Francoise Tisseur

List of Publications by Citations

62 papers	2,572 citations	23 h-index	50 g-index
62 ext. papers	2,858 ext. citations	1.9 avg, IF	5.33 L-index

#	Paper	IF	Citations
62	The Quadratic Eigenvalue Problem. *SIAM Review*, **2001**, 43, 235-286	7.4	841
61	Backward error and condition of polynomial eigenvalue problems. *Linear Algebra and Its Applications*, **2000**, 309, 339-361	0.9	165
60	NLEVP. *ACM Transactions on Mathematical Software*, **2013**, 39, 1-28	2.3	138
59	A Block Algorithm for Matrix 1-Norm Estimation, with an Application to 1-Norm Pseudospectra. *SIAM Journal on Matrix Analysis and Applications*, **2000**, 21, 1185-1201	1.5	107
58	Structured Pseudospectra for Polynomial Eigenvalue Problems, with Applications. *SIAM Journal on Matrix Analysis and Applications*, **2001**, 23, 187-208	1.5	87
57	The nonlinear eigenvalue problem *. *Acta Numerica*, **2017**, 26, 1-94	15.1	86
56	The Conditioning of Linearizations of Matrix Polynomials. *SIAM Journal on Matrix Analysis and Applications*, **2006**, 28, 1005-1028	1.5	69
55	Symmetric Linearizations for Matrix Polynomials. *SIAM Journal on Matrix Analysis and Applications*, **2007**, 29, 143-159	1.5	67
54	Backward Error of Polynomial Eigenproblems Solved by Linearization. *SIAM Journal on Matrix Analysis and Applications*, **2008**, 29, 1218-1241	1.5	60
53	An algorithm for the complete solution of quadratic eigenvalue problems. *ACM Transactions on Mathematical Software*, **2013**, 39, 1-19	2.3	58
52	Bounds for eigenvalues of matrix polynomials. *Linear Algebra and Its Applications*, **2003**, 358, 5-22	0.9	54
51	A Parallel Divide and Conquer Algorithm for the Symmetric Eigenvalue Problem on Distributed Memory Architectures. *SIAM Journal of Scientific Computing*, **1999**, 20, 2223-2236	2.6	53
50	Structured Factorizations in Scalar Product Spaces. *SIAM Journal on Matrix Analysis and Applications*, **2005**, 27, 821-850	1.5	44
49	Perturbation theory for homogeneous polynomial eigenvalue problems. *Linear Algebra and Its Applications*, **2003**, 358, 71-94	0.9	44
48	Structured Eigenvalue Condition Numbers. *SIAM Journal on Matrix Analysis and Applications*, **2006**, 28, 1052-1068	1.5	43
47	Detecting a definite Hermitian pair and a hyperbolic or elliptic quadratic eigenvalue problem, and associated nearness problems. *Linear Algebra and Its Applications*, **2002**, 351-352, 455-474	0.9	42
46	Scaling, sensitivity and stability in the numerical solution of quadratic eigenvalue problems. *International Journal for Numerical Methods in Engineering*, **2008**, 73, 344-360	2.4	36

45	Functions Preserving Matrix Groups and Iterations for the Matrix Square Root. *SIAM Journal on Matrix Analysis and Applications*, **2005**, 26, 849-877	1.5	36
44	A Chart of Backward Errors for Singly and Doubly Structured Eigenvalue Problems. *SIAM Journal on Matrix Analysis and Applications*, **2003**, 24, 877-897	1.5	34
43	More on pseudospectra for polynomial eigenvalue problems and applications in control theory. *Linear Algebra and Its Applications*, **2002**, 351-352, 435-453	0.9	33
42	Structured tools for structured matrices. *Electronic Journal of Linear Algebra*,10,	1.6	30
41	Newton$s Method in Floating Point Arithmetic and Iterative Refinement of Generalized Eigenvalue Problems. *SIAM Journal on Matrix Analysis and Applications*, **2001**, 22, 1038-1057	1.5	29
40	Computing the Polar Decomposition and the Matrix Sign Decomposition in Matrix Groups. *SIAM Journal on Matrix Analysis and Applications*, **2004**, 25, 1178-1192	1.5	26
39	Hermitian matrix polynomials with real eigenvalues of definite type. Part I: Classification. *Linear Algebra and Its Applications*, **2012**, 436, 3954-3973	0.9	23
38	A framework for analyzing nonlinear eigenproblems and parametrized linear systems. *Linear Algebra and Its Applications*, **2011**, 435, 623-640	0.9	22
37	Definite Matrix Polynomials and their Linearization by Definite Pencils. *SIAM Journal on Matrix Analysis and Applications*, **2009**, 31, 478-502	1.5	22
36	The Ehrlich--Aberth Method for the Nonsymmetric Tridiagonal Eigenvalue Problem. *SIAM Journal on Matrix Analysis and Applications*, **2005**, 27, 153-175	1.5	21
35	An Improved Arc Algorithm for Detecting Definite Hermitian Pairs. *SIAM Journal on Matrix Analysis and Applications*, **2010**, 31, 1131-1151	1.5	20
34	Detecting and Solving Hyperbolic Quadratic Eigenvalue Problems. *SIAM Journal on Matrix Analysis and Applications*, **2009**, 30, 1593-1613	1.5	20
33	Structured Mapping Problems for Matrices Associated with Scalar Products. Part I: Lie and Jordan Algebras. *SIAM Journal on Matrix Analysis and Applications*, **2008**, 29, 1389-1410	1.5	20
32	Analysis of the Cholesky Method with Iterative Refinement for Solving the Symmetric Definite Generalized Eigenproblem. *SIAM Journal on Matrix Analysis and Applications*, **2001**, 23, 472-493	1.5	20
31	Detecting the causes of ill-conditioning in structural finite element models. *Computers and Structures*, **2014**, 133, 79-89	4.5	19
30	Stability of Structured Hamiltonian Eigensolvers. *SIAM Journal on Matrix Analysis and Applications*, **2001**, 23, 103-125	1.5	18
29	The Canonical Generalized Polar Decomposition. *SIAM Journal on Matrix Analysis and Applications*, **2010**, 31, 2163-2180	1.5	17
28	G-reflectors: analogues of Householder transformations in scalar product spaces. *Linear Algebra and Its Applications*, **2004**, 385, 187-213	0.9	16

