

Yvon J Maday

List of Publications by Year in descending order

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145
papers

6,611
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61945

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152
all docs

152
docs citations

152
times ranked

2614
citing authors

#	ARTICLE	IF	CITATIONS
1	Coupling Parareal with Optimized Schwarz Waveform Relaxation for Parabolic Problems. SIAM Journal on Numerical Analysis, 2022, 60, 913-939.	1.1	3
2	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
3	Time-Parallel Algorithm for Two Phase Flows Simulation. SEMA SIMAI Springer Series, 2021, , 169-178.	0.4	1
4	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
5	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
6	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
7	Guaranteed a posteriori bounds for eigenvalues and eigenvectors: Multiplicities and clusters. Mathematics of Computation, 2020, 89, 2563-2611.	1.1	10
8	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
9	Model Order Reduction for Problems with Large Convection Effects. Computational Methods in Applied Sciences (Springer), 2019, , 131-150.	0.1	30
10	Two-grid methods for a class of nonlinear elliptic eigenvalue problems. IMA Journal of Numerical Analysis, 2018, 38, 605-645.	1.5	14
11	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
12	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
13	Guaranteed and robust a posteriori bounds for Laplace eigenvalues and eigenvectors: a unified framework. Numerische Mathematik, 2018, 140, 1033-1079.	0.9	19
14	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
15	A posteriori analysis of a nonlinear Gross-Pitaevskii-type eigenvalue problem. IMA Journal of Numerical Analysis, 2017, 37, 94-137.	1.5	12
16	A new method for reconstruction of cross-sections using Tucker decomposition. Journal of Computational Physics, 2017, 345, 189-206.	1.9	8
17	Reduced-Order Semi-Implicit Schemes for Fluid-Structure Interaction Problems. Modeling, Simulation and Applications, 2017, , 149-167.	1.3	6
18	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

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19	Use cases of Tucker decomposition method for reconstruction of neutron macroscopic cross-sections. <i>Annals of Nuclear Energy</i> , 2017, 109, 284-297.	0.9	2
20	An online intrinsic stabilization strategy for the reduced basis approximation of parametrized advection-dominated problems. <i>Comptes Rendus Mathematique</i> , 2016, 354, 1188-1194.	0.1	4
21	A perturbation-method-based post-processing for the planewave discretization of Kohn-Sham models. <i>Journal of Computational Physics</i> , 2016, 307, 446-459.	1.9	11
22	Explicit Residual Methods. <i>SpringerBriefs in Applied Sciences and Technology</i> , 2016, , 1-18.	0.2	0
23	Mortar Methods with Optimized Transmission Conditions for Advection-Diffusion Problems. <i>Lecture Notes in Computational Science and Engineering</i> , 2016, , 541-549.	0.1	1
24	A parameterized background data weak approach to variational data assimilation: formulation, analysis, and application to acoustics. <i>International Journal for Numerical Methods in Engineering</i> , 2015, 102, 933-965.	1.5	71
25	A Priori and A Posteriori Error Analysis in Chemistry. , 2015, , 5-10.		0
26	Numerical Analysis of Eigenproblems for Electronic Structure Calculations. , 2015, , 1042-1047.		0
27	h [∞] P Finite element approximation for full-potential electronic structure calculations. <i>Chinese Annals of Mathematics Series B</i> , 2014, 35, 1-24.	0.2	5
28	Computational modeling of blood flow in the aorta—insights into eccentric dilatation of the ascending aorta after surgery for coarctation. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2014, 148, 1572-1582.	0.4	17
29	Robin Schwarz Algorithm for the NICEM Method: The \mathbf{P}_q Finite Element Case. <i>SIAM Journal on Numerical Analysis</i> , 2014, 52, 1497-1524.	1.1	1
30	A perturbation-method-based a posteriori estimator for the planewave discretization of nonlinear Schrödinger equations. <i>Comptes Rendus Mathematique</i> , 2014, 352, 941-946.	0.1	16
31	Parametric analytical preconditioning and its applications to the reduced collocation methods. <i>Comptes Rendus Mathematique</i> , 2014, 352, 661-666.	0.1	12
32	Parareal in time 3D numerical solver for the LWR Benchmark neutron diffusion transient model. <i>Journal of Computational Physics</i> , 2014, 279, 67-79.	1.9	14
33	Non-consistent approximations of self-adjoint eigenproblems: application to the supercell method. <i>Numerische Mathematik</i> , 2014, 128, 663-706.	0.9	5
34	Comparison of Some Reduced Representation Approximations. , 2014, , 67-100.		5
35	h [∞] P Finite Element Approximation for Full-Potential Electronic Structure Calculations. , 2014, , 349-377.		2
36	A NEW INTERFACE CEMENT EQUILIBRATED MORTAR (NICEM) METHOD WITH ROBIN INTERFACE CONDITIONS: THE \mathbf{P}_1 FINITE ELEMENT CASE. <i>Mathematical Models and Methods in Applied Sciences</i> , 2013, 23, 2253-2292.	1.7	5

