Yoshikazu Giga

List of Publications by Year
in descending order

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116	6,140	159585 30	71685 76
papers	citations	h-index	g-index

121	121	121	1368
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Uniqueness and existence of viscosity solutions of generalized mean curvature flow equations. Journal of Differential Geometry, 1991, 33, 749.	1.1	644
2	Solutions for semilinear parabolic equations in Lp and regularity of weak solutions of the Navier-Stokes system. Journal of Differential Equations, 1986, 62, 186-212.	2.2	630
3	Asymptotically self-similar blow-up of semilinear heat equations. Communications on Pure and Applied Mathematics, 1985, 38, 297-319.	3.1	459
4	Abstract Lp estimates for the Cauchy problem with applications to the Navier-Stokes equations in exterior domains. Journal of Functional Analysis, 1991, 102, 72-94.	1.4	438
5	Solutions in Lr of the Navier-Stokes initial value problem. Archive for Rational Mechanics and Analysis, 1985, 89, 267-281.	2.4	312
6	Analyticity of the semigroup generated by the Stokes operator inL r spaces. Mathematische Zeitschrift, 1981, 178, 297-329.	0.9	308
7	Title is missing!. Indiana University Mathematics Journal, 1987, 36, 1.	0.9	281
8	Nondegeneracy of blowup for semilinear heat equations. Communications on Pure and Applied Mathematics, 1989, 42, 845-884.	3.1	246
9	Navier-stokes flow in r3with measures as initial vorticity and morrey spaces. Communications in Partial Differential Equations, 1989, 14, 577-618.	2.2	206
10	Remarks on spectra of operator rot. Mathematische Zeitschrift, 1990, 204, 235-245.	0.9	191
11	Domains of fractional powers of the Stokes operator in Lr spaces. Archive for Rational Mechanics and Analysis, 1985, 89, 251-265.	2.4	176
12	Two-dimensional Navier-Stokes flow with measures as initial vorticity. Archive for Rational Mechanics and Analysis, 1988, 104, 223-250.	2.4	131
13	A bound for global solutions of semilinear heat equations. Communications in Mathematical Physics, 1986, 103, 415-421.	2.2	127
14	Mean curvature flow through singularities for surfaces of rotation. Journal of Geometric Analysis, 1995, 5, 293-358.	1.0	97
15	Nonlinear Partial Differential Equations. Progress in Nonlinear Differential Equations and Their Application, 2010, , .	0.9	87
16	Large time behavior of the vorticity of two-dimensional viscous flow and its application to vortex formation. Communications in Mathematical Physics, 1988, 117, 549-568.	2.2	69
17	Evolving Graphs by Singular Weighted Curvature. Archive for Rational Mechanics and Analysis, 1998, 141, 117-198.	2.4	67
18	A kinetic construction of global solutions of first order quasilinear equations. Duke Mathematical Journal, 1983, 50, 505.	1.5	66

