List of Publications by Year in descending order

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Υνονι Ι Μαραγ

#	Article	IF	CITATIONS
1	An â€~empirical interpolation' method: application to efficient reduced-basis discretization of partial differential equations. Comptes Rendus Mathematique, 2004, 339, 667-672.	0.1	1,033
2	Efficient reduced-basis treatment of nonaffine and nonlinear partial differential equations. ESAIM: Mathematical Modelling and Numerical Analysis, 2007, 41, 575-605.	0.8	373
3	Résolution d'EDP par un schéma en temps «pararéel ». Comptes Rendus Mathematique, 2001, 332, 661	l-668.	336
4	Spectral methods. Handbook of Numerical Analysis, 1997, 5, 209-485.	0.9	223
5	<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.	0.8	187
6	A general multipurpose interpolation procedure: the magic points. Communications on Pure and Applied Analysis, 2009, 8, 383-404.	0.4	159
7	New formulations of monotonically convergent quantum control algorithms. Journal of Chemical Physics, 2003, 118, 8191-8196.	1.2	158
8	Legendre Pseudospectral Viscosity Method for Nonlinear Conservation Laws. SIAM Journal on Numerical Analysis, 1993, 30, 321-342.	1.1	140
9	Generalized Inf-Sup Conditions for Chebyshev Spectral Approximation of the Stokes Problem. SIAM Journal on Numerical Analysis, 1988, 25, 1237-1271.	1.1	120
10	Title is missing!. Journal of Scientific Computing, 2002, 17, 437-446.	1.1	106
11	Existence for an Unsteady Fluid-Structure Interaction Problem. ESAIM: Mathematical Modelling and Numerical Analysis, 2000, 34, 609-636.	0.8	105
12	Analysis of Iterative Methods for the Steady and Unsteady Stokes Problem: Application to Spectral Element Discretizations. SIAM Journal of Scientific Computing, 1993, 14, 310-337.	1.3	102
13	The Reduced Basis Element Method: Application to a Thermal Fin Problem. SIAM Journal of Scientific Computing, 2004, 26, 240-258.	1.3	92
14	Optimal error analysis of spectral methods with emphasis on non-constant coefficients and deformed geometries. Computer Methods in Applied Mechanics and Engineering, 1990, 80, 91-115.	3.4	90
15	Iterative Substructuring Preconditioners for Mortar Element Methods in Two Dimensions. SIAM Journal on Numerical Analysis, 1999, 36, 551-580.	1.1	88
16	A parareal in time procedure for the control of partial differential equations. Comptes Rendus Mathematique, 2002, 335, 387-392.	0.1	88
17	Polynomial interpolation results in Sobolev spaces. Journal of Computational and Applied Mathematics, 1992, 43, 53-80.	1.1	87
18	Coupling finite element and spectral methods: first results. Mathematics of Computation, 1990, 54, 21-39.	1.1	84

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19	Reduced Basis Techniques for Stochastic Problems. Archives of Computational Methods in Engineering, 2010, 17, 435-454.	6.0	81
20	Numerical Analysis of Nonlinear Eigenvalue Problems. Journal of Scientific Computing, 2010, 45, 90-117.	1.1	81
21	Output bounds for reduced-basis approximations of symmetric positive definite eigenvalue problems. Comptes Rendus Mathematique, 2000, 331, 153-158.	0.5	78
22	Analysis of the Spectral Vanishing Viscosity Method for Periodic Conservation Laws. SIAM Journal on Numerical Analysis, 1989, 26, 854-870.	1.1	77
23	A Reduced-Basis Element Method. Journal of Scientific Computing, 2002, 17, 447-459.	1.1	72
24	A parameterizedâ€background dataâ€weak approach to variational data assimilation: formulation, analysis, and application to acoustics. International Journal for Numerical Methods in Engineering, 2015, 102, 933-965.	1.5	71
25	Global a priori convergence theory for reduced-basis approximations of single-parameter symmetric coercive elliptic partial differential equations. Comptes Rendus Mathematique, 2002, 335, 289-294.	0.1	70
