

# FATMA SEVINÇ KURNAZ

## ASSOC. PROF.

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Blok A1-24 Davutpaşa İstanbul

### International Researcher IDs

ScholarID: D-7GjLsAAAAJ

ORCID: 0000-0002-5958-7366

Publons / Web Of Science ResearcherID: AAZ-5457-2020

ScopusID: 56581920500

Yoksis Researcher ID: 178123



### Certificates, Courses and Trainings

Measurement and Evaluation, Öğretim Yeterliliklerinin Geliştirilmesi, Yıldız Teknik Üniversitesi, 2019

Personal Evolution, Prof. Dr. Fuat Sezgin Eserlerini Okuma Günleri, İstanbul Üniversitesi, 2019

Health&Medicine, İlk Yardım Eğitimi, Yıldız Teknik Üniversitesi, 2017

Industrial Rights, Intellectual Property Rights, Patent, Licensing, Birliklilik Temel Eğitimi, İstanbul Üniversitesi, 2017

Education Management and Planning, Araştırmalarda Farkındalık ve Odaklanma, TÜBİTAK, 2012

Education Management and Planning, Pedagojik Formasyon, Yıldız Teknik Üniversitesi, 2010

### Dissertations

Doctorate, New Robust Penalized Estimators for Linear and Logistic Regression, Yıldız Technical University, İstatistik, 2017

Postgraduate, Bazı Yanlı Tahmin Edicilerde Yanlılık Tahmin Edicisinin Tahmin Edilmesi, İstanbul University, Matematik, 2011

### Academic Titles / Tasks

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Associate Professor  
2022 - Continues

Yıldız Technical University, Faculty Of Arts & Science, Department Of Statistics

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Researcher  
2021 - 2022

Technische Universitaet Wien, Institute of Statistics and Mathematical Methods in Economics

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Assistant Professor  
2020 - 2022

Yıldız Technical University, Faculty Of Arts & Science, Department Of Statistics

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Research Assistant PhD  
2017 - 2020

Yıldız Technical University, Faculty Of Arts & Science, Department Of Statistics

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Researcher  
2016 - 2017

Technische Universitaet Wien, Institute of Statistics and Mathematical Methods in  
Economics

Research Assistant  
2014 - 2017

Yildiz Technical University, Faculty Of Arts & Science, Department Of Statistics

Researcher  
2013 - 2014

Technische Universitaet Wien, Institute of Statistics and Mathematical Methods in  
Economics

Research Assistant  
2012 - 2014

Karadeniz Technical University, Fen Fakültesi, İstatistik Ve Bilgisayar Bilimleri

## Supported Projects

1. Özcan E., Kurnaz F. S., TUBITAK Project, Türkiy'ede Doğurganlığı Etkileyen Faktörlerin Analizi: 2018 Tnsa Verisi, 2023 - 2024
2. Kurnaz F. S., TUBITAK Project, Yüksek Boyutlu Veri Kümeleri İçin Çok Değişkenli Robust Regresyon Modeli, 2023 - 2024
3. Kurnaz F. S., Project Supported by Higher Education Institutions, Yüksek Boyutlu Veri Kümelerinde Robust Tahmin Ediciler, 2022 - 2023
4. Kurnaz F. S., TUBITAK Project, Yüksek Boyutlu Veri Kümelerinde Çok Terimli Lojistik Regresyon ve Poisson Regresyon için Robust ve Sparse Tahmin Edici, 2021 - 2022
5. Kurnaz F. S., Demir S. B., Company, Araştırmacı Eğitimi Online Öğrenme Ortamının ve Sisteminin Geliştirilmesi ve Tasarımı, 2021 - 2022
6. Kurnaz F. S., Project Supported by Higher Education Institutions, Yüksek Boyutlu Veri Kümelerinde Çok Terimli Lojistik Regresyon için Robust ve Sparse Tahmin Edici, 2020 - 2021

## Awards

1. Kurnaz F. S., TU Wien Yurtdışı Bilimsel Etkinliklere Katılım Desteği, Viyana Teknik Üniversitesi (Tu Wien), July 2022
2. Kurnaz F. S., TU Wien Yurtdışı Bilimsel Etkinliklere Katılım Desteği, Viyana Teknik Üniversitesi (Tu Wien), September 2017
3. KURNAZ F. S., Tübitak 2224-A Yurtdışı Bilimsel Etkinliklere Katılım Desteği, TÜBİTAK, July 2012
4. KURNAZ F. S., The Young Scientists Award 3th, LinStat12, The International Conference on Trends and Perspectives in Linear Statistical Inference (LinStat2012), July 2012
5. KURNAZ F. S., Çanakkale Onsekiz Mart Üniversitesi Matematik Bölümü Bölüm Birinciliği, ÇOMÜ, June 2007

