

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	Containment Control in Mobile Networks. IEEE Transactions on Automatic Control, 2008, 53, 1972-1975.	5.7	644
2	A Multiplicative Calderon Preconditioner for the Electric Field Integral Equation. IEEE Transactions on Antennas and Propagation, 2008, 56, 2398-2412.	5.1	379
3	On traces for $H(\text{curl}, \hat{\mathbb{C}})$ in Lipschitz domains. Journal of Mathematical Analysis and Applications, 2002, 276, 845-867.	1.0	297
4	Isogeometric analysis in electromagnetics: B-splines approximation. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 1143-1152.	6.6	265
5	A dual finite element complex on the barycentric refinement. Mathematics of Computation, 2007, 76, 1743-1770.	2.1	237
6	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
7	Mathematical analysis of variational isogeometric methods. Acta Numerica, 2014, 23, 157-287.	10.7	210
8	A fully \mathbb{C} -locking-free 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
9	<i>A priori</i> convergence of the Greedy algorithm for the parametrized reduced basis method. ESAIM: Mathematical Modelling and Numerical Analysis, 2012, 46, 595-603.	1.9	187
10	A Justification of Eddy Currents Model for the Maxwell Equations. SIAM Journal on Applied Mathematics, 2000, 60, 1805-1823.	1.8	177
11	Mimetic finite differences for elliptic problems. ESAIM: Mathematical Modelling and Numerical Analysis, 2009, 43, 277-295.	1.9	163
12	Some estimates for h^k -refinement in Isogeometric Analysis. Numerische Mathematik, 2011, 118, 271-305.	1.9	159
13	Isogeometric mortar methods. Computer Methods in Applied Mechanics and Engineering, 2015, 284, 292-319.	6.6	152
14	IsoGeometric Analysis: Stable elements for the 2D Stokes equation. International Journal for Numerical Methods in Fluids, 2011, 65, 1407-1422.	1.6	151
15	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
16	Isogeometric Discrete Differential Forms in Three Dimensions. SIAM Journal on Numerical Analysis, 2011, 49, 818-844.	2.3	142
17	Boundary Element Methods for Maxwell Transmission Problems in Lipschitz Domains. Numerische Mathematik, 2003, 95, 459-485.	1.9	112
18	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

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19	Linear independence of the T-spline blending functions associated with some particular T-meshes. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2010, 199, 1437-1445.	6.6	108
20	Boundary element methods for Maxwell's equations on non-smooth domains. <i>Numerische Mathematik</i> , 2002, 92, 679-710.	1.9	103
21	Analysis of Coordination in Multi-Agent Systems Through Partial Difference Equations. <i>IEEE Transactions on Automatic Control</i> , 2006, 51, 1058-1063.	5.7	100
22	Discontinuous Galerkin Approximation of the Maxwell Eigenproblem. <i>SIAM Journal on Numerical Analysis</i> , 2006, 44, 2198-2226.	2.3	99
23	ANALYSIS-SUITABLE T-SPLINES OF ARBITRARY DEGREE: DEFINITION, LINEAR INDEPENDENCE AND APPROXIMATION PROPERTIES. <i>Mathematical Models and Methods in Applied Sciences</i> , 2013, 23, 1979-2003.	3.3	87
24	An isogeometric method for the Reissner-Mindlin plate bending problem. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2012, 209-212, 45-53.	6.6	86
25	Adaptive isogeometric methods with hierarchical splines: Error estimator and convergence. <i>Mathematical Models and Methods in Applied Sciences</i> , 2016, 26, 1-25.	3.3	85
26	Isogeometric methods for computational electromagnetics: B-spline and T-spline discretizations. <i>Journal of Computational Physics</i> , 2014, 257, 1291-1320.	3.8	84
27	Galerkin Boundary Element Methods for Electromagnetic Scattering. <i>Lecture Notes in Computational Science and Engineering</i> , 2003, , 83-124.	0.3	76
28	The electric field integral equation on Lipschitz screens: definitions and numerical approximation. <i>Numerische Mathematik</i> , 2003, 94, 229-267.	1.9	74