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19	On lower semicontinuity of a defect energy obtained by a singular limit of the Ginzburgâ€“Landau type energy for gradient fields. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 1999, 129, 1-17.	1.2	63
20	Motion of hypersurfaces and geometric equations. Journal of the Mathematical Society of Japan, 1992, 44, 99.	0.4	56
21	Analyticity of the Stokes semigroup in spaces of bounded functions. Acta Mathematica, 2013, 211, 1-46.	3.9	56
22	Uniform global solvability of the rotating Navier-Stokes equations for nondecaying initial data. Indiana University Mathematics Journal, 2008, 57, 2775-2792.	0.9	55
23	Generalized MotionÂ¶by Nonlocal Curvature in the Plane. Archive for Rational Mechanics and Analysis, 2001, 159, 295-333.	2.4	49
24	The Stokes operator in L_r spaces. Proceedings of the Japan Academy Series A: Mathematical Sciences, 1981, 57, 85.	0.4	42
25	On estimates in Hardy spaces for the Stokes flow in a half space. Mathematische Zeitschrift, 1999, 231, 383-396.	0.9	42
26	The L âˆž-Stokes semigroup in exterior domains. Journal of Evolution Equations, 2014, 14, 1-28.	1.1	42
27	Very singular diffusion equations: second and fourth order problems. Japan Journal of Industrial and Applied Mathematics, 2010, 27, 323-345.	0.9	40
28	Well-posedness of Hamiltonâ€“Jacobi equations with Caputoâ€™s time fractional derivative. Communications in Partial Differential Equations, 2017, 42, 1088-1120.	2.2	39
29	On Vorticity Directions near Singularities for the Navier-Stokes Flows with Infinite Energy. Communications in Mathematical Physics, 2011, 303, 289-300.	2.2	33
30	On Global Weak Solutions of the Nonstationary Two-Phase Stokes Flow. SIAM Journal on Mathematical Analysis, 1994, 25, 876-893.	1.9	32
31	Scale-invariant extinction time estimates for some singular diffusion equations. Discrete and Continuous Dynamical Systems, 2011, 30, 509-535.	0.9	32
32	Weak and Strong Solutions of the Navier-Stokes Initial Value Problem. Publications of the Research Institute for Mathematical Sciences, 1983, 19, 887-910.	0.8	31
33	Navier-Stokes equations in a rotating frame in ${mathbb R}^3$ with initial data nondecreasing at infinity. Hokkaido Mathematical Journal, 2006, 35, 321.	0.3	31
34	On blow-up at space infinity for semilinear heat equations. Journal of Mathematical Analysis and Applications, 2006, 316, 538-555.	1.0	31
35	On the Ohmâ€“Navierâ€“Stokes system in magnetohydrodynamics. Journal of Mathematical Physics, 1983, 24, 2860-2864.	1.1	30
36	Time and spartial analyticity of solutions of the navier-stokes equations. Communications in Partial Differential Equations, 1983, 8, 929-948.	2.2	29

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37	Global Existence of Weak Solutions for Interface Equations Coupled with Diffusion Equations. SIAM Journal on Mathematical Analysis, 1992, 23, 821-835.	1.9	29
38	On blow-up rate for sign-changing solutions in a convex domain. Mathematical Methods in the Applied Sciences, 2004, 27, 1771-1782.	2.3	29
39	A comparison theorem for crystalline evolution in the plane. Quarterly of Applied Mathematics, 1996, 54, 727-737.	0.7	29
40	Uniform Local Solvability for the Navier-Stokes Equations with the Coriolis Force. Methods and Applications of Analysis, 2005, 12, 381-394.	0.5	29
41	The distance function and defect energy. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 1996, 126, 923-938.	1.2	27
42	A LEVEL SET APPROACH TO SEMICONTINUOUS VISCOSITY SOLUTIONS FOR CAUCHY PROBLEMS. Communications in Partial Differential Equations, 2001, 26, 813-839.	2.2	27
43	Variational integrals on mappings of bounded variation and their lower semicontinuity. Archive for Rational Mechanics and Analysis, 1991, 115, 201-255.	2.4	26
44	Stability for evolving graphs by nonlocal weighted curvature. Communications in Partial Differential Equations, 1999, 24, 109-184.	2.2	26
45	Local solvability of a constrainedgradient system of total variation. Abstract and Applied Analysis, 2004, 2004, 651-682.	0.7	24
46	On the dynamics of crystalline motions. Japan Journal of Industrial and Applied Mathematics, 1998, 15, 7-50.	0.9	23
47	On anisotropy and curvature effects for growing Crystals. Japan Journal of Industrial and Applied Mathematics, 2001, 18, 207-230.	0.9	23
48	Stokes Resolvent Estimates in Spaces of Bounded Functions. Annales Scientifiques De L'Ecole Normale Superieure, 2015, 48, 537-559.	0.8	22
49	A Liouville Theorem for the Planer Navier-Stokes Equations with the No-Slip Boundary Condition and Its Application to a Geometric Regularity Criterion. Communications in Partial Differential Equations, 2014, 39, 1906-1935.	2.2	21
50	Asymptotic Behavior of Type I Blowup Solutions to a Parabolic-Elliptic System of Driftâ€“Diffusion Type. Archive for Rational Mechanics and Analysis, 2011, 201, 549-573.	2.4	20
51	Existence of selfsimilar shrinking curves for anisotropic curvature flow equations. Calculus of Variations and Partial Differential Equations, 1996, 4, 103-119.	1.7	19
52	Facet Bending in the Driven Crystalline Curvature Flow in the Plane. Journal of Geometric Analysis, 2008, 18, 109-147.	1.0	18
53	Very Singular Diffusion Equations. , 0, , .		18
54	Rotating Navier-Stokes Equations in $${mathbb R}^{3}_{+}$$ with Initial Data Nondecreasing at Infinity: The Ekman Boundary Layer Problem. Archive for Rational Mechanics and Analysis, 2007, 186, 177-224.	2.4	16

