

Metin Demiralp

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	A factorized high dimensional model representation on the nodes of a finite hyperprismatic regular grid. Applied Mathematics and Computation, 2005, 164, 865-883.	1.4	59
2	The influence of the support functions on the quality of enhanced multivariate product representation. Journal of Mathematical Chemistry, 2010, 48, 827-840.	0.7	32
3	A Factorized High Dimensional Model Representation on the Partitioned Random Discrete Data. Applied Numerical Analysis and Computational Mathematics, 2004, 1, 231-241.	0.6	27
4	A probabilistic foundation for dynamical systems: theoretical background and mathematical formulation. Journal of Mathematical Chemistry, 2012, 50, 850-869.	0.7	22
5	A probabilistic foundation for dynamical systems: phenomenological reasoning and principal characteristics of probabilistic evolution. Journal of Mathematical Chemistry, 2012, 50, 870-880.	0.7	21
6	A probabilistic evolution approach trilogy, part 1: quantum expectation value evolutions, block triangularity and conicality, truncation approximants and their convergence. Journal of Mathematical Chemistry, 2013, 51, 1170-1186.	0.7	20
7	A new rational approximation technique based on transformational high dimensional model representation. Numerical Algorithms, 2009, 52, 385-407.	1.1	19
8	Constancy maximization based weight optimization in high dimensional model representation. Numerical Algorithms, 2009, 52, 435-459.	1.1	19
9	A probabilistic evolution approach trilogy, part 3: temporal variation of state variable expectation values from Liouville equation perspective. Journal of Mathematical Chemistry, 2013, 51, 1198-1210.	0.7	18
10	Probabilistic evolution approach for the solution of explicit autonomous ordinary differential equations. Part 2: Kernel separability, space extension, and, series solution via telescopic matrices. Journal of Mathematical Chemistry, 2014, 52, 881-898.	0.7	18
11	A contemporary linear representation theory for ordinary differential equations: probabilistic evolutions and related approximants for unidimensional autonomous systems. Journal of Mathematical Chemistry, 2013, 51, 58-72.	0.7	17
12	Probabilistic evolution approach for the solution of explicit autonomous ordinary differential equations. Part 1: Arbitrariness and equipartition theorem in Kronecker power series. Journal of Mathematical Chemistry, 2014, 52, 866-880.	0.7	17
13	Numerical solution of ordinary differential equations by Fluctuationlessness theorem. Journal of Mathematical Chemistry, 2010, 47, 1323-1343.	0.7	16
14	A probabilistic evolution approach trilogy, part 2: spectral issues for block triangular evolution matrix, singularities, space extension. Journal of Mathematical Chemistry, 2013, 51, 1187-1197.	0.7	16
15	Lie algebraic factorization of multivariable evolution operators: Definition and the solution of the canonical problem. International Journal of Engineering Science, 1993, 31, 307-331.	2.7	14
16	No fluctuation approximation in any desired precision for univariate function matrix representations. Journal of Mathematical Chemistry, 2010, 47, 99-110.	0.7	14
17	Iterative Enhanced Multivariate Products Representation for Effective Compression of Hyperspectral Images. IEEE Transactions on Geoscience and Remote Sensing, 2021, 59, 9569-9584.	2.7	13
18	A contemporary linear representation theory for ordinary differential equations: multilinear algebra in folded arrays (folarrs) perspective and its use in multidimensional case. Journal of Mathematical Chemistry, 2012, 51, 38.	0.7	12

