#### Assoc. Prof. ZAFER BEKİRYAZICI

### **Personal Information**

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#### International Researcher IDs

ScholarID: 36F9Q6AAAAAJ ORCID: 0000-0001-5671-9995

Publons / Web Of Science ResearcherID: AAQ-7932-2020

ScopusID: 56191618000 Yoksis Researcher ID: 193125

#### **Education Information**

Doctorate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Matematik, Turkey 2014 - 2017 Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Matematik Mühendisliği, Turkey 2009 - 2012 Undergraduate, Marmara University, Fen Edebiyat Fakültesi, Matematik Bölümü, Turkey 2005 - 2009

## Certificates, Courses and Trainings

Vocational Training, Erasmus Staff Teaching Mobility, Universita degli Studi del Sannio, 2023

Vocational Training, Latex ile Döküman Hazırlama Kursu, Amasya Üniversitesi, 2022

Vocational Training, Erasmus Staff Training Mobility, Technische Universitaet Darmstadt, 2017

Vocational Training, Doğa Bilimlerinde Akademik Düzeyde Araştırma Projesi Hazırlama Eğitimi, Karadeniz Teknik Üniversitesi, 2015

Vocational Training, Erasmus Staff Training Mobility, Lorentz Center, 2014

#### **Dissertations**

Doctorate, Bazı Kompartmanlı Modellerin Rastgele Etkiler Altında İncelenmesi, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Matematik, 2017

Postgraduate, Lineer Operatör Denklemler İçin Temel Çözüm ve Uygulamaları, Istanbul Technical University, Fen Bilimleri Enstitüsü, Matematik Mühendisliği, 2012

#### **Research Areas**

Mathematics, Differential Equations, Statistics, Probability Theory, Stochastic Processes, Numerical Analysis, Natural Sciences

## **Academic Titles / Tasks**

Associate Professor, Recep Tayyip Erdogan University, Fen Edebiyat Fakültesi, Matematik Bölümü, 2024 - Continues Assistant Professor, Recep Tayyip Erdogan University, Fen Edebiyat Fakültesi, Matematik Bölümü, 2019 - Continues Research Assistant PhD, Recep Tayyip Erdogan University, Fen Edebiyat Fakültesi, Matematik Bölümü, 2017 - 2019 Research Assistant, Recep Tayyip Erdogan University, Fen Edebiyat Fakültesi, Matematik Bölümü, 2010 - 2017

## Academic and Administrative Experience

Assistant Director of the Institute, Recep Tayyip Erdogan University, Fen Edebiyat Fakültesi, Matematik Bölümü, 2024 - Continues

Department Academic Incentive Evaluation Commission Member, Recep Tayyip Erdogan University, Fen Edebiyat Fakültesi, Matematik Bölümü, 2023 - Continues

Erasmus Bölüm Koordinatörü, Recep Tayyip Erdogan University, Fen Edebiyat Fakültesi, Matematik Bölümü, 2013 - 2023

### **Courses**

## **Postgraduate**

Stokastik Diferansiyel Denklemler, Postgraduate, 2023 - 2024, 2021 - 2022, 2020 - 2021

İleri İstatistik, Postgraduate, 2024 - 2025, 2022 - 2023, 2021 - 2022, 2020 - 2021

Uygulamalı Matematiğin Yöntemleri, Postgraduate, 2019 - 2020

#### Undergraduate

Mesleki İngilizce - II, Undergraduate, 2023 - 2024, 2020 - 2021

Probability and Statistics, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022

Olasılık, Undergraduate, 2024 - 2025, 2022 - 2023, 2021 - 2022

Sayısal Analiz, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022

Diferansiyel Denklemlerin Sayısal Çözüm Yöntemleri, Undergraduate, 2023 - 2024, 2021 - 2022, 2020 - 2021, 2019 - 2020

Diferansiyel Denklemler, Undergraduate, 2023 - 2024, 2022 - 2023, 2020 - 2021, 2019 - 2020

Differential Equations, Undergraduate, 2021 - 2022

Uygulamalı Mühendislik Matematiği, Undergraduate, 2020 - 2021

İstatistik, Undergraduate, 2020 - 2021, 2019 - 2020, 2017 - 2018

Mühendislik Matematiği - II, Undergraduate, 2019 - 2020

Mesleki İngilizce - I, Undergraduate, 2019 - 2020

Mühendislik Matematiği - I, Undergraduate, 2019 - 2020

## **Associate Degree**

Matematik, Associate Degree, 2024 - 2025, 2023 - 2024

Matematik-II, Associate Degree, 2019 - 2020

## **Supervised Theses**

Bekiryazıcı Z., Bir COVID-19 yayılımı modelinin stokastik davranışlarının incelenmesi, Postgraduate, A.ÖNEN(Student), 2023

