Annalisa Buffa

List of Publications by Year in descending order

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107 papers	6,741 citations	61984 43 h-index	60623 81 g-index
109 all docs	109 docs citations	109 times ranked	2783 citing authors

#	Article	IF	Citations
1	Fast and multiscale formation of isogeometric matrices of microstructured geometric models. Computational Mechanics, 2022, 69, 439-466.	4.0	6
2	Analysis-aware defeaturing: Problem setting and a posteriori estimation. Mathematical Models and Methods in Applied Sciences, 2022, 32, 359-402.	3.3	7
3	Robust numerical integration on curved polyhedra based on folded decompositions. Computer Methods in Applied Mechanics and Engineering, 2022, 395, 114948.	6.6	6
4	Adaptive Approximation of Shapes. Numerical Functional Analysis and Optimization, 2021, 42, 132-154.	1.4	2
5	Overlapping Multipatch Isogeometric Method with Minimal Stabilization. SIAM Journal of Scientific Computing, 2021, 43, A330-A354.	2.8	14
6	A projected super-penalty method for the $$C^1$$-coupling of multi-patch isogeometric Kirchhoff plates. Computational Mechanics, 2021, 67, 1133-1153.	4.0	7
7	Remarks on PoincarÃ© and interpolation estimates for Truncated Hierarchical B-splines. Mathematical Models and Methods in Applied Sciences, 2021, 31, 525-535.	3.3	3
8	Immersed boundary-conformal isogeometric method for linear elliptic problems. Computational Mechanics, 2021, 68, 1385-1405.	4.0	16
9	Coupling of non-conforming trimmed isogeometric Kirchhoffâ€“Love shells via a projected super-penalty approach. Computer Methods in Applied Mechanics and Engineering, 2021, 387, 114187.	6.6	14
10	Multipatch approximation of the de Rham sequence and its traces in isogeometric analysis. Numerische Mathematik, 2020, 144, 201-236.	1.9	18
11	Isogeometric Mortar Coupling for Electromagnetic Problems. SIAM Journal of Scientific Computing, 2020, 42, B80-B104.	2.8	7
12	A hierarchical approach to the a posteriori error estimation of isogeometric Kirchhoff plates and Kirchhoffâ€“Love shells. Computer Methods in Applied Mechanics and Engineering, 2020, 363, 112919.	6.6	10
13	Adaptive isogeometric analysis on two-dimensional trimmed domains based on a hierarchical approach. Computer Methods in Applied Mechanics and Engineering, 2020, 364, 112925.	6.6	22
14	A Minimal Stabilization Procedure for Isogeometric Methods on Trimmed Geometries. SIAM Journal on Numerical Analysis, 2020, 58, 2711-2735.	2.3	15
15	Isogeometric Analysis on V-reps: First results. Computer Methods in Applied Mechanics and Engineering, 2019, 355, 976-1002.	6.6	37
16	Optimizing Micro-Tiles in Micro-Structures as a Design Paradigm. CAD Computer Aided Design, 2019, 115, 23-33.	2.7	26
17	Mathematical Foundations of Isogeometric Analysis. Oberwolfach Reports, 2019, 16, 1981-2032.	0.0	2
18	A priori error for unilateral contact problems with Lagrange multipliers and isogeometric analysis. IMA Journal of Numerical Analysis, 2019, 39, 1627-1651.	2.9	14

