

# Prof. GÜLESEN ÜSTÜNDAĞ ŞIRAY

## Personal Information

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## International Researcher IDs

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Publons / Web Of Science ResearcherID: B-7516-2018

Yoksis Researcher ID: 20521

## Education Information

Doctorate, Cukurova University, Fen Bilimleri Enstitüsü, İstatistik, Turkey 2005 - 2011

Postgraduate, Cukurova University, Fen Bilimleri Enstitüsü, İstatistik, Turkey 2002 - 2005

Masters (Non-Thesis), Cukurova University, Fen Bilimleri Enstitüsü, Matematik Öğretmenliği, Turkey 2002 - 2003

Undergraduate, Cukurova University, Fen-Edebiyat Fakültesi, Matematik, Turkey 1998 - 2002

## Foreign Languages

English, B2 Upper Intermediate

## Dissertations

Doctorate, Linear Tahmin Edicilerin Kabul Edilebilirliği, Cukurova University, Fen Bilimleri Enstitüsü, İstatistik, 2011

Postgraduate, Bazı Parametrik Olmayan İstatistiksel Yöntemlerin İncelenmesi, Cukurova University, Fen Bilimleri Enstitüsü, İstatistik, 2005

## Research Areas

Statistics, Statistical Analysis and Applications, Natural Sciences

## Academic Titles / Tasks

Professor, Cukurova University, Fen-Edebiyat Fakültesi, İstatistik, 2023 - Continues

Associate Professor, Cukurova University, İstatistik, 2015 - 2023

Assistant Professor, Cukurova University, Fen-Edebiyat Fakültesi, İstatistik, 2013 - 2015

Research Assistant PhD, Cukurova University, Fen-Edebiyat Fakültesi, İstatistik, 2011 - 2013

Research Assistant, Cukurova University, Fen-Edebiyat Fakültesi, İstatistik, 2007 - 2011

## Academic and Administrative Experience

Cukurova University, Fen Edebiyat Fakültesi, 2017 - Continues

## Advising Theses

- Üstündağ Şiray G., Geleneksel regresyon analizi ile yapay sinir ağlarının farklı aktivasyon fonksiyonları kullanılarak karşılaştırılması, Doctorate, Y.KOÇAK(Student), 2022
- Üstündağ Şiray G., Ölçüm Hatalı Modellerde Parametre Tahmini, Postgraduate, C.İNCEKAŞ(Student), 2020
- ÜSTÜNDAĞ ŞİRAY G., Diskriminant Analizi ve Bazı Alternatif Regresyon Analizleri, Postgraduate, S.SEVİNDİK(Student), 2018
- ÜSTÜNDAĞ ŞİRAY G., Using Genetic Algorithms for order selection in fractional polynomials, Postgraduate, B.NDABASHINZE(Student), 2017
- ÜSTÜNDAĞ ŞİRAY G., Lineer Regresyon Modellerinde Ölçüm Hataları, Postgraduate, N.TOTİK(Student), 2016

## Jury Memberships

- Doctorate, Doctorate, Çukurova Üniversitesi, August, 2024
- Doctorate, Doctorate, Çukurova Üniversitesi, January, 2024
- Doctorate, Doctorate, Çukurova Üniversitesi, June, 2020
- Doctorate, Doctorate, Çukurova Üniversitesi, January, 2017

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

- I. **Improvement of simultaneous prediction using principal components approach**  
Üstündağ Şiray G.  
COMMUNICATIONS IN STATISTICS-SIMULATION AND COMPUTATION, 2024 (SCI-Expanded)
- II. **Simultaneous prediction using target function based on principal components estimator with correlated errors**  
Üstündağ Şiray G.  
STATISTICAL PAPERS, vol.64, no.5, pp.1527-1628, 2023 (SCI-Expanded)
- III. **Consistent ridge estimation for replicated ultrastructural measurement error models**  
Üstündağ Şiray G.  
COMMUNICATIONS IN STATISTICS -THEORY AND METHODS, vol.0, pp.1-21, 2023 (SCI-Expanded)
- IV. **Comparing ordinary ridge and generalized ridge regression results obtained using genetic algorithms for ridge parameter selection**  
Ndabashinze B., Siray G.  
COMMUNICATIONS IN STATISTICS-SIMULATION AND COMPUTATION, vol.51, no.10, pp.6159-6169, 2022 (SCI-Expanded)
- V. **Two-parameter estimation for Tobit model: An application to national health and nutrition examination survey dataset**  
ÖZBAY N., ÜSTÜNDAĞ ŞİRAY G., TOKER KUTAY S., Yenilmez I.  
CONCURRENCY AND COMPUTATION-PRACTICE & EXPERIENCE, vol.34, no.18, 2022 (SCI-Expanded)
- VI. **Defining a two-parameter estimator: a mathematical programming evidence**  
ÜSTÜNDAĞ ŞİRAY G., TOKER KUTAY S., ÖZBAY N.  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, vol.91, no.11, pp.2133-2152, 2021 (SCI-Expanded)
- VII. **Tobit Liu estimation of censored regression model: an application to Mroz data and a Monte Carlo simulation study**  
TOKER KUTAY S., ÖZBAY N., ÜSTÜNDAĞ ŞİRAY G., Yenilmez I.  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, vol.91, no.6, pp.1061-1091, 2021 (SCI-Expanded)