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37	Symmetric parareal algorithms for Hamiltonian systems. ESAIM: Mathematical Modelling and Numerical Analysis, 2013, 47, 717-742.	0.8	28
38	Stable Parareal in Time Method for First- and Second-Order Hyperbolic Systems. SIAM Journal of Scientific Computing, 2013, 35, A52-A78.	1.3	56
39	Parareal in Time Intermediate Targets Methods for Optimal Control Problems. International Series of Numerical Mathematics, 2013, , 79-92.	1.0	17
40	A Generalized Empirical Interpolation Method: Application of Reduced Basis Techniques to Data Assimilation. Springer INdAM Series, 2013, , 221-235.	0.4	34
41	<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
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	Periodic Schrödinger Operators with Local Defects and Spectral Pollution. SIAM Journal on Numerical Analysis, 2012, 50, 3016-3035.	1.1	20
44	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
45	The reduced basis method for the electric field integral equation. Journal of Computational Physics, 2011, 230, 5532-5555.	1.9	54
46	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
47	The lifting of polynomial traces revisited. Mathematics of Computation, 2010, 79, 47-47.	1.1	7
48	Reduced Basis Techniques for Stochastic Problems. Archives of Computational Methods in Engineering, 2010, 17, 435-454.	6.0	81
49	Numerical Analysis of Nonlinear Eigenvalue Problems. Journal of Scientific Computing, 2010, 45, 90-117.	1.1	81
50	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
51	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
52	A greedy algorithm for the identification of quantum systems. , 2009, , .		4
53	GLOBAL C^1 MAPS ON GENERAL DOMAINS. Mathematical Models and Methods in Applied Sciences, 2009, 19, 803-832.	1.7	8
54	Fast Tensor-Product Solvers: Partially Deformed Three-dimensional Domains. Journal of Scientific Computing, 2009, 39, 28-48.	1.1	6

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55	Results and Questions on a Nonlinear Approximation Approach for Solving High-dimensional Partial Differential Equations. <i>Constructive Approximation</i> , 2009, 30, 621-651.	1.8	63
56	A reduced basis approach for variational problems with stochastic parameters: Application to heat conduction with variable Robin coefficient. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2009, 198, 3187-3206.	3.4	52
57	Une méthode combinée d'éléments finis à deux grilles/bases réduites pour l'approximation des solutions d'une E.D.P. paramétrique. <i>Comptes Rendus Mathématique</i> , 2009, 347, 435-440.	0.1	13
58	Reliable Fast Frequency Sweep for Microwave Devices via the Reduced-Basis Method. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2009, 57, 2923-2937.	2.9	69
59	A general multipurpose interpolation procedure: the magic points. <i>Communications on Pure and Applied Analysis</i> , 2009, 8, 383-404.	0.4	159
60	Parallelization in time through tensor-product space-time solvers. <i>Comptes Rendus Mathématique</i> , 2008, 346, 113-118.	0.1	43
61	A reduced basis method applied to the Restricted Hartree-Fock equations. <i>Comptes Rendus Mathématique</i> , 2008, 346, 243-248.	0.1	9
62	A monotonic evaluation of lower bounds for inf-sup stability constants in the frame of reduced basis approximations. <i>Comptes Rendus Mathématique</i> , 2008, 346, 1295-1300.	0.1	22
63	Efficient reduced-basis treatment of nonaffine and nonlinear partial differential equations. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2007, 41, 575-605.	0.8	373
64	Monotonic Parareal Control for Quantum Systems. <i>SIAM Journal on Numerical Analysis</i> , 2007, 45, 2468-2482.	1.1	60
65	Optimized Schwarz methods without overlap for highly heterogeneous media. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2007, 196, 1541-1553.	3.4	40
66	Parareal in time approximation of the Korteweg-de Vries-Burgers' equations. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2007, 7, 1026403-1026404.	0.2	3
67	Modeling and Analysis of an Elastic Problem with Large Displacements and Small Strains. <i>Journal of Elasticity</i> , 2007, 87, 29-72.	0.9	8
68	Parareal in time algorithm for kinetic systems based on model reduction. <i>CRM Proceedings & Lecture Notes</i> , 2007, , 183-194.	0.1	8
69	Reduced basis method for the rapid and reliable solution of partial differential equations. , 2007, , 1255-1270.		11
70	A reduced basis element method for the steady Stokes problem. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2006, 40, 529-552.	0.8	53
71	Improved ad hoc interface conditions for Schwarz solution procedure tuned to highly heterogeneous media. <i>Applied Mathematical Modelling</i> , 2006, 30, 731-743.	2.2	31
72	Absorbing interface conditions for domain decomposition methods: A general presentation. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006, 195, 3880-3900.	3.4	54

