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Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: L-2566-2018

ScopusID: 57194781083

Yoksis Researcher ID: 222126

Education

Doctorate, Tobb University Of Economics And Technology, Institute Of Science, Matematik, Turkey 2014 - 2019

Postgraduate, Tobb University Of Economics And Technology, Institute Of Science, Matematik Bölümü, Turkey 2012 - 2014

Undergraduate, Hacettepe University, Fen Fakültesi, Matematik Bölümü, Turkey 2006 - 2011

Foreign Languages

English, C2 Mastery

Certificates, Courses and Trainings

Other, Image Processing Onramp, Matlab Organization, 2020

Dissertations

Doctorate, Study of Approximation Properties for Nonlinear Operators via Summability Process, Tobb University Of Economics And Technology, Institute Of Science, Matematik, 2019

Postgraduate, Application of Summability Process on Baskakov-type Korovkin Theory, Tobb University Of Economics And Technology, Institute Of Science, Matematik (YI) (Tezli), 2014

Research Areas

Signal Processing, Pattern Recognition and Image Processing, Neural Networks, Mathematics, Sequences, Series, Summability, Integral Equations, Integral Transformations, Computational Calculation, Measure and Integration, Numerical Analysis, Approximations and Expansions, Natural Sciences

Academic Positions

Associate Professor, Hacettepe University, Fen Fakültesi, Matematik Bölümü, 2022 - Continues
Associate Professor, Università Degli Studi di Padova, Mathematics, 2023 - 2024
Assistant Professor, Hacettepe University, Fen Fakültesi, Matematik Bölümü, 2022 - 2022
Research Assistant PhD, Hacettepe University, Fen Fakültesi, Matematik Bölümü, 2019 - 2022
Research Assistant, Hacettepe University, Fen Fakültesi, Matematik Bölümü, 2017 - 2019
Research Assistant, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Mathematics, 2014 - 2017

Academic and Administrative Experience

Faculty Board Member, Hacettepe University, Fen Fakültesi, Matematik Bölümü, 2024 - Continues

Courses

Undergraduate

Analiz 1, Undergraduate, 2024 - 2025
Matematik 1, Undergraduate, 2024 - 2025
Mathematics II, Undergraduate, 2021 - 2022
Mathematics 2, Undergraduate, 2021 - 2022
Basic Mathematics I, Undergraduate, 2021 - 2022
Mathematics for Engineers, Undergraduate, 2021 - 2022
Basic Mathematics, Undergraduate, 2020 - 2021
General Mathematics 2, Undergraduate, 2019 - 2020
Mathematics, Undergraduate, 2019 - 2020

Journal articles indexed in SCI, SSCI, and AHCI

- I. **Approximation by Max-Min Neural Network Operators**
Aslan İ.
NUMERICAL FUNCTIONAL ANALYSIS AND OPTIMIZATION, no.4-5, pp.374-393, 2025 (SCI-Expanded)
- II. **Approximation by N-dimensional max-product and max-min kind discrete operators with applications**
ASLAN İ., Ellidokuz T. Y. G.
FILOMAT, no.5, pp.1825-1845, 2024 (SCI-Expanded)
- III. **Approximation by Kantorovich-type max-min operators and its applications**
Gökçer T. Y., Aslan İ.
Applied Mathematics and Computation, vol.423, 2022 (SCI-Expanded)
- IV. **Approximation to the classical fractals by using non-affine contraction mappings**
Aslan N., Aslan İ.
PORTUGALIAE MATHEMATICA, vol.79, no.1/2, pp.1-16, 2022 (SCI-Expanded)
- V. **Multivariate approximation in phi-variation for nonlinear integral operators via summability methods**
ASLAN İ.
TURKISH JOURNAL OF MATHEMATICS, vol.46, pp.277-298, 2022 (SCI-Expanded)
- VI. **Nonlinear approximation in N-dimension with the help of summability methods**
ASLAN İ., DUMAN O.
REVISTA DE LA REAL ACADEMIA DE CIENCIAS EXACTAS FISICAS Y NATURALES SERIE A-MATEMATICAS, vol.115, no.3, 2021 (SCI-Expanded)