29	Analysis-Suitable T-splines are Dual-Compatible. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2012, 249-252, 42-51.	6.6	74
30	Analysis of a Multiscale Discontinuous Galerkin Method for Convection-Diffusion Problems. <i>SIAM Journal on Numerical Analysis</i> , 2006, 44, 1420-1440.	2.3	73
31	Compact embeddings of broken Sobolev spaces and applications. <i>IMA Journal of Numerical Analysis</i> , 2009, 29, 827-855.	2.9	71
32	Discontinuous Galerkin approximation of the Laplace eigenproblem. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006, 195, 3483-3503.	6.6	68
33	Efficient matrix computation for tensor-product isogeometric analysis: The use of sum factorization. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2015, 285, 817-828.	6.6	68
34	Error estimates for the Ultra Weak Variational Formulation of the Helmholtz equation. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2008, 42, 925-940.	1.9	63
35	Remarks on the Discretization of Some Noncoercive Operator with Applications to Heterogeneous Maxwell Equations. <i>SIAM Journal on Numerical Analysis</i> , 2005, 43, 1-18.	2.3	62
36	Discontinuous Galerkin computation of the Maxwell eigenvalues on simplicial meshes. <i>Journal of Computational and Applied Mathematics</i> , 2007, 204, 317-333.	2.0	62

#	ARTICLE	IF	CITATIONS
37	H1, H(curl) and H(div)-conforming projection-based interpolation in three dimensions. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2005, 194, 267-296.	6.6	56
38	IsoGeometric analysis using T-splines on two-patch geometries. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2011, 200, 1787-1803.	6.6	54
39	The mimetic finite difference method for the 3D magnetostatic field problems on polyhedral meshes. <i>Journal of Computational Physics</i> , 2011, 230, 305-328.	3.8	51
40	Regularized Combined Field Integral Equations. <i>Numerische Mathematik</i> , 2005, 100, 1-19.	1.9	50
41	BPX-preconditioning for isogeometric analysis. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2013, 265, 63-70.	6.6	50
42	The Mortar Finite Element Method for 3D Maxwell Equations: First Results. <i>SIAM Journal on Numerical Analysis</i> , 2001, 39, 880-901.	2.3	49
43	Calculation of eddy currents in moving structures by a sliding mesh-finite element method. <i>IEEE Transactions on Magnetics</i> , 2000, 36, 1356-1359.	2.1	43
44	Solving electromagnetic eigenvalue problems in polyhedral domains with nodal finite elements. <i>Numerische Mathematik</i> , 2009, 113, 497-518.	1.9	43
45	A Sliding Mesh-Mortar Method for a two Dimensional Currents Model of Electric Engines. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2001, 35, 191-228.	1.9	38
46	A dual finite element complex on the barycentric refinement. <i>Comptes Rendus Mathematique</i> , 2005, 340, 461-464.	0.3	37
47	Isogeometric Analysis on V-reps: First results. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 355, 976-1002.	6.6	37
48	HODGE DECOMPOSITIONS ON THE BOUNDARY OF NONSMOOTH DOMAINS: THE MULTI-CONNECTED CASE. <i>Mathematical Models and Methods in Applied Sciences</i> , 2001, 11, 1491-1503.	3.3	32
49	Adaptive isogeometric methods with hierarchical splines: Optimality and convergence rates. <i>Mathematical Models and Methods in Applied Sciences</i> , 2017, 27, 2781-2802.	3.3	32
50	Algebraic convergence for anisotropic edge elements in polyhedral domains. <i>Numerische Mathematik</i> , 2005, 101, 29-65.	1.9	31
51	A Coercive Combined Field Integral Equation for Electromagnetic Scattering. <i>SIAM Journal on Numerical Analysis</i> , 2004, 42, 621-640.	2.3	30
52	Mimetic scalar products of discrete differential forms. <i>Journal of Computational Physics</i> , 2014, 257, 1228-1259.	3.8	29
