceedings, 2022, , .	0.4	0
4	Numerical conservation issues for stochastic Hamiltonian problems. AIP Conference Proceedings, 2022, , .	0.4	0
5	Adapted peer methods for oscillatory problems. AIP Conference Proceedings, 2022, , .	0.4	0
6	Two-step peer methods with equation-dependent coefficients. Computational and Applied Mathematics, 2022, 41, 1.	2.2	4
7	A Modified SEIR Model: Stiffness Analysis andÂApplication toÂtheÂDiffusion ofÂFake News. Lecture Notes in Computer Science, 2022, , 90-103.	1.3	1
8	Improved Ï‑methods for stochastic Volterra integral equations. Communications in Nonlinear Science and Numerical Simulation, 2021, 93, 105528.	3.3	15
9	Multivalue collocation methods free from order reduction. Journal of Computational and Applied Mathematics, 2021, 387, 112515.	2.0	24
10	Time-Delay Fractional Optimal Control Problems: A Survey Based on Methodology. Lecture Notes in Mechanical Engineering, 2021, , 325-337.	0.4	4
11	Jacobian-Dependent Two-Stage Peer Method for Ordinary Differential Equations. Lecture Notes in Computer Science, 2021, , 309-324.	1.3	3
12	Vehicle-to-Everything (V2X) Communication Scenarios for Vehicular Ad-hoc Networking (VANET): AnÂOverview. Lecture Notes in Computer Science, 2021, , 15-30.	1.3	5
13	Comparison Between Protein-Protein Interaction Networks CD4$$^+$$T and CD8$$^+$$T and a Numerical Approach for Fractional HIV Infection of CD4$$^{+}$$T Cells. Lecture Notes in Computer Science, 2021, , 78-94.	1.3	2
14	Continuous Extension of Euler-Maruyama Method for Stochastic Differential Equations. Lecture Notes in Computer Science, 2021, , 135-145.	1.3	1
15	Optimal control of system governed by nonlinear volterra integral and fractional derivative equations. Computational and Applied Mathematics, 2021, 40, 1.	2.2	5
16	Stiffness Analysis to Predict the Spread Out of Fake Information. Future Internet, 2021, 13, 222.	3.8	14
17	Perturbative analysis of stochastic Hamiltonian problems under time discretizations. Applied Mathematics Letters, 2021, 120, 107223.	2.7	10
18	Multivalue mixed collocation methods. Applied Mathematics and Computation, 2021, 409, 126346.	2.2	6

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19	Synchronization scenarios induced by delayed communication in arrays of diffusively coupled autonomous chemical oscillators. Physical Chemistry Chemical Physics, 2021, 23, 17606-17615.	2.8	8
20	Numerical Treatment of Fractional Differential Models. Lecture Notes in Mechanical Engineering, 2021, , 289-302.	0.4	3
21	A MATLAB Implementation of Spline Collocation Methods for Fractional Differential Equations. Lecture Notes in Computer Science, 2021, , 387-401.	1.3	4
22	Highly stable multivalue collocation methods. Journal of Physics: Conference Series, 2020, 1564, 012012.	0.4	3
23	Singly diagonally implicit multivalue collocation methods. , 2020, , .		1
24	Some mathematical aspects to detect fake news: a short review. , 2020, , .		2
25	Jacobian-dependent vs Jacobian-free discretizations for nonlinear differential problems. Computational and Applied Mathematics, 2020, 39, 1.	2.2	4
26	Exponentially fitted two-step peer methods for oscillatory problems. Computational and Applied Mathematics, 2020, 39, 1.	2.2	13
27	Regularized exponentially fitted methods for oscillatory problems. Journal of Physics: Conference Series, 2020, 1564, 012013.	0.4	3
28	User-Friendly Expressions of the Coefficients of Some Exponentially Fitted Methods. Lecture Notes in Computer Science, 2020, , 47-62.	1.3	1
29	Multivalue Almost Collocation Methods with Diagonal Coefficient Matrix. Lecture Notes in Computer Science, 2020, , 135-148.	1.3	0
30	A spectral method for stochastic fractional differential equations. Applied Numerical Mathematics, 2019, 139, 115-119.	2.1	30
