

# Sylvan Elhay

## List of Publications by Year in descending order

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37  
papers

1,879  
citations

471371

17  
h-index

395590

33  
g-index

37  
all docs

37  
docs citations

37  
times ranked

887  
citing authors

#	ARTICLE	IF	CITATIONS
1	Genetic Algorithms Compared to Other Techniques for Pipe Optimization. Journal of Water Resources Planning and Management - ASCE, 1994, 120, 423-443.	1.3	554
2	An Improved Genetic Algorithm for Pipe Network Optimization. Water Resources Research, 1996, 32, 449-458.	1.7	380
3	Orthogonality and partial pole assignment for the symmetric definite quadratic pencil. Linear Algebra and Its Applications, 1997, 257, 29-48.	0.4	154
4	PARTIAL EIGENSTRUCTURE ASSIGNMENT FOR THE QUADRATIC PENCIL. Journal of Sound and Vibration, 2000, 230, 101-110.	2.1	115
5	A combined NLP&#x2013;differential evolution algorithm approach for the optimization of looped water distribution systems. Water Resources Research, 2011, 47, .	1.7	103
6	POLE ASSIGNMENT IN VIBRATORY SYSTEMS BY MULTI-INPUT CONTROL. Journal of Sound and Vibration, 2000, 230, 309-321.	2.1	62
7	Updating and Datedating of Orthogonal Polynomials with Data Fitting Applications. SIAM Journal on Matrix Analysis and Applications, 1991, 12, 327-353.	0.7	48
8	Dealing with Zero Flows in Solving the Nonlinear Equations for Water Distribution Systems. Journal of Hydraulic Engineering, 2011, 137, 1216-1224.	0.7	44
9	A Robust, Rapidly Convergent Method That Solves the Water Distribution Equations for Pressure-Dependent Models. Journal of Water Resources Planning and Management - ASCE, 2016, 142, .	1.3	42
10	An Inverse Eigenvalue Problem for the Symmetric Tridiagonal Quadratic Pencil with Application to Damped Oscillatory Systems. SIAM Journal on Applied Mathematics, 1996, 56, 232-244.	0.8	41
11	Jacobian Matrix for Solving Water Distribution System Equations with the Darcy-Weisbach Head-Loss Model. Journal of Hydraulic Engineering, 2011, 137, 696-700.	0.7	41
12	Reformulated Co-Tree Flows Method Competitive with the Global Gradient Algorithm for Solving Water Distribution System Equations. Journal of Water Resources Planning and Management - ASCE, 2014, 140, .	1.3	41
13	Nonsymmetric Lanczos and finding orthogonal polynomials associated with indefinite weights. Numerical Algorithms, 1991, 1, 21-43.	1.1	34
14	THE THEORY OF A MULTI-DEGREE-OF-FREEDOM DYNAMIC ABSORBER. Journal of Sound and Vibration, 1996, 195, 607-615.	2.1	33
15	Algorithm 655. ACM Transactions on Mathematical Software, 1987, 13, 399-415.	1.6	27
16	An affine inverse eigenvalue problem. Inverse Problems, 2002, 18, 455-466.	1.0	23
17	Forest-Core Partitioning Algorithm for Speeding Up Analysis of Water Distribution Systems. Journal of Water Resources Planning and Management - ASCE, 2014, 140, 435-443.	1.3	18
18	Gauss quadratures and Jacobi matrices for weight functions not of one sign. Mathematics of Computation, 1984, 43, 543-543.	1.1	14

#	ARTICLE	IF	CITATIONS
19	Constructing the shape of a rod from eigenvalues. Communications in Numerical Methods in Engineering, 1998, 14, 597-608.	1.3	14
20	A Content-Based Active-Set Method for Pressure-Dependent Models of Water Distribution Systems with Flow Controls. Journal of Water Resources Planning and Management - ASCE, 2020, 146, .	1.3	14
21	Jacobi matrices for sums of weight functions. BIT Numerical Mathematics, 1992, 32, 143-166.	1.0	12
22	Jacobi matrices for measures modified by a rational factor. Numerical Algorithms, 1994, 6, 205-227.	1.1	11
23	Generalized Kronrod Patterson type imbedded quadratures. Applications of Mathematics, 1992, 37, 81-103.	0.9	11
24	Dualities in vibrating rods and beams: continuous and discrete models. Journal of Sound and Vibration, 1995, 184, 759-766.	2.1	9
25	Empirical mathematics: the first patterson extension of gauss-kronrod rules. International Journal of Computer Mathematics, 1990, 36, 119-129.	1.0	5
26	The construction of band symmetric models for vibratory systems from modal analysis data. Journal of Sound and Vibration, 1995, 181, 583-591.	2.1	5
27	Closure to "Dealing with Zero Flows in Solving the Nonlinear Equations for Water Distribution Systems" by Sylvan Elhay and Angus R. Simpson. Journal of Hydraulic Engineering, 2013, 139, 560-562.	0.7	4
28	The spectrum of a modified linear pencil. Computers and Mathematics With Applications, 2003, 46, 1413-1426.	1.4	3
29	Closure to "Jacobian Matrix for Solving Water Distribution System Equations with the Darcy-Weisbach Head-Loss Model" by Angus Simpson and Sylvan Elhay. Journal of Hydraulic Engineering, 2012, 138, 1001-1002.	0.7	3
30	Bridge-Block Partitioning Algorithm for Speeding Up Analysis of Water Distribution Systems. Journal of Water Resources Planning and Management - ASCE, 2019, 145, .	1.3	3
31	Formulating the Water Distribution System Equations in Terms of Head and Velocity. , 2009, , .		2
32	A Framework for Alternative Formulations of the Pipe Network Equations. , 2009, , .		2
33	Sensitivity Analysis of Topological Subgraphs within Water Distribution Systems. Procedia Engineering, 2017, 186, 252-260.	1.2	2
34	A software tool for assessing the performance of and implementing water distribution system solution methods. Environmental Modelling and Software, 2019, 112, 52-69.	1.9	2
35	An Interior Point Method Applied to Flow Constraints in a Pressure-Dependent Water Distribution System. Journal of Water Resources Planning and Management - ASCE, 2022, 148, .	1.3	2
36	The Darcy-Weisbach Jacobian and Avoiding Zero Flow Failures in the Global Gradient Algorithm for the Water Network Equations. , 2012, , .		1

#	ARTICLE	IF	CITATIONS
37	Some Inverse Eigenvalue and Pole Placement Problems for Linear and Quadratic Pencils. Lecture Notes in Electrical Engineering, 2011, , 217-249.	0.3	0