26	Reliable Fast Frequency Sweep for Microwave Devices via the Reduced-Basis Method. IEEE Transactions on Microwave Theory and Techniques, 2009, 57, 2923-2937.	2.9	69
27	Certified Reduced Basis Methods and Output Bounds for the Harmonic Maxwell's Equations. SIAM Journal of Scientific Computing, 2010, 32, 970-996.	1.3	69
28	A "Parareal―Time Discretization for Non-Linear PDE's with Application to the Pricing of an American Put. Lecture Notes in Computational Science and Engineering, 2002, , 189-202.	0.1	68
29	Legendre and Chebyshev spectral approximations of Burgers' equation. Numerische Mathematik, 1981, 37, 321-332.	0.9	64
30	Results and Questions on a Nonlinear Approximation Approach for Solving High-dimensional Partial Differential Equations. Constructive Approximation, 2009, 30, 621-651.	1.8	63
31	Properties of Some Weighted Sobolev Spaces and Application to Spectral Approximations. SIAM Journal on Numerical Analysis, 1989, 26, 769-829.	1.1	60
32	Monotonic Parareal Control for Quantum Systems. SIAM Journal on Numerical Analysis, 2007, 45, 2468-2482.	1.1	60
33	Basics and some applications of the mortar element method. GAMM Mitteilungen, 2005, 28, 97-123.	2.7	58
34	Computational quantum chemistry: A primer. Handbook of Numerical Analysis, 2003, 10, 3-270.	0.9	57
35	Stable Parareal in Time Method for First- and Second-Order Hyperbolic Systems. SIAM Journal of Scientific Computing, 2013, 35, A52-A78.	1.3	56
36	Absorbing interface conditions for domain decomposition methods: A general presentation. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 3880-3900.	3.4	54

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37	The reduced basis method for the electric field integral equation. Journal of Computational Physics, 2011, 230, 5532-5555.	1.9	54
38	A stabilized POD model for turbulent flows over a range of Reynolds numbers: Optimal parameter sampling and constrained projection. Journal of Computational Physics, 2018, 371, 214-243.	1.9	54
39	A reduced basis element method for the steady Stokes problem. ESAIM: Mathematical Modelling and Numerical Analysis, 2006, 40, 529-552.	0.8	53
40	A reduced basis approach for variational problems with stochastic parameters: Application to heat conduction with variable Robin coefficient. Computer Methods in Applied Mechanics and Engineering, 2009, 198, 3187-3206.	3.4	52
41	A general formulation for a posteriori bounds for output functionals of partial differential equations; application to the eigenvalue problem. Comptes Rendus Mathematique, 1999, 328, 823-828.	0.5	51
42	Numerical analysis of the planewave discretization of some orbital-free and Kohn-Sham models. ESAIM: Mathematical Modelling and Numerical Analysis, 2012, 46, 341-388.	0.8	50
43	Parallel in time algorithms for quantum control: Parareal time discretization scheme. International Journal of Quantum Chemistry, 2003, 93, 223-228.	1.0	47
44	A Parareal in Time Semi-implicit Approximation of the Navier-Stokes Equations. , 2005, , 433-440.		47
45	Monotonic time-discretized schemes in quantum control. Numerische Mathematik, 2006, 103, 323-338.	0.9	45
46	A collocation method over staggered grids for the Stokes problem. International Journal for Numerical Methods in Fluids, 1988, 8, 537-557.	0.9	44
47	Parallelization in time through tensor-product space–time solvers. Comptes Rendus Mathematique, 2008, 346, 113-118.	0.1	43
48	Optimized Schwarz methods without overlap for highly heterogeneous media. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 1541-1553.	3.4	40
49	A Slideing Mesh-Mortar Method for a two Dimensional Currents Model of Electric Engines. ESAIM: Mathematical Modelling and Numerical Analysis, 2001, 35, 191-228.	0.8	38
