## Carl Kelley

## List of Publications by Year in descending order

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CADI KELLEV

#	Article	IF	CITATIONS
1	A Locally-Biased form of the DIRECT Algorithm. Journal of Global Optimization, 2001, 21, 27-37.	1.1	251
2	Convergence Analysis of Pseudo-Transient Continuation. SIAM Journal on Numerical Analysis, 1998, 35, 508-523.	1.1	218
3	Detection and Remediation of Stagnation in the NelderMead Algorithm Using a Sufficient Decrease Condition. SIAM Journal on Optimization, 1999, 10, 43-55.	1.2	166
4	Accurate and economical solution of the pressure-head form of Richards' equation by the method of lines. Advances in Water Resources, 1997, 20, 1-14.	1.7	137
5	An Implicit Filtering Algorithm for Optimization of Functions with Many Local Minima. SIAM Journal on Optimization, 1995, 5, 269-285.	1.2	136
6	Robust solution of Richards' equation for nonuniform porous media. Water Resources Research, 1998, 34, 2599-2610.	1.7	116
7	Convergence Analysis for Anderson Acceleration. SIAM Journal on Numerical Analysis, 2015, 53, 805-819.	1.1	115
8	Optimal design for problems involving flow and transport phenomena in saturated subsurface systems. Advances in Water Resources, 2002, 25, 1233-1256.	1.7	106
9	Newton's Method at Singular Points. I. SIAM Journal on Numerical Analysis, 1980, 17, 66-70.	1.1	88
10	Additive Scaling and the DIRECT Algorithm. Journal of Global Optimization, 2006, 36, 597-608.	1.1	88
11	Convergence of iterative split-operator approaches for approximating nonlinear reactive transport problems. Advances in Water Resources, 2003, 26, 247-261.	1.7	86
12	Pseudotransient Continuation and Differential-Algebraic Equations. SIAM Journal of Scientific Computing, 2003, 25, 553-569.	1.3	85
13	Convergence Rates for Newton's Method at Singular Points. SIAM Journal on Numerical Analysis, 1983, 20, 296-314.	1.1	83
14	Comparison of derivative-free optimization methods for groundwater supply and hydraulic capture community problems. Advances in Water Resources, 2008, 31, 743-757.	1.7	81
15	GMRES and the minimal polynomial. BIT Numerical Mathematics, 1996, 36, 664-675.	1.0	78
16	Numerical simulation of water resources problems: Models, methods, and trends. Advances in Water Resources, 2013, 51, 405-437.	1.7	73
17	Developing portfolios of water supply transfers. Water Resources Research, 2006, 42, .	1.7	70
18	Algorithms for Noisy Problems in Gas Transmission Pipeline Optimization. Optimization and Engineering, 2001, 2, 139-157.	1.3	68