- VIII. **New activation functions for single layer feedforward neural network**  
KOÇAK Y., ÜSTÜNDAĞ ŞIRAY G.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.164, 2021 (SCI-Expanded)
- IX. **Principal components estimator for measurement error models**  
Siray G.  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, vol.90, no.6, pp.1022-1038, 2020 (SCI-Expanded)
- X. **Liu estimation approach to the measurement error models**  
Siray G.  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, vol.89, no.18, pp.3453-3496, 2019 (SCI-Expanded)
- XI. **r-d Class Estimator Under Misspecification**  
Siray G.  
COMMUNICATIONS IN STATISTICS-THEORY AND METHODS, vol.44, no.22, pp.4742-4756, 2015 (SCI-Expanded)
- XII. **On the Restricted Liu Estimator in the Logistic Regression Model**  
Siray G. U., Toker S., KAÇIRANLAR S.  
COMMUNICATIONS IN STATISTICS-SIMULATION AND COMPUTATION, vol.44, no.1, pp.217-232, 2015 (SCI-Expanded)
- XIII. **r - k Class estimator in the linear regression model with correlated errors**  
Siray G., KAÇIRANLAR S., SAKALLIOĞLU S.  
STATISTICAL PAPERS, vol.55, no.2, pp.393-407, 2014 (SCI-Expanded)
- XIV. **Modified and Restricted r-k Class Estimators**  
Siray G.  
COMMUNICATIONS IN STATISTICS-THEORY AND METHODS, vol.43, no.24, pp.5130-5155, 2014 (SCI-Expanded)
- XV. **RESTRICTED TWO PARAMETER RIDGE ESTIMATOR**  
Siray G., Toker S.  
AUSTRALIAN & NEW ZEALAND JOURNAL OF STATISTICS, vol.55, no.4, pp.455-469, 2013 (SCI-Expanded)
- XVI. **Inequality constrained ridge regression estimator**  
Toker S., Siray G., KAÇIRANLAR S.  
STATISTICS & PROBABILITY LETTERS, vol.83, no.10, pp.2391-2398, 2013 (SCI-Expanded)
- XVII. **Superiority of the r-k Class Estimator Over Some Estimators In A Linear Model**  
Siray G., SAKALLIOĞLU S.  
COMMUNICATIONS IN STATISTICS-THEORY AND METHODS, vol.41, no.15, pp.2819-2832, 2012 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Performance Evaluation of Swish-Based Activation Functions for Multi-Layer Networks**  
Koçak Y., Üstündağ Şiray G.  
Artificial Intelligence Studies (AIS), vol.5, no.1, pp.1-13, 2022 (Peer-Reviewed Journal)
- II. **COMPARISONS OF SOME BIASED ESTIMATORS FOR LINEAR MEASUREMENT ERROR MODELS**  
Üstündağ Şiray G., İncekaş C.  
Eskişehir Technical University Journal of Science and Technology A - Applied Sciences and Engineering, vol.21, no.3, pp.421-435, 2020 (Peer-Reviewed Journal)
- III. **Genetic Algorithms Applied to Fractional Polynomials for Power Selection: Application to Diabetes Data**  
Ndabashinze B., ÜSTÜNDAĞ ŞIRAY G., Scrucca L.  
Turkish journal of forecasting, vol.3, no.1, pp.15-25, 2019 (Peer-Reviewed Journal)
- IV. **Comparisons of the generalized Liu and the ordinary Liu estimators to the ordinary least squares estimator under the Pitman's closeness criterion**  
ÜSTÜNDAĞ ŞIRAY G., SAKALLIOĞLU S.  
Far East Journal of Theoretical Statistics, vol.38, no.1, pp.37-47, 2012 (Peer-Reviewed Journal)
- V. **Inadmissibility of The Liu Estimator To The Ordinary Least Squares Estimator**