## Scholarships

2219 Yurt Dışı Doktora Sonrası Araştırma Bursu , TUBITAK, 2021 - 2022

2214/A Yurt Dışı Doktora Sırası Araştırma Bursu, TUBITAK, 2016 - 2017

## Designed Lessons

Kurnaz F. S., Dayanıklı İstatistik, Postgraduate, 2020 - 2021

Kurnaz F. S., Robust İstatistik ve R ile Uygulamaları, Undergraduate, 2020 - 2021

Kurnaz F. S., Seyrek İstatistiksel Modelleme, Doctorate, 2020 - 2021

## Taught Courses And Trainings

Kurnaz F. S., R ile Veri Bilimi, 2024 - 2025

Kurnaz F. S., R ile Veri Bilimi, 2022 - 2022

Kurnaz F. S., R ile Veri Bilimi, 2021 - 2021

Kurnaz F. S., Büyük Veri ve R ile Veri Analitiği, 2021 - 2021

Kurnaz F. S., Büyük Veri ve Veri Analitiği, 2020 - 2020

Kurnaz F. S., R ile Veri Bilimi, 2020 - 2020

Kurnaz F. S., R ile Veri Bilimi, 2019 - 2019

Kurnaz F. S., Büyük Veri ve Veri Analitiği, 2019 - 2019

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

### 1. Robust and sparse multinomial regression in high dimensions

Kurnaz F. S., Filzmoser P.

DATA MINING AND KNOWLEDGE DISCOVERY, vol.1, pp.1-25, 2023 (SCI-Expanded)

### 2. A Comparative Assessment of Municipal Water Use in Turkey

Güneş M. Ş., Yıldız D., Kurnaz F. S.

JOURNAL OF WATER RESOURCES PLANNING AND MANAGEMENT, vol.148, no.2, 2022 (SCI-Expanded)

### 3. Forecasting drought using neural network approaches with transformed time series data

Evkaya O. O., KURNAZ F. S.

JOURNAL OF APPLIED STATISTICS, vol.48, no.13-15, pp.2591-2606, 2021 (SCI-Expanded)

### 4. Performances of some high dimensional regression methods: sparse principal component regression

KURNAZ F. S.

COMMUNICATIONS IN STATISTICS-SIMULATION AND COMPUTATION, vol.50, no.9, pp.2529-2543, 2021 (SCI-Expanded)

### 5. Performances of some high dimensional regression methods

KURNAZ F. S.

COMMUNICATIONS IN STATISTICS-SIMULATION AND COMPUTATION, vol.50, no.6, pp.1820-1836, 2021 (SCI-Expanded)

### 6. Robust and sparse estimation methods for high-dimensional linear and logistic regression

KURNAZ F. S., Hoffmann I., Filzmoser P.

CHEMOMETRICS AND INTELLIGENT LABORATORY SYSTEMS, vol.172, pp.211-222, 2018 (SCI-Expanded)

### 7. Matrix mean squared error comparisons of some biased estimators with two biasing parameters

KURNAZ F. S., Akay K. U.

COMMUNICATIONS IN STATISTICS-THEORY AND METHODS, vol.47, no.8, pp.2022-2035, 2018 (SCI-Expanded)

### 8. A robust Liu regression estimator

Filzmoser P., KURNAZ F. S.

COMMUNICATIONS IN STATISTICS-SIMULATION AND COMPUTATION, vol.47, no.2, pp.432-443, 2018 (SCI-Expanded)

### 9. A new Liu-type estimator

KURNAZ F. S., Akay K. U.