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55	On a lower bound for the extinction time of surfaces moved by mean curvature. Calculus of Variations and Partial Differential Equations, 1993, 1, 417-428.	1.7	15
56	Self-similar Expanding Solutions in a Sector for a Crystalline Flow. SIAM Journal on Mathematical Analysis, 2005, 37, 1207-1226.	1.9	15
57	A microscopic time scale approximation to the behavior of the local slope on the faceted surface under a nonuniformity in supersaturation. Physica D: Nonlinear Phenomena, 2008, 237, 2845-2855.	2.8	15
58	On the motion by singular interfacial energy. Japan Journal of Industrial and Applied Mathematics, 2001, 18, 231-248.	0.9	14
59	Viscosity solutions with shocks. Communications on Pure and Applied Mathematics, 2002, 55, 431-480.	3.1	14
60	Large-time asymptotics for one-dimensional Dirichlet problems for Hamiltonâ€“Jacobi equations with noncoercive Hamiltonians. Journal of Differential Equations, 2012, 252, 1263-1282.	2.2	14
61	Initial Values for the Navier-Stokes Equations in Spaces with Weights in Time. Funkcialaj Ekvacioj, 2016, 59, 199-216.	0.3	14
62	Approximation of General Facets by Regular Facets with Respect to Anisotropic Total Variation Energies and Its Application to Crystalline Mean Curvature Flow. Communications on Pure and Applied Mathematics, 2018, 71, 1461-1491.	3.1	14
63	Analyticity of solutions to the primitive equations. Mathematische Nachrichten, 2020, 293, 284-304.	0.8	14
64	Periodic total variation flow of non-divergence type in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:msup><mml:mrow><mml:mi mathvariant="double-struck">R</mml:mi></mml:mrow><mml:mrow><mml:mi>n</mml:mi></mml:mrow></mml:msup></mml:math>. Journal Des Mathematiques Pures Et Appliquees, 2014, 102, 203-233.	1.6	13
65	A duality based approach to the minimizing total variation flow in the space $$H^{-s}$$. Japan Journal of Industrial and Applied Mathematics, 2019, 36, 261-286.	0.9	13
66	Hamilton-Jacobi Equations with Discontinuous Source Terms. Communications in Partial Differential Equations, 2013, 38, 199-243.	2.2	12
67	On time analyticity of the Navierâ€“Stokes equations in a rotating frame with spatially almost periodic data. Physica D: Nonlinear Phenomena, 2008, 237, 1422-1428.	2.8	11
68	A comparison principle for Hamilton-Jacobi equations with discontinuous Hamiltonians. Proceedings of the American Mathematical Society, 2011, 139, 1777-1777.	0.8	11
69	On the Stokes semigroup in some non-Helmholtz domains. Archiv Der Mathematik, 2015, 104, 177-187.	0.5	11
70	Bounded ?^{âˆž}-calculus for the hydrostatic Stokes operator on ?^{?}-spaces and applications. Proceedings of the American Mathematical Society, 2017, 145, 3865-3876.	0.8	11
71	On a resolvent estimate for bidomain operators and its applications. Journal of Mathematical Analysis and Applications, 2018, 459, 528-555.	1.0	11
72	The hydrostatic Stokes semigroup and well-posedness of the primitive equations on spaces of bounded functions. Journal of Functional Analysis, 2020, 279, 108561.	1.4	11

