Alexander Zadorin

List of Publications by Year
in descending order

48 papers	183 citations	1307594 7 h-index	1281871 11 g-index
49 all docs	49 docs citations	49 times ranked	26 citing authors

#	Article	IF	Citations
1	Approaches to constructing two-dimensional interpolation formulas in the presence of boundary layers. Journal of Physics: Conference Series, 2022, 2182, 012036.	0.4	2
2	Analysis of approaches to spline interpolation of functions with large gradients in the boundary layer. Journal of Physics: Conference Series, 2022, 2182, 012016.	0.4	0
3	Lagrange Interpolation and the Newtonâ€"Cotes Formulas on a Bakhvalov Mesh in the Presence of a Boundary Layer. Computational Mathematics and Mathematical Physics, 2022, 62, 347-358.	0.8	1
4	Non-Polynomial Interpolation of Functions with Large Gradients and Its Application. Computational Mathematics and Mathematical Physics, 2021, 61, 167-176.	0.8	2
5	Application a cubic spline to calculate derivatives in the presence of a boundary layer. Journal of Physics: Conference Series, 2021, 1791, 012069.	0.4	1
6	New approaches to constructing quadrature formulas for functions with large gradients. Journal of Physics: Conference Series, 2021, 1901, 012055.	0.4	0
7	Application of Cubic Splines on Bakhvalov Meshes in the Case of a Boundary Layer. Computational Mathematics and Mathematical Physics, 2021, 61, 1911-1930.	0.8	1
8	Optimization of nodes of Newton-Cotes formulas in the presence of an exponential boundary layer. Journal of Physics: Conference Series, 2020, 1546, 012107.	0.4	0
9	Generalized Spline Interpolation of Functions with Large Gradients in Boundary Layers. Computational Mathematics and Mathematical Physics, 2020, 60, 411-426.	0.8	0
10	Approaches to the calculation of derivatives of functions with large gradients in the boundary layer under the values at the grid nodes. Journal of Physics: Conference Series, 2019, 1158, 022029.	0.4	1
11	Adaptive formulas of numerical differentiation of functions with large gradients. Journal of Physics: Conference Series, 2019, 1260, 042003.	0.4	5
12	An application of the cubic spline on Shishkin mesh for the approximation of a function and its derivatives in the presence of a boundary layer. Journal of Physics: Conference Series, 2019, 1210, 012017.	0.4	1
13	Analogue of Cubic Spline for Functions with Large Gradients in a Boundary Layer. Lecture Notes in Computer Science, 2019, , 654-662.	1.3	0
14	Approximation of a Function and Its Derivatives on the Basis of Cubic Spline Interpolation in the Presence of a Boundary Layer. Computational Mathematics and Mathematical Physics, 2019, 59, 343-354.	0.8	6
15	On the Parameter-Uniform Convergence of Exponential Spline Interpolation in the Presence of a Boundary Layer. Computational Mathematics and Mathematical Physics, 2018, 58, 348-363.	0.8	8
16	Analysis of Numerical Differentiation Formulas in a Boundary Layer on a Shishkin Grid. Numerical Analysis and Applications, 2018, 11, 193-203.	0.4	3
17	An application of the exponential spline for the approximation of a function and its derivatives in the presence of a boundary layer. Journal of Physics: Conference Series, 2018, 1050, 012012.	0.4	1
18	On the uniform convergence of parabolic spline interpolation on the class of functions with large gradients in the boundary layer. Numerical Analysis and Applications, 2017, 10, 108-119.	0.4	6

