

Curriculum Vitae

1. **Name Surname:** Ayla OKAN
2. **Date of Birth:** 20/10/1983
3. **Title:** Assistant Professor
4. **Education:** PhD Graduate

Degree	Field	University	Year
Bachelor	Mathematics	Yıldız Technical University	2005
Master	Applied Mathematics	Marmara University	2012
Doctorate	Computational Science and Engineering	İstanbul Technical University	2019
Post Graduate			

5. Academic Titles

Title	Department	University	Year/Period
Assistant Professor	Civil Engineering	İstanbul Aydın University	26.12.2019
Associate Professor			
Professor			

6. Graduate Theses Supervised

- 6.1 Master Theses
- 6.2 Doctorate Theses

7. Publications

7.1. Articles published in peer reviewed international journals (SCI, SSCI Arts and Humanities)

- i. Okan A., Demiralp, M., A Self-Consistent High Dimensional Modelling Based Decomposition Approach for Univariate Linear Integral Operators: Tridiagonal Kernel Enhanced Multivariate Products Representation (TKEMPR), Vol. 326, 2017, Doi:10.1016/j.cam.2017.05.024

7.2. Articles published in other peer reviewed international journals

- i. Okan A., A New Decomposition Approach for Binary Product Series via High Dimensional Modeling, Mathematics in Engineering, Science and Aerospace (MESA), 9 (2), 165-176, (2018).

- ii. Okan A., Demiralp, M., Numerical Implementations for Tridiagonal Kernel Enhanced Multivariance Products Representation (TKEMPR) Method: Bivariate Case, International Journal of Signal Processing, Vol. 1, 102-107, (2016).

7.3. Papers delivered in international conferences and printed as proceedings

- i. Okan, A., Gündoğar, Z and Demiralp, M. Tridiagonal Folded Kernel Enhanced Multivariance Products Representation (TFKEMPR), ICNPAA World Congress 2018: Mathematical Problems in Engineering, Aerospace and Sciences, July 3-6 2018, Yerevan, Armenia, AIP Conference Proceedings, 2046 (1), 020023, 2018. Doi: 10.1063/1.5081543
- ii. Gürvit E., Okan A. And Baykara N.A., Univariate Function Evaluation via Contour Integration in Tridiagonal Enhanced Multivariance Products Representation (TKEMPR) Perspective: Focusing on High Oscillations, AIP Conference Proceedings, 2046, 020008 (2018); Doi:10.1063/1.5081528
- iii. Okan A., Demiralp, M. Recursive Bivariate Enhanced Multivariance Products Representation to Tridiagonalize Arrowheaded Matrices: Tridiagonal Matrix Enhanced Multivariance Products Representation (TMEMPR) with Weight Considerations, AIP Conference Proceedings, Vol. 1798, 020116 (2017), Doi: 10.1063/1.4972708
- iv. Okan A., Demiralp, M., Arrowheading Enhanced Multivariance Products Representation for a Kernel (AEMPRK) in a Bivariate Taylor Series Expansion, AIP Conference Proceedings, Vol. 1702, (2015). Doi: 10.1063/ 1.4938942
- v. Okan A., Demiralp, M., Tridiagonal Kernel Enhanced Multivariance Products Representation (TKEMPR) for Outer Product Sums: Arrowheading EMPR for Kernel (AEMPRK), AIP Conference Proceedings, Vol. 1648, 160002 (2015); Doi: 10.1063/1.4912452
- vi. Okan A., Demiralp, M., Fluctuation Suppression to Optimize Initial Data to Increase the Quality of Truncation Approximants in Probabilistic Evolution Approach for ODEs: Basic Philosophy, AIP Conference Proceedings, Vol. 1479, 2007 (2012); Doi: 10.1063/1.4756582
- vii. Okan A., Baykara, N.A. and Demiralp, M., Parameter Optimization to Get Maximum Constancy in Constant Möbius Transformational High Dimensional Model Representation, Advances in Systems Theory, Signal Processing and Computational Science, 219-223, (2012), ISBN: 978-1-61804-115-9
- viii. Okan A., Baykara, N.A. and Demiralp, M., A Gauss Quadrature Like Numerical Integration Approach Based on Hermite Interpolation with Node Optimisation, AIP Conference Proceedings, Vol. 1389, 1168 (2011); Doi: 10.1063/1.3637823
- ix. Okan A., Baykara, N.A. and Demiralp, M., Weight Optimization in Enhanced Multivariate Product Representation (EMPR) for Given Supports at the Fluctuation Free Integration Limit , Proceedings of the 2nd International Conference on Applied Informatics and Computing Theory (AICT'11), IEEEAM, Prague, Czech Republic, 26-28 September, pp. 52-57, 2011.
- x. Okan A., Baykara, N.A. and Demiralp, M., Weight Optimization in Enhanced Multivariance Product Representation (EMPR) Method, AIP Conference Proceedings, Vol. 1281, 1935 (2010); Doi: 10.1063/1.3498306

