Luigi C Berselli

List of Publications by Year
in descending order

85	1,161	471061 17	476904 29
papers	citations	h-index	g-index

91	91	91	517
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Regularity criteria involving the pressure for the weak solutions to the Navier-Stokes equations. Proceedings of the American Mathematical Society, 2002, 130, 3585-3595.	0.4	135
2	Existence of Strong Solutions for Incompressible Fluids with Shear Dependent Viscosities. Journal of Mathematical Fluid Mechanics, 2010, 12, 101-132.	0.4	76
3	Navierâ€“Stokes equations: Green's matrices, vorticity direction, and regularity up to the boundary. Journal of Differential Equations, 2009, 246, 597-628.	1.1	56
4	ASHEE-1.0: aÂcompressible, equilibriumâ€“Eulerian model for volcanic ash plumes. Geoscientific Model Development, 2016, 9, 697-730.	1.3	51
5	On the Finite Element Approximation ofp-Stokes Systems. SIAM Journal on Numerical Analysis, 2012, 50, 373-397.	1.1	45
6	On the Vanishing Viscosity Limit of 3D Navier-Stokes Equations under Slip Boundary Conditions in General Domains. Communications in Mathematical Physics, 2012, 316, 171-198.	1.0	43
7	On the structural stability of the Eulerâ€“Voigt and Navierâ€“Stokesâ€“Voigt models. Nonlinear Analysis: Theory, Methods & Applications, 2012, 75, 117-130.	0.6	39
8	Convergence of approximate deconvolution models to the mean Navierâ€“Stokes equations. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2012, 29, 171-198.	0.7	37
9	Some geometric constraints and the problem of global regularity for the Navierâ€“Stokes equations. Nonlinearity, 2009, 22, 2561-2581.	0.6	29
10	On the energy equality for the 3D Navierâ€“Stokes equations. Nonlinear Analysis: Theory, Methods & Applications, 2020, 192, 111704.	0.6	26
11	Vanishing viscosity limits and long-time behavior for 2D quasi-geostrophic equations. Indiana University Mathematics Journal, 2002, 51, 905-930.	0.4	25
12	MATHEMATICAL ANALYSIS FOR THE RATIONAL LARGE EDDY SIMULATION MODEL. Mathematical Models and Methods in Applied Sciences, 2002, 12, 1131-1152.	1.7	24
13	On the Large Eddy Simulation of the Taylorâ€“Green vortex. Journal of Mathematical Fluid Mechanics, 2005, 7, S164-S191.	0.4	24
14	On the regularity of the solutions to the 3D Navierâ€“Stokes equations: a remark on the role of the helicity. Comptes Rendus Mathematique, 2009, 347, 613-618.	0.1	23
15	Local solvability and turning for the inhomogeneous Muskat problem. Interfaces and Free Boundaries, 2014, 16, 175-213.	0.2	22
16	On the W2,q-Regularity of Incompressible Fluids with Shear-Dependent Viscosities: The Shear-Thinning Case. Journal of Mathematical Fluid Mechanics, 2009, 11, 171-185.	0.4	21
17	Analysis of a reduced-order approximate deconvolution model and its interpretation as a Navier-Stokes-Voigt regularization. Discrete and Continuous Dynamical Systems - Series B, 2016, 21, 1027-1050.	0.5	18
18	Some criteria concerning the vorticity and the problem of global regularity for the 3D Navierâ€“Stokes equations. Annali Dell'Universita Di Ferrara, 2009, 55, 209-224.	0.7	17