#	Article	IF	Citations
19	Parabolic spline interpolation for functions with large gradient in the boundary layer. Siberian Mathematical Journal, 2017, 58, 578-590.	0.6	8
20	Cubic spline interpolation of functions with high gradients in boundary layers. Computational Mathematics and Mathematical Physics, 2017, 57, 7-25.	0.8	21
21	Two-Dimensional Interpolation of Functions with Large Gradients in Boundary Layers. Lecture Notes in Computer Science, 2017, , 760-768.	1.3	0
22	Analogue of Newtonâ€"Cotes formulas for numerical integration of functions with a boundary-layer component. Computational Mathematics and Mathematical Physics, 2016, 56, 358-366.	0.8	5
23	Analysis of polynomial interpolation of the function of two variables with large gradients in the parabolic boundary layers. AIP Conference Proceedings, 2016, , .	0.4	1
24	Interpolation of a function of two variables with large gradients in boundary layers. Lobachevskii Journal of Mathematics, 2016, 37, 349-359.	0.9	7
25	A two-grid method with Richardson extrapolation for a semilinear convection-diffusion problem. AIP Conference Proceedings, 2015, , .	0.4	3
26	A two-grid method for elliptic problem with boundary layers. Applied Numerical Mathematics, 2015, 93, 270-278.	2.1	12
27	Lagrange interpolation and Newton-Cotes formulas for functions with boundary layer components on piecewise-uniform grids. Numerical Analysis and Applications, 2015, 8, 235-247.	0.4	11
28	The Analysis of Lagrange Interpolation for Functions with a Boundary Layer Component. Lecture Notes in Computer Science, 2015, , 426-432.	1.3	2
29	Modification of the Euler quadrature formula for functions with a boundary-layer component. Computational Mathematics and Mathematical Physics, 2014, 54, 1489-1498.	0.8	0
30	Solving a second-order nonlinear singular perturbation ordinary differential equation by a Samarskii scheme. Numerical Analysis and Applications, 2013, 6, 9-23.	0.4	7
31	Cubature formulas for a two-variable function with boundary-layer components. Computational Mathematics and Mathematical Physics, 2013, 53, 1808-1818.	0.8	1
32	An analogue of the four-point Newton-Cotes formula for a function with a boundary-layer component. Numerical Analysis and Applications, 2013, 6, 268-278.	0.4	4
33	Difference Scheme on a Uniform Grid for the Singularly Perturbed Cauchy Problem. Journal of Mathematical Sciences, 2013, 195, 865-872.	0.4	3
34	Quadrature Formula with Five Nodes for Functions with a Boundary Layer Component. Lecture Notes in Computer Science, 2013, , 540-546.	1.3	3
35	Analysis of a difference scheme for a singular perturbation Cauchy problem on refined grids. Numerical Analysis and Applications, 2011, 4, 36-45.	0.4	3
36	Quadrature formulas for functions with a boundary-layer component. Computational Mathematics and Mathematical Physics, 2011, 51, 1837-1846.	0.8	10

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37	Spline interpolation on a uniform grid for functions with a boundary-layer component. Computational Mathematics and Mathematical Physics, 2010, 50, 211-223.	0.8	16
38	A Two-Grid Algorithm for Solution of the Difference Equations of a System of Singularly Perturbed Semilinear Equations. Lecture Notes in Computer Science, 2009, , 580-587.	1.3	2
39	Two-grid Algorithms for The Solution of 2D Semilinear Singularly-perturbed Convection-diffusion Equations Using an Exponential Finite Difference Scheme. , 2009, , .		8
40	Interpolation Method for a Function with a Singular Component. Lecture Notes in Computer Science, 2009, , 612-619.	1.3	4
41	Refined-mesh interpolation method for functions with a boundary-layer component. Computational Mathematics and Mathematical Physics, 2008, 48, 1634-1645.	0.8	4
42	Two-grid Interpolation Algorithms for Difference Schemes of Exponential Type for Semilinear Diffusion Convection-Dominated Equations. , 2008, , .		3
43	Title is missing!. Siberian Mathematical Journal, 2001, 42, 884-892.	0.6	0
44	A Method of Lines Approach to the Numerical Solution of Singularly Perturbed Elliptic Problems. Lecture Notes in Computer Science, 2001, , 451-458.	1.3	2
45	A difference scheme for a non-linear singularly perturbed second-order equation. USSR Computational Mathematics and Mathematical Physics, 1990, 30, 107-111.	0.0	0
46	Finite-difference method for calculating a two-dimensional laminar flame. Combustion, Explosion and Shock Waves, 1987, 22, 423-425.	0.8	0
47	Numerical solution of the third boundary value problem for an equation with a small parameter. USSR Computational Mathematics and Mathematical Physics, 1984, 24, 28-33.	0.0	4
48	On the numerical solution of equations with a small parameter in the highest derivative. USSR Computational Mathematics and Mathematical Physics, 1983, 23, 66-71.	0.0	1