Bekiryazıcı Z., El, Ayak, Ağız Hastalığı Modelinin Rastgele Koşullarda İncelenmesi, Postgraduate, S.HAŞİMOĞLU(Student), 2022

## Jury Memberships

Post Graduate, Post Graduate, Recep Tayyip Erdoğan Üniversitesi, August, 2021 Doctoral Examination, Doctoral Examination, Gümüşhane Üniversitesi, January, 2020 Post Graduate, Post Graduate, Gümüşhane Üniversitesi, January, 2020

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

I. Sensitivity Analysis and Random Dynamics for a Mathematical Model of Tuberculosis Transmission Bekiryazıcı Z.

COMMUNICATIONS IN STATISTICS PART B: SIMULATION AND COMPUTATION, vol.53, no.12, pp.6009-6021, 2024 (SCI-Expanded)

II. Utilizing fractional derivatives and sensitivity analysis in a random framework: a model-based approach to the investigation of random dynamics of malware spread

Bekiryazıcı Z.

BOUNDARY VALUE PROBLEMS, vol.2024, no.1, 2024 (SCI-Expanded)

III. Approximate Solutions of Fractional Differential Equations Using Optimal q-Homotopy Analysis Method: A Case Study of Abel Differential Equations

Sengül S., Bekiryazici Z., Merdan M.

FRACTAL AND FRACTIONAL, vol.8, no.9, pp.533, 2024 (SCI-Expanded)

IV. A modification of approximate random characteristics for a model of Zika virus transmission Bekiryazici Z., Kesemen T., Merdan M., Khaniyev T.

THERMAL SCIENCE, vol.26, no.4A, pp.3067-3077, 2022 (SCI-Expanded)

V. Modification of the random differential transformation method and its applications to compartmental models

Bekiryazici Z., Merdan M., Kesemen T.

COMMUNICATIONS IN STATISTICS-THEORY AND METHODS, vol.50, no.18, pp.4271-4292, 2021 (SCI-Expanded)

VI. WONG-ZAKAI METHOD FOR STOCHASTIC DIFFERENTIAL EQUATIONS IN ENGINEERING

Şengül S., Bekiryazıcı Z., Merdan M.

THERMAL SCIENCE, vol.25, 2021 (SCI-Expanded)

VII. Modelling of cohesive -sediment depositional areas carried by the Solaklı River to the eastern Black-Sea

Yazır D., Ünver İ., Köse E., Bekiryazıcı Z.

Indian Journal of Geo-Marine Sciences, vol.47, no.3, pp.721-728, 2018 (SCI-Expanded)

VIII. Deterministic stability and random behavior of a Hepatitis C model

Merdan M., Bekiryazici Z., Kesemen T., Khanlyev T.

PLOS ONE, vol.12, no.7, 2017 (SCI-Expanded)

IX. Comparison of stochastic and random models for bacterial resistance

Merdan M., Bekiryazici Z., Kesemen T., Khaniyev T.

ADVANCES IN DIFFERENCE EQUATIONS, 2017 (SCI-Expanded)

## Articles Published in Other Journals

I. Analyzing the stochastic dynamics of COVID-19 waves in Turkey using real data and piecewise sinusoidal functions

Bekiryazıcı Z., Önen A.

International Journal of Dynamics and Control, vol.12, no.8, pp.2830-2841, 2024 (ESCI)

II. Wong-Zakai approximation for stochastic models of smoking

Şengül S., Bekiryazıcı Z., Merdan M.

Sigma Journal of Engineering and Natural Sciences, vol.41, no.5, pp.958-968, 2023 (ESCI)

III. MODELING DISEASE TRANSMISSION DYNAMICS WITH RANDOM DATA AND HEAVY TAILED RANDOM EFFECTS: THE ZIKA CASE

Bekiryazici Z., Kesemen T., Merdan M., Khaniyev T.

