

Prof. ESRA DUMAN

Personal Information

Office Phone: [+90 312 202 1094](tel:+903122021094)

Email: eduman@gazi.edu.tr

Other Email: eerkusduman@gmail.com

Web: <https://avesis.gazi.edu.tr/eduman>

Education Information

Doctorate, Ankara University, Fen Bilimleri Enstitüsü, Matematik (Dr), Turkey 1999 - 2005

Post Graduate, Ankara University, Institute Of Science, Matematik (YI) (Tezli), Turkey 1996 - 1999

Under Graduate, Ankara University, Fen Fakültesi, Matematik Bölümü, Turkey 1991 - 1995

Research Areas

Mathematics, Natural Sciences

Academic Titles / Tasks

Professor, Gazi University, Fen Fakültesi, Matematik Bölümü, 2017 - Continues

Associate Professor, Gazi University, Fen Fakültesi, Matematik Bölümü, 2010 - 2017

Researcher, University of Central Florida, Department of Mathematics, 2015 - 2015

Assistant Professor, Gazi University, Fen Fakültesi, Matematik Bölümü, 2007 - 2010

Assistant Professor, Canakkale Onsekiz Mart University, Fen-Edebiyat Fakültesi, Matematik Bölümü, 2006 - 2007

Research Assistant, Ankara University, Fen Bilimleri Enstitüsü, Matematik (Dr), 1996 - 2005

Advising Theses

Erkus-Duman E., Bazı özel fonksiyonların q- analogları, Post Graduate, Y.AVCI(Student), 2019

Erkus-Duman E., A New Class Of Generating Functions For Some Polynomials, Post Graduate, Ö.AKYEL(Student), 2019

Erkus-Duman E., Bernstein Type And Beta Type Polynomials And Their Properties, Post Graduate, D.UÇAK(Student), 2019

Erkus-Duman E., The Multivariable Hypergeometric Functions, Doctorate, D.KORKMAZ(Student), 2017

Erkus-Duman E., Generating Functions For Bernoulli, Euler And Genocchi Polynomials, Post Graduate, E.GÜLDOĞAN(Student), 2015

Erkus-Duman E., Çok değişkenli polinomların bazı aileleri için doğurucu fonksiyonlar, Doctorate, N.ÖZMEN(Student), 2014

Erkus-Duman E., Fibonacci ve lucas polinomları için doğurucu fonksiyonlar, Post Graduate, M.ŞENOCAK(Student), 2014

Erkus-Duman E., Generalized humberg polynomials, Post Graduate, O.ÇELİK(Student), 2013

Erkus-Duman E., d- orthogonal polynomials, Post Graduate, G.ORUCOVA(Student), 2013

Erkus-Duman E., Classical orthogonal polynomials of a discrete variable, Post Graduate, B.AYATA(Student), 2012

Erkus-Duman E., Extended linear generating functions, Post Graduate, E.ÇİMEN(Student), 2012

Erkus-Duman E., Applications of fractional derivatives to hypergeometric functions, Post Graduate, B.ÜNAL(Student), 2011

