

## Prof. Dr. ESRA DUMAN

### Kişisel Bilgiler

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### Eğitim Bilgileri

Doktora, Ankara Üniversitesi, Fen Bilimleri Enstitüsü, Matematik (Dr), Türkiye 1999 - 2005

Yüksek Lisans, Ankara Üniversitesi, Fen Bilimleri Enstitüsü, Matematik (Yl) (Tezli), Türkiye 1996 - 1999

Lisans, Ankara Üniversitesi, Fen Fakültesi, Matematik Bölümü, Türkiye 1991 - 1995

### Araştırma Alanları

Matematik, Temel Bilimler

### Akademik Unvanlar / Görevler

Prof. Dr., Gazi Üniversitesi, Fen Fakültesi, Matematik Bölümü, 2017 - Devam Ediyor

Doç. Dr., Gazi Üniversitesi, Fen Fakültesi, Matematik Bölümü, 2010 - 2017

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

Yrd. Doç. Dr., Gazi Üniversitesi, Fen Fakültesi, Matematik Bölümü, 2007 - 2010

Yrd. Doç. Dr., Çanakkale Onsekiz Mart Üniversitesi, Fen-Edebiyat Fakültesi, Matematik Bölümü, 2006 - 2007

Araştırma Görevlisi, Ankara Üniversitesi, Fen Bilimleri Enstitüsü, Matematik (Dr), 1996 - 2005

### Yönetilen Tezler

Erkus-Duman E, Bazı özel fonksiyonların q-analogları, Yüksek Lisans, Y.AVCI(Öğrenci), 2019

Erkus-Duman E, Bazı polinomlar için doğrulu Fonksiyonların yeni bir sınıfı, Yüksek Lisans, Ö.AKYEL(Öğrenci), 2019

Erkus-Duman E., Bernstein tipi ve beta tipi polinomları ve özellikleri, Yüksek Lisans, D.UÇAK(Öğrenci), 2019

Erkus-Duman E., Çok değişkenli hipergeometrik fonksiyonlar, Doktora, D.KORKMAZ(Öğrenci), 2017

Erkus-Duman E., Genelleştirilmiş Bernoulli, Euler ve Genocchi polinomları, Yüksek Lisans, E.GÜLDOĞAN(Öğrenci), 2015

Erkus-Duman E., Çok değişkenli polinomların bazı aileleri için doğrulu Fonksiyonlar, Doktora, N.ÖZMEN(Öğrenci), 2014

Erkus-Duman E., Fibonacci ve Lucas polinomları için doğrulu Fonksiyonlar, Yüksek Lisans, M.ŞENOCAK(Öğrenci), 2014

Erkus-Duman E., Genelleştirilmiş humbert polinomları, Yüksek Lisans, O.ÇELİK(Öğrenci), 2013

Erkus-Duman E., d-ortogonal polinomlar, Yüksek Lisans, G.ORUCOVA(Öğrenci), 2013

Erkus-Duman E., Diskret Değişkenli Klasik Ortogonal Polinomlar, Yüksek Lisans, B.AYATA(Öğrenci), 2012

Erkus-Duman E., Genişletilmiş Lineer Doğrurucu Fonksiyonlar, Yüksek Lisans, E.ÇİMEN(Öğrenci), 2012

Erkus-Duman E., Kesirli Türevlerin Hipergeometrik Fonksiyonlara Uygulamaları, Yüksek Lisans, B.ÜNAL(Öğrenci), 2011

Erkus-Duman E., Özel Fonksiyonların Bazı Özellikleri, Yüksek Lisans, T.MERCAN(Öğrenci), 2009

## **SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler**

### **I. A new family of two-variable polynomials based on hermite polynomials**

Erkus-Duman E., ÇİFTÇİ H.

MATHEMATICA SLOVACA, cilt.72, sa.4, ss.885-898, 2022 (SCI-Expanded)

### **II. Gottlieb Polynomials and Their q-Extensions**

Erkus-Duman E., Choi J.

