

# Asst. Prof. EDA ÖZKUL

## Personal Information

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### International Researcher IDs

ORCID: 0000-0002-9840-8818

ScopusID: 57188802739

Yoksis Researcher ID: 25262

## Education Information

2015 - 2022	Doctorate, Karadeniz Technical University, İstatistik ve Bilgisayar Bilimleri, Turkey
2012 - 2015	Postgraduate, Karadeniz Technical University, -, İstatistik ve Bilgisayar Bilimleri, Turkey
2008 - 2012	Undergraduate, Karadeniz Technical University, Fen Fakültesi, İstatistik ve Bilgisayar Bilimleri, Turkey

## Foreign Languages

English, B2 Upper Intermediate

## Dissertations

2014	SAYISAL GÖRÜNTÜLERDE İKİ BOYUTLU NESNE ANALİZİ İLE BETON BOŞLUK ORANININ KESTİRİMİ, Karadeniz Technical University, -, İstatistik ve Bilgisayar Bilimleri, Postgraduate
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## Research Areas

Statistics, Statistical Analysis and Applications, Natural Sciences

## Academic Titles / Tasks

2013 - Continues	Research Assistant PhD, Karadeniz Technical University, Fen Fakültesi, İstatistik ve Bilgisayar Bilimleri
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## Published journal articles indexed by SCI, SSCI, and AHCI

- Artificial locust swarm optimization algorithm**  
KESEMEN O., ÖZKUL E., TEZEL Ö., TİRYAKİ B. K.  
Soft Computing, vol.27, no.9, pp.5663-5701, 2023 (SCI-Expanded)
- Random sampling with fuzzy replacement**  
KESEMEN O., TİRYAKİ B. K., TEZEL Ö., ÖZKUL E., Naz E.  
Expert Systems with Applications, vol.185, 2021 (SCI-Expanded)
- A New Goodness of Fit Test for Multivariate Normality**  
Kesemen O., Tiryaki B. K., Tezel Ö., Özkul E.  
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.50, no.3, pp.872-894, 2021 (SCI-Expanded)

- IV. **Fuzzy c-Means Directional Clustering (FCMDC) algorithm using trigonometric approximation**  
KESEMEN O., TEZEL Ö., ÖZKUL E., TIRYAKI B. K.  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.28, no.1, pp.140-152, 2020 (SCI-Expanded)
- V. **Solving cross-matching puzzles using intelligent genetic algorithms**  
KESEMEN O., ÖZKUL E.  
ARTIFICIAL INTELLIGENCE REVIEW, vol.49, no.2, pp.211-225, 2018 (SCI-Expanded)
- VI. **Fuzzy c-means clustering algorithm for directional data (FCM4DD)**  
KESEMEN O., TEZEL Ö., ÖZKUL E.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.58, pp.76-82, 2016 (SCI-Expanded)

## Articles Published in Other Journals

- I. **A New Goodness-of-Fit Test: Free Chi-Square (FCS)**  
Tezel Ö., Tiryaki B. K., Özkul E., Kesemen O.  
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.34, no.3, pp.879-897, 2021 (ESCI)
- II. **Finding combinations of four-operations with Type-2 tree structure**  
Özkul E., Tiryaki B. K., Tezel Ö., Ağayev E., Kesemen O.  
Pamukkale University Journal of Engineering Sciences, vol.27, no.1, pp.52-59, 2021 (ESCI)
- III. **CONFIDENCE REGIONS FOR BIVARIATE PROBABILITY DENSITY FUNCTIONS USING POLYGONAL AREAS**  
Kesemen O., Özkul E., Ünsal Ü.  
COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS, vol.69, no.1, pp.276-306, 2020 (ESCI)
- IV. **Determination of the Confidence Intervals for Multimodal Probability Density Functions**  
Kesemen O., Tiryaki B. K., Özkul E., Tezel Ö.  
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.31, no.1, pp.310-326, 2018 (ESCI)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Detection of Lines on Images with Multimodal Directional Artificial Bee Colony Algorithm**  
Kesemen O., Özkul E., Tiryaki B. K., Tezel Ö.  
11th International Statistics Days Conference, Muğla, Turkey, 3 - 07 October 2018, pp.151
- II. **A New Approximation for Fuzzy Directional Clustering(FDC)**  
Kesemen O., Tezel Ö., Özkul E., Tiryaki B. K.  
11th International Statistics Days Conference, Muğla, Turkey, 3 - 07 October 2018, pp.75
- III. **Directional K-Means Algorithm Using Signed Angular Distance**  
Kesemen O., Tiryaki B. K., Tezel Ö., Özkul E.  
11th International Statistics Days Conference, Muğla, Turkey, 3 - 07 October 2018, pp.155
- IV. **Calculating the Moments of Circular Data Using Angular Distance**  
Kesemen O., Tezel Ö., Özkul E., Tiryaki B. K.  
International Conference on Mathematics and Mathematics Education (ICMME-2018), Ordu, Turkey, 27 - 29 June 2018, pp.763-764
- V. **Solving Cross-Matching Puzzle Using Heuristic Approximation with Probabilities**  
Kesemen O., Özkul E., Tezel Ö., Tiryaki B. K.  
International Conference on Mathematics and Mathematics Education (ICMME-2018), Ordu, Turkey, 27 - 29 June 2018, pp.414
- VI. **Finding Combinations of Four Operations with Type-2 Search Method**  
Kesemen O., Tiryaki B. K., Özkul E., Tezel Ö., Ağayev E.