TWMS JOURNAL OF APPLIED AND ENGINEERING MATHEMATICS, vol.13, no.4, pp.1272-1286, 2023 (ESCI)

IV. Comparison of a random model of Hand-Foot-Mouth Disease model with Gaussian and Laplacian parameters

Bekiryazıcı Z., Hasimoglu S.

Gümüşhane Üniversitesi Fen Bilimleri Dergisi, vol.12, no.1, pp.200-210, 2022 (Peer-Reviewed Journal)

V. GENERALIZED OSCULATING CURVES OF TYPE (n-3) IN THE n-DIMENSIONAL EUCLIDEAN SPACE Bektas O., Bekiryazıcı Z.

COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS, vol.71, no.1, pp.212-225, 2022 (ESCI)

VI. Transmission of Cholera Disease with Laplacian and Triangular Parameters

Merdan M., Bekiryazıcı Z., Kesemen T., Khaniyev T.

IRANIAN JOURNAL OF MATHEMATICAL SCIENCES AND INFORMATICS, vol.17, no.2, pp.289-305, 2022 (ESCI)

VII. THE PERFORMANCE OF WONG-ZAKAI APPROXIMATIONS FOR THE INVESTIGATION OF STOCHASTIC DIFFERENTIAL EQUATION MODELS WITH NONLINEAR MULTIPLICATIVE NOISE

Şengül S., Bekiryazıcı Z., Merdan M.

ACTA MATHEMATICA UNIVERSITATIS COMENIANAE, vol.90, no.2, pp.231-243, 2021 (ESCI)

VIII. Analysis of The Dynamics of The Classical Epidemic Model with Beta Distributed Random Components

Kesemen T., Merdan M., Bekiryazıcı Z.

Iğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.10, no.3, pp.1956-1965, 2020 (Peer-Reviewed Journal)

IX. Investigation of the Behaviour of Volterra Integral Equations with Random Effects Merdan M., Altay Ö., Bekiryazıcı Z.

Gümüşhane Üniversitesi Fen Bilimleri Dergisi, vol.10, no.1, pp.205-216, 2020 (Peer-Reviewed Journal)

X. Investigation of Random and Stochastic Models for CD8 T Cell Immune Response

Merdan M., Bekiryazıcı Z., Kesemen T., Anac H.

Journal of Abstract and Computational Mathematics, vol.4, pp.37-48, 2019 (Peer-Reviewed Journal)

XI. Solving of Some Random Partial Differential Equations by Using Differential Transformation Method and Laplace- Padé Method

Merdan M., Anaç H., Bekiryazıcı Z., Kesemen T.

Gümüşhane Üniversitesi Fen Bilimleri Dergisi, vol.9, no.1, pp.108-118, 2019 (Peer-Reviewed Journal)

XII. Analysis of a Random Zeeman Heartbeat Model with Differential Transformation Method Oral P., Merdan M., Bekiryazıcı Z.

Cumhuriyet Science Journal, vol.40, no.2, pp.285-298, 2019 (Peer-Reviewed Journal)

XIII. GLOBAL STABILITY IN A PATHOGEN-SPECIFIC CD8 IMMUNE RESPONSE PREDICTION MODEL

Anac H., Merdan M., Bekiryazici Z.

SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.10, no.3, pp.325-342, 2019 (ESCI)

XIV. Local Fractional Derivative Operators Method for Solving Nonlinear Gas Dynamic Equation of Fractional Order

Merdan M., Bekiryazıcı Z.

INTERNATIONAL JOURNAL OF PURE AND APPLIED MATHEMATICS, vol.119, pp.501-517, 2018 (Peer-Reviewed Journal)

XV. Investigation of Zeeman Models with Time Delays

Oral P., Merdan M., Bekiryazici Z.

Journal of Advances in Mathematics and Computer Science, vol.26, no.6, pp.1-15, 2018 (Peer-Reviewed Journal)

XVI. ANALYZING THE DYNAMICS OF EBOLA TRANSMISSION WITH RANDOM EFFECTS Merdan M., Bekiryazici Z., Kesemen T., Khaniyev T.

COMMUNICATIONS IN MATHEMATICAL BIOLOGY AND NEUROSCIENCE, 2018 (ESCI)

XVII. Stochastic and random models of Malaria Disease with vertical transmission

Bekiryazıcı Z., Kesemen T., Merdan M.

New Trends in Mathematical Sciences, vol.1, no.5, pp.269-277, 2017 (Peer-Reviewed Journal)

XVIII. Mathematical Modeling of Biochemical Reactions Under Random Effects

Bekiryazıcı Z., Merdan M., Kesemen T., Khaniyev T.