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73	L ² -Stable Approximation of a Solution to $\text{Div}(Y) = f$ for $f \in L^2$ in Two Dimensions. Journal of Scientific Computing, 2006, 28, 451-458.	1.1	1
74	Monotonic time-discretized schemes in quantum control. Numerische Mathematik, 2006, 103, 323-338.	0.9	45
75	The Reduced Basis Element Method for Fluid Flows. , 2006, , 129-154.		16
76	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
77	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
78	Non-overlapping additive Schwarz methods tuned to highly heterogeneous media. Comptes Rendus Mathematique, 2005, 341, 701-705.	0.1	16
79	The Parareal in Time Iterative Solver: a Further Direction to Parallel Implementation. , 2005, , 441-448.		26
80	A Parareal in Time Semi-implicit Approximation of the Navier-Stokes Equations. , 2005, , 433-440.		47
81	Analysis of Some Pad \hat{e} -Chebyshev Approximants. SIAM Journal on Numerical Analysis, 2005, 43, 437-454.	1.1	12
82	Basics and some applications of the mortar element method. GAMM Mitteilungen, 2005, 28, 97-123.	2.7	58
83	The Reduced Basis Element Method: Application to a Thermal Fin Problem. SIAM Journal of Scientific Computing, 2004, 26, 240-258.	1.3	92
84	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
85	An "empirical interpolation" method: application to efficient reduced-basis discretization of partial differential equations. Comptes Rendus Mathematique, 2004, 339, 667-672.	0.1	1,033
86	Error bars and quadratically convergent methods for the numerical simulation of the Hartree-Fock equations. Numerische Mathematik, 2003, 94, 739-770.	0.9	22
87	Parallel in time algorithms for quantum control: Parareal time discretization scheme. International Journal of Quantum Chemistry, 2003, 93, 223-228.	1.0	47
88	Computational quantum chemistry: A primer. Handbook of Numerical Analysis, 2003, 10, 3-270.	0.9	57
89	New formulations of monotonically convergent quantum control algorithms. Journal of Chemical Physics, 2003, 118, 8191-8196.	1.2	158
90	Applications of the Mortar Element Method to 3D Electromagnetic Moving Structures. Lecture Notes in Computational Science and Engineering, 2003, , 35-50.	0.1	4

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91	Coupling between scalar and vector potentials by the mortar element method. Comptes Rendus Mathematique, 2002, 334, 933-938.	0.1	3
92	A reduced-basis element method. Comptes Rendus Mathematique, 2002, 335, 195-200.	0.1	35
93	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
94	A parareal in time procedure for the control of partial differential equations. Comptes Rendus Mathematique, 2002, 335, 387-392.	0.1	88
95	Title is missing!. Journal of Scientific Computing, 2002, 17, 437-446.	1.1	106
96	Towards Reduced Basis Approaches in ab initio Electronic Structure Computations. Journal of Scientific Computing, 2002, 17, 461-469.	1.1	12
97	A Reduced-Basis Element Method. Journal of Scientific Computing, 2002, 17, 447-459.	1.1	72
98	A "Parareal" Time Discretization for Non-Linear PDEs with Application to the Pricing of an American Put. Lecture Notes in Computational Science and Engineering, 2002, , 189-202.	0.1	68
99	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
100	A Sliding 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
101	Résolution d'EDP par un schéma en temps "parael". Comptes Rendus Mathematique, 2001, 332, 661-668.		336
102	Spectral, Spectral Element and Mortar Element Methods. Universitext, 2001, , 1-57.	0.2	4
103	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
104	A "flux-free" nodal Neumann subproblem approach to output bounds for partial differential equations. Comptes Rendus Mathematique, 2000, 330, 249-254.	0.5	30
105	Output bounds for reduced-basis approximations of symmetric positive definite eigenvalue problems. Comptes Rendus Mathematique, 2000, 331, 153-158.	0.5	78
106	Existence for an Unsteady Fluid-Structure Interaction Problem. ESAIM: Mathematical Modelling and Numerical Analysis, 2000, 34, 609-636.	0.8	105
107	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
108	Mesh adaptivity in finite elements using the mortar method. Revue Europeenne Des Elements, 2000, 9, 451-465.	0.1	11