53	Innovative mimetic discretizations for electromagnetic problems. <i>Journal of Computational and Applied Mathematics</i> , 2010, 234, 1980-1987.	2.0	28
54	Isogeometric Analysis for Electromagnetic Problems. <i>IEEE Transactions on Magnetics</i> , 2010, 46, 3305-3308.	2.1	28

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55	Complexity of hierarchical refinement for a class of admissible mesh configurations. <i>Computer Aided Geometric Design</i> , 2016, 47, 83-92.	1.2	26
56	Optimizing Micro-Tiles in Micro-Structures as a Design Paradigm. <i>CAD Computer Aided Design</i> , 2019, 115, 23-33.	2.7	26
57	Adaptive isogeometric methods with hierarchical splines: An overview. <i>Discrete and Continuous Dynamical Systems</i> , 2019, 39, 241-261.	0.9	23
58	NURBS-Based BEM Implementation of High-Order Surface Impedance Boundary Conditions. <i>IEEE Transactions on Magnetics</i> , 2012, 48, 4757-4766.	2.1	22
59	Adaptive isogeometric analysis on two-dimensional trimmed domains based on a hierarchical approach. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 364, 112925.	6.6	22
60	Trace Theorems on Non-Smooth Boundaries for Functional Spaces Related to Maxwell Equations: an Overview. <i>Lecture Notes in Computational Science and Engineering</i> , 2003, , 23-34.	0.3	20
61	Characterization of T-splines with reduced continuity order on T-meshes. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2012, 201-204, 112-126.	6.6	20
62	The Mortar-Discontinuous Galerkin Method for the 2D Maxwell Eigenproblem. <i>Journal of Scientific Computing</i> , 2009, 40, 86-114.	2.3	19
63	Approximation estimates for isogeometric spaces in multipatch geometries. <i>Numerical Methods for Partial Differential Equations</i> , 2015, 31, 422-438.	3.6	19
64	On traces of functions in for Lipschitz domains in. <i>Comptes Rendus Mathematique</i> , 2001, 332, 699-704.	0.5	18
65	Anisotropic regularity results for Laplace and Maxwell operators in a polyhedron. <i>Comptes Rendus Mathematique</i> , 2003, 336, 565-570.	0.3	18
66	On the Acoustic Single Layer Potential: Stabilization and Fourier Analysis. <i>SIAM Journal of Scientific Computing</i> , 2006, 28, 1974-1999.	2.8	18
67	Multipatch approximation of the de Rham sequence and its traces in isogeometric analysis. <i>Numerische Mathematik</i> , 2020, 144, 201-236.	1.9	18
68	Characterization of analysis-suitable T-splines. <i>Computer Aided Geometric Design</i> , 2015, 39, 17-49.	1.2	16
69	Immersed boundary-conformal isogeometric method for linear elliptic problems. <i>Computational Mechanics</i> , 2021, 68, 1385-1405.	4.0	16
70	Calculation of eddy currents with edge elements on non-matching grids in moving structures. <i>IEEE Transactions on Magnetics</i> , 2000, 36, 1351-1355.	2.1	15
71	A Minimal Stabilization Procedure for Isogeometric Methods on Trimmed Geometries. <i>SIAM Journal on Numerical Analysis</i> , 2020, 58, 2711-2735.	2.3	15
72	A priori error for unilateral contact problems with Lagrange multipliers and isogeometric analysis. <i>IMA Journal of Numerical Analysis</i> , 2019, 39, 1627-1651.	2.9	14

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73	Overlapping Multipatch Isogeometric Method with Minimal Stabilization. SIAM Journal of Scientific Computing, 2021, 43, A330-A354.	2.8	14
74	Coupling of non-conforming trimmed isogeometric Kirchhoff-“Love shells via a projected super-penalty approach. Computer Methods in Applied Mechanics and Engineering, 2021, 387, 114187.	6.6	14
75	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
76	The Mortar Edge Element Method in Three Dimensions: Application to Magnetostatics. SIAM Journal of Scientific Computing, 2003, 24, 1303-1327.	2.8	11
77	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
78	<i>a posteriori</i> error estimators for hierarchical B-spline discretizations. Mathematical Models and Methods in Applied Sciences, 2018, 28, 1453-1480.	3.3	11
