

# MELEK ERİŞ BÜYÜKKAYA

## ASSOC. PROF.

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Bilgisayar Bilimleri Bölümü

### International Researcher IDs

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Publons / Web Of Science ResearcherID: AAJ-8229-2021

Yoksis Researcher ID: 240481



### Learning Knowledge

Doctorate 2019 - Continues	Karadeniz Technical University, Fen Bilimleri Enstitüsü, Turkey
Postgraduate 2016 - 2019	Karadeniz Technical University, Fen Bilimleri Enstitüsü, -, Turkey
Doctorate 2015 - 2019	Sakarya University, Institute Of Science, Turkey
Postgraduate 2013 - 2015	Sakarya University, Institute Of Science, Uygulamalı Matematik, Turkey
Undergraduate 2009 - 2013	Sakarya University, Fen Edebiyat Fakültesi, Matematik, Turkey
Associate Degree 2010 - 2012	Anadolu University, Department Of Foreign Trade, Turkey

### Foreign Languages

English, B2 Upper Intermediate

### Dissertations

Doctorate, Genel lineer rasgele etki modelleri altında ön tahmin edicilerin kovaryans matris karşılaştırması, Sakarya University, Institute Of Science, 2019

Postgraduate, Tehlike modellerine göre sistemlerin ve bileşenlerinin bulanık güvenilirliği, Karadeniz Technical University, Fen Bilimleri Enstitüsü, 2019

Postgraduate, Parçalanmış Lineer Modeller Altında Parametrelerin En iyi Lineer Yansız Tahminlerinde Parçalanmış Matris Tersi Yöntemi, Sakarya University, Fen Bilimleri Enstitüsü, Matematik, 2015

## Academic Titles / Tasks

Associate Professor 2024 - Continues	Karadeniz Technical University, Fen Bilimleri Enstitüsü, -
Research Assistant PhD 2019 - 2024	Karadeniz Technical University, Fen Bilimleri Enstitüsü, -
Research Assistant 2015 - 2019	Karadeniz Technical University, Fen Bilimleri Enstitüsü, -

## Supported Projects

1. Eriş Büyükkaya M., Project Supported by Higher Education Institutions, Parçalanmış Lineer Modeller Altında Parametrelerin En İyi Lineer Yansız Tahminlerinde Parçalanmış Matris Tersi Yöntemi, 2015 - 2015

## Awards

1. Eriş Büyükkaya M., Sakarya Üniversitesi Matematik Bölüm Birinciliği, Sakarya Üniversitesi, June 2013

## Scholarships

2211-A Genel Yurt İçi Doktora Burs Programı, TÜBİTAK, 2015 - 2019

## Published journal articles indexed by SCI, SSCI, and AHCI

1. **Further remarks on constrained over-parameterized linear models**  
Güler N., Büyükkaya M. E.  
Statistical Papers, vol.65, no.2, pp.975-988, 2024 (SCI-Expanded)
2. **Comparison of predictors under constrained general linear model and its future observations**  
Eriş Büyükkaya M.  
COMMUNICATIONS IN STATISTICS -THEORY AND METHODS, vol.0, no.0, pp.1-14, 2024 (SCI-Expanded)
3. **Statistical inference of a stochastically restricted linear mixed model**  
Guler N., Eriş Büyükkaya M.  
AIMS MATHEMATICS, vol.8, no.10, pp.24401-24417, 2023 (SCI-Expanded)
4. **Characterizing relationships between BLUPs under linear mixed model and some associated reduced models**  
Eriş Büyükkaya M.  
COMMUNICATIONS IN STATISTICS-SIMULATION AND COMPUTATION, vol.52, no.8, pp.3438-3451, 2023 (SCI-Expanded)

5. **Inertia and rank approach in transformed linear mixed models for comparison of BLUPs**  
Guler N., Buyukkaya M. E.  
COMMUNICATIONS IN STATISTICS-THEORY AND METHODS, vol.52, no.9, pp.3108-3123, 2023 (SCI-Expanded)
6. **Comparison of Covariance Matrices of Predictors in Seemingly Unrelated Regression Models**  
Güler N., Eriş Büyükkaya M., Yiğit M.  
Indian Journal of Pure and Applied Mathematics, vol.53, no.3, pp.801-809, 2022 (SCI-Expanded)
7. **Some Remarks on Comparison of Predictors in Seemingly Unrelated Linear Mixed Models**  
Guler N., Buyukkaya M. E.  
APPLICATIONS OF MATHEMATICS, vol.67, no.4, pp.525-542, 2022 (SCI-Expanded)
8. **Notes on Comparison of Covariance Matrices of BLUPs Under Linear Random-Effects Model with Its Two Subsample Models**  
Guler N., Eriş Büyükkaya M.  
IRANIAN JOURNAL OF SCIENCE AND TECHNOLOGY TRANSACTION A-SCIENCE, vol.43, pp.2993-3002, 2019 (SCI-Expanded)
9. **Rank and inertia formulas for covariance matrices of BLUPs in general linear mixed models**  
Güler N., Eriş Büyükkaya M.  
Communications in Statistics - Theory and Methods, 2019 (SCI-Expanded)