31	Adapted explicit two-step peer methods. Journal of Numerical Mathematics, 2019, 27, 69-83.	3.5	20
32	Parameter estimation in IMEX-trigonometrically fitted methods for the numerical solution of reactionâ€"diffusion problems. Computer Physics Communications, 2018, 226, 55-66.	7.5	13
33	Stability Issues for Selected Stochastic Evolutionary Problems: A Review. Axioms, 2018, 7, 91.	1.9	11
34	Collocation Methods for Volterra Integral and Integro-Differential Equations: A Review. Axioms, 2018, 7, 45.	1.9	20
35	Stochastic Numerical Models of Oscillatory Phenomena. Communications in Computer and Information Science, 2018, , 59-69.	0.5	0
36	Adapted numerical modelling of the Belousovâ€"Zhabotinsky reaction. Journal of Mathematical Chemistry, 2018, 56, 2876-2897.	1.5	9

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37	On the stability of <inline-formula><tex-math id="M1">egin{document} $vartheta$end{document}</tex-math></inline-formula>-methods for stochastic Volterra integral equations. Discrete and Continuous Dynamical Systems - Series B, 2018, 23, 2695-2708.	0.9	10
38	Two-step collocation methods for fractional differential equations. Discrete and Continuous Dynamical Systems - Series B, 2018, 23, 2709-2725.	0.9	10
39	Numerical preservation of long-term dynamics by stochastic two-step methods. Discrete and Continuous Dynamical Systems - Series B, 2018, 23, 2763-2773.	0.9	14
40	Parallel methods for weakly singular Volterra integral equations on GPUs. Applied Numerical Mathematics, 2017, 114, 30-37.	2.1	13
41	High order exponentially fitted methods for Volterra integral equations with periodic solution. Applied Numerical Mathematics, 2017, 114, 18-29.	2.1	21
42	Numerical solution of time fractional diffusion systems. Applied Numerical Mathematics, 2017, 116, 82-94.	2.1	44
43	Construction and implementation of two-step continuous methods for Volterra integral equations. Applied Numerical Mathematics, 2017, 119, 239-247.	2.1	19
44	Adapted numerical methods for advectionâ€“reactionâ€“diffusion problems generating periodic wavefronts. Computers and Mathematics With Applications, 2017, 74, 1029-1042.	2.7	36
45	Exponentially fitted IMEX methods for advectionâ€“diffusion problems. Journal of Computational and Applied Mathematics, 2017, 316, 100-108.	2.0	27
46	On the numerical treatment of selected oscillatory evolutionary problems. AIP Conference Proceedings, 2017, , .	0.4	1
47	On the Employ of Time Series in the Numerical Treatment of Differential Equations Modeling Oscillatory Phenomena. Communications in Computer and Information Science, 2017, , 179-187.	0.5	3
48	Modified Gaussâ€“Laguerre Exponential Fitting Based Formulae. Journal of Scientific Computing, 2016, 69, 227-243.	2.3	19
49	General NystrÃ¶m methods in Nordsieck form: Error analysis. Journal of Computational and Applied Mathematics, 2016, 292, 694-702.	2.0	10
50	GPU-acceleration of waveform relaxation methods for large differential systems. Numerical Algorithms, 2016, 71, 293-310.	1.9	21
51	Numerical solution of reactionâ€“diffusion systems of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si16.gif" display="inline" overflow="scroll"><mml:mi>Î»</mml:mi></mml:math>â€“<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si17.gif" display="inline" overflow="scroll"><mml:mi>Ï‰</mml:mi></mml:math>type by trigonometrically fitted methods. Journal of Computational and Applied Mathematics, 2016, 294, 436-445.	2.0	27
52	Highly stable multivalue numerical methods. AIP Conference Proceedings, 2015, , .	0.4	0
53	A general framework for the numerical solution of second order ODEs. Mathematics and Computers in Simulation, 2015, 110, 113-124.	4.4	10