#	ARTICLE	IF	CITATIONS
19	Tridiagonal Kernel Enhanced Multivariate Products Representation (TKEMPR) for Univariate Integral Operator Kernels. , 2014, , .		12
20	Reductive enhanced multivariate product representation for multi-way arrays. Journal of Mathematical Chemistry, 2014, 52, 2546-2558.	0.7	11
21	Lie algebraic factorization of multivariable evolution operators: Convergence theorems for the canonical case. International Journal of Engineering Science, 1993, 31, 333-346.	2.7	9
22	Factorization of certain evolution operators using lie algebra: Formulation of the method. Journal of Mathematical Chemistry, 1991, 6, 165-191.	0.7	8
23	Tridiagonal kernel enhanced multivariate products representation (TKEMPR) for outer product sums: Arrowheading EMPR for kernel (AEMPRK). AIP Conference Proceedings, 2015, , .	0.3	8
24	Probabilistic evolution theory for the solution of explicit autonomous ordinary differential equations: squarified telescope matrices. Journal of Mathematical Chemistry, 2017, 55, 175-194.	0.7	8
25	A Hybridized Finite Taylor Formula by Fluctuation Free Remainder Term for Univariate Function Approximation. , 2008, , .		7
26	Bound analysis in univariately truncated Generalized High Dimensional Model Representation for random-data partitioning: Interval GHDMR. Applied Numerical Mathematics, 2009, 59, 1431-1448.	1.2	7
27	An Integration Free Universal Approximation Method Based on Orthogonal Polynomials. , 2008, , .		6
28	Evaluation of Univariate Integrals via Fluctuationlessness Theorem. , 2008, , .		6
29	Constancy maximization based weight optimization in high dimensional model representation for multivariate functions. Journal of Mathematical Chemistry, 2011, 49, 1996-2012.	0.7	6
30	Formulation of tridiagonal format enhanced multivariate products representation (TFEMPR). AIP Conference Proceedings, 2015, , .	0.3	6
31	High Dimensional Model Representation Approximation of an Evolution Operator with a First Order Partial Differential Operator Argument. Applied Numerical Analysis and Computational Mathematics, 2004, 1, 280-289.	0.6	5
32	The fluctuationlessness approach to the numerical integration of functions with a single variable by integrating Taylor expansion with explicit remainder term. Journal of Mathematical Chemistry, 2011, 49, 393-406.	0.7	5
33	Fluctuation free multivariate integration based logarithmic HDMR in multivariate function representation. Journal of Mathematical Chemistry, 2011, 49, 894-909.	0.7	5
34	Probabilistic evolution approach to the expectation value dynamics of quantum mechanical operators, part II: the use of mathematical fluctuation theory. Journal of Mathematical Chemistry, 2014, 52, 2294-2315.	0.7	5
35	Probabilistic evolution approach to the expectation value dynamics of quantum mechanical operators, part I: integral representation of Kronecker power series and multivariate Hausdorff moment problems. Journal of Mathematical Chemistry, 2014, 52, 2161-2182.	0.7	5
36	Bivariate enhanced multivariate products representation (EMPR) at zero volume limit via geometric separation. AIP Conference Proceedings, 2015, , .	0.3	5

#	ARTICLE	IF	CITATIONS
37	A self-consistent high dimensional modelling based decomposition approach for univariate linear integral operators: Tridiagonal Kernel Enhanced Multivariate Products Representation (TKEMPR). Journal of Computational and Applied Mathematics, 2017, 326, 99-115.	1.1	5
38	On Autonomy Imposition in Zero Interval Limit Perturbation Expansion for the Spectral Entities of Hilbert-Schmidt Integral Operators. Mathematics, 2017, 5, 2.	1.1	5
39	Promenading in the enchanted realm of Kronecker powers: single monomial probabilistic evolution theory (PREVTH) in evolver dynamics. Journal of Mathematical Chemistry, 2018, 56, 2001-2023.	0.7	5
40	Factorization of certain evolution operators using lie algebra: Convergence theorems. Journal of Mathematical Chemistry, 1991, 6, 193-204.	0.7	4
41	Generalized Enhanced Multivariate Product Representation for Data Partitioning: Constancy Level. , 2011, , .		4
42	Probabilistic evolutions in classical dynamics: Conicalization and block triangularization of Lennard-Jones systems. , 2012, , .		4
43	Combined small scale high dimensional model representation. Journal of Mathematical Chemistry, 2012, 50, 2023-2042.	0.7	4
44	Weighted tridiagonal matrix enhanced multivariate products representation (WTMEMPR) for decomposition of multiway arrays: applications on certain chemical system data sets. Journal of Mathematical Chemistry, 2017, 55, 455-476.	0.7	4
45	Somehow emancipating Probabilistic Evolution Theory (PREVTH) from singularities via getting single monomial PREVTH. Journal of Mathematical Chemistry, 2018, 56, 2024-2043.	0.7	4
46	Fundamental elements of vector enhanced multivariate product representation. , 2012, , .		3
47	Multivariate data modelling through Piecewise generalized HDMR method. Journal of Mathematical Chemistry, 2012, 50, 1711-1726.	0.7	3
48	Constancy adding space extension for ODE sets with second degree multinomial right hand side functions. , 2014, , .		3
49	Probabilistic evolution theory for ODE sets with second degree multinomial right hand side functions: Implementation. AIP Conference Proceedings, 2015, , .	0.3	3
50	Combined small scale enhanced multivariate product representation (CSSEMPR) for image reconstruction. AIP Conference Proceedings, 2015, , .	0.3	3
51	Separate node ascending derivatives expansion (SNADE) for univariate functions: Conceptuality and formulation. AIP Conference Proceedings, 2015, , .	0.3	3
52	Separate node ascending derivatives expansion (SNADE) for univariate functions: Polynomial recursions, remainder bounds and the convergence. AIP Conference Proceedings, 2015, , .	0.3	3
53	Probabilistic evolution theory for explicit autonomous ordinary differential equations: recursion of squarified telescope matrices and optimal space extension. Journal of Mathematical Chemistry, 2018, 56, 1826-1848.	0.7	3
54	Block tridiagonal matrix enhanced multivariate products representation (BTMEMPR). Journal of Mathematical Chemistry, 2018, 56, 747-769.	0.7	3