#### Articles Published in Other Journals

1. **On Predictors and Estimators under a Constrained Partitioned Linear Model and its Reduced Models**  
ERİŞ BÜYÜKKAYA M., GÜLER N.  
Fundamental journal of mathematics and applications (Online), vol.5, no.3, pp.192-200, 2022 (Peer-Reviewed Journal)
2. **Some equalities on predictors under seemingly unrelated regression models**  
Güler N., Yiğit M., Eriş Büyükkaya M.  
APPLIED SCIENCES, vol.24, pp.142-154, 2022 (Scopus)
3. **Some Remarks on the Equalities of Predictors in Linear Mixed Models**  
Yiğit M., GÜLER N., ERİŞ BÜYÜKKAYA M.  
Mathematical Sciences and Applications E-Notes, vol.9, no.4, pp.185-193, 2021 (Peer-Reviewed Journal)
4. **Rank Approach for Equality Relations of BLUPs in Linear Mixed Model and its Transformed Model**  
ERİŞ BÜYÜKKAYA M., GÜLER N., Yiğit M.  
Fundamental journal of mathematics and applications (Online), vol.4, no.3, pp.143-149, 2021 (Peer-Reviewed Journal)
5. **Üçgensel Müdahaleli Yarı-Markov (s,S) Tipli Modellerin Momentleri İçin Tahmin Ediciler**  
Eriş Büyükkaya M., Bektaş Kamışlık A., Kesemen T.  
Gümüşhane Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.8, no.2, pp.430-441, 2018 (Peer-Reviewed Journal)
6. **IPM yöntemi ile alt parametrelerin tahmini**  
ERİŞ M., GÜLER N.  
SAKARYA UNIVERSITY JOURNAL OF SCIENCE, vol.20, no.2, pp.259-264, 2016 (Peer-Reviewed Journal)

#### Books & Book Chapters

1. **LİNEER REGRESYON MODELLERİNDE PARAMETRE TAHMİNİNDE BAZI OPTİMİZASYON YÖNTEMLERİ**  
Güler N., Eriş Büyükkaya M.  
in: TEKNOBİLİM-2023 OPTİMİZASYON MODELLEME VE YAPAY ZEKA OPTİMİZASYON ALGORİTMALARI, KÖSE Bayram,DEMİRTÜRK Bahar, Editor, Efe Akademi Yayınları, İstanbul, pp.189-208, 2023