## Refereed Congress / Symposium Publications in Proceedings

- I. **A New Predictor for Simultaneous Prediction in Linear Regression Model**  
Üstündağ Şiray G.  
6th International Conference on Mathematics, İstanbul, Turkey, 21 - 24 June 2022, pp.16
- II. **A NEW PREDICTOR OF TARGET FUNCTION FOR PREDICTION OUTSIDE THE SAMPLE**  
Üstündağ Şiray G.  
10th International İstanbul Scientific Research Congress, İstanbul, Turkey, 23 - 25 July 2022, pp.87
- III. **PERFORMANCE EVALUATION OF SOME NEW PREDICTORS FOR SIMULTANEOUS PREDICTION IN LINEAR REGRESSION MODEL**  
Üstündağ Şiray G.  
10th International İstanbul Scientific Research Congress, İstanbul, Turkey, 23 - 25 July 2022, pp.88
- IV. **'Performance Evaluation of Swish Based Activation Functions For Multi Layer Networks**  
Koçak Y., Üstündağ Şiray G.  
International Conference on Engineering Technologies, ICENTE'21 , Konya, Turkey, 18 - 21 November 2021, pp.47
- V. **Simultaneous Prediction with Target Function in Case of Multicollinearity**  
Üstündağ Şiray G.  
8th International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM2021), Muğla, Turkey, 24 - 27 September 2021, pp.146
- VI. **Comparison of Statistical and Neural Regression Using Activation Functions Derived from Swish Activation Function**  
Koçak Y., Üstündağ Şiray G.  
ICAME'21 The Second International Conference on Applied Mathematics in Engineering, Balıkesir, Turkey, 1 - 03 September 2021, pp.56
- VII. **Applying a New Tobit Estimation Method to a Labor Supply Dataset**  
Toker Kutay S., Üstündağ Şiray G., Özbay N., Yenilmez İ.  
IECMSA-2021 10th International Eurasian Conference On Mathematical Sciences and Applications, Sakarya, Turkey, 25 - 27 August 2021, pp.182
- VIII. **Estimation In Replicated Ultrastructural Measurement Error Models By Improving Corrected Score Function**  
ÜSTÜNDAĞ ŞIRAY G.  
International Marmara Sciences Congress IMASCON 2020 - Autumn, Turkey, 4 - 05 December 2020
- IX. **Comparison of Statistical and Neural Regression Using Different Activation Functions**  
KOÇAK Y., ÜSTÜNDAĞ ŞIRAY G.  
5th International Mediterranean SCIENCE AND ENGINEERING CONGRESS 2020, Turkey, 21 October 2020
- X. **Biased Estimation Approach to the Measurement Error Models**  
İncekaş C., Üstündağ Şiray G.  
ICOAEF'19, VI International Conference on Applied Economics and Finance & Extended with Social Sciences, Balıkesir, Turkey, 16 - 17 October 2019, pp.148
- XI. **Liu Estimation for Tobit Regression Model**  
TOKER KUTAY S., ÖZBAY N., ÜSTÜNDAĞ ŞIRAY G., YENİLMEZ İ.  
20th International Symposium on Econometrics, Operations Research and Statistics (EYİ 2020), Ankara, Turkey, 12 - 14 February 2020
- XII. **Developing a First Order Two Parameter Estimator for Generalized Linear Model**  
Toker Kutay S., Üstündağ Şiray G., Qasim M.  
11th International Statistics Congress, Muğla, Turkey, 4 - 08 October 2019, pp.987-1001
- XIII. **Liu and Restricted Liu Estimators in Linear Measurement Error Models**

Üstündağ Şiray G.

11th International Statistics Congress, Muğla, Turkey, 4 - 08 October 2019, pp.38

**XIV. Examination of a two parameter estimator with mathematical programming method**

ÖZBAY N., TOKER KUTAY S., ÜSTÜNDAĞ ŞİRAY G.

International Conference on Mathematics and Mathematics Education (ICMME 2019), Konya, Turkey, 11 - 13 July 2019, pp.203-204

**XV. A comparison of Conventional Statistical Regression Analysis and Fuzzy Regression**

KOÇAK Y., ÜSTÜNDAĞ ŞİRAY G.

The 5th International Fuzzy Systems Symposium, Ankara, Turkey, 14 - 15 October 2017, pp.90

**XVI. Ölçüm Hatalı Modellerde Ranklara Dayalı Yöntem ile Parametre Tahmini**

TOTİK N., ÜSTÜNDAĞ ŞİRAY G.