50	Mixed spectral element approximation of the Navier-Stokes equations in the stream-function and vorticity formulation. IMA Journal of Numerical Analysis, 1992, 12, 565-608.	1.5	37
51	Polynomial approximation of some singular functions. Applicable Analysis, 1991, 42, 1-32.	0.6	35
52	A reduced-basis element method. Comptes Rendus Mathematique, 2002, 335, 195-200.	0.1	35
53	A high order characteristics method for the incompressible Navier—Stokes equations. Computer Methods in Applied Mechanics and Engineering, 1994, 116, 211-218.	3.4	34
54	A Generalized Empirical Interpolation Method: Application of Reduced Basis Techniques to Data Assimilation. Springer INdAM Series, 2013, , 221-235.	0.4	34

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55	Improved successive constraint method based <i>a posteriori</i> error estimate for reduced basis approximation of 2D Maxwell's problem. ESAIM: Mathematical Modelling and Numerical Analysis, 2009, 43, 1099-1116.	0.8	33
56	Two different approaches for matching nonconforming grids: The Mortar Element method and the Feti Method. BIT Numerical Mathematics, 1997, 37, 720-738.	1.0	32
57	Improved ad hoc interface conditions for Schwarz solution procedure tuned to highly heterogeneous media. Applied Mathematical Modelling, 2006, 30, 731-743.	2.2	31
58	A "flux-free―nodal Neumann subproblem approach to output bounds for partial differential equations. Comptes Rendus Mathematique, 2000, 330, 249-254.	0.5	30
59	Model Order Reduction for Problems with Large Convection Effects. Computational Methods in Applied Sciences (Springer), 2019, , 131-150.	0.1	30
60	Symmetric parareal algorithms for Hamiltonian systems. ESAIM: Mathematical Modelling and Numerical Analysis, 2013, 47, 717-742.	0.8	28
61	The Parareal in Time Iterative Solver: a Further Direction to Parallel Implementation. , 2005, , 441-448.		26
62	Combined finite element and spectral approximation of the Navier-Stokes equations. Numerische Mathematik, 1984, 44, 201-217.	0.9	25
63	Spectral approximation of the periodic-nonperiodic Navier-Stokes equations. Numerische Mathematik, 1987, 51, 655-700.	0.9	24
64	NUMERICAL ANALYSIS OF A POSTERIORI FINITE ELEMENT BOUNDS FOR LINEAR FUNCTIONAL OUTPUTS. Mathematical Models and Methods in Applied Sciences, 2000, 10, 785-799.	1.7	24
65	Guaranteed and Robust a Posteriori Bounds for Laplace Eigenvalues and Eigenvectors: Conforming Approximations. SIAM Journal on Numerical Analysis, 2017, 55, 2228-2254.	1.1	24
66	Error bars and quadratically convergent methods for the numerical simulation of the Hartree-Fock equations. Numerische Mathematik, 2003, 94, 739-770.	0.9	22
67	A monotonic evaluation of lower bounds for inf-sup stability constants in the frame of reduced basis approximations. Comptes Rendus Mathematique, 2008, 346, 1295-1300.	0.1	22
68	On the linear force-free fields in bounded and unbounded three-dimensional domains. ESAIM: Mathematical Modelling and Numerical Analysis, 1999, 33, 359-393.	0.8	20
69	Periodic Schrödinger Operators with Local Defects and Spectral Pollution. SIAM Journal on Numerical Analysis, 2012, 50, 3016-3035.	1.1	20
70	Guaranteed and robust a posteriori bounds for Laplace eigenvalues and eigenvectors: a unified framework. Numerische Mathematik, 2018, 140, 1033-1079.	0.9	19
71	Certified reduced basis method for electromagnetic scattering and radar cross section estimation. Computer Methods in Applied Mechanics and Engineering, 2012, 233-236, 92-108.	3.4	18
72	Relèvement polynômial de traces et applications. ESAIM: Mathematical Modelling and Numerical Analysis, 1990, 24, 557-611.	0.8	18