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19	Superlinear Convergence and Implicit Filtering. SIAM Journal on Optimization, 2000, 10, 1149-1162.	1.2	58
20	Estimation and identification of parameters in a lumped cerebrovascular model. Mathematical Biosciences and Engineering, 2009, 6, 93-115.	1.0	58
21	Existence and uniqueness of solutions of nonlinear systems of conductive-radiative heat transfer equations. Transport Theory and Statistical Physics, 1996, 25, 249-260.	0.4	51
22	Newton's Method at Singular Points. II. SIAM Journal on Numerical Analysis, 1980, 17, 465-471.	1.1	49
23	Quasi-Newton Methods and Unconstrained Optimal Control Problems. SIAM Journal on Control and Optimization, 1987, 25, 1503-1516.	1.1	48
24	Insights into the Spin-State Transitions in [Fe(tpy) <sub>2</sub> ] <sup>2+</sup> : Importance of the Terpyridine Rocking Motion. Inorganic Chemistry, 2015, 54, 11259-11268.	1.9	47
25	Yield optimization using a GaAs process simulator coupled to a physical device model. IEEE Transactions on Microwave Theory and Techniques, 1992, 40, 1353-1363.	2.9	45
26	Optimization of Automotive Valve Train Components with Implicit Filtering. Optimization and Engineering, 2000, 1, 9-27.	1.3	42
27	Numerical methods for nonlinear equations. Acta Numerica, 2018, 27, 207-287.	6.3	42
28	Convergence Acceleration for Newton's Method at Singular Points. SIAM Journal on Numerical Analysis, 1982, 19, 219-229.	1.1	41
29	Transformation approaches for simulating flow in variably saturated porous media. Water Resources Research, 2000, 36, 923-934.	1.7	39
30	Multilevel Algorithms for Constrained Compact Fixed Point Problems. SIAM Journal of Scientific Computing, 1994, 15, 645-667.	1.3	37
31	Fast Algorithms for Nonsmooth Compact Fixed-Point Problems. SIAM Journal on Numerical Analysis, 1992, 29, 1769-1792.	1.1	36
32	Efficient steady-state solution techniques for variably saturated groundwater flow. Advances in Water Resources, 2003, 26, 833-849.	1.7	36
33	An Aggregation-Based Domain Decomposition Preconditioner for Groundwater Flow. SIAM Journal of Scientific Computing, 2001, 23, 430-441.	1.3	35
34	An assessment of coupling algorithms for nuclear reactor core physics simulations. Journal of Computational Physics, 2016, 311, 241-257.	1.9	35
35	The Simplex Gradient and Noisy Optimization Problems. , 1998, , 77-90.		35
36	A New Acceleration Method for Newton's Method at Singular Points. SIAM Journal on Numerical Analysis, 1983, 20, 1001-1009.	1.1	34

#	Article	IF	CITATIONS
37	Title is missing!. Annals of Software Engineering, 1998, 2, 291-309.	0.5	34
38	Patient-specific modeling of cardiovascular and respiratory dynamics during hypercapnia. Mathematical Biosciences, 2013, 241, 56-74.	0.9	32
39	Solution of the Chandrasekhar Hâ€equation by Newton's Method. Journal of Mathematical Physics, 1980, 21, 1625-1628.	0.5	31
40	Rank-Deficient Nonlinear Least Squares Problems and Subset Selection. SIAM Journal on Numerical Analysis, 2011, 49, 1244-1266.	1.1	31
41	Convergence Estimates for Solution of Integral Equations with GMRES. Journal of Integral Equations and Applications, 1996, 8, 19.	0.2	30
42	A Fast Multilevel Algorithm for the Solution of Nonlinear Systems of Conductive-Radiative Heat Transfer Equations. SIAM Journal of Scientific Computing, 1998, 19, 266-279.	1.3	30
43	More efficient optimization of longâ€ŧerm water supply portfolios. Water Resources Research, 2009, 45,	1.7	29
44	Broyden's Method for a Class of Problems Having Singular Jacobian at the Root. SIAM Journal on Numerical Analysis, 1985, 22, 566-574.	1.1	28
45	A Quasi-Newton Method for Elliptic Boundary Value Problems. SIAM Journal on Numerical Analysis, 1987, 24, 516-531.	1.1	28
46	Mesh Independence of the Gradient Projection Method for Optimal Control Problems. SIAM Journal on Control and Optimization, 1992, 30, 477-493.	1.1	27
47	A Fast Multilevel Algorithm for Integral Equations. SIAM Journal on Numerical Analysis, 1995, 32, 501-513.	1.1	26
48	Projected Pseudotransient Continuation. SIAM Journal on Numerical Analysis, 2008, 46, 3071-3083.	1.1	26
49	A Shamanskii-Like Acceleration Scheme for Nonlinear Equations at Singular Roots. Mathematics of Computation, 1986, 47, 609.	1.1	25
50	Application of Proper Orthogonal Decomposition (POD) to inverse problems in saturated groundwater flow. Advances in Water Resources, 2011, 34, 1519-1526.	1.7	25
51	Local Improvement Results for Anderson Acceleration with Inaccurate Function Evaluations. SIAM Journal of Scientific Computing, 2017, 39, S47-S65.	1.3	25
52	A Pointwise Quasi-Newton Method for Integral Equations. SIAM Journal on Numerical Analysis, 1988, 25, 1138-1155.	1.1	24
53	Solution of Optimal Control Problems by a Pointwise Projected Newton Method. SIAM Journal on Control and Optimization, 1995, 33, 1731-1757.	1.1	24
54	A pointwise quasi-Newton method for unconstrained optimal control problems. Numerische Mathematik, 1989, 55, 159-176.	0.9	23