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19	Adaptive isogeometric methods with hierarchical splines: An overview. Discrete and Continuous Dynamical Systems, 2019, 39, 241-261.	0.9	23
20	A posteriori error estimators for hierarchical B-spline discretizations. Mathematical Models and Methods in Applied Sciences, 2018, 28, 1453-1480.	3.3	11
21	Adaptive isogeometric methods with hierarchical splines: Optimality and convergence rates. Mathematical Models and Methods in Applied Sciences, 2017, 27, 2781-2802.	3.3	32
22	An isogeometric method for linear nearly-incompressible elasticity with local stress projection. Computer Methods in Applied Mechanics and Engineering, 2017, 316, 694-719.	6.6	12
23	An Introduction to the Numerical Analysis of Isogeometric Methods. SEMA SIMAI Springer Series, 2016, , 3-69.	0.7	2
24	On Quasi-Interpolation Operators in Spline Spaces. Lecture Notes in Computational Science and Engineering, 2016, , 73-91.	0.3	6
25	Refinable spaces and local approximation estimates for hierarchical splines. IMA Journal of Numerical Analysis, 2016, , drw035.	2.9	2
26	Complexity of hierarchical refinement for a class of admissible mesh configurations. Computer Aided Geometric Design, 2016, 47, 83-92.	1.2	26
27	Adaptive isogeometric methods with hierarchical splines: Error estimator and convergence. Mathematical Models and Methods in Applied Sciences, 2016, 26, 1-25.	3.3	85
28	An Introduction to the Numerical Analysis of Isogeometric Methods. Lecture Notes in Mathematics, 2016, , 87-154.	0.2	0
29	The Influence of Quadrature Errors on Isogeometric Mortar Methods. Lecture Notes in Computational Science and Engineering, 2015, , 33-50.	0.3	4
30	Efficient matrix computation for tensor-product isogeometric analysis: The use of sum factorization. Computer Methods in Applied Mechanics and Engineering, 2015, 285, 817-828.	6.6	68
31	Approximation estimates for isogeometric spaces in multipatch geometries. Numerical Methods for Partial Differential Equations, 2015, 31, 422-438.	3.6	19
32	Characterization of analysis-suitable T-splines. Computer Aided Geometric Design, 2015, 39, 17-49.	1.2	16
33	Isogeometric mortar methods. Computer Methods in Applied Mechanics and Engineering, 2015, 284, 292-319.	6.6	152
34	Moment equations for the mixed formulation of the Hodge Laplacian with stochastic loading term. IMA Journal of Numerical Analysis, 2014, 34, 1328-1360.	2.9	11
35	Isogeometric analysis for electromagnetic scattering problems. , 2014, , .		0
36	Mathematical analysis of variational isogeometric methods. Acta Numerica, 2014, 23, 157-287.	10.7	210

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37	Isogeometric FEM Implementation of High-Order Surface Impedance Boundary Conditions. IEEE Transactions on Magnetics, 2014, 50, 1-8.	2.1	6
38	Isogeometric Finite Elements With Surface Impedance Boundary Conditions. IEEE Transactions on Magnetics, 2014, 50, 429-432.	2.1	3
39	Mimetic scalar products of discrete differential forms. Journal of Computational Physics, 2014, 257, 1228-1259.	3.8	29
40	Isogeometric methods for computational electromagnetics: B-spline and T-spline discretizations. Journal of Computational Physics, 2014, 257, 1291-1320.	3.8	84
41	ANALYSIS-SUITABLE T-SPLINES OF ARBITRARY DEGREE: DEFINITION, LINEAR INDEPENDENCE AND APPROXIMATION PROPERTIES. Mathematical Models and Methods in Applied Sciences, 2013, 23, 1979-2003.	3.3	87
42	BPX-preconditioning for isogeometric analysis. Computer Methods in Applied Mechanics and Engineering, 2013, 265, 63-70.	6.6	50
43	Convergence analysis for hyperbolic evolution problems in mixed form. Numerical Linear Algebra With Applications, 2013, 20, 541-556.	1.6	7
44	Mesh generation and numerical analysis of a Galerkin method for highly conductive prefractal layers. Applied Numerical Mathematics, 2013, 65, 63-78.	2.1	6
45	A prioriconvergence of the Greedy algorithm for the parametrized reduced basis method. ESAIM: Mathematical Modelling and Numerical Analysis, 2012, 46, 595-603.	1.9	187
46	NURBS-Based BEM Implementation of High-Order Surface Impedance Boundary Conditions. IEEE Transactions on Magnetics, 2012, 48, 4757-4766.	2.1	22
47	Analysis-Suitable T-splines are Dual-Compatible. Computer Methods in Applied Mechanics and Engineering, 2012, 249-252, 42-51.	6.6	74
48	Characterization of T-splines with reduced continuity order on T-meshes. Computer Methods in Applied Mechanics and Engineering, 2012, 201-204, 112-126.	6.6	20
49	An isogeometric method for the Reissnerâ€“Mindlin plate bending problem. Computer Methods in Applied Mechanics and Engineering, 2012, 209-212, 45-53.	6.6	86
50	Isogeometric Discrete Differential Forms in Three Dimensions. SIAM Journal on Numerical Analysis, 2011, 49, 818-844.	2.3	142
51	Some estimates for hâ€“pâ€“k-refinement in Isogeometric Analysis. Numerische Mathematik, 2011, 118, 271-305.	1.9	159
52	IsoGeometric Analysis: Stable elements for the 2D Stokes equation. International Journal for Numerical Methods in Fluids, 2011, 65, 1407-1422.	1.6	151
53	IsoGeometric analysis using T-splines on two-patch geometries. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 1787-1803.	6.6	54
54	The mimetic finite difference method for the 3D magnetostatic field problems on polyhedral meshes. Journal of Computational Physics, 2011, 230, 305-328.	3.8	51