- VII. **Approximation by Sampling-Type Nonlinear Discrete Operators in ϕ -Variation**
ASLAN İ.
FILOMAT, vol.35, no.8, pp.2731-2746, 2021 (SCI-Expanded)
- VIII. **Convergence in Φ -Variation and Rate of Approximation for Nonlinear Integral Operators Using Summability Process**
ASLAN İ.
MEDITERRANEAN JOURNAL OF MATHEMATICS, vol.18, no.1, 2020 (SCI-Expanded)
- IX. **Approximation by nonlinear integral operators via summability process**
ASLAN İ., DUMAN O.
MATHEMATISCHE NACHRICHTEN, vol.293, no.3, pp.430-448, 2020 (SCI-Expanded)
- X. **Characterization of absolute and uniform continuity**
ASLAN İ., DUMAN O.
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.49, no.5, pp.1550-1565, 2020 (SCI-Expanded)
- XI. **Summability on Mellin-type nonlinear integral operators**
ASLAN İ., Duman O.
INTEGRAL TRANSFORMS AND SPECIAL FUNCTIONS, vol.30, no.6, pp.492-511, 2019 (SCI-Expanded)
- XII. **A summability process on Baskakov-type approximation**
Aslan I., Duman O.
PERIODICA MATHEMATICA HUNGARICA, vol.72, no.2, pp.186-199, 2016 (SCI-Expanded)

Articles Published in Other Journals

- I. **Fractal Image Decompression via Non-affine Contractions**
Aslan N., Aslan İ.
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.38, no.1, pp.292-303, 2025 (ESCI)
- II. **Multivariate ϕ -Variational Approximation of Mellin-Type Nonlinear Integral Operators via Summability Methods**
ASLAN İ.
DOLOMITES RESEARCH NOTES ON APPROXIMATION, vol.18, no.2, pp.25-38, 2025 (ESCI)
- III. **Nonlinear approximation by N -dimensional sampling type discrete operators with applications**
ASLAN İ.
COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS, vol.73, no.4, pp.1134-1152, 2024 (ESCI)
- IV. **Convergence in ϕ -variation for Mellin-type nonlinear integral operators**
ASLAN İ.
Journal of Analysis, 2024 (ESCI)
- V. **APPROXIMATION BY PSEUDO-LINEAR DISCRETE OPERATORS**
ASLAN İ., Gökcer T. Y.
MATHEMATICAL FOUNDATIONS OF COMPUTING, 2021 (ESCI)
- VI. **APPROXIMATION BY SAMPLING TYPE DISCRETE OPERATORS**
ASLAN İ.
COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS, vol.69, no.1, pp.969-980, 2020 (ESCI)

Papers Presented at Peer-Reviewed Scientific Conferences

- I. **Sözde-Doğrusal Sinir Ağı Operatörleriyle Yaklaşım ve Gürültü Giderme**
ASLAN İ., Erb W.
36. Ulusal Matematik Sempozyumu, Amasya, Turkey, 9 - 12 September 2024, (Summary Text)