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55	Mesh Independence of Newton-like Methods for Infinite Dimensional Problems. Journal of Integral Equations and Applications, 1991, 3, 549.	0.2	23
56	A Trust Region Method for Parabolic Boundary Control Problems. SIAM Journal on Optimization, 1999, 9, 1064-1081.	1.2	23
57	Approximate quasi-Newton methods. Mathematical Programming, 1990, 48, 41-70.	1.6	22
58	Combining Trust-Region Techniques and Rosenbrock Methods to Compute Stationary Points. Journal of Optimization Theory and Applications, 2009, 140, 265-286.	0.8	22
59	A fast solver for the Ornstein–Zernike equations. Journal of Computational Physics, 2004, 197, 491-501.	1.9	21
60	Pseudo-Transient Continuation for Nonsmooth Nonlinear Equations. SIAM Journal on Numerical Analysis, 2005, 43, 1385-1406.	1.1	21
61	Condition Estimates for Pseudoâ€Arclength Continuation. SIAM Journal on Numerical Analysis, 2007, 45, 263-276.	1.1	21
62	Inexact primal-dual interior point iteration for linear programs in function spaces. Computational Optimization and Applications, 1995, 4, 189-201.	0.9	20
63	Sublinear convergence of the Chord method at singular points. Numerische Mathematik, 1983, 42, 147-154.	0.9	18
64	GMRES and Integral Operators. SIAM Journal of Scientific Computing, 1996, 17, 217-226.	1.3	18
65	A New Proof of Superlinear Convergence for Broyden's Method in Hilbert Space. SIAM Journal on Optimization, 1991, 1, 146-150.	1.2	17
66	Fast Algorithms for Compact Fixed Point Problems with Inexact Function Evaluations. SIAM Journal on Scientific and Statistical Computing, 1991, 12, 725-742.	1.5	17
67	A Fast Multilevel Algorithm for the Solution of Nonlinear Systems of Conductive-Radiative Heat Transfer Equations in Two Space Dimensions. SIAM Journal of Scientific Computing, 1999, 20, 1214-1228.	1.3	17
68	Truncated Newton Methods for Optimization with Inaccurate Functions and Gradients. Journal of Optimization Theory and Applications, 2003, 116, 83-98.	0.8	17
69	Termination of Newton/Chord Iterations and the Method of Lines. SIAM Journal of Scientific Computing, 1998, 19, 280-290.	1.3	16
70	Development and Validation of a Method for Approximating Road Surface Texture-Induced Contact Pressure in Tire-Pavement Interaction. Tire Science and Technology, 1988, 16, 2-17.	0.3	16
71	Convergence of Broyden's Method in Banach Spaces. SIAM Journal on Optimization, 1992, 2, 505-532.	1.2	15
72	Inexact Newton Methods for singular problems. Optimization Methods and Software, 1993, 2, 249-267.	1.6	15