MATHEMATICS, cilt.9, sa.13, 2021 (SCI-Expanded)

### **III. On Some Families of New Constructed Polynomials**

Çiftci H., Erkuş-Duman E.

BULLETIN OF THE MALAYSIAN MATHEMATICAL SCIENCES SOCIETY, cilt.43, ss.1111-1125, 2020 (SCI-Expanded)

### **IV. SOME NEW PROPERTIES OF UNIVARIATE AND MULTIVARIATE GOTTLIEB POLYNOMIALS**

Erkus-Duman E.

MISKOLC MATHEMATICAL NOTES, cilt.19, sa.2, ss.835-845, 2018 (SCI-Expanded)

### **V. Harmonic functions associated with some polynomials in several variables**

Tasdelen F., AKTAŞ R., Erkus-Duman E.

TURKISH JOURNAL OF MATHEMATICS, cilt.42, sa.4, ss.1803-1814, 2018 (SCI-Expanded)

### **VI. Generalized Vieta-Jacobsthal and Vieta-Jacobsthal-Lucas polynomials**

Yalcin N. F., TAŞCI D., Erkus-Duman E.

MATHEMATICAL COMMUNICATIONS, cilt.20, sa.2, ss.241-251, 2015 (SCI-Expanded)

### **VII. GENERATING FUNCTIONS FOR THE GENERALIZED BIVARIATE FIBONACCI AND LUCAS POLYNOMIALS**

Erkus-Duman E., TUĞLU N.

JOURNAL OF COMPUTATIONAL ANALYSIS AND APPLICATIONS, cilt.18, sa.5, ss.815-821, 2015 (SCI-Expanded)

### **VIII. FAMILIES OF GENERATING FUNCTIONS FOR THE JACOBI AND RELATED MATRIX POLYNOMIALS**

ALTIN A., ÇEKİM B., Erkus-Duman E.

ARS COMBINATORIA, cilt.117, ss.257-273, 2014 (SCI-Expanded)

### **IX. The Laguerre polynomials in several variables**

AKTAŞ R., Erkus-Duman E.

MATHEMATICA SLOVACA, cilt.63, sa.3, ss.531-544, 2013 (SCI-Expanded)

### **X. Extended Jacobi Functions via Riemann-Liouville Fractional Derivative**

ÇEKİM B., Erkus-Duman E.

ABSTRACT AND APPLIED ANALYSIS, 2013 (SCI-Expanded)

### **XI. On a Family of Multivariate Modified Humbert Polynomials**

AKTAŞ R., Erkus-Duman E.

SCIENTIFIC WORLD JOURNAL, 2013 (SCI-Expanded)

### **XII. STATISTICAL APPROXIMATION BY MEANS OF OPERATORS CONSTRUCTED BY q-LAGRANGE**

#### **POLYNOMIALS**

Erkus-Duman E.

JOURNAL OF COMPUTATIONAL ANALYSIS AND APPLICATIONS, cilt.14, sa.1, ss.67-77, 2012 (SCI-Expanded)

### **XIII. STATISTICAL KOROVKIN-TYPE THEORY FOR MATRIX-VALUED FUNCTIONS**

DUMAN O., Erkus-Duman E.

STUDIA SCIENTIARUM MATHEMATICARUM HUNGARICA, cilt.48, sa.4, ss.489-508, 2011 (SCI-Expanded)

### **XIV. Statistical approximation properties of high order operators constructed with the Chan-Chyan-Srivastava polynomials**

Erkus-Duman E., DUMAN O.

APPLIED MATHEMATICS AND COMPUTATION, cilt.218, sa.5, ss.1927-1933, 2011 (SCI-Expanded)