- II. **Approximation by Kantorovich-type Max-Min Neural Network Operators and Applications to Signal Processing**
ASLAN İ., De Marchi S., Erb W.
Approximation Theory and Special Functions ATSF 2024 Conference - 8th Series, Ankara, Turkey, 4 - 07 September 2024, (Summary Text)
- III. **Maksimum-minimum sinir ağı operatörleri ve sinyal analizi üzerine uygulamaları**
ASLAN İ.
15. Ankara Matematik Günleri, Ankara, Turkey, 23 - 24 May 2024, (Summary Text)
- IV. **Approximation by Kantorovich type Max-Min Operators with Applications**
ASLAN İ., GÖKÇER ELLİDOKUZ T. Y.
Dolomites Research Week on Approximation and Applications 2023, San Vito Di Cadore, Italy, 15 - 19 September 2023, (Summary Text)
- V. **Kantorovich tipindeki Maksimum-Minimum Operatörleri ve Görüntü İşleme Üzerine Uygulamaları**
ASLAN İ., GÖKÇER T. Y.
Yaklaşımlar Teorisi ve Uygulamaları Çalıştayı, Ankara, Turkey, 4 - 05 March 2022, (Summary Text)
- VI. **Φ -variational Approximation by Mellin-type Nonlinear Integral Operators**
ASLAN İ.
Studies on Scientific Developments in Geometry Algebra and Applied Mathematics, Ankara, Turkey, 1 - 03 February 2022, (Summary Text)
- VII. **Sampling-type Nonlinear Discrete Operators and Applications to the Image Processing**
ASLAN İ.
8th International Conference on Recent Advances in Pure and Applied Mathematics, Muğla, Turkey, 24 - 27 September 2021, (Summary Text)
- VIII. **Approximation to fractals by means of non-affine contraction mappings**
ASLAN İ., ASLAN N.
The Second International Conference on Applied Mathematics in Engineering, Balıkesir, Turkey, 1 - 03 September 2021, (Summary Text)
- IX. **Approximation properties of pseudo-linear operators with discrete kernels and application to image processing**
ASLAN İ., GÖKÇER T. Y.
INTERNATIONAL SOCIETY FOR ANALYSIS ITS APPLICATIONS AND COMPUTATION, Gent, Belgium, 2 - 06 August 2021, (Summary Text)
- X. **Approximation by kantorovich variant of max-min operators with applications to digital image processing**
ASLAN İ., GÖKÇER T. Y.
International Conference on Mathematics and Its Applications in Science and Engineering (ICMASE 2021), Salamanca, Mexico, 1 - 02 July 2021, (Summary Text)
- XI. **Approximation by discrete operators of Max-Product kind**
Aslan İ., Gökçer T. Y.
International Online Workshop on Approximation Theory, Ivano-Frankivsk, Ukraine, 19 - 21 March 2021, pp.6, (Summary Text)
- XII. **Approximation by discrete operators of Max-Min kind**
Gökçer T. Y., Aslan İ.
International Online Workshop on Approximation Theory, Ivano-Frankivsk, Ukraine, 19 - 21 March 2021, pp.16, (Summary Text)
- XIII. **Some Approximation Properties of Nonlinear Discrete Operators of Sampling-type**
Aslan İ.
7th INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN PURE ANDAPPLIED MATHEMATICS, Muğla, Turkey, 25 - 28 September 2020, (Summary Text)
- XIV. **N-dimensional ϕ -variation of nonlinear discrete operators**
ASLAN İ.

3rd International Conference on Pure and Applied Mathematics, Van, Turkey, 3 - 05 September 2020, (Summary Text)

XV. Nonlinear Approximation in Discrete Operators of Sampling-type

ASLAN İ.

International Conference on Mathematics and its Applications in Science and Engineering, Ankara, Turkey, 9 - 10 July 2020, (Summary Text)

XVI. Convergence in ϕ -variation and Rate of Approximation in Ndimension with the Help of Summability Method

ASLAN İ.

Multivariate Approximation: Theory and Applications, Perugia, Italy, 16 - 18 January 2020, (Summary Text)

XVII. Summability of Nonlinear Integral Operators in the Space of Bounded ϕ -variation

ASLAN İ.

Summability of Nonlinear Integral Operators in the Space of Bounded ϕ -variation, Brüksel, Belgium, 22 - 25 July 2019, (Summary Text)

XVIII. Application of Summability Process on the Mellin-type Nonlinear Integral Operators

ASLAN İ., DUMAN O.

THE FIRST INTERNATIONAL WORKSHOP ON CONSTRUCTIVE MATHEMATICAL ANALYSIS, Konya, Turkey, 11 - 13 February 2019, (Summary Text)

XIX. Summability method in the approximation by nonlinear integral operators in N-dimension BV-space

ASLAN İ., DUMAN O.

2018 The 7th International Conference on Pure and Applied Mathematics, Budapest, Hungary, 10 - 13 July 2018, (Summary Text)

XX. Lineer Olmayan İntegral Operatörleriyle Yaklaşımda Bell-Tipinde Toplanabilme Metodu

ASLAN İ., DUMAN O.

13. Ankara Matematik Günleri, Ankara, Turkey, 27 - 28 April 2018, (Summary Text)

XXI. Approximation by nonlinear integral operators with the help of summation methods

ASLAN İ., DUMAN O.

The International Society for Analysis, its Applications and Computation, Vaxjö, Sweden, 14 - 18 August 2017, (Summary Text)

XXII. Summability Process on the Approximation by Nonlinear Integral Operators of Convolution Type

ASLAN İ., DUMAN O.

International Conference on Mathematics and Mathematics Education, Şanlıurfa, Turkey, 11 - 13 May 2017, (Summary Text)

XXIII. A Generalized Version of the Korovkin Theory

ASLAN İ., DUMAN O.

Emerging Trends In Applied Mathematics And Mechanics, Perpignan, France, 30 May - 03 June 2016, (Summary Text)

XXIV. Application of Summability Process on Baskakov Type Korovkin Theory

ASLAN İ., DUMAN O.