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73	Multilevel source iteration accelerators for the linear transport equation in slab geometry. Transport Theory and Statistical Physics, 1995, 24, 679-707.	0.4	15
74	Local Convergence of the Symmetric Rank-One Iteration. Computational Optimization and Applications, 1998, 9, 43-63.	0.9	15
75	Convolution and Hâ€equations for operatorâ€valued functions with applications to neutron transport theory. Journal of Mathematical Physics, 1977, 18, 764-769.	0.5	14
76	Solution by iteration of Hâ€equations in multigroup neutron transport. Journal of Mathematical Physics, 1978, 19, 500-501.	0.5	14
77	A note on the approximation of functions of several variables by sums of functions of one variable. Journal of Approximation Theory, 1981, 33, 179-189.	0.5	14
78	Spatially distributed stochastic systems: Equation-free and equation-assisted preconditioned computations. Journal of Chemical Physics, 2006, 125, 204108.	1.2	14
79	Hybrid Deterministic/Monte Carlo Neutronics. SIAM Journal of Scientific Computing, 2013, 35, S62-S83.	1.3	14
80	Optimization with hidden constraints and embedded Monte Carlo computations. Optimization and Engineering, 2016, 17, 157-175.	1.3	14
81	Expanded Convergence Domains for Newton's Method at Nearly Singular Roots. SIAM Journal on Scientific and Statistical Computing, 1985, 6, 951-966.	1.5	13
82	A fast two-grid method for matrix H-equations. Transport Theory and Statistical Physics, 1989, 18, 185-203.	0.4	12
83	A Bounded and Discretized Nelder-Mead Algorithm Suitable for RFIC Calibration. IEEE Transactions on Circuits and Systems I: Regular Papers, 2013, 60, 1787-1799.	3.5	12
84	Reaction Path Following with Sparse Interpolation. Journal of Chemical Theory and Computation, 2014, 10, 2942-2949.	2.3	12
85	Convergence of the EDIIS Algorithm for Nonlinear Equations. SIAM Journal of Scientific Computing, 2019, 41, A365-A379.	1.3	12
86	Interpolation Methods for Molecular Potential Energy Surface Construction. Journal of Physical Chemistry A, 2021, 125, 9725-9735.	1.1	11
87	Convergence of the Fn method for exponential atmospheres. Transport Theory and Statistical Physics, 1983, 12, 183-194.	0.4	10
88	Pseudoâ€ŧransient continuation for nonlinear transient elasticity. International Journal for Numerical Methods in Engineering, 2009, 78, 1209-1219.	1.5	10
89	Efficient Solution of the Wigner–Poisson Equations for Modeling Resonant Tunneling Diodes. IEEE Nanotechnology Magazine, 2010, 9, 708-715.	1.1	10
90	Newton's Method for Monte CarloBased Residuals. SIAM Journal on Numerical Analysis, 2015, 53, 1738-1757.	1.1	10

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91	Anderson Acceleration for a Class of Nonsmooth Fixed-Point Problems. SIAM Journal of Scientific Computing, 2021, 43, S1-S20.	1.3	10
92	Pointwise quasi-Newton method for unconstrained optimal control problems, II. Journal of Optimization Theory and Applications, 1991, 71, 535-547.	0.8	9
93	Mesh Independence of Matrix-Free Methods for Path Following. SIAM Journal of Scientific Computing, 2000, 21, 1835-1850.	1.3	9
94	Solutions of the Optimized Closure Integral Equation Theory:  Heteronuclear Polyatomic Fluids. Journal of Chemical Theory and Computation, 2008, 4, 385-396.	2.3	9
95	Modeling Nondilute Species Transport Using the Thermodynamically Constrained Averaging Theory. Water Resources Research, 2018, 54, 6656-6682.	1.7	9
96	A Smoothing Direct Search Method for Monte Carlo-Based Bound Constrained Composite Nonsmooth Optimization. SIAM Journal of Scientific Computing, 2018, 40, A2174-A2199.	1.3	9
97	A comparison of iteration schemes for Chandrasekhar Hâ€equations in multigroup neutron transport. Journal of Mathematical Physics, 1980, 21, 408-409.	0.5	8
98	Hydrodynamic hot-electron transport simulation based on the Monte Carlo method. Solid-State Electronics, 1989, 32, 1347-1351.	0.8	8
99	Use of an Implicit Filtering Algorithm for Mechanical System Parameter Identification. , 1996, , .		8
100	Versatile Two-Level Schwarz Preconditioners for Multiphase Flow. Computational Geosciences, 2003, 7, 91-114.	1.2	8
101	A hydraulic capture application for optimal remediation design. Developments in Water Science, 2004, , 1149-1157.	0.1	8
102	A Sparse Interpolation Algorithm for Dynamical Simulations in Computational Chemistry. SIAM Journal of Scientific Computing, 2015, 37, S137-S156.	1.3	8
103	Finding a stable solution of a system of nonlinear equations arising from dynamic systems. Journal of Industrial and Management Optimization, 2011, 7, 497-521.	0.8	8
104	Pointwise quasi-Newton methods and some applications. , 1987, , 167-180.		7
105	Solution of the time discretized Stefan problem by Newton's method. Nonlinear Analysis: Theory, Methods & Applications, 1990, 14, 851-872.	0.6	7
106	Asymptotically Exact Boundary Conditions for thePNEquations. Nuclear Science and Engineering, 1993, 114, 12-19.	0.5	7
107	Globally convergent algorithms for nonsmooth nonlinear equations in computational fluid dynamics. Journal of Computational and Applied Mathematics, 2003, 152, 69-81.	1.1	7
108	Optimization of a Mathematical Model of Cerebral Autoregulation Using Patient Data. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 181-186.	0.4	7