## Refereed Congress / Symposium Publications in Proceedings

1. **Some Properties of BLUPs in Constrained Multivariate Linear Model and its Reduced Models**  
ERİŞ BÜYÜKKAYA M., GÜLER N.  
6th International HYBRID Conference on Mathematical Advances and Applications (ICOMAA-2023), İstanbul, Turkey, 10 - 13 May 2023, vol.6, pp.120-124
2. **Comparison Of Predictors/Estimators in General Linear Models With Stochastic Restrictions**  
GÜLER N., ERİŞ BÜYÜKKAYA M.  
9th International IFS and Contemporary Mathematics and Engineering Conference (IFSCOM2023), Mersin, Turkey, 8 - 11 July 2023, pp.78
3. **A Note on Linear Mixed Models with Stochastic Restriction**  
GÜLER N., ERİŞ BÜYÜKKAYA M.  
2nd International E-Conference on Mathematical and Statistical Sciences: A Selçuk Meeting (ICOMSS 2023), Konya, Turkey, 5 - 07 June 2023, pp.96
4. **A Note on Constrained General Linear Mixed Model**  
Eriş Büyükkaya M., Güler N.  
11th International Eurasian Conference on Mathematical Sciences and Applications (IECMSA-2022), İstanbul, Turkey, 29 August - 01 September 2022, pp.207
5. **Some Remarks on BLUPs and BLUEs under Constrained Linear Models**  
ERİŞ BÜYÜKKAYA M., GÜLER N.  
3th International Applied Statistics Conference (UYİK-2022), Skopje, Macedonia, 22 - 24 June 2022, pp.282-289
6. **A Note on Over-Parametrized Linear Models**  
Güler N., Eriş Büyükkaya M.  
8th International Conference on Intuitionistic Fuzzy Sets and Contemporary Mathematics (IFSCOM 2022), Mersin, Turkey, 16 - 19 June 2022, pp.72
7. **On predictors of partial parameters under a partitioned linear model and its reduced models**  
Güler N., Eriş Büyükkaya M., Yiğit M.  
1st INTERNATIONAL SYMPOSIUM ON CURRENT DEVELOPMENTS IN FUNDAMENTAL AND APPLIED MATHEMATICS SCIENCES (ISCDFAMS 2022), Erzurum, Turkey, 23 - 25 May 2022, pp.174
8. **Some further properties of predictors in correctly-reduced linear models**  
Güler N., Eriş Büyükkaya M.  
International ONLINE Conference on Mathematical Advances and Applications (ICOMAA-2022), İstanbul, Turkey, 11 - 14 May 2022, vol.5, pp.67-71
9. **Notes on BLUPs and OLSPs under SUR Models**  
Yiğit M., GÜLER N., ERİŞ BÜYÜKKAYA M.  
10th International Eurasian Conference on Mathematical Sciences and Applications (IECMSA-2021), Sakarya, Turkey, 25 - 27 August 2021, vol.4, pp.303-307
10. **On the Best linear Unbiased Predictors in SULM models**  
ERİŞ BÜYÜKKAYA M., GÜLER N., Yiğit M.  
8th International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2021), Muğla, Turkey, 24 - 27 September 2021
11. **Some Remarks on Predictors in Reduced Linear Models**  
ERİŞ BÜYÜKKAYA M., GÜLER N., Yiğit M.  
International Conference on Mathematics and Mathematics Education (ICMME - 2021), Ankara, Turkey, 16 - 18 September 2021
12. **Some Further Properties of BLUPs in SUR Models**  
ERİŞ BÜYÜKKAYA M., GÜLER N., Yiğit M.  
International Conference on Mathematics and Mathematics Education (ICMME - 2021), Ankara, Turkey, 16 - 18 September 2021
13. **Notes on rank properties of BLUPs in LMM and its transformed model**  
ERİŞ BÜYÜKKAYA M., Yiğit M., GÜLER N.

- IFSCOM2021 (7th Ifs And Contemporary Mathematics Conference), Mersin, Turkey, 25 - 29 May 2021, pp.74-81
14. **Notes on equalities of BLUPs under linear mixed model and its sub-sample models,**  
Yiğit M., ERİŞ BÜYÜKKAYA M., GÜLER N.  
4th International e-conference on mathematical advances and its applications (ICOMAA-2021), İstanbul, Turkey, 26 - 29 May 2021, vol.4, pp.110-115
15. **Some comparisons of blups under general linear random effects models**  
ERİŞ BÜYÜKKAYA M., GÜLER N.  
7th International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2020), Muğla, Turkey, 25 - 28 September 2020, pp.29-35
16. **Comparison for Covariance Matrices of Predictors in General Linear Mixed Model**  
ERİŞ BÜYÜKKAYA M., GÜLER N.  
INTERNATIONAL CONFERENCE on RECENT ADVANCES in PURE AND APPLIED MATHEMATICS (ICRAPAM2019), 12 - 15 June 2019, pp.29
17. **Bazı rank ve inertia formülleri ile lineer karma modellerde tahminlerin kovaryans matrislerinin karşılaştırılması**  
GÜLER N., ERİŞ BÜYÜKKAYA M.  
2. Uluslararası İstatistik, Matematik ve Analitik yöntemler kongresi, 28 March 2019
18. **On The Estimator of Semi-Markovian Inventory Model with Subexponential Component**  
ERİŞ BÜYÜKKAYA M., BEKTAŞ KAMIŞLIK A., KESEMEN T., HANALIOĞLU T.  
INTERNATIONAL CONFERENCE on RECENT ADVANCES in PURE AND APPLIED MATHEMATICS (ICRAPAM2018), 23 - 27 July 2018, pp.56-57
19. **Evaluating Gaussian Fuzzy System Reliability**  
ŞAHİN H. İ., ERİŞ BÜYÜKKAYA M.  
INTERNATIONAL CONFERENCE on RECENT ADVANCES in PURE AND APPLIED MATHEMATICS (ICRAPAM2018), Trabzon, Turkey, 23 - 27 July 2018, pp.157
20. **Evaluating Fuzzy System Reliability Using Weibull Hazard Function**  
ŞAHİN H. İ., ERİŞ BÜYÜKKAYA M.  
International Conference on Mathematics and Mathematics Education (ICMME-2018), Ordu, Turkey, 27 - 29 June 2018, pp.771-772
21. **A New Estimator for Ergodic Distribution of a Semi-Markovian Renewal Reward Process when Demand Distributions Belongs to the L<sup>0</sup>D Subclass of Heavy Tailed Distributions**  
BEKTAŞ KAMIŞLIK A., ERİŞ BÜYÜKKAYA M., KESEMEN T.  
International Conference on Mathematics and Mathematics Education (ICMME-2018), Ordu, Turkey, 27 - 29 June 2018, pp.751-752
22. **Some Equalities For Covariance Matrices Of BLUPs Under General Linear Mixed Model**  
ERİŞ BÜYÜKKAYA M., GÜLER N.  
International Conference on Mathematics and Mathematics Education (ICMME-2018), 27 June 2018
23. **Fuzzy Complex System Reliability Analysis Using Depth-First Search**  
ŞAHİN H. İ., ERİŞ BÜYÜKKAYA M.  
3RD INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN PURE AND APPLIED MATHEMATICS (ICRAPAM 2016), Muğla, Turkey, 19 - 23 May 2016, pp.200
24. **Lineer Modellerde Alt Parametrelerin Tahmininde Parçalanmış Matris Tersisi Yöntemi**  
GÜLER N., ERİŞ BÜYÜKKAYA M.  
13. Matematik Sempozyumu, Karabük, Turkey, 15 - 17 May 2014, pp.144-145