27	Tropical Roots as Approximations to Eigenvalues of Matrix Polynomials. *SIAM Journal on Matrix Analysis and Applications*, **2015**, 36, 138-157	1.5	14
26	Triangularizing matrix polynomials. *Linear Algebra and Its Applications*, **2013**, 439, 1679-1699	0.9	12
25	Triangularizing Quadratic Matrix Polynomials. *SIAM Journal on Matrix Analysis and Applications*, **2013**, 34, 312-337	1.5	11
24	Tridiagonal-Diagonal Reduction of Symmetric Indefinite Pairs. *SIAM Journal on Matrix Analysis and Applications*, **2004**, 26, 215-232	1.5	10
23	On the sign characteristics of Hermitian matrix polynomials. *Linear Algebra and Its Applications*, **2016**, 511, 328-364	0.9	10
22	Incomplete LU Preconditioner Based on Max-Plus Approximation of LU Factorization. *SIAM Journal on Matrix Analysis and Applications*, **2017**, 38, 1160-1189	1.5	9
21	Standard triples of structured matrix polynomials. *Linear Algebra and Its Applications*, **2012**, 437, 817-834	0.9	9
20	Simultaneous tridiagonalization of two symmetric matrices. *International Journal for Numerical Methods in Engineering*, **2003**, 57, 1643-1660	2.4	9
19	Polynomial eigenvalue solver based on tropically scaled Lagrange linearization. *Linear Algebra and Its Applications*, **2018**, 542, 186-208	0.9	7
18	Hermitian quadratic matrix polynomials: Solvents and inverse problems. *Linear Algebra and Its Applications*, **2012**, 436, 4017-4026	0.9	7
17	Algorithms for Hessenberg-Triangular Reduction of Fiedler Linearization of Matrix Polynomials. *SIAM Journal of Scientific Computing*, **2015**, 37, C384-C414	2.6	6
16	Improving the numerical stability of the Sakurai-Sugiura method for quadratic eigenvalue problems. *JSIAM Letters*, **2017**, 9, 17-20	0.2	6
15	Deflating quadratic matrix polynomials with structure preserving transformations. *Linear Algebra and Its Applications*, **2011**, 435, 464-479	0.9	6
14	Structured condition numbers and backward errors in scalar product spaces. *Electronic Journal of Linear Algebra*,15,	1.6	6
13	Efficient Block Preconditioning for a C^1 Finite Element Discretization of the Dirichlet Biharmonic Problem. *SIAM Journal of Scientific Computing*, **2016**, 38, A325-A345	2.6	5
12	Implicit Gamma Theorems (I): Pseudoroots and Pseudospectra. *Foundations of Computational Mathematics*, **2003**, 3, 1-31	2.7	4
11	Polynomial Eigenvalue Problems: Theory, Computation, and Structure **2015**, 319-348		4
10	Compact Two-Sided Krylov Methods for Nonlinear Eigenvalue Problems. *SIAM Journal of Scientific Computing*, **2018**, 40, A2801-A2829	2.6	4

9	A Max-Plus Approach to Incomplete Cholesky Factorization Preconditioners. *SIAM Journal of Scientific Computing*, **2018**, 40, A1987-A2004	2.6	3
8	Max-Balanced Hungarian Scalings. *SIAM Journal on Matrix Analysis and Applications*, **2019**, 40, 320-346	1.5	2
7	The role of topology and mechanics in uniaxially growing cell networks. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2020**, 476, 20190523	2.4	2
6	The Structured Condition Number of a Differentiable Map between Matrix Manifolds, with Applications. *SIAM Journal on Matrix Analysis and Applications*, **2019**, 40, 774-799	1.5	2
5	Filtering Frequencies in a Shift-and-Invert Lanczos Algorithm for the Dynamic Analysis of Structures. *SIAM Journal of Scientific Computing*, **2019**, 41, B601-B624	2.6	2
4	Performance impact of precision reduction in sparse linear systems solvers.. *PeerJ Computer Science*, **2022**, 8, e778	2.7	1
3	Min-max elementwise backward error for roots of polynomials and a corresponding backward stable root finder. *Linear Algebra and Its Applications*, **2021**, 623, 454-477	0.9	1
2	Reduction of Matrix Polynomials to Simpler Forms. *SIAM Journal on Matrix Analysis and Applications*, **2018**, 39, 148-177	1.5	
1	Parallel Implementation of the Yau and Lu Method for Eigenvalue Computation. *International Journal of High Performance Computing Applications*, **1997**, 11, 197-204		