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109	A Generally Applicable Calibration Algorithm for Digitally Reconfigurable Self-Healing RFICs. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2016, 24, 1151-1164.	2.1	7
110	Implicit Filtering and Optimal Design Problems. , 1995, , 159-176.		7
111	Optimization of processor allocation for domain decomposed Monte Carlo calculations. Parallel Computing, 2019, 87, 77-86.	1.3	6
112	Solution ofH-Equations by Iteration. SIAM Journal on Mathematical Analysis, 1979, 10, 844-849.	0.9	5
113	Approximate methods for the solution of the Chandrasekhar Hâ€equation. Journal of Mathematical Physics, 1982, 23, 2097-2100.	0.5	5
114	Why does the F <sub>N</sub> -method work?. Transport Theory and Statistical Physics, 1985, 14, 513-525.	0.4	5
115	Yield optimization using a GaAs process simulator coupled to a physical device model. , 0, , .		5
116	Molecular Dynamics Simulations on Relaxed Reduced-Dimensional Potential Energy Surfaces. Journal of Physical Chemistry A, 2019, 123, 4543-4554.	1.1	5
117	Newton's Method in Mixed Precision. SIAM Review, 2022, 64, 191-211.	4.2	5
118	Sequential quadratic programming for certain parameter identification problems. Mathematical Programming, 1991, 51, 281-305.	1.6	4
119	Estimates for the NashSofer Preconditioner for the Reduced Hessian for Some Elliptic Variational Inequalities. SIAM Journal on Optimization, 1999, 9, 327-341.	1.2	4
120	Approximate methods for exit distribution problems in inhomogeneous slabs. Progress in Nuclear Energy, 1981, 8, 227-234.	1.3	3
121	Applications of the FN method to transport calculations. Transport Theory and Statistical Physics, 1984, 13, 85-95.	0.4	3
122	Convergence of the F <sub>N</sub> - method for multi-group transport. Transport Theory and Statistical Physics, 1986, 15, 821-828.	0.4	3
123	Doping profiles for optimum class B performance of GaAs MESFET amplifiers. , 0, , .		3
124	On a Powder Consolidation Problem. SIAM Journal on Applied Mathematics, 2001, 62, 1-20.	0.8	3
125	Parallel parameter study of the Wigner-Poisson equations for RTDs. Computers and Mathematics With Applications, 2006, 51, 1677-1688.	1.4	3
126	Steady states for chemical process plants: A legacy code, timeâ€stepping approach. AICHE Journal, 2013, 59, 3308-3321.	1.8	3