## Activities in Scientific Journals

Türkiye Ortadoğu Çalışmaları Dergisi, Committee Member, 2023 - Continues

Sakarya Üniversitesi Kadın Araştırmaları Dergisi, Committee Member, 2023 - Continues

Journal of mathematical sciences and modelling (Online), Committee Member, 2023 - Continues

## Scientific Refereeing

APPLIED MATHEMATICS, Journal Indexed in SCI-E, June 2023

FORESTIST, Journal Indexed in ESCI, May 2023

STATISTICAL PAPERS, Journal Indexed in SCI-E, May 2023

COMMUNICATIONS IN STATISTICS PART B: SIMULATION AND COMPUTATION, Journal Indexed in SCI-E, October 2022

## Tasks In Event Organizations

Eriş Büyükkaya M., 8 th International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2021), Scientific Congress, Muğla, Turkey, Eylül 2021

Eriş Büyükkaya M., 7 th International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2020), Scientific Congress, Muğla, Turkey, Eylül 2020

Eriş Büyükkaya M., 6 th International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2019), Scientific Congress, Turkey, Haziran 2019

Eriş Büyükkaya M., 5 th International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2018), Scientific Congress, Trabzon, Turkey, Temmuz 2018

## Metrics

Publication: 41

Citation (WoS): 14

Citation (Scopus): 27

H-Index (WoS): 3

H-Index (Scopus): 3

## Congress and Symposium Activities

9th International IFS and Contemporary Mathematics and Engineering Conference (IFSCOM2023), Attendee, Mersin, Turkey, 2023

2nd International E-Conference on Mathematical and Statistical Sciences: A Selçuk Meeting (ICOMSS 2023), Attendee, Konya, Turkey, 2023

International ONLINE Conference on Mathematical Advances and Applications (ICOMAA-2023), Attendee, İstanbul, Turkey, 2023

11th International Eurasian Conference on Mathematical Sciences and Applications (IECMSA-2022), Attendee, İstanbul, Turkey, 2022

III. International Applied Statistics Conference (UYIK - 2022), Attendee, Skopje, Macedonia, 2022

8th International Conference on Intuitionistic Fuzzy Sets and Contemporary Mathematics (IFSCOM 2022), Attendee, Mersin, Turkey, 2022

1st INTERNATIONAL SYMPOSIUM ON CURRENT DEVELOPMENTS IN FUNDAMENTAL AND APPLIED MATHEMATICS SCIENCES (ISCDFAMS 2022), Attendee, Erzurum, Turkey, 2022

International ONLINE Conference on Mathematical Advances and Applications (ICOMAA-2022), Attendee, İstanbul, Turkey, 2022

8th International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2021), Attendee, Muğla, Turkey, 2021

International Conference on Mathematics and Mathematics Education (ICMME - 2021), Attendee, Ankara, Turkey, 2021  
IFSCOM2021 (7th IFS And Contemporary Mathematics Conference), Attendee, Mersin, Turkey, 2021

7th International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2020), Attendee, Muğla,

Turkey, 2020

6th International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2019), Attendee, İstanbul, Turkey, 2019

5th International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2018), Attendee, Trabzon, Turkey, 2018

International Conference on Mathematics and Mathematics Education (ICMME-2018), Attendee, Ordu, Turkey, 2018

3th International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2016), Attendee, Muğla, Turkey, 2016

13. Matematik Sempozyumu (MATDER), Attendee, Karabük, Turkey, 2014

## Research Areas

Statistics, Natural Sciences