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73	Computational modeling of blood flow in the aorta—insights intoÂeccentric dilatation of the ascending aorta after surgery for coarctation. Journal of Thoracic and Cardiovascular Surgery, 2014, 148, 1572-1582.	0.4	17
74	Parareal in Time Intermediate Targets Methods for Optimal Control Problems. International Series of Numerical Mathematics, 2013, , 79-92.	1.0	17
75	Non-overlapping additive Schwarz methods tuned to highly heterogeneous media. Comptes Rendus Mathematique, 2005, 341, 701-705.	0.1	16
76	A perturbation-method-based a posteriori estimator for the planewave discretization of nonlinear Schrödinger equations. Comptes Rendus Mathematique, 2014, 352, 941-946.	0.1	16
77	The Reduced Basis Element Method for Fluid Flows. , 2006, , 129-154.		16
78	Coupling Spectral and Finite Elements for Second Order Elliptic Three-Dimensional Equations. SIAM Journal on Numerical Analysis, 1999, 36, 1234-1263.	1.1	15
79	Noncorming matching conditions for coupling spectral and finite element methods. Applied Numerical Mathematics, 1989, 6, 65-84.	1.2	14
80	Spectral Approximations of the Stokes Equations with Boundary Conditions on the Pressure. SIAM Journal on Numerical Analysis, 1991, 28, 333-362.	1.1	14
81	Parareal in time 3D numerical solver for the LWR Benchmark neutron diffusion transient model. Journal of Computational Physics, 2014, 279, 67-79.	1.9	14
82	Two-grid methods for a class of nonlinear elliptic eigenvalue problems. IMA Journal of Numerical Analysis, 2018, 38, 605-645.	1.5	14
83	Spectral methods for the approximation of fourth-order problems: Application to the stokes and Navier-Stokes equations. Computers and Structures, 1988, 30, 205-216.	2.4	13
84	Existence de solutions d'un problème de couplage fluide-structure bidimensionnel instationnaire. Comptes Rendus Mathematique, 1998, 326, 525-530.	0.5	13
85	Une méthode combinée d'éléments finis à deux grilles/bases réduites pour l'approximation des solutions d'une E.D.P. paramétrique. Comptes Rendus Mathematique, 2009, 347, 435-440.	0.1	13
86	Optimal and fast field reconstruction with reduced basis and limited observations: Application to reactor core online monitoring. Nuclear Engineering and Design, 2021, 377, 111113.	0.8	13
87	Towards Reduced Basis Approaches in ab initio Electronic Structure Computations. Journal of Scientific Computing, 2002, 17, 461-469.	1.1	12
88	Analysis of Some PadéChebyshev Approximants. SIAM Journal on Numerical Analysis, 2005, 43, 437-454.	1.1	12
89	Parametric analytical preconditioning and its applications to the reduced collocation methods. Comptes Rendus Mathematique, 2014, 352, 661-666.	0.1	12
90	A <i>posteriori</i> analysis of a nonlinear Gross–Pitaevskii-type eigenvalue problem. IMA Journal of Numerical Analysis, 2017, 37, 94-137.	1.5	12

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91	Approximation results for spectral methods with domain decomposition. Applied Numerical Mathematics, 1989, 6, 33-52.	1.2	11
92	A high-order Lagrangian-decoupling method for the incompressible Navier-Stokes equations. Computer Methods in Applied Mechanics and Engineering, 1990, 80, 65-90.	3.4	11
93	A spectral element method for the time-dependent two-dimensional Euler equations: applications to flow simulations. Journal of Computational and Applied Mathematics, 1998, 91, 63-85.	1.1	11
94	Mesh adaptivity in finite elements using the mortar method. Revue Europeenne Des Elements, 2000, 9, 451-465.	0.1	11
95	A perturbation-method-based post-processing for the planewave discretization of Kohn–Sham models. Journal of Computational Physics, 2016, 307, 446-459.	1.9	11
96	The Influence of Quadrature Formulas in 2D and 3D Mortar Element Methods. Lecture Notes in Computational Science and Engineering, 2002, , 203-221.	0.1	11