Turkish Journal of Mathematics and Computer Science, vol.5, pp.8-18, 2016 (Peer-Reviewed Journal)

XIX. Mathematical Modeling of Dengue Disease under Random Effects

Bekiryazıcı Z., Merdan M., Kesemen T., Najmuldeen M.

Mathematical Sciences and Applications E-Notes, vol.4, no.2, pp.72-84, 2016 (Peer-Reviewed Journal)

XX. A psychometric scale for determining university students' attitudes towards the statistics courses they take: Statistical attitude scale (SAS)

Tunc T., Komitoglu F., Bekiryazıcı Z.

Energy Education Science & Technology, Part B: Social and Educational Studies, vol.6, pp.15-24, 2014 (Scopus)

## Papers Published in Refereed Scientific Meetings

I. The Congruity of Solutions from Stochastic and Random Models in the Analysis of Deterministic Systems with Uncertainty

Bekiryazıcı Z.

10th International IFS and Contemporary Mathematics and Engineering Conference, Mersin, Turkey, 4 - 07 September 2024, pp.45

II. A New Study on a Random Conformable Fractional System Modeling Acid-Mediated Tumor Cell Invasion

Meral G., Yazır T., Bekiryazıcı Z., Anaç H.

8th Approximation Theory and Special Functions (ATSF 2024) Conference, Ankara, Turkey, 4 - 07 September 2024, pp.172

III. Average Solutions of Differential Equations Containing Fractional Derivatives of Orders Governed by Probability Distributions with Bounded Support

Bekiryazıcı Z.

12th International Conference on Applied Analysis and Mathematical Modeling, İstanbul, Turkey, 19 - 23 July 2024, pp.84

IV. An Investigation of Pest Management Dynamics for Tea Plant in Turkey using Stochastic Models Bekiryazıcı Z.

6th International Conference on Research in Applied Mathematics and Computer Science, Marrakush, Morocco, 25 - 27 April 2024, pp.312

V. Analyzing Compartmental Models of Disease Transmission with Fractional Derivatives and Randomized Parameters: An Approach Based on Simulations

Bekiryazıcı Z.

7th International Conference on Mathematics: An Istanbul Meeting for World Mathematicians, İstanbul, Turkey, 11 - 13 July 2023, pp.212

VI. The Effects of Randomized Initial Values on the Dynamics of Disease Transmission in Fractional-Random Compartmental Models

Bekiryazıcı Z.

7th International Conference on Mathematics: An Istanbul Meeting for World Mathematicians, İstanbul, Turkey, 11 - 13 July 2023, pp.489-498

VII. Analysis of COVID-19 Dynamics in Turkey using Sinusoidal Transmission Rates and Stochastic Differential Equations

Bekiryazıcı Z.

2nd International E-Conference on Mathematical and Statistical Science: A Selcuk Meeting, Konya, Turkey, 5 - 07

June 2023, pp.54

# VIII. Investigation of the Most Appropriate Plant Selections for Parking Areas in Urban Areas with Multi-Criteria Decision-Making Methods

Bekiryazıcı F., Köseoğlu A., Bekiryazıcı Z.

8th International Asian Congress on Contemporary Sciences, Aksaray, Turkey, 5 - 07 May 2023, pp.317

IX. Investigation of COVID-19 Dynamics in Turkey with Real Data and Stochastic Simulations Bekiryazıcı Z.

5th International Conference on Research in Applied Mathematics and Computer Science, Casablanca, Morocco, 16 - 18 March 2023, pp.307

# X. Investigation of Simulation Based Stochastic and Random Characteristics of the FitzHugh-Nagumo Model

Bekiryazıcı Z.

4th International Conference on Applied Engineering and Natural Sciences, Konya, Turkey, 10 - 13 November 2022, pp.1260-1265

XI. Investigation of Fractional Order Genesio-Tesi System Using Laplace Transformation Bekiryazıcı Z., Şengül S., Merdan M.