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **On Some Families of New Constructed Polynomials**
Çiftci H., Erkuş-Duman E.
BULLETIN OF THE MALAYSIAN MATHEMATICAL SCIENCES SOCIETY, vol.43, pp.1111-1125, 2020 (Journal Indexed in SCI)
- II. **SOME NEW PROPERTIES OF UNIVARIATE AND MULTIVARIATE GOTTLIEB POLYNOMIALS**
Erkus-Duman E.
MISKOLC MATHEMATICAL NOTES, vol.19, no.2, pp.835-845, 2018 (Journal Indexed in SCI)
- III. **Harmonic functions associated with some polynomials in several variables**
Tasdelen F., AKTAŞ R., Erkuş-Duman E.
TURKISH JOURNAL OF MATHEMATICS, vol.42, no.4, pp.1803-1814, 2018 (Journal Indexed in SCI)
- IV. **Generalized Vieta-Jacobsthal and Vieta-Jacobsthal-Lucas polynomials**
Yalcin N. F., TAŞCI D., Erkuş-Duman E.
MATHEMATICAL COMMUNICATIONS, vol.20, no.2, pp.241-251, 2015 (Journal Indexed in SCI)
- V. **GENERATING FUNCTIONS FOR THE GENERALIZED BIVARIATE FIBONACCI AND LUCAS POLYNOMIALS**
Erkus-Duman E., TUĞLU N.
JOURNAL OF COMPUTATIONAL ANALYSIS AND APPLICATIONS, vol.18, no.5, pp.815-821, 2015 (Journal Indexed in SCI)
- VI. **FAMILIES OF GENERATING FUNCTIONS FOR THE JACOBI AND RELATED MATRIX POLYNOMIALS**
ALTIN A., ÇEKİM B., Erkuş-Duman E.
ARS COMBINATORIA, vol.117, pp.257-273, 2014 (Journal Indexed in SCI)
- VII. **The Laguerre polynomials in several variables**
AKTAŞ R., Erkuş-Duman E.
MATHEMATICA SLOVACA, vol.63, no.3, pp.531-544, 2013 (Journal Indexed in SCI)
- VIII. **Extended Jacobi Functions via Riemann-Liouville Fractional Derivative**
ÇEKİM B., Erkuş-Duman E.
ABSTRACT AND APPLIED ANALYSIS, 2013 (Journal Indexed in SCI)
- IX. **On a Family of Multivariate Modified Humbert Polynomials**
AKTAŞ R., Erkuş-Duman E.
SCIENTIFIC WORLD JOURNAL, 2013 (Journal Indexed in SCI)
- X. **STATISTICAL APPROXIMATION BY MEANS OF OPERATORS CONSTRUCTED BY q-LAGRANGE POLYNOMIALS**
Erkus-Duman E.
JOURNAL OF COMPUTATIONAL ANALYSIS AND APPLICATIONS, vol.14, no.1, pp.67-77, 2012 (Journal Indexed in SCI)
- XI. **STATISTICAL KOROVKIN-TYPE THEORY FOR MATRIX-VALUED FUNCTIONS**
DUMAN O., Erkuş-Duman E.
STUDIA SCIENTIARUM MATHEMATICARUM HUNGARICA, vol.48, no.4, pp.489-508, 2011 (Journal Indexed in SCI)
- XII. **Miscellaneous properties of some multivariable polynomials**
Erkus-Duman E., ALTIN A., AKTAŞ R.
MATHEMATICAL AND COMPUTER MODELLING, vol.54, pp.1875-1885, 2011 (Journal Indexed in SCI)
- XIII. **Statistical approximation properties of high order operators constructed with the Chan-Chyan-Srivastava polynomials**
Erkus-Duman E., DUMAN O.
APPLIED MATHEMATICS AND COMPUTATION, vol.218, no.5, pp.1927-1933, 2011 (Journal Indexed in SCI)
- XIV. **MATRIX EXTENSIONS OF POLYNOMIALS IN SEVERAL VARIABLES**
Erkus-Duman E.