54	Ef-Gaussian direct quadrature methods for Volterra integral equations with periodic solution. Mathematics and Computers in Simulation, 2015, 110, 125-143.	4.4	17

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55	Numerical integration of Hamiltonian problems by G-symplectic methods. Advances in Computational Mathematics, 2014, 40, 553.	1.6	15
56	Order conditions for General Linear NystrÃ¶m methods. Numerical Algorithms, 2014, 65, 579-595.	1.9	13
57	Revised exponentially fitted Rungeâ€“Kuttaâ€“NystrÃ¶m methods. Applied Mathematics Letters, 2014, 30, 56-60.	2.7	27
58	P-stable general NystrÃ¶m methods foryâ€³=f(y(t)). Journal of Computational and Applied Mathematics, 2014, 262, 271-280.	2.0	9
59	Exponentially-fitted Gaussâ€“Laguerre quadrature rule for integrals over an unbounded interval. Journal of Computational and Applied Mathematics, 2014, 255, 725-736.	2.0	20
60	Exponentially fitted singly diagonally implicit Rungeâ€“Kutta methods. Journal of Computational and Applied Mathematics, 2014, 263, 277-287.	2.0	26
61	Numerical solution of a diffusion problem by exponentially fitted finite difference methods. SpringerPlus, 2014, 3, 425.	1.2	28
62	Numerical search for algebraically stable two-step almost collocation methods. Journal of Computational and Applied Mathematics, 2013, 239, 304-321.	2.0	26
63	Exponential fitting quadrature rule for functional equations. , 2012, , .		7
64	Diagonally implicit exponentially fitted Runge-Kutta methods with equation dependent coefficients. , 2012, , .		0
65	An exponentially fitted quadrature rule over unbounded intervals. , 2012, , .		5
66	General linear methods for yâ€²â€²â€‰=â€‰fâ€‰(yâ€‰(t)). Numerical Algorithms, 2012, 61, 331-349.	1.9	29
67	A PRACTICAL APPROACH FOR THE DERIVATION OF ALGEBRAICALLY STABLE TWO-STEP RUNGE-KUTTA METHODS. Mathematical Modelling and Analysis, 2012, 17, 65-77.	1.5	13
68	Two-step diagonally-implicit collocation based methods for Volterra Integral Equations. Applied Numerical Mathematics, 2012, 62, 1312-1324.	2.1	24
69	Two-step modified collocation methods with structured coefficient matrices. Applied Numerical Mathematics, 2012, 62, 1325-1334.	2.1	25
70	Present state-of-the-art in exponential fitting. A contribution dedicated to Liviu Ixaru on his 70th birthday. Computer Physics Communications, 2012, 183, 2499-2512.	7.5	80
71	Exponentially fitted two-step Rungeâ€“Kutta methods: Construction and parameter selection. Applied Mathematics and Computation, 2012, 218, 7468-7480.	2.2	28
72	Parameter estimation in exponentially fitted hybrid methods for second order differential problems. Journal of Mathematical Chemistry, 2012, 50, 155-168.	1.5	29

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73	Exponentially fitted two-step hybrid methods for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si14.gif" display="inline" overflow="scroll"><mml:msup><mml:mrow><mml:mi>y</mml:mi></mml:mrow><mml:mrow><mml:mo>â€³</mml:mo></mml:mrow> Journal of Computational and Applied Mathematics, 2011, 235, 4888-4897.	2.0	38
74	Construction of the ef-based Rungeâ€“Kutta methods revisited. Computer Physics Communications, 2011, 182, 322-329.	7.5	29
75	Trigonometrically fitted two-step hybrid methods for special second order ordinary differential equations. Mathematics and Computers in Simulation, 2011, 81, 1068-1084.	4.4	31
76	Advances on Collocation Based Numerical Methods for Ordinary Differential Equations and Volterra Integral Equations. , 2011, , 41-66.		2
77	Two-step almost collocation methods for ordinary differential equations. Numerical Algorithms, 2010, 53, 195-217.	1.9	37
78	Exponential fitting Direct Quadrature methods for Volterra integral equations. Numerical Algorithms, 2010, 55, 467-480.	1.9	28