8th International IFS and Contemporary Mathematics Conference, Mersin, Turkey, 16 - 19 June 2022, pp.18-19

XII. Stochastic Dynamics of the Novel Coronavirus Transmission Considering Asymptomatic Cases Bekiryazıcı Z., Önen A.

8th International IFS and Contemporary Mathematics Conference, Mersin, Turkey, 16 - 19 June 2022, pp.20-21

XIII. Comparison of HFMD Transmission Dynamics under Gaussian and Laplacian Random Effects
Bekiryazıcı Z., Haşimoğlu S.

International Online Conferences on Engineering and Natural Sciences, Gümüşhane, Turkey, 5 - 07 July 2021, pp.211

#### XIV. Gender Based Transmission Dynamics of Zika Virus with Random Effects

Bekiryazıcı Z., Kesemen T., Merdan M., Khaniyev T.

International Online Conferences on Engineering and Natural Sciences, Gümüşhane, Turkey, 5 - 07 July 2021, pp.212

## XV. A new type of osculating curve in En

Bektaş Ö., Bekiryazıcı Z.

18. Uluslararası Geometri Sempozyumu, Malatya, Turkey, 12 - 13 July 2021, pp.81

# XVI. Investigation of Random Zika Virus Transmission with Modified Random Differential Transformation Method

Bekiryazıcı Z., Kesemen T., Merdan M., Hanalioğlu T.

9th International Eurasian Conference on Mathematical Sciences and Applications, Skopje, Macedonia, 25 - 28 August 2020, pp.114-115

# XVII. Modelling Disease Transmission Scenarios Using Field Data and Heavy Tailed Random Effects: The Zika Case

BEKİRYAZICI Z., Kesemen T., Merdan M., Khaniyev T.

11th International Statistics Congress, Muğla, Turkey, 4 - 08 October 2019, pp.91

## XVIII. Stochastic Investigation of a Crop Pest Management Model with Awareness

BEKİRYAZICI Z.

3rd International Conference on Advanced Engineering Technologies, Bayburt, Turkey, 19 - 21 September 2019, pp.374-378

# XIX. Mathematical Modelling of the Random Spread of Malware under Mutation Using Random Differential Equations

BEKİRYAZICI Z.

3rd International Conference on Advanced Engineering Technologies, Bayburt, Turkey, 19 - 21 September 2019, pp.223-229

# XX. Global Stability in a Predicting Pathogen-Specific CD8 Cell Immune Responses from a Modelling Approach

BEKİRYAZICI Z., Anac H., Merdan M.

International Conference on Applied Analysis and Mathematical Modelling, İstanbul, Turkey, 10 - 13 March 2019, pp.221

### XXI. Analysis of a Pneumonia Transmission Model with Random Components

BEKİRYAZICI Z., Kesemen T., Merdan M.

5th International Conference on Recent Advances In Pure And Applied Mathematics, Trabzon, Turkey, 23 - 27 July 2018, pp.39-40

#### XXII. A Fractional Random Model for Influenza Transmission

Merdan M., BEKİRYAZICI Z.

International Conference on Mathematics: An Istanbul Meeting for World Mathematicians, İstanbul, Turkey, 3 - 06 July 2018, pp.412

# XXIII. An Epidemiological Model with Caputo Fractional Derivative and Normally Distributed Random Components

Merdan M., BEKİRYAZICI Z.

International Conference on Mathematics: An Istanbul Meeting for World Mathematicians, İstanbul, Turkey, 3 - 06 July 2018, pp.413

# XXIV. A Comparison of Variation Coefficients of Biochemical Reaction Model for Several Probability Distributions

Kesemen T., BEKİRYAZICI Z., Khaniyev T., Karaarslan G.

International Conference on Mathematics and Mathematics Education, Ordu, Turkey, 27 - 29 June 2018, pp.745-746

#### XXV. Behaivours of Random Effected Volterra and Fredholm Integral Equation

Merdan M., Altay Ö., BEKİRYAZICI Z.

International Conference on Mathematics and Mathematics Education, Ordu, Turkey, 27 - 29 June 2018, pp.259-260

# XXVI. Investigation of A Model For Polio By Using Random Differential Equations and Parameters with Gaussian Distribution

BEKİRYAZICI Z., Kesemen T., Merdan M.

International Conference on Mathematics and Mathematics Education, Ordu, Turkey, 27 - 29 June 2018, pp.785-786

#### XXVII. Generalized Beta Parameters for a SVEIR-Type Random Model of Polio Transmission

Bekiryazici Z., Merdan M., Kesemen T.

7th International Eurasian Conference on Mathematical Sciences and Applications (IECMSA), Kyiv, Ukraine, 28 - 31 August 2018, vol.2037

### XXVIII. Investigation of the moments for a random model of cholera disease

Merdan M., Kesemen T., BEKİRYAZICI Z.