- UTILITAS MATHEMATICA, vol.85, pp.161-180, 2011 (Journal Indexed in SCI)
- XV. **STATISTICAL RATES IN APPROXIMATION BY POSITIVE LINEAR OPERATORS**
Erkus-Duman E.
MISKOLC MATHEMATICAL NOTES, vol.12, no.2, pp.159-166, 2011 (Journal Indexed in SCI)
- XVI. **Rates of Ideal Convergence for Approximation Operators**
DUMAN O., Ozarslan M. A. , Erkus-Duman E.
MEDITERRANEAN JOURNAL OF MATHEMATICS, vol.7, no.1, pp.111-121, 2010 (Journal Indexed in SCI)
- XVII. **On a multivariable extension for the extended Jacobi polynomials**
Altin A., AKTAŞ R., Erkus-Duman E.
JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS, vol.353, no.1, pp.121-133, 2009 (Journal Indexed in SCI)
- XVIII. **Statistical Approximation for Stochastic Processes**
Anastassiou G. A. , DUMAN O., Erkus-Duman E.
STOCHASTIC ANALYSIS AND APPLICATIONS, vol.27, no.3, pp.460-474, 2009 (Journal Indexed in SCI)
- XIX. **A q-extension of the Erkus-Srivastava polynomials in several variables**
Erkus-Duman E.
TAIWANESE JOURNAL OF MATHEMATICS, vol.12, no.2, pp.539-543, 2008 (Journal Indexed in SCI)
- XX. **Integral-type generalizations of operators obtained from certain multivariate polynomials**
Erkus-Duman E., DUMAN O.
CALCOLO, vol.45, no.1, pp.53-67, 2008 (Journal Indexed in SCI)
- XXI. **Statistical approximation of certain positive linear operators constructed by means of the Chan-Chyan-Srivastava polynomials**
Erkus E., Duman O., Srivastava H. M.
APPLIED MATHEMATICS AND COMPUTATION, vol.182, no.1, pp.213-222, 2006 (Journal Indexed in SCI)
- XXII. **Statistical rates on the multivariate approximation theory**
Duman O., Erkus E., Gupta V.
MATHEMATICAL AND COMPUTER MODELLING, vol.44, pp.763-770, 2006 (Journal Indexed in SCI)
- XXIII. **The q-Lagrange polynomials in several variables**
Altin A., Erkus E., Tasdelen F.
TAIWANESE JOURNAL OF MATHEMATICS, vol.10, no.5, pp.1131-1137, 2006 (Journal Indexed in SCI)
- XXIV. **Approximation of continuous periodic functions via statistical convergence**
Duman O., Erkus E.
COMPUTERS & MATHEMATICS WITH APPLICATIONS, vol.52, pp.967-974, 2006 (Journal Indexed in SCI)
- XXV. **Families of linear generating functions for polynomials in two variables**
Altin A., Erkus E., Oezarslan M. A.
INTEGRAL TRANSFORMS AND SPECIAL FUNCTIONS, vol.17, no.5, pp.315-320, 2006 (Journal Indexed in SCI)
- XXVI. **A unified presentation of some families of multivariable polynomials**
Erkus E., Srivastava H. M.
INTEGRAL TRANSFORMS AND SPECIAL FUNCTIONS, vol.17, no.4, pp.267-273, 2006 (Journal Indexed in SCI)
- XXVII. **On a multivariable extension of the Lagrange-Hermite polynomials**
Altin A., Erkus E.
INTEGRAL TRANSFORMS AND SPECIAL FUNCTIONS, vol.17, no.4, pp.239-244, 2006 (Journal Indexed in SCI)
- XXVIII. **A Korovkin type approximation theorem in statistical sense**
Erkus E., Duman O.
STUDIA SCIENTIARUM MATHEMATICARUM HUNGARICA, vol.43, no.3, pp.285-294, 2006 (Journal Indexed in SCI)
- XXIX. **A-statistical extension of the Korovkin type approximation theorem**
Erkus E., Duman O.
PROCEEDINGS OF THE INDIAN ACADEMY OF SCIENCES-MATHEMATICAL SCIENCES, vol.115, no.4, pp.499-508, 2005 (Journal Indexed in SCI)
- XXX. **A note on the Lagrange polynomials in several variables**
Erkus E., Altin A.

Articles Published in Other Journals

- I. **The Meixner Polynomials in Several Variables**
Özmen N., Erkuş-Duman E.
International Journal of Applied Physics and Mathematics, vol.9, no.3, pp.144-151, 2019 (Refereed Journals of Other Institutions)
- II. **Extended Multivariable Fourth Type Horn Functions**
Düzgün D., Erkuş-Duman E.
Gazi University Journal of Science, vol.32, no.1, pp.225-240, 2019 (Journal Indexed in ESCI)
- III. **ON THE GOTTLIEB POLYNOMIALS IN SEVERAL VARIABLES**
Erkuş-Duman E., Özmen N.
FACTA UNIVERSITATIS-SERIES MATHEMATICS AND INFORMATICS, vol.34, pp.927-940, 2019 (Journal Indexed in ESCI)
- IV. **Generating Functions for k-Hypergeometric Functions**
Düzgün D., Erkuş-Duman E.
International Journal of Applied Physics and Mathematics, vol.9, no.3, pp.119-126, 2019 (Refereed Journals of Other Institutions)
- V. **Some Generating Functions For a Class of Hypergeometric Polynomials**
Özmen N., Erkuş-Duman E.
Gazi University Journal of Science, vol.31, no.4, pp.1179-1190, 2018 (Journal Indexed in ESCI)
- VI. **Fibonacci and Lucas Differential Equations**
Erkuş-Duman E., Çiftci H.
Application and applied mathematics, vol.13, no.2, pp.756-763, 2018 (Journal Indexed in ESCI)
- VII. **An Extension of a Class of Generating Functions For The Cesaro Polynomials of Three Variables**
Özmen N., Erkuş-Duman E.
Journal of Science and Arts, vol.45, no.4, pp.939-950, 2018 (Journal Indexed in ESCI)
- VIII. **Some Families of Generating Functions for the Generalized Cesaro Polynomials**
Özmen N., Erkuş-Duman E.
Journal Of Computational Analysis And Applications, vol.25, no.4, pp.670-683, 2018 (Refereed Journals of Other Institutions)
- IX. **The Laguerre Type d-Orthogonal Polynomials**
Düzgün D., Erkuş-Duman E.
Journal of Science and Arts, vol.1, no.42, pp.95-106, 2018 (Journal Indexed in ESCI)
- X. **ON THE POISSON CHARLIER POLYNOMIALS**
Özmen N., Erkuş-Duman E.
Serdica Mathematical Journal, vol.41, pp.457-470, 2015 (Refereed Journals of Other Institutions)
- XI. **A generalization of the extended Jacobi polynomials in two variables**
Aktaş R., Erkuş-Duman E.
Gazi University Journal of Science, vol.28, no.3, pp.503-521, 2015 (Other Refereed National Journals)
- XII. **New generating functions for the Konhauser matrix polynomials**
Erkuş-Duman E., Çekim B.
Communications de la Faculté des Sciences de l'Université d'Ankara, vol.63, no.1, pp.35-41, 2014 (Other Refereed National Journals)
- XIII. **Integral Representations for Bessel Matrix Functions**
Çekim B., Erkuş-Duman E.
Gazi University Journal of Science, vol.27, no.1, pp.663-667, 2014 (Other Refereed National Journals)
- XIV. **Korovkin Type Error Estimates for Positive Linear Operators Involving Some Special Functions**