International Conference on Computational and Statistical Methods in Applied Sciences COSTAS 2017, Samsun, Turkey, 9 - 11 November 2017, pp.37-38

**VII. Yığın Ortalamasının Kestiriminde Z ve T Testlerinin Benzetimle Karşılaştırılması**

Kesemen O., Tiryaki B. K., Tezel Ö., Özkul E.

XVIII. Uluslararası Ekonometri, Yöneylem Araştırması ve İstatistik Sempozyumu 2017, Trabzon, Turkey, 5 - 07 October 2017, pp.422-423

**VIII. Bitki Dallarının Ortalama Yönelim Sayılarının Belirlenmesinde Yönel Kümeleme Yaklaşımı**

KESEMEN O., TİRYAKİ B. K., TEZEL Ö., ÖZKUL E.

XVIII. Uluslararası Ekonometri, Yöneylem Araştırması ve İstatistik Sempozyumu 2017, Trabzon, Turkey, 5 - 07 October 2017, pp.364

**IX. Yapay Arı Kolonisi Algoritmasıyla Test Sorularının Soru Kağıdına Otomatik Yerleştirilmesi**

Kesemen O., Tiryaki B. K., Özkul E., Tezel Ö.

XVIII. Uluslararası Ekonometri, Yöneylem Araştırması ve İstatistik Sempozyumu 2017, Trabzon, Turkey, 5 - 07 October 2017, pp.382

**X. A comparison of validity indices on fuzzy C-means clustering algorithm for directional data**

Kesemen O., Tezel Ö., Özkul E., Tiryaki B. K., Ağayev E.

25th Signal Processing and Communications Applications Conference, SIU 2017, Antalya, Turkey, 15 - 18 May 2017

**XI. Hue-Based Segmentation of Color Images Using Weighted Directional Clustering Algorithms**

KESEMEN O., ÖZKUL E., TEZEL Ö., TİRYAKİ B. K., Vefaeinahr S.

25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017

**XII. Real Time Measurement of Micro Changes in Dinamic Images**

KESEMEN O., TEZEL Ö., ÖZKUL E., KESİM M.

25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017

**XIII. The Use of ABC and PSO Algorithms for Determination of the Shortest Multiple Target Route for Armed UAVs**

KESEMEN O., ÖZKUL E., ERTÜRK S.

Xth International Statistics Days Conference, Giresun, Turkey, 07 October 2016, pp.802-807

**XIV. Recognition of the Objects in Digital Images Using Weighted Fuzzy C Means Clustering Algorithm for Directional Data W-FCM4DD**

Özkul E., Kesemen O.

19th European Young Statisticians Meeting, Praha, Czech Republic, 31 August - 04 September 2015, pp.113-114

**XV. Fuzzy Clustering For Line Segments in Digital Images With Multi Parameters**

KESEMEN O., ÖZKUL E.

International Symposium on Aggregation on Bounded Lattices (ABLAT), Trabzon, Turkey, 16 - 20 June 2014

**XVI. Average Air Temperature Forecasting of Trabzon Using Artificial Neural Networks**

Tezel Ö., Kesemen O., Özkul E.

9th International Statistics Days Symposium, Antalya, Turkey, 10 - 14 May 2014, pp.40

**XVII. Investigation Significant Differences between Standard (Linear) Method and Proposed Method in the Estimation of the Air Void Analysis of Hardened Concrete**

Özkul E., Kesemen O.

9th International Statistics Days Symposium, Antalya, Turkey, 10 - 14 May 2014, pp.68

**XVIII. Determination of the Locations of Distribution Centers on the Road Using Modified Artificial Bee Colony Algorithm**

Kesemen O., Yeginoğlu Y., Özkul E.

8th International Statistics Congress, Antalya, Turkey, 27 - 30 October 2013, pp.354-355

**XIX. Solving Crossmatching Puzzles Using Multi-Layer Genetic Algorithms**

KESEMEN O., ÖZKUL E.

First International Conference on Analysis and Applied Mathemaics, Gümüşhane, Turkey, 18 - 21 October 2012, pp.115

## Tasks In Event Organizations

## Metrics

Publication: 30  
Citation (WoS): 72  
Citation (Scopus): 87  
H-Index (WoS): 3  
H-Index (Scopus): 4

## Congress and Symposium Activities

2018	11th International Statistics Days Conference, Attendee, Muğla, Turkey
2018	International Conference on Mathematics and Mathematics Education (ICMME-2018), Attendee, Ordu, Turkey
2017	International Conference on Computational and Statistical Methods in Applied Sciences (COSTAS), Attendee, Samsun, Turkey
2017	XVIII. International Symposium on Econometrics, Operations Research and Statistics, Attendee, Trabzon, Turkey
2017	25th Signal Processing and Communications Applications Conference (SIU), Attendee, Antalya, Turkey
2016	Xth International Statistics Days Conference, Attendee, Giresun, Turkey
2015	19th European Young Statisticians Meeting, Attendee, Praha, Czech Republic
2014	International Symposium on Aggregation on Bounded Lattices, Attendee, Trabzon, Turkey
2014	9th International Statistics Days Symposium, Attendee, Antalya, Turkey
2013	8th International Statistics Congress, Attendee, Antalya, Turkey
2012	First International Conference on Analysis and Applied Mathematics, Attendee, Gümüşhane, Turkey