XVIII. National and I. International Biostatistics Congress, Antalya, Turkey, 26 - 29 October 2016, pp.122-123

**XVII. Ölçüm Hatalı Modellerde Gruplandırma Yöntemleriyle Parametre Tahmini**

TOTİK N., ÜSTÜNDAĞ ŞİRAY G.

XVIII. National and I. International Biostatistics Congress, Antalya, Turkey, 26 - 29 October 2016, pp.67-68

**XVIII. Dealing With Measurement Errors In Linear Regression Models**

TOTİK N., ÜSTÜNDAĞ ŞİRAY G., ALPARSLAN Z. N.

The 8th Conference Of Eastern Mediterranean Region International Biometric Society, 11 - 13 May 2015

**XIX. A New Restricted Estimator**

ÜSTÜNDAĞ ŞİRAY G., TOKER S.

International 8th Statistics Congress, Antalya, Turkey, 27 - 30 October 2013, pp.110-111

**XX. Inequality Constrained Ridge Regression Estimation**

TOKER S., ÜSTÜNDAĞ ŞİRAY G., KAÇIRANLAR S.

14th International Symposium On Econometrics, Operations Research and Statistics, Sarajevo, Bosnia And Herzegovina, 24 - 28 May 2013, pp.339

**XXI. On the restricted Liu estimator for the logistic regression model**

Siray G. U., TOKER S., KAÇIRANLAR S., ÜSTÜNDAĞ ŞİRAY G.

8. Uluslararası İstatistik Günleri Sempozyumu, Eskişehir, Turkey, 11 - 13 October 2012, pp.1

**XXII. Liu Tahmin Edici İle En Küçük Kareler Tahmin Edicinin Mahalanobis Kayıp Fonksiyonu Altında Karşılaştırılması**

ÜSTÜNDAĞ ŞİRAY G., SAKALLIOĞLU S.

Uluslararası 7. İstatistik Kongresi, Antalya, Turkey, 28 April - 01 May 2011, pp.204-205

## Supported Projects

ÜSTÜNDAĞ ŞİRAY G., SEVİNDİK S., Project Supported by Higher Education Institutions, DİSKRİMİNANT ANALİZİ ve BAZI ALTERNATİF REGRESYON ANALİZLERİ, 2016 - 2018

ÜSTÜNDAĞ ŞİRAY G., TOTİK N., Project Supported by Higher Education Institutions, Lineer Regresyon Modellerinde Ölçüm Hataları, 2015 - 2016

ÜSTÜNDAĞ ŞİRAY G., Project Supported by Higher Education Institutions, Restricted Two Parameter Ridge Estimator; R-K Class Estimator In The Linear Regression Model With Correlated Errors, 2015 - 2015

## Scientific Refereeing

JOURNAL OF KING SAUD UNIVERSITY - COMPUTER AND INFORMATION SCIENCES, Journal Indexed in SCI-E, September 2024

QUALITY & QUANTITY, Journal Indexed in SCI-E, April 2024

International Econometric Review, Other Indexed Journal, April 2024

JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, Journal Indexed in SCI-E, July 2023

COMMUNICATIONS IN STATISTICS-THEORY AND METHODS, Journal Indexed in SCI-E, August 2022  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, SCI Journal, August 2021  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, SCI Journal, April 2021  
Thailand Statistician , Other Indexed Journal, March 2021  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, SCI Journal, March 2021  
ÇANAKKALE ONSEKİZ MART ÜNİVERSİTESİ FEN BİLİMLERİ ENSTİTÜSÜ DERGİSİ, National Scientific Refreed Journal,  
May 2020  
COMMUNICATIONS SERIES A1: MATHEMATICS AND STATISTICS, National Scientific Refreed Journal, March 2020  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, SCI Journal, August 2018  
Project Supported by Higher Education Institutions, March 2018  
Journal of Statistical Computation and Simulation, SCI Journal, July 2017  
Communications in Statistics - Theory and Methods, SCI Journal, June 2017  
Journal of Statistical Computation and Simulation, SCI Journal, July 2016  
Journal of Applied Statistics, SCI Journal, July 2015  
Communications in Statistics - Simulation and Computation, SCI Journal, April 2015  
International Econometric Review, Other Indexed Journal, October 2014

## **Metrics**

Publication: 44  
Citation (WoS): 74  
Citation (Scopus): 91  
H-Index (WoS): 5  
H-Index (Scopus): 5

## **Scholarships**

Yurt İçi Doktora Programı Bideb, TUBITAK, 2006 - 2009

## **Non Academic Experience**

MEB Kozan Teknik Lise ve Endüstri Meslek Lisesi