- XV. **Miscellaneous properties of some multivariable polynomials**  
Erkus-Duman E., ALTIN A., AKTAŞ R.  
MATHEMATICAL AND COMPUTER MODELLING, cilt.54, ss.1875-1885, 2011 (SCI-Expanded)
- XVI. **MATRIX EXTENSIONS OF POLYNOMIALS IN SEVERAL VARIABLES**  
Erkus-Duman E.  
UTILITAS MATHEMATICA, cilt.85, ss.161-180, 2011 (SCI-Expanded)
- XVII. **STATISTICAL RATES IN APPROXIMATION BY POSITIVE LINEAR OPERATORS**  
Erkus-Duman E.  
MISKOLC MATHEMATICAL NOTES, cilt.12, sa.2, ss.159-166, 2011 (SCI-Expanded)
- XVIII. **Rates of Ideal Convergence for Approximation Operators**  
DUMAN O., Ozarslan M. A., Erkus-Duman E.  
MEDITERRANEAN JOURNAL OF MATHEMATICS, cilt.7, sa.1, ss.111-121, 2010 (SCI-Expanded)
- XIX. **On a multivariable extension for the extended Jacobi polynomials**  
Altin A., AKTAŞ R., Erkus-Duman E.  
JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS, cilt.353, sa.1, ss.121-133, 2009 (SCI-Expanded)
- XX. **Statistical Approximation for Stochastic Processes**  
Anastassiou G. A., DUMAN O., Erkus-Duman E.  
STOCHASTIC ANALYSIS AND APPLICATIONS, cilt.27, sa.3, ss.460-474, 2009 (SCI-Expanded)
- XXI. **Korovkin Type Error Estimates for Positive Linear Operators Involving Some Special Functions**  
Dogru O., Erkus-Duman E.  
TURKISH JOURNAL OF MATHEMATICS, cilt.33, sa.1, ss.41-53, 2009 (SCI-Expanded)
- XXII. **A q-extension of the Erkus-Srivastava polynomials in several variables**  
Erkus-Duman E.  
TAIWANESE JOURNAL OF MATHEMATICS, cilt.12, sa.2, ss.539-543, 2008 (SCI-Expanded)
- XXIII. **Integral-type generalizations of operators obtained from certain multivariate polynomials**  
Erkus-Duman E., DUMAN O.  
CALCOLO, cilt.45, sa.1, ss.53-67, 2008 (SCI-Expanded)
- XXIV. **Statistical rates on the multivariate approximation theory**  
Duman O., Erkus E., Gupta V.  
MATHEMATICAL AND COMPUTER MODELLING, cilt.44, ss.763-770, 2006 (SCI-Expanded)
- XXV. **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, cilt.182, sa.1, ss.213-222, 2006 (SCI-Expanded)
- XXVI. **The q-Lagrange polynomials in several variables**  
Altin A., Erkus E., Tasdelen F.  
TAIWANESE JOURNAL OF MATHEMATICS, cilt.10, sa.5, ss.1131-1137, 2006 (SCI-Expanded)
- XXVII. **Approximation of continuous periodic functions via statistical convergence**  
Duman O., Erkus E.  
COMPUTERS & MATHEMATICS WITH APPLICATIONS, cilt.52, ss.967-974, 2006 (SCI-Expanded)
- XXVIII. **Families of linear generating functions for polynomials in two variables**  
Altin A., Erkus E., Oezarslan M. A.  
INTEGRAL TRANSFORMS AND SPECIAL FUNCTIONS, cilt.17, sa.5, ss.315-320, 2006 (SCI-Expanded)
- XXIX. **A unified presentation of some families of multivariable polynomials**  
Erkus E., Srivastava H. M.  
INTEGRAL TRANSFORMS AND SPECIAL FUNCTIONS, cilt.17, sa.4, ss.267-273, 2006 (SCI-Expanded)
- XXX. **On a multivariable extension of the Lagrange-Hermite polynomials**  
Altin A., Erkus E.  
INTEGRAL TRANSFORMS AND SPECIAL FUNCTIONS, cilt.17, sa.4, ss.239-244, 2006 (SCI-Expanded)
- XXXI. **A Korovkin type approximation theorem in statistical sense**  
Erkus E., Duman O.