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127	High-Dimensional Model Representations for the Neutron Transport Equation. Nuclear Science and Engineering, 2014, 177, 350-360.	0.5	3
128	Approximating Periodic Potential Energy Surfaces with Sparse Trigonometric Interpolation. Journal of Physical Chemistry B, 2019, 123, 9677-9684.	1.2	3
129	Improved Numerical Methodologies on Power System Dynamic Simulation Using GPU Implementation. , 2019, , .		3
130	Mesh independence of the generalized Davidson algorithm. Journal of Computational Physics, 2020, 409, 109322.	1.9	3
131	Efficient Approximation of Potential Energy Surfaces with Mixed-Basis Interpolation. Journal of Chemical Theory and Computation, 2021, 17, 5673-5683.	2.3	3
132	The F <sub>N</sub> method in slab geometries with a polynomial basis. Transport Theory and Statistical Physics, 1988, 17, 295-303.	0.4	2
133	Pointwise Broyden Methods. SIAM Journal on Optimization, 1993, 3, 423-441.	1.2	2
134	Parallel-platform based numerical simulation of instabilities in nanoscale tunneling devices. , 0, , .		2
135	Numerical tools for the study of instabilities within the positive-differential-resistance regions of tunneling devices. , 0, , .		2
136	Terahertz-frequency quantum oscillator operating in the positive differential resistance region. , 2005, , .		2
137	Efficient Parallel Computation of Molecular Potential Energy Surfaces for the Study of Light-Induced Transition Dynamics in Multiple Coordinates. IEEE Nanotechnology Magazine, 2011, 10, 70-74.	1.1	2
138	Simulations of Light-Induced Molecular Transformations in Multiple Dimensions with Incremental Sparse Surrogates. Journal of Algorithms and Computational Technology, 2012, 6, 577-592.	0.4	2
139	Hybrid Deterministic/Monte Carlo Neutronics Using GPU Accelerators. , 2012, , .		2
140	Sparse interpolatory reduced-order models for simulation of light-induced molecular transformations. Optimization Methods and Software, 2014, 29, 264-273.	1.6	2
141	Reduced-dimensional surface hopping with offline–online computations. Physical Chemistry Chemical Physics, 2021, 23, 19547-19557.	1.3	2
142	Quasi Newton methods and unconstrained optimal control problems. , 1986, , .		1
143	Vector algorithms for H-equations arising in radiative transfer through inhomogeneous media. Transport Theory and Statistical Physics, 1986, 15, 33-48.	0.4	1
144	Convergence analysis for the harmonic balance method. Nonlinear Analysis: Theory, Methods & Applications, 1993, 20, 365-380.	0.6	1

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145	SIMULATING NANOSCALE SEMICONDUCTOR DEVICES. International Journal of High Speed Electronics and Systems, 2006, 16, 677-690.	0.3	1
146	Parallel Computation of Surrogate Models for Potential Energy Surfaces. , 2010, , .		1
147	Scalable Hybrid Deterministic/Monte Carlo Neutronics Simulations in Two Space Dimensions. , 2013, , .		1
148	A Hybrid Deterministic/Monte Carlo Method for Solving the <i>k</i> -Eigenvalue Problem with a Comparison to Analog Monte Carlo Solutions. Journal of Computational and Theoretical Transport, 2014, 43, 50-67.	0.3	1
149	Implicit Filtering and Nonlinear Least Squares Problems. IFIP Advances in Information and Communication Technology, 2003, , 71-90.	0.5	1
150	A variational equivalent to diagonal scaling. Journal of Mathematical Analysis and Applications, 1979, 72, 291-304.	0.5	0
151	Corrigenda to "Why does the FNmethod work?― Transport Theory and Statistical Physics, 1986, 15, 405-405.	0.4	Ο
152	A study of electron transit-time in ballistic diodes using a multi-valley hydrodynamic transport model. , 0, , .		0
153	Adaptive Integral Equation Methods in Transport Theory. Nuclear Science and Engineering, 1992, 112, 361-368.	0.5	0
154	A fast multi-level method for the fixed point form of matrix H-equations. Transport Theory and Statistical Physics, 1993, 22, 533-547.	0.4	0
155	A non-quasi-static modular model for HBTs. , 0, , .		Ο
156	Higher order, locally conservative temporal integration methods for modeling multiphase flow in porous media. Developments in Water Science, 2002, , 249-256.	0.1	0
157	Simulation of nondifferentiable models for groundwater flow and transport. Developments in Water Science, 2004, 55, 939-949.	0.1	0
158	Chapter 38: Implicit Filtering and Hidden Constraints. , 2017, , 507-517.		0
159	SIMULATING NANOSCALE SEMICONDUCTOR DEVICES. , 2006, , .		Ο
160	SEQUENTIAL QUADRATIC PROGRAMMING FOR PARAMETER IDENTIFICATION PROBLEMS. , 1990, , 259-263.		0
161	Fast Algorithms for Compact Fixed Point Problems. , 1992, , 106-109.		0
162	Analytical Determination of Normal Contact Stresses for Arbitrary Geometries with Application to the Tire/Pavement Interaction Mechanism. , 1985, , 162-178.		0