79	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
80	A hierarchical approach to the <i>a posteriori</i> error estimation of isogeometric Kirchhoff plates and Kirchhoff-“Love shells. Computer Methods in Applied Mechanics and Engineering, 2020, 363, 112919.	6.6	10
81	Error estimate for a stabilised domain decomposition method with nonmatching grids. Numerische Mathematik, 2002, 90, 617-640.	1.9	7
82	Convergence analysis for hyperbolic evolution problems in mixed form. Numerical Linear Algebra With Applications, 2013, 20, 541-556.	1.6	7
83	Isogeometric Mortar Coupling for Electromagnetic Problems. SIAM Journal of Scientific Computing, 2020, 42, B80-B104.	2.8	7
84	A projected super-penalty method for the H^1 -coupling of multi-patch isogeometric Kirchhoff plates. Computational Mechanics, 2021, 67, 1133-1153.	4.0	7
85	Analysis-aware defeaturing: Problem setting and <i>a posteriori</i> estimation. Mathematical Models and Methods in Applied Sciences, 2022, 32, 359-402.	3.3	7
86	Simulation of a magneto-mechanical damping machine: analysis, discretization, results. Computer Methods in Applied Mechanics and Engineering, 2002, 191, 2587-2610.	6.6	6
87	Finite elements for a prefractal transmission problem. Comptes Rendus Mathematique, 2006, 342, 211-214.	0.3	6
88	Mesh generation and numerical analysis of a Galerkin method for highly conductive prefractal layers. Applied Numerical Mathematics, 2013, 65, 63-78.	2.1	6
89	Isogeometric FEM Implementation of High-Order Surface Impedance Boundary Conditions. IEEE Transactions on Magnetics, 2014, 50, 1-8.	2.1	6
90	On Quasi-Interpolation Operators in Spline Spaces. Lecture Notes in Computational Science and Engineering, 2016, , 73-91.	0.3	6

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91	Fast and multiscale formation of isogeometric matrices of microstructured geometric models. Computational Mechanics, 2022, 69, 439-466.	4.0	6
92	Robust numerical integration on curved polyhedra based on folded decompositions. Computer Methods in Applied Mechanics and Engineering, 2022, 395, 114948.	6.6	6
93	The mortar method for the Maxwell's equations in 3D. Comptes Rendus Mathematique, 1999, 329, 903-908.	0.5	5
94	The Influence of Quadrature Errors on Isogeometric Mortar Methods. Lecture Notes in Computational Science and Engineering, 2015, , 33-50.	0.3	4
95	Applications of the Mortar Element Method to 3D Electromagnetic Moving Structures. Lecture Notes in Computational Science and Engineering, 2003, , 35-50.	0.3	4
96	Numerical solution of Maxwell's equations using B-splines. , 2009, , .		3
97	Isogeometric Finite Elements With Surface Impedance Boundary Conditions. IEEE Transactions on Magnetics, 2014, 50, 429-432.	2.1	3
98	Remarks on Poincaré and interpolation estimates for Truncated Hierarchical B-splines. Mathematical Models and Methods in Applied Sciences, 2021, 31, 525-535.	3.3	3
99	An Introduction to the Numerical Analysis of Isogeometric Methods. SEMA SIMAI Springer Series, 2016, , 3-69.	0.7	2
100	Refinable spaces and local approximation estimates for hierarchical splines. IMA Journal of Numerical Analysis, 2016, , drw035.	2.9	2
101	Mathematical Foundations of Isogeometric Analysis. Oberwolfach Reports, 2019, 16, 1981-2032.	0.0	2
102	Adaptive Approximation of Shapes. Numerical Functional Analysis and Optimization, 2021, 42, 132-154.	1.4	2
103	The dirichlet problem for generalized mean curvature flows*. Applicable Analysis, 1997, 67, 137-156.	1.3	1
104	Image filtering, mean curvature, Dirichlet problems. Applied Mathematics Letters, 1999, 12, 131-135.	2.7	0
105	Isogeometric analysis for electromagnetic scattering problems. , 2014, , .		0
106	An Introduction to the Numerical Analysis of Isogeometric Methods. Lecture Notes in Mathematics, 2016, , 87-154.	0.2	0
107	Compatible Discretizations in Two Dimensions. , 2006, , 3-20.		0