- STUDIA SCIENTIARUM MATHEMATICARUM HUNGARICA, cilt.43, sa.3, ss.285-294, 2006 (SCI-Expanded)
- XXXII. **A-statistical extension of the Korovkin type approximation theorem**  
Erkus E., Duman O.  
PROCEEDINGS OF THE INDIAN ACADEMY OF SCIENCES-MATHEMATICAL SCIENCES, cilt.115, sa.4, ss.499-508, 2005 (SCI-Expanded)
- XXXIII. **A note on the Lagrange polynomials in several variables**  
Erkus E., Altin A.  
JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS, cilt.310, sa.1, ss.338-341, 2005 (SCI-Expanded)

## Diger Dergilerde Yayınlanan Makaleler

- I. **Advances in the Continuous Dual Hahn Polynomials**  
DUMLUPIÑAR M., DUMAN E.  
JOURNAL OF MATHEMATICAL EXTENSION, cilt.17, sa.4, ss.1-18, 2023 (ESCI)
- II. **The Meixner Polynomials in Several Variables**  
Özmen N., Erkuş-Duman E.  
International Journal of Applied Physics and Mathematics, cilt.9, sa.3, ss.144-151, 2019 (Hakemli Dergi)
- III. **Extended Multivariable Fourth Type Horn Functions**  
Düzungün D., Erkuş-Duman E.  
Gazi University Journal of Science, cilt.32, sa.1, ss.225-240, 2019 (ESCI)
- IV. **ON THE GOTTLIEB POLYNOMIALS IN SEVERAL VARIABLES**  
Erkuş-Duman E., Özmen N.  
FACTA UNIVERSITATIS-SERIES MATHEMATICS AND INFORMATICS, cilt.34, ss.927-940, 2019 (ESCI)
- V. **Generating Functions for k-Hypergeometric Functions**  
Düzungün D., Erkuş-Duman E.  
International Journal of Applied Physics and Mathematics, cilt.9, sa.3, ss.119-126, 2019 (Hakemli Dergi)
- VI. **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, cilt.45, sa.4, ss.939-950, 2018 (ESCI)
- VII. **Fibonacci and Lucas Differential Equations**  
Erkuş-Duman E., Çiftci H.  
Application and applied mathematics, cilt.13, sa.2, ss.756-763, 2018 (ESCI)
- VIII. **Some Generating Functions For a Class of Hypergeometric Polynomials**  
Özmen N., Erkuş-Duman E.  
Gazi University Journal of Science, cilt.31, sa.4, ss.1179-1190, 2018 (ESCI)
- IX. **Some Families of Generating Functions for the Generalized Cesaro Polynomials**  
Özmen N., Erkuş-Duman E.  
Journal Of Computational Analysis And Applications, cilt.25, sa.4, ss.670-683, 2018 (Scopus)
- X. **The Laguerre Type d-Orthogonal Polynomials**  
Düzungün D., Erkuş-Duman E.  
Journal of Science and Arts, cilt.1, sa.42, ss.95-106, 2018 (ESCI)
- XI. **ON THE POISSON CHARLIER POLYNOMIALS**  
Özmen N., Erkuş-Duman E.  
Serdica Mathematical Journal, cilt.41, ss.457-470, 2015 (Hakemli Dergi)
- XII. **A generalization of the extended Jacobi polynomials in two variables**  
Aktaş R., Erkuş-Duman E.  
Gazi University Journal of Science, cilt.28, sa.3, ss.503-521, 2015 (Scopus)
- XIII. **New generating functions for the Konhauser matrix polynomials**  
Erkuş-Duman E., Çekim B.  
Communications de la Faculté des Sciences de l'Université d'Ankara, cilt.63, sa.1, ss.35-41, 2014 (Hakemli Dergi)

- XIV. **Integral Representations for Bessel Matrix Functions**  
 Çekim B., Erkuş-Duman E.  
 Gazi University Journal of Science, cilt.27, sa.1, ss.663-667, 2014 (Scopus)
- XV. **On a hybrid family of summation integral type operators**  
 Gupta V., Erkuş E.  
 Journal of Inequalities in Pure and Applied Mathematics, cilt.7, sa.1, ss.1-11, 2006 (Hakemli Dergi)
- XVI. **The multivariate q Lagrange Hermite polynomials**  
 Erkuş E.  
 International Journal of Computational and Numerical Analysis and Applications, cilt.6, sa.2, ss.143-151, 2004  
 (Hakemli Dergi)