International Conference on Recent Advances in Pure and Applied Mathematics, Antalya, Turkey, 6 - 09 November 2014, (Summary Text)

XXV. Summability Process on the Baskakov type Approximation theory

ASLAN İ., DUMAN O.

International Conference Mathematics Days In Sofia, Sofya, Bulgaria, 7 - 10 July 2014, (Summary Text)

Funded Projects

Gökçer T. Y., Duman O., Aslan İ., TUBITAK Project, Bell Tipinde Toplanabilme Metodunun Lineer Olmayan Operatörlere Uygulanması Ve Görüntü İşleme, 2020 - 2022

Aslan İ., Aslan N., Project Supported by Higher Education Institutions, Approximation to Fractals by Non-affine Mappings,

2020 - 2021

Activities in Scientific Journals

Journal of Advances in Applied & Computational Mathematics, Committee Member, 2024 - Continues
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, Assistant Editor/Section Editor, 2021 - Continues
Researches in Mathematics, Committee Member, 2021 - Continues

Peer Reviews in Scientific Publications

DEMONSTRATIO MATHEMATICA, SCI Journal, February 2025
Springer Proceedings in Mathematics & Statistics, Chapter Scientific / Professional Book Published by Renowned Publishing Houses, January 2025
DEMONSTRATIO MATHEMATICA, SCI Journal, January 2025
DOLOMITES RESEARCH NOTES ON APPROXIMATION, Journal Indexed in ESCI, October 2024
International Journal of Applied and Computational Mathematics, Other Indexed Journal, July 2024
International Journal of Applied and Computational Mathematics, Other Indexed Journal, June 2024
CONTEMPORARY MATHEMATICS, Journal Indexed in ESCI, June 2023
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, Journal Indexed in SCI-E, March 2023
KRAGUJEVAC JOURNAL OF MATHEMATICS, Journal Indexed in ESCI, September 2022

Scientific Project Refereeing

TUBITAK Project, 2221 - Sabbatical Science Support P., March 2025
TUBITAK Project, 1002 - Quick Support Program, January 2025
TUBITAK Project, 1002 - Quick Support Program, May 2024
TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, June 2023
TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, June 2023
TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, June 2023
TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, June 2023
TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, June 2023
TUBITAK Project, 1002 - Quick Support Program, August 2021

Roles in Event Organizations

Aslan İ., Approximation Theory and Special Functions ATSF 2024 Conference - 8th Series, Scientific Congress, Ankara, Turkey, Eylül 2024
Aslan İ., Yaklaşımlar Teorisi ve Uygulamaları Çalıştayı, Workshop Organization, Ankara, Turkey, Mart 2022
Aslan İ., 12. Ankara Matematik Günleri, Scientific Congress, Ankara, Turkey, Mayıs 2017
Aslan İ., AMAT 2015 - 3rd International Conference on Applied Mathematics and Approximation Theory, Scientific Congress, Ankara, Turkey, Mayıs 2015

Mobility Activity

Post Doc, Post Doc, Università Degli Studi di Padova, Italy, 2023 - 2024

Metrics

Publication: 43
Citation (WoS): 61
Citation (Scopus): 50
H-Index (WoS): 5
H-Index (Scopus): 4

Invited Talks

Sözde-Linear Sinir Ağı Operatörleri ve Gürültü Filtreleme Özellikleri Üzerine, Seminar, Ankara Üniversitesi, Turkey, October 2024
Sözde-Linear Sinir Ağı Operatörleri ve Sinyal İşleme Üzerine Uygulamaları, Seminar, Hacettepe Üniversitesi, Turkey, May 2024
Approximation by Pseudo-Linear Neural Network Operators and Their Applications to Signal Processing, Seminar, Padua University, Italy, March 2024
Toplam Sürecinin Linear Olmayan İntegral Operatörleri Üzerindeki Etkileri, Seminar, Ankara Üniversitesi, Turkey, March 2019

Scholarships

Bideb 2219, TUBITAK, 2023 - 2024
Yurt Dışı Doktora Sonrası Araştırma Burs Programı, TUBITAK, 2023 - 2024
Full scholarship for doctoral education, University, 2014 - 2019
2211-A Ph.D. Scholarship, TUBITAK, 2016 - 2018
Full scholarship for master education, University, 2012 - 2014

Awards

Aslan İ., Excellent Oral Presentation Certificate, 2018 International Conference On Pure And Applied Mathematics, July 2018