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55	Isogeometric analysis in electromagnetics: B-splines approximation. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 1143-1152.	6.6	265
56	Linear independence of the T-spline blending functions associated with some particular T-meshes. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 1437-1445.	6.6	108
57	Innovative mimetic discretizations for electromagnetic problems. Journal of Computational and Applied Mathematics, 2010, 234, 1980-1987.	2.0	28
58	Isogeometric Analysis for Electromagnetic Problems. IEEE Transactions on Magnetics, 2010, 46, 3305-3308.	2.1	28
59	Compact embeddings of broken Sobolev spaces and applications. IMA Journal of Numerical Analysis, 2009, 29, 827-855.	2.9	71
60	The Mortar-Discontinuous Galerkin Method for the 2D Maxwell Eigenproblem. Journal of Scientific Computing, 2009, 40, 86-114.	2.3	19
61	Solving electromagnetic eigenvalue problems in polyhedral domains with nodal finite elements. Numerische Mathematik, 2009, 113, 497-518.	1.9	43
62	Numerical solution of Maxwell's equations using B-splines. , 2009, , .		3
63	Mimetic finite differences for elliptic problems. ESAIM: Mathematical Modelling and Numerical Analysis, 2009, 43, 277-295.	1.9	163
64	A Multiplicative Calderon Preconditioner for the Electric Field Integral Equation. IEEE Transactions on Antennas and Propagation, 2008, 56, 2398-2412.	5.1	379
65	Containment Control in Mobile Networks. IEEE Transactions on Automatic Control, 2008, 53, 1972-1975.	5.7	644
66	Error estimates for the Ultra Weak Variational Formulation of the Helmholtz equation. ESAIM: Mathematical Modelling and Numerical Analysis, 2008, 42, 925-940.	1.9	63
67	A dual finite element complex on the barycentric refinement. Mathematics of Computation, 2007, 76, 1743-1770.	2.1	237
68	A Fast Algorithm for Determining the Propagation Path of Multiple Diffracted Rays. IEEE Transactions on Antennas and Propagation, 2007, 55, 1416-1422.	5.1	10
69	A fully â€œlocking-freeâ€•isogeometric approach for plane linear elasticity problems: A stream function formulation. Computer Methods in Applied Mechanics and Engineering, 2007, 197, 160-172.	6.6	199
70	Discontinuous Galerkin computation of the Maxwell eigenvalues on simplicial meshes. Journal of Computational and Applied Mathematics, 2007, 204, 317-333.	2.0	62
71	Discontinuous Galerkin Approximation of the Maxwell Eigenproblem. SIAM Journal on Numerical Analysis, 2006, 44, 2198-2226.	2.3	99
72	Analysis of a Multiscale Discontinuous Galerkin Method for Convectionâ€Diffusion Problems. SIAM Journal on Numerical Analysis, 2006, 44, 1420-1440.	2.3	73