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73	Stability of facets of crystals growing from vapor. Discrete and Continuous Dynamical Systems, 2006, 14, 689-706.	0.9	11
74	On a limiting motion and self-intersections for the intermediate surface diffusion flow. Journal of Evolution Equations, 2002, 2, 349-364.	1.1	10
75	On $$L^infty $$ L âˆž -BMO estimates for derivatives of the Stokes semigroup. Mathematische Zeitschrift, 2016, 284, 1163-1183.	0.9	9
76	On analyticity of the â€Stokes semigroup for some nonâ€Helmholtz domains. Mathematische Nachrichten, 2017, 290, 2524-2546.	0.8	9
77	Facet bending driven by the planar crystalline curvature with a generic nonuniform forcing term. Journal of Differential Equations, 2009, 246, 2264-2303.	2.2	8
78	On Asymptotic Speed of Solutions to Level-Set Mean Curvature Flow Equations with Driving and Source Terms. SIAM Journal on Mathematical Analysis, 2016, 48, 3515-3546.	1.9	8
79	Rigorous justification of the hydrostatic approximation for the primitive equations by scaled Navierâ€“Stokes equations*. Nonlinearity, 2020, 33, 6502-6516.	1.4	8
80	On a Bound for Amplitudes of Navierâ€“Stokes Flow with almost Periodic Initial Data. Journal of Mathematical Fluid Mechanics, 2011, 13, 459-467.	1.0	7
81	Equivalence of BMO-type Norms with Applications to the Heat and Stokes Semigroups. Potential Analysis, 2018, 49, 105-130.	0.9	7
82	Numerical computations of split Bregman method for fourth order total variation flow. Journal of Computational Physics, 2020, 405, 109114.	3.8	7
83	An Approach to Rotating Boundary Layers Based on Vector Radon Measures. Journal of Mathematical Fluid Mechanics, 2013, 15, 89-127.	1.0	6
84	Singular Neumann problems and large-time behavior of solutions of noncoercive Hamilton-Jacobi equations. Transactions of the American Mathematical Society, 2013, 366, 1905-1941.	0.9	6
85	A remark on a Liouville problem with boundary for the Stokes and the Navier-Stokes equations. Discrete and Continuous Dynamical Systems - Series S, 2013, 6, 1277-1289.	1.1	6
86	Continuous alignment of vorticity direction prevents the blow-up of the Navierâ€“Stokes flow under the no-slip boundary condition. Nonlinear Analysis: Theory, Methods & Applications, 2019, 189, 111579.	1.1	6
87	Strong time-periodic solutions to the bidomain equations with arbitrary large forces. Nonlinear Analysis: Real World Applications, 2019, 47, 398-413.	1.7	6
88	Nonlocal spatially inhomogeneous Hamilton-Jacobi equation with unusual free boundary. Discrete and Continuous Dynamical Systems, 2010, 26, 493-519.	0.9	6
89	An Existence Result for a Discretized Constrained Gradient System of Total Variation Flow in Color Image Processing. Interdisciplinary Information Sciences, 2005, 11, 199-204.	0.4	6
90	Analyticity of the Stokes semigroup in BMO-type spaces. Journal of the Mathematical Society of Japan, 2018, 70, .	0.4	5

