

# Res. Asst. PhD BUĞRA KAN TİRYAKİ

## Personal Information

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## Education Information

2015 - 2021	Doctorate, Karadeniz Technical University, Fen Fakültesi, İstatistik Ve Bilgisayar Bilimleri, Turkey
2013 - 2015	Postgraduate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, İstatistik Ve Bilgisayar Bilimleri, Turkey
2008 - 2012	Undergraduate, Gazi University, Fen Fakültesi, İstatistik, Turkey

## Foreign Languages

English, B2 Upper Intermediate

## Dissertations

2021	A New Empirical Goodness Of Fit Test For Multivariate Normal Distribution, Karadeniz Technical University, Fen Fakültesi, İstatistik Ve Bilgisayar Bilimleri, Doctorate
2014	Çokgensel Alan İçerisinde İki Değişkenli Keyfi Bir Dağılımdan Rastgele Sayı Üretilmesi, Karadeniz Technical University, Fen Bilimleri Enstitüsü, İstatistik Ve Bilgisayar Bilimleri, Postgraduate

## Research Areas

Statistics, Statistical Analysis and Applications, Natural Sciences

## Academic Titles / Tasks

2013 - Continues	Research Assistant, Karadeniz Technical University, Fen Fakültesi, İstatistik Ve Bilgisayar Bilimleri
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## Courses

2021 - 2022	Deneylerin İstatistiksel Tasarımı, Undergraduate
2021 - 2022	Biyostatistik, Undergraduate

## Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

1. Random sampling with fuzzy replacement  
KESEMEN O., TİRYAKİ B. K., TEZEL Ö., ÖZKUL E., Naz E.  
Expert Systems with Applications, vol.185, 2021 (Journal Indexed in SCI Expanded)

- II. **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 (Journal Indexed in SCI Expanded)
- III. **Fuzzy c-Means Directional Clustering (FCMDC) algorithm using trigonometric approximation**  
KESEMEN O., TEZEL Ö., ÖZKUL E., TİRYAKI B. K.  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.28, no.1, pp.140-152, 2020  
(Journal Indexed in SCI)

## 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 (Journal Indexed in 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 (Journal Indexed in ESCI)
- III. **Some Statistics in Polar Coordinate System with Uniform Angles**  
Kesemen O., Tiryaki B. K. , Tezel Ö., Pak A.  
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.33, no.3, pp.846-867, 2020 (Journal Indexed in ESCI)
- IV. **A Novel Approximation for Computation Bivariate Distribution Functions in Polygonal Area**  
KESEMEN O., TİRYAKI B. K. , ULUYURT T.  
Gümüşhane University Journal of Science and Technology Institute, vol.9, no.1, pp.88-98, 2019 (International Refereed University Journal)
- V. **Non-Uniform Random Number Generation from Arbitrary Bivariate Distribution in Polygonal Area**  
KESEMEN O., TİRYAKI B. K.  
Süleyman Demirel University Journal of Natural and Applied Sciences, vol.22, no.2, pp.443-457, 2018  
(International Refereed University Journal)
- VI. **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 (Journal Indexed in ESCI)
- VII. **Chi-Square Goodness of Fit Test for Bivariate Distributions in Polygonal Area**  
KESEMEN O., TİRYAKI B. K. , ULUYURT T.  
International Journal of Scientific and Technological Research, vol.4, no.10, pp.528-540, 2018 (Refereed Journals of Other Institutions)

## Refereed Congress / Symposium Publications in Proceedings

- I. **A Numerical Approximation of Inversion Method to Generate Non-Uniform Random Numbers**  
KESEMEN O., TİRYAKI B. K. , PAK A.  
11. International Statistics Congress, Muğla, Turkey, 4 - 08 October 2019, pp.328-335
- II. **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
- 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. **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

- V. **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
- VI. **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
- VII. **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
- VIII. **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
- IX. **Bitki Dallarının Ortalama Yönelim Sayılarının Belirlenmesinde Yönelim 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
- X. **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
- XI. **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
- XII. **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
- XIII. **Investigation of the Kolmogorov Smirnov Test Statistics**  
KESEMEN O., TİRYAKİ B. K. , EBRU N.  
Xth International Statistics Days Conference, Giresun, Turkey, 7 - 09 October 2016, pp.768-773
- XIV. **Novel Approximation for Computation Bivariate Distribution Functions in Polygonal Area**  
KESEMEN O., TİRYAKİ B. K. , ULUYURT T.  
5TH INTERNATIONAL EURASIAN CONFERENCE ON MATHEMATICAL SCIENCES AND APPLICATIONS, Belgrad, Serbia And Montenegro, 16 August - 19 September 2016, pp.191
- XV. **İstatistiksel Test Tablolarının Benzetimle Elde Edilmesi**  
TİRYAKİ B. K. , KESEMEN O.  
9. Uluslararası İstatistik Kongresi, Antalya, Turkey, 28 October - 01 November 2015, pp.306-307
- XVI. **Fuzzy Similarity Measure for Geometric Shapes in Digital Images**  
KESEMEN O., TEZEL Ö., TİRYAKİ B. K.  
International Symposium on Aggregation on Bounded Lattices (ABLAT), Trabzon, Turkey, 16 - 20 June 2014, pp.32
- XVII. **A New Method for Fuzzy Ranking for Fuzzy Numbers**  
KESEMEN O., TİRYAKİ B. K. , TEZEL Ö.  
International Symposium on Aggregation on Bounded Lattices (ABLAT), Trabzon, Turkey, 16 - 20 June 2014, pp.33-34
- XVIII. **A Novel Method for Random Numbers Generating in the Polygonal Area**  
TİRYAKİ B. K. , KESEMEN O., ÜNSAL Ü.  
9th International Statistic Days Symposium, Antalya, Turkey, 10 - 14 May 2014, pp.69
- XIX. **Bivariate Kolmogorov-Smirnov Goodness of Fit Test on Polygonal Areas**

ULUYURT T., KESEMEN O., TİRYAKİ B. K.

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

XX. **DETERMINING MINIMUM NUMBER OF CLASS FOR CHI-SQUARE GOODNESS OF FIT TEST USING T-TEST WITH SIMULATION**

KESEMEN O., TİRYAKİ B. K.

8. International Statistics Congress, Antalya, Turkey, 27 - 30 October 2013, pp.230-231

## **Scientific Refereeing**

September 2021 Veri Bilimi, Other Indexed Journal

March 2021 Veri Bilimi, Other Indexed Journal

October 2020 veri Bilimi, Other Indexed Journal

## **Tasks In Event Organizations**

16 Haziran 2014 Ertuğrul Ü., Çaylı G. D. , Ocak F., Tezel Ö., Özkul E., Tiryaki B. K. , International Symposium on Aggregation on Bounded Lattices (ABLAT), Scientific Congress, Trabzon, Turkey

## **Citations**

I. Total Citations (WOS): 1

II. h-index (WOS): 1

## **Scholarships**

2015 - 2019 Yurtiçi Doktora Bursu, TÜBİTAK