## Kitap & Kitap Bölümleri

- I. **Extended Multivariable Hypergeometric Functions**  
 Düzgün D., Erkuş-Duman E.  
 Analysis, Probability, Applications, and Computation, Lindahl K., Lindström T., Rodino L., Toft J., Wahlberg P., Editör, Birkhäuser, Cham, Vaxjö, ss.17-25, 2019
- II. **On the Generalized Sylvester Polynomials**  
 Özmen N., Erkuş-Duman E.  
 Analysis, Probability, Applications, and Computation, Karl-Olof Lindahl, Torsten Lindström, Luigi G. Rodino, Joachim Toft, Patrik Wahlberg, Editör, Birkhäuser, Cham, Vaxjö, ss.47-55, 2019
- III. **On the g-Jacobi Matrix Functions**  
 Çekim B., Erkuş-Duman E.  
 Advances in Applied Mathematics and Approximation Theory, Anastassiou, Duman, Editör, Springer-Verlag, Zürich, ss.73-84, 2013

## Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **A GENERALIZATION FOR THE HERMITE-BASED APPELL POLYNOMIALS**  
 SOYARSLAN G., DUMAN E.  
 6 th INTERNATIONAL CONFERENCE ON MULTIDISCIPLINARY SCIENTIFIC STUDIES, İstanbul, Türkiye, 2 - 03 Haziran 2023, ss.298-305
- II. **SOME NEW RESULTS FOR THE WILSON POLYNOMIALS**  
 DUMLUPINAR M., DUMAN E.  
 ANKARA INTERNATIONAL CONGRESS ON SCIENTIFIC RESEARCH-VIII, Ankara, Türkiye, 9 - 11 Haziran 2023, ss.131-142
- III. **A Generalization of Cesaro Polynomials in Several Variables and the Generalized Lauricella Functions**  
 Erkus-Duman E., Özmen N.  
 7th International Conference on Recent Advanced in Pure and Applied Mathematics, Muğla, Türkiye, 25 Eylül 2020, ss.90
- IV. **On Some Generalized Polynomials**  
 Korkmaz Düzgün D., Erkus-Duman E.  
 7th International Conference on Recent Advanced in Pure and Applied Mathematics, Muğla, Türkiye, 25 Eylül 2020, ss.49
- V. **Generating Functions for The Extended MultivariableFourth Type Horn Functions**  
 Düzgün D., Erkuş-Duman E.  
 The 8th International Conference On Pure and Applied Mathematics, Brussels, Belçika, 22 - 25 Temmuz 2019
- VI. **Generating Functions for k-Hypergeometric Functions**