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19	Analytical and Numerical Results for the Rational Large Eddy Simulation Model. Journal of Mathematical Fluid Mechanics, 2007, 9, 44-74.	0.4	16
20	Suitable weak solutions to the 3D Navierâ€“Stokes equations are constructed with the Voigt approximation. Journal of Differential Equations, 2017, 262, 3285-3316.	1.1	16
21	Exact solution to the inverse Womersley problem for pulsatile flows in cylindrical vessels, with application to magnetic particle targeting. Applied Mathematics and Computation, 2013, 219, 5717-5729.	1.4	15
22	Turbulent flows as generalized Kelvinâ€“Voigt materials: Modeling and analysis. Nonlinear Analysis: Theory, Methods & Applications, 2020, 196, 111790.	0.6	15
23	Analysis of a Large Eddy Simulation model based on anisotropic filtering. Journal of Mathematical Analysis and Applications, 2012, 386, 149-170.	0.5	13
24	Global regularity properties of steady shear thinning flows. Journal of Mathematical Analysis and Applications, 2017, 450, 839-871.	0.5	13
25	Analysis of commutation errors for functions with low regularity. Journal of Computational and Applied Mathematics, 2007, 206, 1027-1045.	1.1	12
26	Convergence of approximate deconvolution models to the mean magnetohydrodynamics equations: Analysis of two models. Journal of Mathematical Analysis and Applications, 2013, 401, 864-880.	0.5	12
27	Convergence analysis for a finite element approximation of a steady model for electrorheological fluids. Numerische Mathematik, 2016, 132, 657-689.	0.9	12
28	Global regularity for systems with p-structure depending on the symmetric gradient. Advances in Nonlinear Analysis, 2020, 9, 176-192.	1.3	12
29	Some results for the line vortex equation. Nonlinearity, 2002, 15, 1729-1746.	0.6	11
30	On the spaceâ€“time regularity of C(0,T;Ln)-very weak solutions to the Navierâ€“Stokes equations. Nonlinear Analysis: Theory, Methods & Applications, 2004, 58, 703-717.	0.6	11
31	On the Boussinesq system: regularity criteria and singular limits. Methods and Applications of Analysis, 2011, 18, 391-416.	0.1	11
32	On the Existence and Uniqueness of Weak Solutions for a Vorticity Seeding Model. SIAM Journal on Mathematical Analysis, 2006, 37, 1780-1799.	0.9	10
33	Asymptotic behaviour of commutation errors and the divergence of the Reynolds stress tensor near the wall in the turbulent channel flow. Mathematical Methods in the Applied Sciences, 2006, 29, 1709-1719.	1.2	10
34	Long-time Reynolds averaging of reduced order models for fluid flows: Preliminary results. Mathematics in Engineering, 2020, 2, 1-25.	0.5	10
35	Sufficient conditions for the regularity of the solutions of the Navier-Stokes equations. Mathematical Methods in the Applied Sciences, 1999, 22, 1079-1085.	1.2	9
36	On a theorem by Sohr for the Navier-Stokes equations. Journal of Evolution Equations, 2004, 4, 193.	0.6	9

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37	On the Global Evolution of Vortex Filaments, Blobs, and Small Loops in 3D Ideal Flows. Communications in Mathematical Physics, 2006, 269, 693-713.	1.0	9
38	Optimal Error Estimates for a Semi-Implicit Euler Scheme for Incompressible Fluids with Shear Dependent Viscosities. SIAM Journal on Numerical Analysis, 2009, 47, 2177-2202.	1.1	9
39	Horizontal Large Eddy Simulation of Stratified Mixing inÂaÂLock-Exchange System. Journal of Scientific Computing, 2011, 49, 3-20.	1.1	9
40	Pulsatile Viscous Flows in Elliptical Vessels and Annuli: Solution to the Inverse Problem, with Application to Blood and Cerebrospinal Fluid Flow. SIAM Journal on Applied Mathematics, 2014, 74, 40-59.	0.8	9
41	An elementary approach to the inviscid limits for the 3D Navierâ€“Stokes equations with slip boundary conditions and applications to the 3D Boussinesq equations. Nonlinear Differential Equations and Applications, 2014, 21, 149-166.	0.4	9
42	An elementary approach to the 3D Navier-Stokes equations with Navier boundary conditions: Existence and uniqueness of various classes of solutions in the flat boundary case.. Discrete and Continuous Dynamical Systems - Series S, 2010, 3, 199-219.	0.6	9
43	A higher-order subfilter-scale model for large eddy simulation. Journal of Computational and Applied Mathematics, 2003, 159, 411-430.	1.1	8
44	Logarithmic and improved regularity criteria for the 3D nematic liquid crystals models, Boussinesq system, and MHD equations in a bounded domain. Communications on Pure and Applied Analysis, 2015, 14, 637-655.	0.4	8
45	Optimal error estimate for semi-implicit space-time discretization for the equations describing incompressible generalized Newtonian fluids. IMA Journal of Numerical Analysis, 2015, 35, 680-697.	1.5	8
46	New substructuring domain decomposition methods for advectionâ€“diffusion equations. Journal of Computational and Applied Mathematics, 2000, 116, 201-220.	1.1	7
47	A note on regularity of weak solutions of the Navier-Stokes equations in Rⁿ. Japanese Journal of Mathematics, 2002, 28, 51-60.	0.8	7
48	On the Well-Posedness of the Boussinesq Equations with Anisotropic Filter for Turbulent Flows. Zeitschrift Fur Analysis Und Ihre Anwendung, 2015, 34, 61-83.	0.8	7
49	On the construction of suitable weak solutions to the 3D Navierâ€“Stokes equations in a bounded domain by an artificial compressibility method. Communications in Contemporary Mathematics, 2018, 20, 1650064.	0.6	7
50	Spaceâ€“time discretization for nonlinear parabolic systems withp-structure. IMA Journal of Numerical Analysis, 2022, 42, 260-299.	1.5	7
51	Disperse Two-Phase Flows, with Applications to Geophysical Problems. Pure and Applied Geophysics, 2015, 172, 181-196.	0.8	6
52	On the Reynolds time-averaged equations and the long-time behavior of Lerayâ€“Hopf weak solutions, with applications to ensemble averages. Nonlinearity, 2019, 32, 4579-4608.	0.6	6
53	On a Stochastic Approach to Eddy Viscosity Models for Turbulent Flows. , 2009, , 55-81.		6
54	On the analysis of a geometrically selective turbulence model. Advances in Nonlinear Analysis, 2020, 9, 1402-1419.	1.3	6