Dođru O., Erkuş-Duman E.

Turkish Journal Of Mathematics, vol.33, no.1, pp.41-53, 2009 (Refereed Journals of Other Institutions)

XV. On a hybrid family of summation integral type operators

Gupta V., Erkuş E.

Journal of Inequalities in Pure and Applied Mathematics, vol.7, no.1, pp.1-11, 2006 (Refereed Journals of Other Institutions)

XVI. The multivariate q Lagrange Hermite polynomials

Erkuş E.

International Journal of Computational and Numerical Analysis and Applications, vol.6, no.2, pp.143-151, 2004 (Refereed Journals of Other Institutions)

Books & Book Chapters

I. Extended Multivariable Hypergeometric Functions

Düzgün D., Erkuş-Duman E.

in: Analysis, Probability, Applications, and Computation, Lindahl K., Lindström T., Rodino L., Toft J., Wahlberg P., Editor, Birkhäuser, Cham, Vaxjö, pp.17-25, 2019

II. On the Generalized Sylvester Polynomials

Özmen N., Erkuş-Duman E.

in: Analysis, Probability, Applications, and Computation, Karl-Olof Lindahl, Torsten Lindström, Luigi G. Rodino, Joachim Toft, Patrik Wahlberg, Editor, Birkhäuser, Cham, Vaxjö, pp.47-55, 2019

III. On the g-Jacobi Matrix Functions

Çekim B., Erkuş-Duman E.

in: Advances in Applied Mathematics and Approximation Theory, Anastassiou, Duman, Editor, Springer-Verlag, Zürich, pp.73-84, 2013

Refereed Congress / Symposium Publications in Proceedings

I. On Some Generalized Polynomials

Korkmaz Düzgün D., Erkuş-Duman E.

7th International Conference on Recent Advanced in Pure and Applied Mathematics, Muğla, Turkey, 25 September 2020, pp.49

II. A Generalization of Cesaro Polynomials in Several Variables and the Generalized Lauricella Functions

Erkuş-Duman E., Özmen N.

7th International Conference on Recent Advanced in Pure and Applied Mathematics, Muğla, Turkey, 25 September 2020, pp.90

III. Generating Functions for The Extended Multivariable Fourth Type Horn Functions

Düzgün D., Erkuş-Duman E.

The 8th International Conference On Pure and Applied Mathematics, Brussels, Belgium, 22 - 25 July 2019

IV. Generating Functions for k-Hypergeometric Functions

Düzgün D., Erkuş-Duman E.

ICPAM, Budapest, Hungary, 10 - 14 July 2018

V. Gottlieb Polynomials in several Variables

Özmen N., Erkuş-Duman E.

V. Kadın Matematikçiler Derneği Çalıştayı, Diyarbakır, Turkey, 5 - 07 May 2018, pp.12

VI. EXTENDED MULTIVARIABLE HYPERGEOMETRIC FUNCTIONS

Erkuş-Duman E., Düzgün D.