97	Reduced basis method for the rapid and reliable solution of partial differential equations. , 2007, , 1255-1270.		11
98	MORTARING THE TWO-DIMENSIONAL EDGE FINITE ELEMENTS FOR THE DISCRETIZATION OF SOME ELECTROMAGNETIC MODELS. Mathematical Models and Methods in Applied Sciences, 2004, 14, 1635-1656.	1.7	10
99	Regularity and hp discontinuous Galerkin finite element approximation of linear elliptic eigenvalue problems with singular potentials. Mathematical Models and Methods in Applied Sciences, 2019, 29, 1585-1617.	1.7	10
100	Guaranteed a posteriori bounds for eigenvalues and eigenvectors: Multiplicities and clusters. Mathematics of Computation, 2020, 89, 2563-2611.	1.1	10
101	An EIM-degradation free reduced basis method via over collocation and residual hyper reduction-based error estimation. Journal of Computational Physics, 2021, 444, 110545.	1.9	10
102	A Seamless Reduced Basis Element Method for 2D Maxwell's Problem: An Introduction. Lecture Notes in Computational Science and Engineering, 2011, , 141-152.	0.1	10
103	Towards a method for solving partial differential equations by using wavelet packet bases. Computer Methods in Applied Mechanics and Engineering, 1994, 116, 301-307.	3.4	9
104	A reduced basis method applied to the Restricted Hartree–Fock equations. Comptes Rendus Mathematique, 2008, 346, 243-248.	0.1	9
105	Single-Grid Spectral Collocation for the Navier-Stokes Equations. IMA Journal of Numerical Analysis, 1990, 10, 253-297.	1.5	8
106	Modeling and Analysis of an Elastic Problem with Large Displacements and Small Strains. Journal of Elasticity, 2007, 87, 29-72.	0.9	8
107	GLOBAL C ¹ MAPS ON GENERAL DOMAINS. Mathematical Models and Methods in Applied Sciences, 2009, 19, 803-832.	1.7	8
108	A new method for reconstruction of cross-sections using Tucker decomposition. Journal of Computational Physics, 2017, 345, 189-206.	1.9	8

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109	A domain decomposition method for the polarizable continuum model based on the solvent excluded surface. Mathematical Models and Methods in Applied Sciences, 2018, 28, 1233-1266.	1.7	8
110	Parareal in time algorithm for kinetic systems based on model reduction. CRM Proceedings & Lecture Notes, 2007, , 183-194.	0.1	8
111	The lifting of polynomial traces revisited. Mathematics of Computation, 2010, 79, 47-47.	1.1	7
112	A reduced basis element method for the steady Stokes problem: Application to hierarchical flow systems. Modeling, Identification and Control, 2006, 27, 79-94.	0.6	7
113	Fast Tensor-Product Solvers: Partially Deformed Three-dimensional Domains. Journal of Scientific Computing, 2009, 39, 28-48.	1.1	6
114	Reduced-Order Semi-Implicit Schemes for Fluid-Structure Interaction Problems. Modeling, Simulation and Applications, 2017, , 149-167.	1.3	6
115	La méthode des elements avec joint appliquée aux méthodes d'approximations Discrete Kirchhoff Triangles. Comptes Rendus Mathematique, 1998, 326, 1237-1242.	0.5	5
116	The mortar method for the Maxwell's equations in 3D. Comptes Rendus Mathematique, 1999, 329, 903-908.	0.5	5
117	A NEW INTERFACE CEMENT EQUILIBRATED MORTAR (NICEM) METHOD WITH ROBIN INTERFACE CONDITIONS: THE P ₁ FINITE ELEMENT CASE. Mathematical Models and Methods in Applied Sciences, 2013, 23, 2253-2292.	1.7	5
118	h — P Finite element approximation for full-potential electronic structure calculations. Chinese Annals of Mathematics Series B, 2014, 35, 1-24.	0.2	5
119	Non-consistent approximations of self-adjoint eigenproblems: application to the supercell method. Numerische Mathematik, 2014, 128, 663-706.	0.9	5
120	Comparison of Some Reduced Representation Approximations. , 2014, , 67-100.		5