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73	On the Acoustic Single Layer Potential: Stabilization and Fourier Analysis. SIAM Journal of Scientific Computing, 2006, 28, 1974-1999.	2.8	18
74	Analysis of Coordination in Multi-Agent Systems Through Partial Difference Equations. IEEE Transactions on Automatic Control, 2006, 51, 1058-1063.	5.7	100
75	Finite elements for a prefractal transmission problem. Comptes Rendus Mathematique, 2006, 342, 211-214.	0.3	6
76	A multiscale discontinuous Galerkin method with the computational structure of a continuous Galerkin method. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 2761-2787.	6.6	111
77	Discontinuous Galerkin approximation of the Laplace eigenproblem. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 3483-3503.	6.6	68
78	Compatible Discretizations in Two Dimensions. , 2006, , 3-20.		0
79	H1, H(curl) and H(div)-conforming projection-based interpolation in three dimensions. Computer Methods in Applied Mechanics and Engineering, 2005, 194, 267-296.	6.6	56
80	A dual finite element complex on the barycentric refinement. Comptes Rendus Mathematique, 2005, 340, 461-464.	0.3	37
81	Regularized Combined Field Integral Equations. Numerische Mathematik, 2005, 100, 1-19.	1.9	50
82	Algebraic convergence for anisotropic edge elements in polyhedral domains. Numerische Mathematik, 2005, 101, 29-65.	1.9	31
83	Remarks on the Discretization of Some Noncoercive Operator with Applications to Heterogeneous Maxwell Equations. SIAM Journal on Numerical Analysis, 2005, 43, 1-18.	2.3	62
84	A Coercive Combined Field Integral Equation for Electromagnetic Scattering. SIAM Journal on Numerical Analysis, 2004, 42, 621-640.	2.3	30
85	Boundary Element Methods for Maxwell Transmission Problems in Lipschitz Domains. Numerische Mathematik, 2003, 95, 459-485.	1.9	112
86	The electric field integral equation on Lipschitz screens: definitions and numerical approximation. Numerische Mathematik, 2003, 94, 229-267.	1.9	74
87	Anisotropic regularity results for Laplace and Maxwell operators in a polyhedron. Comptes Rendus Mathematique, 2003, 336, 565-570.	0.3	18
88	The Mortar Edge Element Method in Three Dimensions: Application to Magnetostatics. SIAM Journal of Scientific Computing, 2003, 24, 1303-1327.	2.8	11
89	Trace Theorems on Non-Smooth Boundaries for Functional Spaces Related to Maxwell Equations: an Overview. Lecture Notes in Computational Science and Engineering, 2003, , 23-34.	0.3	20
90	Galerkin Boundary Element Methods for Electromagnetic Scattering. Lecture Notes in Computational Science and Engineering, 2003, , 83-124.	0.3	76

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91	Applications of the Mortar Element Method to 3D Electromagnetic Moving Structures. Lecture Notes in Computational Science and Engineering, 2003, , 35-50.	0.3	4
92	Error estimate for a stabilised domain decomposition method with nonmatching grids. Numerische Mathematik, 2002, 90, 617-640.	1.9	7
93	Boundary element methods for Maxwell's equations on non-smooth domains. Numerische Mathematik, 2002, 92, 679-710.	1.9	103
94	On traces for H(curl,Î©) in Lipschitz domains. Journal of Mathematical Analysis and Applications, 2002, 276, 845-867.	1.0	297
95	Simulation of a magneto-mechanical damping machine: analysis, discretization, results. Computer Methods in Applied Mechanics and Engineering, 2002, 191, 2587-2610.	6.6	6
96	The Mortar Finite Element Method for 3D Maxwell Equations: First Results. SIAM Journal on Numerical Analysis, 2001, 39, 880-901.	2.3	49
97	HODGE DECOMPOSITIONS ON THE BOUNDARY OF NONSMOOTH DOMAINS: THE MULTI-CONNECTED CASE. Mathematical Models and Methods in Applied Sciences, 2001, 11, 1491-1503.	3.3	32
98	A Slideing Mesh-Mortar Method for a two Dimensional Currents Model of Electric Engines. ESAIM: Mathematical Modelling and Numerical Analysis, 2001, 35, 191-228.	1.9	38
99	On traces of functions in for Lipschitz domains in. Comptes Rendus Mathematique, 2001, 332, 699-704.	0.5	18
100	On traces for functional spaces related to Maxwell's equations Part II: Hodge decompositions on the boundary of Lipschitz polyhedra and applications. Mathematical Methods in the Applied Sciences, 2001, 24, 31-48.	2.3	147
101	On traces for functional spaces related to Maxwell's equations Part I: An integration by parts formula in Lipschitz polyhedra. Mathematical Methods in the Applied Sciences, 2001, 24, 9-30.	2.3	213
102	A Justification of Eddy Currents Model for the Maxwell Equations. SIAM Journal on Applied Mathematics, 2000, 60, 1805-1823.	1.8	177
103	Calculation of eddy currents in moving structures by a sliding mesh-finite element method. IEEE Transactions on Magnetics, 2000, 36, 1356-1359.	2.1	43
104	Calculation of eddy currents with edge elements on non-matching grids in moving structures. IEEE Transactions on Magnetics, 2000, 36, 1351-1355.	2.1	15
105	The mortar method for the Maxwell's equations in 3D. Comptes Rendus Mathematique, 1999, 329, 903-908.	0.5	5
106	Image filtering, mean curvature, Dirichlet problems. Applied Mathematics Letters, 1999, 12, 131-135.	2.7	0
107	The dirichlet problem for generalized mean curvature flows*. Applicable Analysis, 1997, 67, 137-156.	1.3	1