STATISTICAL PAPERS, vol.56, no.2, pp.495-517, 2015 (SCI-Expanded)

## Articles Published in Other Journals

- 1. The Impact of Prior Based Loss Function for Elliptical Regression Models**  
Arashi M., Kurnaz F. S., Mammodekhan N.  
Sinop Üniversitesi Fen Bilimleri Dergisi, vol.9, no.2, pp.551-571, 2024 (Peer-Reviewed Journal)
- 2. A Comparative Study of Marriage-Divorce and Related Factors in Türkiye's Regions Using Kohonen SOM - MDS Tandem and MULTIMOORA Approaches**  
Yiğit P., Kurnaz F. S.  
SN Computer Science, vol.5, pp.1-18, 2024 (Scopus)
- 3. enetLTS: Robust and Sparse Methods for High Dimensional Linear, Binary, and Multinomial Regression**  
Kurnaz F. S., Filzmoser P.  
The Journal of Open Source Software, vol.8, no.82, pp.1-8, 2023 (Peer-Reviewed Journal)
- 4. Some Regression Methods Based on Principal Components**  
Kurnaz F. S.  
Gümüşhane Üniversitesi Fen Bilimleri Dergisi, vol.10, no.1, pp.581-591, 2020 (Peer-Reviewed Journal)

## Books & Book Chapters

- 1. İstatistik Çalışmaları**  
Kurnaz F. S. (Editor)  
Yaz Yayınları, Afyonkarahisar, 2024
- 2. İstatistikte Temel Robustluk Kavramları**  
Kurnaz F. S.  
in: İstatistik Çalışmaları, Doç. Dr. Fatma Sevinç KURNAZ, Editor, Yaz Yayınları, Afyonkarahisar, pp.27-40, 2024
- 3. Konum ve Ölçek Parametreleri için Bazı Tahmin Ediciler**  
Kurnaz F. S.  
in: İstatistik Çalışmaları, Doç. Dr. Fatma Sevinç KURNAZ, Editor, Yaz Yayınları, Afyonkarahisar, pp.41-55, 2024
- 4. Çeşitli Lineer Sınıflandırma Yöntemleri, Uygulamaları ve Karşılaştırmaları**  
Kurnaz F. S.  
in: Mühendislik, Matematik ve Doğa Bilimlerinde Yenilikçi Yöntemler, Turgut Özseven, Ebubekir Yaşar, Muharrem Düğenci, Sena Özen Yıldırım, Şirin Çetin, Editor, Ekin Yayınevi, Bursa, pp.53-65, 2019
- 5. R ile Lineer Yöntemler**  
Kurnaz F. S.  
in: Mühendislik, Matematik ve Doğa Bilimlerinde Yenilikçi Yöntemler, Turgut Özseven, Ebubekir Yaşar, Muharrem Düğenci, Sena Özen Yıldırım, Şirin Çetin, Editor, Ekin Yayınevi, Bursa, pp.28-52, 2019

## Refereed Congress / Symposium Publications in Proceedings

- 1. Investigation Of Marriage-Divorce Pattern Of Turkish Regions Using MCDM And Machine Learning Approaches**  
Yiğit P., Kurnaz F. S., Evkaya Ö. O.  
V. International Applied Statistic Congress (UYIK-2024), İstanbul, Turkey, 21 - 23 May 2024, vol.1, pp.2
- 2. Crypto Price Similarity: An Investigation Using Cross Correlation**  
Doğan O. B., Kurnaz F. S.  
V. International Applied Statistic Congress (UYIK-2024), İstanbul, Turkey, 21 - 23 May 2024, vol.1, pp.1
- 3. Robustified Elastic Net Estimator for Multinomial Regression**  
Kurnaz F. S., Filzmoser P.  
The 17th conference of the International Federation of Classification Societies (IFCS 2022), Porto, Portugal, 18 - 23