121	A Dynamical Adaptive Concept Based on Wavelet Packet Best Bases: Application to Convection Diffusion Partial Differential Equations. Wavelet Analysis and Its Applications, 1997, 6, 199-235.	0.2	4
122	Bounds evaluation for outputs of eigenvalue problems approximated by the overlapping modal synthesis method. Comptes Rendus Mathematique, 1999, 329, 909-914.	0.5	4
123	A greedy algorithm for the identification of quantum systems. , 2009, , .		4
124	An online intrinsic stabilization strategy for the reduced basis approximation of parametrized advection-dominated problems. Comptes Rendus Mathematique, 2016, 354, 1188-1194.	0.1	4
125	Reduced Basis' Acquisition by a Learning Process for Rapid On-line Approximation of Solution to PDE's: Laminar Flow Past a Backstep. Archives of Computational Methods in Engineering, 2018, 25, 131-141.	6.0	4
126	Error estimate of the non-intrusive reduced basis method with finite volume schemes. ESAIM: Mathematical Modelling and Numerical Analysis, 2021, 55, 1941-1961.	0.8	4

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127	Applications of the Mortar Element Method to 3D Electromagnetic Moving Structures. Lecture Notes in Computational Science and Engineering, 2003, , 35-50.	0.1	4
128	Spectral, Spectral Element and Mortar Element Methods. Universitext, 2001, , 1-57.	0.2	4
129	Coupling between scalar and vector potentials by the mortar element method. Comptes Rendus Mathematique, 2002, 334, 933-938.	0.1	3
130	Scalar and vector potentials' coupling on nonmatching grids for the simulation of an electromagnetic brake. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2005, 24, 1061-1070.	0.5	3
131	Parareal in time approximation of the Kortevegâ€deVriesâ€Burgers' equations. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1026403-1026404.	0.2	3
132	Post-processing of the planewave approximation of Schrödinger equations. Part I: linear operators. IMA Journal of Numerical Analysis, 2021, 41, 2423-2455.	1.5	3
133	Coupling Parareal with Optimized Schwarz Waveform Relaxation for Parabolic Problems. SIAM Journal on Numerical Analysis, 2022, 60, 913-939.	1.1	3
134	Spectral methods for the Stokes problem in stream-function formulation. Computer Methods in Applied Mechanics and Engineering, 1990, 80, 229-236.	3.4	2
135	Use cases of Tucker decomposition method for reconstruction of neutron macroscopic cross-sections. Annals of Nuclear Energy, 2017, 109, 284-297.	0.9	2
136	hâ^'P Finite Element Approximation for Full-Potential Electronic Structure Calculations. , 2014, , 349-377.		2
137	Numerical simulation of incompressible fluid flows. Concurrency and Computation: Practice and Experience, 1991, 3, 667-685.	0.6	1
138	Lâ^ž-Stable Approximation of a Solution to Div(Y) = f for \$\$fin L^2\$\$ in Two Dimensions. Journal of Scientific Computing, 2006, 28, 451-458.	1.1	1
139	Robin Schwarz Algorithm for the NICEM Method: The \$mathbf{P}_q\$ Finite Element Case. SIAM Journal on Numerical Analysis, 2014, 52, 1497-1524.	1.1	1
140	Time-Parallel Algorithm for Two Phase Flows Simulation. SEMA SIMAI Springer Series, 2021, , 169-178.	0.4	1
141	Numerical Analysis of the Adiabatic Variable Method for the Approximation of the Nuclear Hamiltonian. ESAIM: Mathematical Modelling and Numerical Analysis, 2001, 35, 779-798.	0.8	1
142	Mortar Methods with Optimized Transmission Conditions for Advection-Diffusion Problems. Lecture Notes in Computational Science and Engineering, 2016, , 541-549.	0.1	1
143	A Priori and A Posteriori Error Analysis in Chemistry. , 2015, , 5-10.		0
144	Numerical Analysis of Eigenproblems for Electronic Structure Calculations. , 2015, , 1042-1047.		0

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145	Explicit Residual Methods. SpringerBriefs in Applied Sciences and Technology, 2016, , 1-18.	0.2	Ο