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55	On the Boussinesq equations with anisotropic filter in a vertical pipe. Dynamics of Partial Differential Equations, 2015, 12, 177-192.	1.0	6
56	On the consistency of the Rational Large Eddy Simulation model. Computing and Visualization in Science, 2004, 6, 75-82.	1.2	5
57	On the Bardinaâ€™s Model in the Whole Space. Journal of Mathematical Fluid Mechanics, 2018, 20, 1335-1351.	0.4	5
58	Remarks on determining projections for stochastic dissipative equations. Discrete and Continuous Dynamical Systems, 1999, 5, 197-214.	0.5	5
59	Natural second-order regularity for parabolic systems with operators having $$(p,delta) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 Differential Equations, 2022, 61, .	0.9	5
60	On the existence of almost-periodic solutions for the 2D dissipative Euler equations. Revista Matematica Iberoamericana, 2015, 31, 267-290.	0.4	4
61	Suitable weak solutions of the Navierâ€“Stokes equations constructed by a spaceâ€“time numerical discretization. Journal Des Mathematiques Pures Et Appliquees, 2019, 125, 189-208.	0.8	4
62	On the Existence of Leray-Hopf Weak Solutions to the Navier-Stokes Equations. Fluids, 2021, 6, 42.	0.8	4
63	Analysis of fully discrete, quasi non-conforming approximations of evolution equations and applications. Mathematical Models and Methods in Applied Sciences, 0, , 1-47.	1.7	4
64	On the existence of weak solutions for the steady Baldwin-Lomax model and generalizations. Journal of Mathematical Analysis and Applications, 2020, , 124633.	0.5	3
65	On the uniqueness for weak solutions of steady double-phase fluids. Advances in Nonlinear Analysis, 2021, 11, 454-468.	1.3	3
66	Towards fluid equations by approximate deconvolution models. , 0, , 1-22.		2
67	An elementary proof of uniqueness of particle trajectories for solutions of a class of shear-thinning non-Newtonian 2D fluids. Nonlinearity, 2013, 26, 1031-1047.	0.6	2
68	Rotational Forms of Large Eddy Simulation Turbulence Models: Modeling and Mathematical Theory. Chinese Annals of Mathematics Series B, 2021, 42, 17-40.	0.2	2
69	A note on the Eulerâ€“Voigt system in a 3D bounded domain: Propagation of singularities and absence of the boundary layer. AIMS Mathematics, 2018, 4, 1-11.	0.7	2
70	Existence and Convergence of an MHD Approximate Deconvolution Model. ESAIM: Proceedings and Surveys, 2013, 39, 25-31.	0.4	1
71	A Note on Strong Solutions to the Stokes System. Acta Applicandae Mathematicae, 2014, 134, 123-131.	0.5	1
72	On the convergence of a fully discrete scheme of LES type to physically relevant solutions of the incompressible Navierâ€“Stokes. Zeitschrift Fur Angewandte Mathematik Und Physik, 2018, 69, 1.	0.7	1

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73	Classical Solutions of the Divergence Equation with Dini Continuous Data. Journal of Mathematical Fluid Mechanics, 2020, 22, 1.	0.4	1
74	On the regularity up to the boundary for certain nonlinear elliptic systems. Discrete and Continuous Dynamical Systems - Series S, 2016, 9, 53-71.	0.6	1
75	Classical solutions for the system $f {ext{curl}, ν = g}$, with vanishing Dirichlet boundary conditions. Discrete and Continuous Dynamical Systems - Series S, 2019, 12, 215-229.	0.6	1
76	The Caccioppoli ultrafunctions. Advances in Nonlinear Analysis, 2019, 8, 946-978.	1.3	0
77	Local energy inequality. , 2021, , 131-185.		0
78	On weak and strong solutions. , 2021, , 31-75.		0
79	Numerical construction of physically reasonable solutions. , 2021, , 187-254.		0
80	Modeling error of $ alpha $-models of turbulence on a two-dimensional torus. Discrete and Continuous Dynamical Systems - Series B, 2021, 26, 4613.	0.5	0
81	Global energy conservation. , 2021, , 77-129.		0
82	Long-time behavior of the energy. , 2021, , 255-310.		0
83	Horizontal Approximate Deconvolution for Stratified Flows: Analysis and Computations. ERCOFTAC Series, 2011, , 399-410.	0.1	0
84	On the regularity of solution to the time-dependent p-Stokes system. Opuscula Mathematica, 2020, 40, 49-69.	0.3	0
85	Optimal error estimate for a space-time discretization for incompressible generalized Newtonian fluids: the Dirichlet problem. SN Partial Differential Equations and Applications, 2021, 2, 1.	0.3	0