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55	Using enchanted features of Constancy Adding Space Extension (CASE) to reduce the dimension of evolver dynamics: Single Monomial Probabilistic Evolution Theory. Journal of Mathematical Chemistry, 2018, 56, 2044-2068.	0.7	3
56	Tridiagonal Folmat Enhanced Multivariance Products Representation Based Hyperspectral Data Compression. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2018, 11, 3272-3278.	2.3	3
57	A Parametric Sensitivity Analysis for the Solution of Extrema Evaluation Problems via a Dimensionality Reducing Approximation Method. Applied Numerical Analysis and Computational Mathematics, 2004, 1, 260-269.	0.6	2
58	Determination of the external field amplitude and deviation parameter through expectation value based quantum optimal control of multiharmonic oscillators under linear control agents. Journal of Mathematical Chemistry, 2009, 46, 834-852.	0.7	2
59	A Fluctuation Analysis at the Classical Limit for the Expectation Dynamics of a Single Quartic Quantum Anharmonic Oscillator. , 2010, , .		2
60	A fluctuation removal based univariate integration over prescribed nodes: certain important aspects of one node fluctuation free integration. Journal of Mathematical Chemistry, 2011, 49, 407-427.	0.7	2
61	A fluctuation removal based univariate integration over prescribed nodes. Journal of Mathematical Chemistry, 2011, 49, 428-443.	0.7	2
62	Fluctuation suppression to optimize initial data to increase the quality of truncation approximants in probabilistic evolution approach for ODEs: Basic philosophy. , 2012, , .		2
63	Hybrid HDMR method with an optimized hybridity parameter in multivariate function representation. Journal of Mathematical Chemistry, 2012, 50, 2223-2238.	0.7	2
64	Tridiagonal folmat enhanced multivariance products representation (TFEMPR) under subspace supported rational transformations (SsSRT). AIP Conference Proceedings, 2017, , .	0.3	2
65	Zero interval limit perturbation expansion for the spectral entities of Hilbertâ€™Schmidt operators combined with most dominant spectral component extraction: formulation and certain technicalities. Journal of Mathematical Chemistry, 2017, 55, 1253-1277.	0.7	2
66	Influence of a simple pole on the convergence of separate node ascending derivatives expansion (SNADE) on a sequence of nodes alternating between 2 values. Mathematical Methods in the Applied Sciences, 2018, 41, 7333-7350.	1.2	2
67	Formulation of some gaussian integrals over via generating functions. International Journal of Computer Mathematics, 1994, 54, 239-248.	1.0	1
68	Optimally Controlled Dynamics of One Dimensional Harmonic Oscillator: Linear Dipole Function and Quadratic Penalty. Applied Numerical Analysis and Computational Mathematics, 2004, 1, 242-250.	0.6	1
69	Weighted Eigenvalue Problem Approach To The Critical Value Determination Of Screened Coulomb Potential Systems. Applied Numerical Analysis and Computational Mathematics, 2004, 1, 251-259.	0.6	1
70	Optimal Control of One Dimensional Quantum Harmonic Oscillator Under an External Field With Quadratic Dipole Function and Penalty on Momentum: Construction of the Linearised Field Amplitude Integral Equation. Applied Numerical Analysis and Computational Mathematics, 2004, 1, 270-279.	0.6	1
71	A Hybridized Finite Taylor Formula by Fluctuation Free Remainder Term for a Multivariable Function Approximation. , 2009, , .		1
72	Evaluation of Multivariate Integrals via Fluctuationlessness Theorem and Taylorâ€™s Remainder. , 2009, , .		1

