

# FATMA SEVINÇ KURNAZ

## ASSOC. PROF.

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### International Researcher IDs

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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

Associate Professor  
2022 - Continues

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

Researcher  
2021 - 2022

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

Assistant Professor  
2020 - 2022

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

Research Assistant PhD  
2017 - 2020

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

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

## Doctorate

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

## Postgraduate

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

## Undergraduate

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

## Articles Published in Other Journals

- Leveraging Ensemble and Hybrid Forecasting Tools to Increase Accuracy: Turkey COVID-19 Case Study**  
Evkaya Ö. O., Kurnaz F. S., Özdemir O., Yiğit P.  
SN Computer Science, vol.6, pp.1-29, 2025 (Scopus)
- 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)
- 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)
- 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)
- 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

- İstatistik Çalışmaları**  
Kurnaz F. S. (Editor)  
Yaz Yayınları, Afyonkarahisar, 2024
- İstatistikte Temel Robustluk Kavramları**  
Kurnaz F. S.  
in: İstatistik Çalışmaları, Doç. Dr. Fatma Sevinç KURNAZ, Editor, Yaz Yayınları, Afyonkarahisar, pp.27-40, 2024
- 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
- 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
- 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

## Papers Published in Refereed Scientific Meetings

- 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 (Kkctc), 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

### Doctorate

Seyrek İstatistiksel Modelleme, Doctorate, 2024 - 2025, 2023 - 2024

### Postgraduate

Dayanıklı İstatistik, Postgraduate, 2023 - 2024, 2022 - 2023, 2020 - 2021

İstatistiksel Programlama, Postgraduate, 2020 - 2021

### Undergraduate

Bilgisayar Programlamaya Giriş, Undergraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023

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

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

## Peer Reviews in Scientific Publications

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: 43

Citation (WoS): 59

Citation (Scopus): 85

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 (Kkctc), 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 , Kısmi Zamanlı Öğretim Üyesi  
Viyana Teknoloji Üniversitesi, TÜBİTAK 2219 Doktora Sonrası Araştırmacısı  
University, İstanbul Sebahattin Zaim Üniversitesi, İslam İktisadı ve Finans, Kısmi Zamanlı Öğretim Üyesi  
University, İstanbul Sebahattin Zaim Üniversitesi, İktisad, Kısmi Zamanlı Öğretim Üyesi  
Viyana Teknoloji Üniversitesi, TÜBİTAK 2214/A Doktora Sırası Araştırmacısı  
Viyana Teknoloji Üniversitesi, Ziyaretçi Araştırmacı