7.4. Books and sections in books published internationally

7.5. Articles published in peer reviewed national journals

7.6 Papers delivered at national conferences and printed as proceedings

7.7 Other publications

Patents

Title	Authors	Source Title	Total Citations
Univariate Function Evaluation via Contour Integration in Tridiagonal Enhanced Multivariance Products Representation (TKEMPR) Perspective: Focusing on High Oscillations,	Gürvit, E., Baykara, N.A., Okan, A.	ICNPAA 2016 WORLD CONGRESS: 11TH INT. CONFERENCE ON MATHEMATICAL PROBLEMS IN ENGINEERING, AEROSPACE AND SCIENCES	0
Tridiagonal Folded Kernel Enhanced Multivariance Products Representation (TFKEMPR)	Demiralp, M., Okan, A., Gündoğar, Z.,	ICNPAA 2018 WORLD CONGRESS: 12TH INTERNATIONAL CONFERENCE ON MATHEMATICAL PROBLEMS IN ENGINEERING, AEROSPACE AND SCIENCES	0
Taylor Series Remainder's Kernel Evaluation in Tridiagonal Enhanced Multivariance Products Representation (TKEMPR) Perspective	Gürvit, E., Baykara, N.A., Okan, A.	ICNPAA 2018 WORLD CONGRESS: 12TH INTERNATIONAL CONFERENCE ON MATHEMATICAL PROBLEMS IN ENGINEERING, AEROSPACE AND SCIENCES	0
Recursive Bivariate Enhanced Multivariance Products Representation to Tridiagonalize Arrowheaded Matrices: Tridiagonal Matrix Enhanced Multivariance Products Representation (TMEMPR) With Weight Considerations	Okan, A., Demiralp, M.	ICNPAA 2016 WORLD CONGRESS: 11TH INTERNATIONAL CONFERENCE ON MATHEMATICAL PROBLEMS IN ENGINEERING, AEROSPACE AND SCIENCES	0
A self-consistent high dimensional modelling based decomposition approach for univariate linear integral operators: Tridiagonal Kernel Enhanced Multivariance Products Representation (TKEMPR)	Okan, A., Demiralp, M.	<u>JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS</u>	4
Tridiagonal Kernel Enhanced Multivariance Products Representation (TKEMPR) for Outer Product Sums: Arrowheading EMPR for Kernel (AEMPRK)	Okan, A., Demiralp, M.	PROCEEDINGS OF THE INTERNATIONAL CONFERENCE OF NUMERICAL ANALYSIS AND APPLIED MATHEMATICS 2014 (ICNAAM-2014)	5
Arrowheading Enhanced Multivariance Products Representation for a Kernel (AEMPRK) in a Bivariate Taylor Series Expansion	Okan, A., Demiralp, M.	INTERNATIONAL CONFERENCE OF COMPUTATIONAL METHODS IN SCIENCES AND ENGINEERING 2015 (ICCMSE 2015)	2
Tridiagonal Kernel Enhanced Multivariance Products Representation (TKEMPR) for Univariate Integral Operator Kernels	Okan, A., Demiralp, M.	2014 INTERNATIONAL CONFERENCE ON MATHEMATICS AND COMPUTERS IN SCIENCES AND IN INDUSTRY (MCSI 2014)	4
Fluctuation Suppression to Optimize Initial Data to Increase the Quality of Truncation Approximants in Probabilistic Evolution Approach for ODEs: Basic Philosophy	Okan, A., Baykara, N.A., Demiralp, M.	NUMERICAL ANALYSIS AND APPLIED MATHEMATICS (ICNAAM 2012), VOLS A AND B	2
A Gauss Quadrature Like Numerical Integration Approach Based on Hermite Interpolation with Node Optimisation	Okan, A., Baykara, N.A., Demiralp, M.	NUMERICAL ANALYSIS AND APPLIED MATHEMATICS ICNAAM 2011: INTERNATIONAL CONFERENCE ON NUMERICAL ANALYSIS AND APPLIED MATHEMATICS	0
Weight Optimization in Enhanced Multivariance Product Representation (EMPR) Method	Okan, A., Baykara, N.A., Demiralp, M.	NUMERICAL ANALYSIS AND APPLIED MATHEMATICS, VOLS I-III	8
Weight Optimization in Enhanced Multivariance Product Representation (EMPR) Method	Okan, A., Baykara, N.A., Demiralp, M.	NUMERICAL ANALYSIS AND APPLIED MATHEMATICS, VOLS I-III	8

Results found	11
Sum of the Times Cited	25
Average Citations per Item	2,27
h-index	8

8. Projects directed and participated

9. Administrative designations

10. Membership in scholarly institutions

11. Awards and grants

12. Courses taught over the last two academic years

Academic Year	Term	Course Name	Hours/week		Number of Students
			Theoretical	Applied	
2019-2020	Spring (İstanbul Aydın University, Civil Eng., Machine Eng.,)	Mat 147 Mathematics II	3	0	40
		Mat 148 Mathematics II	3	0	35
		Mak 235 Differential Equations	3	0	59
2019-2020	Fall (İstanbul Aydın University, Civil Eng.)	Mat 149 Mathematics I	3	0	26
		Mat 151 Mathematics I	3	0	71
		Mat 235 Mathematics III	3	0	8
2019-2020	Fall (İstinye University, Faculty of Health Science)	Basic Mathematic	3	0	30
		Basic Mathematic	2	0	66
2017-2018	Fall (İstanbul Technical University, Research Assist.)	Scientific Computing I	3	0	14
		Parallel and Distributed Computing	3	0	8
2017-2018	Spring (İstanbul Technical University, Research Assist.)	Scientific Computing II	3	0	12
		Parallel Numerical Algorithms and Tools	3	0	6