#	ARTICLE	IF	CITATIONS
73	Multi Nodalset Fluctuation Free Approximation in Taylor Remainder's Evaluation. , 2010, , .		1
74	Multi Nodalset Fluctuation Free Integration in Taylor Remainder's Evaluation. , 2010, , .		1
75	Quantum Optimal Control of Single Harmonic Oscillator under Quadratic Controls together with Linear Dipole Polarizability: A Fluctuation Free Expectation Value Dynamical Perspective. , 2011, , .		1
76	Various parallel and diverse aspects of the mathematical fluctuations theory with the related standing issues. , 2012, , .		1
77	Bound Analysis Through HDMR for Multivariate Data Modelling - CMMSE. Mathematical Modelling and Algorithms, 2013, 12, 265-276.	0.5	1
78	Truncation approximants to probabilistic evolution of ordinary differential equations under initial conditions via bidiagonal evolution matrices: simple case. International Journal of Computer Mathematics, 2013, 90, 2326-2337.	1.0	1
79	An algebraic function operator expectation value based eigenstate determinations for quantum systems with one degree of freedom. AIP Conference Proceedings, 2015, , .	0.3	1
80	Weight optimization in HDMR with perturbation expansion method. Journal of Mathematical Chemistry, 2015, 53, 2155-2171.	0.7	1
81	Zero interval limit perturbation expansion for the spectral entities of Hilbert-Schmidt operators combined with most dominant spectral component extraction: convergence and confirmative implementations. Journal of Mathematical Chemistry, 2017, 55, 1278-1300.	0.7	1
82	Solving ODEs by Obtaining Purely Second Degree Multinomials via Branch and Bound with Admissible Heuristic. Mathematics, 2019, 7, 367.	1.1	1
83	An Exponential Matrix Product Based Representation for Generalized Hypergeometric Functions of Type pF_p . Applied Numerical Analysis and Computational Mathematics, 2005, 2, 19-33.	0.6	0
84	A high dimensional model representation based numerical method for solving ordinary differential equations. Journal of Mathematical Chemistry, 2011, 49, 687-710.	0.7	0
85	Probabilistic evolution approach for initial value problems over Fourier basis set. , 2012, , .		0
86	Fluctuation free matrix representation based random data partitioning through HDMR. , 2012, , .		0
87	Weight Construction in Extended Space Expectation Values for Singular Quantum Systems at Spectral Structuring and Temporal Constancy Limit. , 2014, , .		0
88	Fine Tuning Points of Generating Function Construction in Integral Form for Linear Recursions. , 2014, , .		0
89	Majorant recursions to determine eigenstate bounds of a symmetric exponential quantum anharmonic oscillator. AIP Conference Proceedings, 2015, , .	0.3	0
90	Fluctuation removal around spectral and temporal constancy limits via use of an extended space expectation value weight function for singular quantum systems. AIP Conference Proceedings, 2015, , .	0.3	0

#	ARTICLE	IF	CITATIONS
91	Tridiagonal folded kernel enhanced multivariate products representation (TFKEMPR). AIP Conference Proceedings, 2018, , .	0.3	0
92	A case study for single monomial probabilistic evolution theory (PREVTH). AIP Conference Proceedings, 2018, , .	0.3	0