ISAAC 2017, Vaxjö, Sweden, 14 - 18 August 2017

- VII. **On the generalized Sylvester polynomials**
Erkuş-Duman E., Özmen N.
ISAAC 2017, Vaxjö, Sweden, 14 - 18 August 2017, pp.19
- VIII. **Extended Multivariable Fourth Type Horn Functions**
Erkuş-Duman E., Düzgün D.
International Conference on Mathematics and Mathematics Education, Şanlıurfa, Turkey, 11 - 13 May 2017
- IX. **On the Cesaro polynomials of three variables**
Özmen N., Erkuş-Duman E.
International Conference on Mathematics and Engineering, İstanbul, Turkey, 10 - 12 May 2017, pp.378
- X. **Some New Properties of the Extended Generalized Hypergeometric Functions**
Düzgün D., Erkuş-Duman E.
ETAMM 2016, Perpignan, France, 30 May - 03 June 2016
- XI. **On the Generalized Cesaro Polynomials**
Erkuş-Duman E., Özmen N.
ETAMM 2016, Perpignan, France, 30 May - 03 June 2016
- XII. **On the Poisson Charlier Polynomials**
Özmen N., Erkuş-Duman E.
International Conference: Mathematics Days in Sofia, Sofija, Bulgaria, 7 - 10 July 2014, vol.41, pp.457-470
- XIII. **Some Families of Generating Functions for Laguerre and Charlier Types d Orthogonal Polynomials**
Düzgün D., Erkuş-Duman E.
International Conference on Recent Developments in Pure and Applied Mathematics - ICRAPAM 2014, Antalya, Turkey, 6 - 09 November 2014
- XIV. **On the Generalized Bernoulli Euler and Genocchi Polynomials**
Güldoğan E., Erkuş-Duman E.
International Conference on Recent Developments in Pure and Applied Mathematics - ICRAPAM 2014, Antalya, Turkey, 6 - 09 November 2014
- XV. **Some Results For A Family of Multivariable Polynomials**
Özmen N., Erkuş-Duman E.
11th International Conference of Numerical Analysis and Applied Mathematics, Rodos, Greece, 21 - 27 September 2013, vol.1558, pp.1124-1127
- XVI. **Çok değişkenli Gottlieb polinomları**
Erkuş-Duman E.
26.Ulusal Matematik Sempozyumu, Diyarbakır, Turkey, 4 - 07 September 2013
- XVII. **On the g Jacobi matrix functions**
Çekim B., Erkuş-Duman E.
Advances in Applied Mathematics and Approximation Theory, Ankara, Turkey, 17 - 20 May 2012
- XVIII. **Laguerre ve Konfluent Hipergeometrik Fonksiyonların Bir Matris Genellemesi**
Çekim B., Erkuş-Duman E.
7. Ankara Matematik Günleri, Ankara, Turkey, 31 May - 01 June 2012
- XIX. **Approximation by matrix valued linear positive operators**
Duman O., Erkuş-Duman E.
Conference on Matrix Analysis and its Applications – MAT TRIAD, Lisbon, Portugal, 12 - 16 July 2011
- XX. **Integral representations for a class of polynomials in two variables**
Erkuş-Duman E.
Mathematical Analysis, Differential Equations and Their Applications, Gazimagusa, Cyprus (Kktc), 12 - 15 September 2008
- XXI. **Some Mixed Generating Relations for Some Families of Multivariable Polynomials**
Erkuş-Duman E.
II. Ankara Matematik Günleri, Ankara, Turkey, 22 - 23 May 2008
- XXII. **Pozitif lineer operatörler yardımıyla sürekli periyodik fonksiyonlara istatistiksel yaklaşım**
Erkuş-Duman E., Duman O.

2nd Turkish World Mathematics Symposium, Sakarya, Turkey, 4 - 07 July 2007

XXIII. **Çok Değişkenli Polinomların Çeşitli Ailelerinin Ortak Bir Gösterimi**
Erkuş-Duman E.

XIX. Ulusal Matematik Sempozyumu, Kütahya, Turkey, 22 - 25 August 2006

Citations

Total Citations (WOS):382

h-index (WOS):11

Awards

Erkuş-Duman E., Best Organizer Award, 10Th International Conference On Mechanical And Aerospace Engineering, Belçika, July 2019