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91	On a dynamic boundary condition for singular degenerate parabolic equations in a half space. Nonlinear Differential Equations and Applications, 2018, 25, 1.	0.8	5
92	On the role of kinetic and interfacial anisotropy in the crystal growth theory. Interfaces and Free Boundaries, 2013, 15, 429-450.	0.8	5
93	Motion by Crystalline-Like Mean Curvature: A Survey. Bulletin of Mathematical Sciences, 0, , .	0.7	5
94	Anisotropic curvature flow in a very thin domain. Indiana University Mathematics Journal, 2003, 52, 257-282.	0.9	4
95	Stability of a Two-Dimensional Poiseuille-Type Flow for a Viscoelastic Fluid. Journal of Mathematical Fluid Mechanics, 2017, 19, 17-45.	1.0	4
96	On boundary detachment phenomena for the total variation flow with dynamic boundary conditions. Journal of Differential Equations, 2020, 269, 10587-10629.	2.2	4
97	Bent rectangles as viscosity solutions over a circle. Nonlinear Analysis: Theory, Methods & Applications, 2015, 125, 518-549.	1.1	3
98	On the Stokes resolvent estimates for cylindrical domains. Journal of Evolution Equations, 2017, 17, 17-49.	1.1	3
99	On the continuity of the solutions to the Navierâ€“Stokes equations with initial data in critical Besov spaces. Annali Di Matematica Pura Ed Applicata, 2019, 198, 1495-1511.	1.0	3
100	Viscosity solutions for the crystalline mean curvature flow with a nonuniform driving force term. SN Partial Differential Equations and Applications, 2020, 1, 1.	0.6	3
101	Continuity of Derivatives of a Convex Solution to a Perturbed One-Laplace Equation by p-Laplacian. Archive for Rational Mechanics and Analysis, 2022, 244, 253-292.	2.4	3
102	The Helmholtz decomposition of a space of vector fields with bounded mean oscillation in a bounded domain. Mathematische Annalen, 0, , 1.	1.4	3
103	Magnetic clusters and fold energies. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 2007, 137, 23-40.	1.2	2
104	A counterexample to finite time stopping property for one-harmonic map flow. Communications on Pure and Applied Analysis, 2014, 14, 121-125.	0.8	2
105	Uniform exponential stability of the Ekman spiral. Arkiv for Matematik, 2015, 53, 105-126.	0.5	2
106	Vorticity Direction and Regularity of Solutions to the Navier-Stokes Equations. , 2018, , 901-932.		2
107	Vorticity Direction and Regularity of Solutions to the Navier-Stokes Equations. , 2016, , 1-31.		2
108	A PDE Approach for Motion of Phase-Boundaries by a Singular Interfacial Energy. , 0, , .		2

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109	Crystalline flow starting from a general polygon. Discrete and Continuous Dynamical Systems, 2021, .	0.9	2
110	Normal Trace for a Vector Field of Bounded Mean Oscillation. Potential Analysis, 0, , 1.	0.9	2
111	A new numerical scheme for discrete constrained total variation flows and its convergence. Numerische Mathematik, 2020, 146, 181-217.	1.9	1
112	The hydrostatic approximation for the primitive equations by the scaled Navierâ€“Stokes equations under the no-slip boundary condition. Journal of Evolution Equations, 2021, 21, 3331-3373.	1.1	1
113	The primitive equations in the scaling-invariant space $$L^{infty }(L^1)$$. Journal of Evolution Equations, 2021, 21, 4145-4169.	1.1	1
114	A bound for the pressure integral in a plasma equilibrium. Journal of Statistical Physics, 1993, 72, 1375-1389.	1.2	0
115	On the stability of the Ekman boundary layer. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1041101-1041102.	0.2	0
116	Existence of selfsimilar shrinking curves for anisotropic curvature flow equations. Calculus of Variations and Partial Differential Equations, 1996, 4, 103-119.	1.7	0