July 2022, pp.78

4. **Robust multinomial regression in high dimensions**  
Filzmoser P., Kurnaz F. S.  
International Conference on Robust Statistics (ICORS 2022), Ontario, Canada, 5 - 08 July 2022, pp.20-21
5. **Drought Monitoring of Marmara Region using Novel Machine Learning Tools**  
Kurnaz F. S., Evkaya Ö. O.  
11th International Statistics Congress (ISC2019), Muğla, Turkey, 4 - 08 October 2019, pp.13
6. **The Changes in Last 10 Years of the Marriage and Divorce Statistics Based on Regions of Level 1 According Statistical Regional Units Classification (NUTS) in Turkey and Age Groups: Examples 2008 and 2018**  
Kurnaz F. S.  
11th International Statistics Congress (ISC2019), Muğla, Turkey, 4 - 08 October 2019, pp.1
7. **COMPARISON OF LEAST SQUARE METHOD, RIDGE AND LIU ESTIMATORS IN SAANEN GOATS**  
Tırınk C., Önder H., Kurnaz F. S.  
International Congress on Domestic Animal Breeding, Genetics and Husbandry 2019 (ICABGEH-19), Praha, Czech Republic, 11 - 13 September 2019, pp.15
8. **Robust and Sparse Methods for Regression and Classification in High Dimensions**  
Filzmoser P., Kurnaz F. S., Hoffmann I.  
International Conference on Data Science, Machine Learning and Statistics - 2019 (DMS-2019), Van, Turkey, 27 - 29 June 2019, pp.12
9. **Outlier Detection and Variable Selection for Count Data**  
KURNAZ F. S.  
11. International Statistics Days Conference, Muğla, Turkey, 03 October 2018, pp.100
10. **Comparison of some robust methods in nonlinear regression**  
KURNAZ F. S., Tez M.  
The International Conference on Trends and Perspectives in Linear Statistical Inference (LinStat2018), Poznan, Poland, 20 August 2018, pp.104
11. **Robustified Elastic Net Estimator for Regression and Classification**  
KURNAZ F. S., Hoffmann I., Filmzoser P.  
10th International Statistics Congress 2017, Ankara, Turkey, 06 December 2017, pp.92
12. **Classification of Hepatit Disease Using Support Vector Machines and Decision Tree**  
ünsal ü., KURNAZ F. S., turhan k.  
10th International Statistics Congress, Ankara, Turkey, 06 December 2017, pp.124
13. **ROBUST AND SPARSE ESTIMATION METHODS FOR HIGH DIMENSIONAL LINEAR AND LOGISTIC REGRESSION**  
Kurnaz F. S., Hoffmann I., Filzmoser P.  
European Conference on Data Analysis (ECDA), Wroclaw, Poland, 27 - 29 September 2017, pp.36
14. **A Robust Liu Regression Estimator**  
KURNAZ F. S., Filzmoser P.  
The International Conference on Trends and Perspectives in Linear Statistical Inference (LinStat2014), Linköping, Sweden, 24 August 2014, pp.58-59
15. **A New Liu-type Estimator**  
KURNAZ F. S., akay k. u.  
The International Conference on Trends and Perspectives in Linear Statistical Inference (LinStat2012), Poznan, Poland, 16 July 2012, pp.123
16. **İki Yanlılık Parametresi İçeren Bazı Yanlı Tahmin Edicilerin Karşılaştırılması**  
Kurnaz F. S., Akay K. U.  
ICEOS-2012/EYİ-2012: 13th International Conference on Econometrics, Operations Research and Statistics, Gazimagusa, Cyprus (Kktc), 24 May 2012, pp.260

## Other Publications

1. **enetLTS: Robust and Sparse Methods for High Dimensional Linear and Binary and Multinomial Regression**  
Kurnaz F. S., Filzmoser P.  
Other, pp.1-20, 2022
2. **enetLTS: robust and sparse methods for high dimensional linear and logistic regression.R package version 0.1.0**, <https://CRAN.R-project.org/package=enetLTS>  
KURNAZ F. S., Hoffmann I., Filzmoser P.  
Other, pp.1, 2018

## Expert Reports

1. **Haksız rekabetin önlenmesi ve maddi sonuçlarının ortadan kaldırılması**  
Kurnaz F. S.  
Bakırköy 1. Asliye Ticaret, pp.17, İstanbul, 2024
2. **Alacak Tespiti**  
Kurnaz F. S.  
İstanbul 10. Tüketici Mahkemesi, pp.13, İstanbul, 2021
3. **Alacak Tespiti**  
Kurnaz F. S.  
İstanbul 5. Tüketici Mahkemesi , pp.7, İstanbul, 2021
4. **İstirdat**  
Kurnaz F. S.  
İstanbul 10. Tüketici Mahkemesi, pp.9, İstanbul, 2020
5. **Haksız Rekabetin Önlenmesi**  
Kurnaz F. S.  
Bakırköy 1. Asliye Ticaret, pp.13, İstanbul, 2020

## Courses

Seyrek İstatistiksel Modelleme, Doctorate, 2024 - 2025, 2023 - 2024  
Bilgisayar Programlamaya Giriş, Undergraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023  
Dayanıklı İstatistik, Postgraduate, 2023 - 2024, 2022 - 2023, 2020 - 2021  
Stokastik Süreçler , Undergraduate, 2023 - 2024, 2022 - 2023, 2019 - 2020  
Robust İstatistik ve R ile Uygulamaları, Undergraduate, 2023 - 2024, 2022 - 2023, 2020 - 2021  
İstatistik, Undergraduate, 2023 - 2024  
Veri Tabanı , Undergraduate, 2020 - 2021  
Olasılık, Undergraduate, 2020 - 2021  
İstatistiksel Programlama, Postgraduate, 2020 - 2021  
İstatistikçiler için Matematiksel Programlama, Undergraduate, 2020 - 2021  
İstatistiğe Giriş, Undergraduate, 2020 - 2021, 2019 - 2020  
Introduction to Mathematical Statistics, Undergraduate, 2019 - 2020