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109	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
110	The mortar method for the Maxwell's equations in 3D. Comptes Rendus Mathematique, 1999, 329, 903-908.	0.5	5
111	Bounds evaluation for outputs of eigenvalue problems approximated by the overlapping modal synthesis method. Comptes Rendus Mathematique, 1999, 329, 909-914.	0.5	4
112	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
113	Coupling Spectral and Finite Elements for Second Order Elliptic Three-Dimensional Equations. SIAM Journal on Numerical Analysis, 1999, 36, 1234-1263.	1.1	15
114	Iterative Substructuring Preconditioners for Mortar Element Methods in Two Dimensions. SIAM Journal on Numerical Analysis, 1999, 36, 551-580.	1.1	88
115	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
116	Existence de solutions d'un problème de couplage fluide-structure bidimensionnel instationnaire. Comptes Rendus Mathematique, 1998, 326, 525-530.	0.5	13
117	La méthode des éléments avec joint appliquée aux méthodes d'approximations Discrete Kirchhoff Triangles. Comptes Rendus Mathematique, 1998, 326, 1237-1242.	0.5	5
118	Spectral methods. Handbook of Numerical Analysis, 1997, 5, 209-485.	0.9	223
119	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
120	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
121	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
122	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
123	Legendre Pseudospectral Viscosity Method for Nonlinear Conservation Laws. SIAM Journal on Numerical Analysis, 1993, 30, 321-342.	1.1	140
124	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
125	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
126	Polynomial interpolation results in Sobolev spaces. Journal of Computational and Applied Mathematics, 1992, 43, 53-80.	1.1	87

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127	Spectral Approximations of the Stokes Equations with Boundary Conditions on the Pressure. SIAM Journal on Numerical Analysis, 1991, 28, 333-362.	1.1	14
128	Polynomial approximation of some singular functions. Applicable Analysis, 1991, 42, 1-32.	0.6	35
129	Numerical simulation of incompressible fluid flows. Concurrency and Computation: Practice and Experience, 1991, 3, 667-685.	0.6	1
130	Single-Grid Spectral Collocation for the Navier-Stokes Equations. IMA Journal of Numerical Analysis, 1990, 10, 253-297.	1.5	8
131	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
132	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
133	Coupling finite element and spectral methods: first results. Mathematics of Computation, 1990, 54, 21-39.	1.1	84
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	Relèvement polynomial de traces et applications. ESAIM: Mathematical Modelling and Numerical Analysis, 1990, 24, 557-611.	0.8	18
136	Approximation results for spectral methods with domain decomposition. Applied Numerical Mathematics, 1989, 6, 33-52.	1.2	11
137	Nonconforming matching conditions for coupling spectral and finite element methods. Applied Numerical Mathematics, 1989, 6, 65-84.	1.2	14
138	Properties of Some Weighted Sobolev Spaces and Application to Spectral Approximations. SIAM Journal on Numerical Analysis, 1989, 26, 769-829.	1.1	60
139	Analysis of the Spectral Vanishing Viscosity Method for Periodic Conservation Laws. SIAM Journal on Numerical Analysis, 1989, 26, 854-870.	1.1	77
140	A collocation method over staggered grids for the Stokes problem. International Journal for Numerical Methods in Fluids, 1988, 8, 537-557.	0.9	44
141	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
142	Generalized Inf-Sup Conditions for Chebyshev Spectral Approximation of the Stokes Problem. SIAM Journal on Numerical Analysis, 1988, 25, 1237-1271.	1.1	120
143	Spectral approximation of the periodic-nonperiodic Navier-Stokes equations. Numerische Mathematik, 1987, 51, 655-700.	0.9	24
144	Combined finite element and spectral approximation of the Navier-Stokes equations. Numerische Mathematik, 1984, 44, 201-217.	0.9	25

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145	Legendre and Chebyshev spectral approximations of Burgers' equation. Numerische Mathematik, 1981, 37, 321-332.	0.9	64