79	Some new uses of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:msub><mml:mi>Î·</mml:mi><mml:mi>m</mml:mi></mml:msub><mml:mo stretchy="false">(</mml:mo><mml:mi>Z</mml:mi><mml:mo stretchy="false">)</mml:mo></mml:math> functions. Computer Physics Communications, 2010, 181, 128-137.	7.5	18
80	A Family of Exponential Fitting Direct Quadrature Methods for Volterra Integral Equations. , 2010, , .		7
81	A family of Multistep Collocation Methods for Volterra Integro-Differential Equations. , 2009, , .		17
82	Two-step hybrid collocation methods for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" display="inline" overflow="scroll"><mml:msup><mml:mrow><mml:mi>y</mml:mi></mml:mrow><mml:mrow><mml:mo>â€³</mml:mo></mml:mrow> Applied Mathematics Letters, 2009, 22, 1076-1080.	2.7	37
83	Multistep collocation methods for Volterra Integral Equations. Applied Numerical Mathematics, 2009, 59, 1721-1736.	2.1	74
84	Modified Collocation Techniques for Volterra Integral Equations. , 2009, , .		1
85	Practical Construction of Two-Step Collocation Runge-Kutta Methods for Ordinary Differential Equations. , 2009, , .		1
86	Two-step almost collocation methods for Volterra integral equations. Applied Mathematics and Computation, 2008, 204, 839-853.	2.2	41
87	Stability of Equilibrium Points of Fractional Difference Equations with Stochastic Perturbations. Advances in Difference Equations, 2008, 2008, 1-22.	3.5	8
88	A Family of Multistep Collocation Methods for Volterra Integral Equations. AIP Conference Proceedings, 2007, , .	0.4	12
89	Mean Square Summability of Solution of Stochastic Difference Second-Kind Volterra Equation with Small Nonlinearity. Advances in Difference Equations, 2007, 2007, 1-14.	3.5	1
90	Stability analysis of frequency and step length dependent Rungeâ€“Kuttaâ€“NystrÃ¶m methods. Future Generation Computer Systems, 2006, 22, 395-402.	7.5	2

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91	Stability regions of one step mixed collocation methods for. Applied Numerical Mathematics, 2005, 53, 201-212.	2.1	9
92	Application of the general method of Lyapunov functionals construction for difference Volterra equations. Computers and Mathematics With Applications, 2004, 47, 1165-1176.	2.7	4
93	Vandermondeâ€“Type Matrices in Two Step Collocation Methods for Special Second Order Ordinary Differential Equations. Lecture Notes in Computer Science, 2004, , 418-425.	1.3	2
94	Two Step Runge-Kutta-NystrÃ¶m Methods for Oscillatory Problems Based on Mixed Polynomials. Lecture Notes in Computer Science, 2003, , 131-138.	1.3	5
95	Two Step Runge-Kutta-NystrÃ¶m Methods for yâ€³ = f(x,y) and P-Stability. Lecture Notes in Computer Science, 2002, , 459-466.	1.3	19
96	A Gauss quadrature rule for oscillatory integrands. Computer Physics Communications, 2001, 133, 177-188.	7.5	37
97	A phase-fitted collocation-based Rungeâ€“Kuttaâ€“NystrÃ¶m method. Applied Numerical Mathematics, 2000, 35, 339-355.	2.1	32
98	About stability of nonlinear stochastic difference equations. Applied Mathematics Letters, 2000, 13, 27-32.	2.7	19
99	Analysis of Stability of Rational Approximations through Computer Algebra. , 1999, , 25-36.		3
100	Computation of the Interval of Stability of Rungeâ€“Kuttaâ€“NystrÃ¶m Methods. Journal of Symbolic Computation, 1998, 25, 383-394.	0.8	9
101	Order bound for a family of parallel Runge-Kutta-NystrÃ¶m methods through computer algebra. Computers and Mathematics With Applications, 1998, 35, 107-119.	2.7	9
102	Runge-Kutta(-NystrÃ¶m) methods for ODEs with periodic solutions based on trigonometric polynomials. Applied Numerical Mathematics, 1998, 28, 401-412.	2.1	127
103	Fully parallel Runge-Kutta-NystrÃ¶m methods for ODEs with oscillating solutions. Applied Numerical Mathematics, 1993, 11, 143-158.	2.1	6