## Activities in Scientific Journals

Sinop University Journal of Natural Sciences, Committee Member, 2024 - Continues  
Black Sea Journal of Engineering and Science, Assistant Editor/Section Editor, 2018 - Continues

## Scientific Refereeing

JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, Journal Indexed in SCI-E, July 2024  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, Journal Indexed in SCI-E, April 2024  
COMMUNICATIONS IN STATISTICS -THEORY AND METHODS, Journal Indexed in SCI-E, December 2023  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, Journal Indexed in SCI-E, July 2023  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, Journal Indexed in SCI-E, June 2023  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, Journal Indexed in SCI-E, December 2022  
COMMUNICATIONS IN STATISTICS -THEORY AND METHODS, Journal Indexed in SCI-E, October 2022  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, Journal Indexed in SCI-E, March 2022  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, Journal Indexed in SCI-E, October 2021  
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, Journal Indexed in SCI-E, August 2021  
COMPUTATIONAL STATISTICS, Journal Indexed in SCI-E, May 2021  
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, Journal Indexed in SCI-E, January 2021  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, Journal Indexed in SCI-E, November 2020  
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, Journal Indexed in SCI-E, July 2020  
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, Journal Indexed in SCI-E, April 2020  
PAKISTAN JOURNAL OF STATISTICS AND OPERATION RESEARCH, Journal Indexed in SCI-E, April 2020  
Statistical Papers, Journal Indexed in SCI-E, January 2020  
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, Journal Indexed in SCI-E, November 2019  
Journal Of Applied Statistics, Journal Indexed in SCI-E, September 2019  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, Journal Indexed in SCI-E, September 2019  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, Journal Indexed in SCI-E, August 2019  
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, Journal Indexed in SCI-E, August 2019  
Journal Of Applied Statistics, Journal Indexed in SCI-E, March 2019  
Analytical Methods, SCI Journal, February 2019  
Statistics, Optimization & Information Computing, Journal Indexed in SCI-E, October 2018  
Computational Statistics, Journal Indexed in SCI-E, July 2018  
Journal of Engineering Technology and Applied Sciences, Other Indexed Journal, April 2018  
Statistical Papers, Journal Indexed in SCI-E, May 2015

## Metrics

Publication: 42  
Citation (WoS): 59  
Citation (Scopus): 84  
H-Index (WoS): 4  
H-Index (Scopus): 3

## Congress and Symposium Activities

11. International Statistics Days Conference, Attendee, Muğla, Turkey, 2018  
The International Conference on Trends and Perspectives in Linear Statistical Inference (LinStat2018), Attendee, Poznan, Poland, 2018  
10th International Statistics Congress 2017, Attendee, Ankara, Turkey, 2017  
European Conference on Data Analysis (ECDA 2017), Attendee, Wroclaw, Poland, 2017  
The International Conference on Trends and Perspectives in Linear Statistical Inference (LinStat2014), Attendee, Linköping, Sweden, 2014  
The International Conference on Trends and Perspectives in Linear Statistical Inference (LinStat2014), Invited Speaker,

Linköping, Sweden, 2014

The International Conference on Trends and Perspectives in Linear Statistical Inference (LinStat2012), Attendee, Poznan, Poland, 2012

13th International Conference on Econometrics, Operations Research and Statistics, Attendee, Gazimagusa, Cyprus (Kkct), 2012

### Invited Talks

A Robust Liu Regression Estimator, Conference, The International Conference on Trends and Perspectives in Linear Statistical Inference (LinStat2014), Sweden, August 2014

### Research Areas

Statistics, Statistical Analysis and Applications, Natural Sciences

### Non Academic Experience

University, İstanbul Rumeli Üniversitesi, Psikoloji

Viyana Teknoloji Üniversitesi

University, İstanbul Sebahattin Zaim Üniversitesi, İslam İktisadı ve Finans

University, İstanbul Sebahattin Zaim Üniversitesi, İktisad

Viyana Teknoloji Üniversitesi

Viyana Teknoloji Üniversitesi