- Düzungün D., Erkuş-Duman E.  
ICPAM, Budapest, Macaristan, 10 - 14 Temmuz 2018
- VII. **Gottlieb Polynomials in several Variables**  
Özmen N., Erkuş-Duman E.  
V. Kadın Matematikçiler Derneği Çalıştayı, Diyarbakır, Türkiye, 5 - 07 Mayıs 2018, ss.12
- VIII. **On the generalized Sylvester polynomials**  
Erkuş-Duman E., Özmen N.  
ISAAC 2017, Vaxjö, İsveç, 14 - 18 Ağustos 2017, ss.19
- IX. **EXTENDED MULTIVARIABLE HYPERGEOMETRIC FUNCTIONS**  
Erkuş-Duman E., Düzgün D.  
ISAAC 2017, Vaxjö, İsveç, 14 - 18 Ağustos 2017
- X. **Extended Multivariable Fourth Type Horn Functions**  
Erkuş-Duman E., Düzgün D.  
International Conference on Mathematics and Mathematics Education, Şanlıurfa, Türkiye, 11 - 13 Mayıs 2017
- XI. **On the Cesaro polynomials of three variables**  
Özmen N., Erkuş-Duman E.  
International Conference on Mathematics and Engineering, İstanbul, Türkiye, 10 - 12 Mayıs 2017, ss.378
- XII. **Some New Properties of the Extended Generalized Hypergeometric Functions**  
Düzgün D., Erkuş-Duman E.  
ETAMM 2016, Perpignan, Fransa, 30 Mayıs - 03 Haziran 2016
- XIII. **On the Generalized Cesaro Polynomials**  
Erkuş-Duman E., Özmen N.  
ETAMM 2016, Perpignan, Fransa, 30 Mayıs - 03 Haziran 2016
- XIV. **On the Poisson Charlier Polynomials**  
Özmen N., Erkuş-Duman E.  
International Conference: Mathematics Days in Sofia, Sofija, Bulgaristan, 7 - 10 Temmuz 2014, cilt.41, ss.457-470
- XV. **Some Families of Generating Functions for Laguerre and Charlier Types d Orthogonal Polynomials**  
Düzgün D., Erkuş-Duman E.  
International Conference on Recenet Developments in Pure and Applied Mathematics - ICRAPAM 2014, Antalya, Türkiye, 6 - 09 Kasım 2014
- XVI. **On the Generalized Bernoulli Euler and Genocchi Polynomials**  
Güldoğan E., Erkuş-Duman E.  
International Conference on Recenet Developments in Pure and Applied Mathematics - ICRAPAM 2014, Antalya, Türkiye, 6 - 09 Kasım 2014
- XVII. **Some Results For A Family of Multivariable Polynomials**  
Özmen N., Erkuş-Duman E.  
11th International Conference of Numerical Analysis and Applied Mathematics, Rodos, Yunanistan, 21 - 27 Eylül 2013, cilt.1558, ss.1124-1127
- XVIII. **Çok değişkenli Gottlieb polinomları**  
Erkuş-Duman E.  
26.Uluslararası Matematik Sempozyumu, Diyarbakır, Türkiye, 4 - 07 Eylül 2013
- XIX. **On the g Jacobi matrix functions**  
Çekim B., Erkuş-Duman E.  
Advances in Applied Mathematics and Approximation Theory, Ankara, Türkiye, 17 - 20 Mayıs 2012
- XX. **Laguerre ve Konfluent Hipergeometrik Fonksiyonların Bir Matris Genellemesi**  
Çekim B., Erkuş-Duman E.  
7. Ankara Matematik Günleri, Ankara, Türkiye, 31 Mayıs - 01 Haziran 2012
- XXI. **Approximation by matrix valued linear positive operators**  
Duman O., Erkuş-Duman E.  
Conference on Matrix Analysis and its Applications – MAT TRIAD, Lisbon, Portekiz, 12 - 16 Temmuz 2011
- XXII. **Integral representations for a class of polynomials in two variables**

- Erkuş-Duman E.  
Mathematical Analysis, Differential Equations and Their Applications, Gazimagusa, Kıbrıs (Kktc), 12 - 15 Eylül 2008
- XXIII. **Some Mixed Generating Relations for Some Families of Multivariable Polynomials**  
Erkuş-Duman E.  
II. Ankara Matematik Günleri, Ankara, Türkiye, 22 - 23 Mayıs 2008
- XXIV. **Pozitif lineer operatörler yardımıyla sürekli periyodik fonksiyonlara istatistiksel yaklaşım**  
Erkuş-Duman E., Duman O.  
2nd Turkish World Mathematics Symposium, Sakarya, Türkiye, 4 - 07 Temmuz 2007
- XXV. **Çok Değişkenli Polinomların Çeşitli Ailelerinin Ortak Bir Gösterimi**  
Erkuş-Duman E.  
XIX. Ulusal Matematik Sempozyumu, Kütahya, Türkiye, 22 - 25 Ağustos 2006

## **Metrikler**

Yayın: 77  
Atıf (WoS): 469  
Atıf (Scopus): 378  
H-İndeks (WoS): 12  
H-İndeks (Scopus): 11

## **Ödüller**

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

## **Akademi Dışı Deneyim**

Gazi Üniversitesi  
University of Central Florida  
Çanakkale Onsekiz Mart Üniversitesi  
Ankara Üniversitesi