International Conference on Applied Analysis and Mathematical Modeling, İstanbul, Turkey, 3 - 07 July 2017, pp.253

## XXIX. Stochastic Zeeman Heartbeat Models with Two and Three Dimensions

Merdan M., BEKİRYAZICI Z., Oral P.

II. International Symposium on Multidisciplinary Studies, Roma, Italy, 18 - 21 May 2017, vol.1, pp.97-107

## XXX. Analysis of Random Two and Three Dimensional Zeeman Modeling

Merdan M., Oral P., BEKİRYAZICI Z.

II. International Symposium on Multidisciplinary Studies, Roma, Italy, 18 - 21 May 2017, vol.1, pp.83-96

## XXXI. Investigation of Zeeman Models with Time Delays

Oral P., Merdan M., BEKİRYAZICI Z.

II. International Symposium on Multidisciplinary Studies, Roma, Italy, 18 - 21 May 2017, pp.101

# XXXII. Application of Differential Transformation Method for Solving Some Random Partial Differential Equations

Merdan M., Kesemen T., Anac H., BEKİRYAZICI Z.

International Conference on Mathematics and Mathematics Education, Şanlıurfa, Turkey, 11 - 13 May 2017, pp.430-

XXXIII. Analysis of Random Zeeman Heartbeat Model by Modified Differential Transformation Method Oral P., Merdan M., BEKİRYAZICI Z.

International Conference on Mathematics and Mathematics Education, Şanlıurfa, Turkey, 11 - 13 May 2017, pp.428-

XXXIV. Moments of Epidemic Models with Random Initial Data

BEKİRYAZICI Z., Merdan M., Kesemen T.

International Conference on Mathematics and Engineering, İstanbul, Turkey, 10 - 12 May 2017, pp.360

XXXV. Analyzing the Moments of the Classical Epidemic Model under Random Effects

Merdan M., BEKİRYAZICI Z., Kesemen T.

International Conference on Mathematics and Engineering, İstanbul, Turkey, 10 - 12 May 2017, pp.343

XXXVI. Analysing the Early-Stage Dynamics of a Model for Ebola Virus Under Random Effects Merdan M., BEKİRYAZICI Z., Kesemen T.

International Workshop on Mathematical Methods in Engineering, Ankara, Turkey, 27 - 29 April 2017, pp.51

XXXVII. Analyzing Mathematical Models of Various Diseases under Random Conditions BEKİRYAZICI Z.

Probability in mathematics and physics, Darmstadt, Germany, 27 - 31 March 2017, pp.14

XXXVIII. Stochastic Modeling of Immune-Mediated Disorder in Inflammatory Bowel Disease

Merdan M., BEKİRYAZICI Z., Kesemen T., Khaniyev T.

1st International Mediterranean Science and Engineering Congress, Adana, Turkey, 26 - 28 October 2016, pp.3092

XXXIX. Some Statistical Characteristics of the Biochemical Reaction Model under Triangular Random Effects
BEKİRYAZICI Z., Kesemen T., Merdan M., BEKTAŞ KAMIŞLIK A.

Xth International Statistics Days Conference, Giresun, Turkey, 7 - 09 October 2016, pp.354-360

XL. Stochastic and Random Behavior Model for Immune System Response and Bacterial Resistance with Antibiotic Therapy

BEKİRYAZICI Z., Merdan M., Khaniyev T., Kesemen T.

5th International Eurasian Conference on Mathematical Sciences and Applications, Belgrad, Serbia And Montenegro, 16 - 19 August 2016, pp.128-129

XLI. Modelling of Dengue Disease under Laplacian Random Effects

BEKİRYAZICI Z., Kesemen T., Merdan M., Najmuldeen M.

International Conference on Mathematics and Mathematics Education, Elazığ, Turkey, 12 - 14 May 2016, pp.142-143

XLII. Random Modelling of Biochemical Reactions under Gaussian Random Effects

BEKİRYAZICI Z., Merdan M., Kesemen T., Khaniyev T.

International Conference on Mathematics and Mathematics Education, Elazığ, Turkey, 12 - 14 May 2016, pp.192-193

XLIII. Stochastic and deterministic stability of models for hepatitis C

Merdan M., Bekiryazici Z., Kesemen T.

7th International Conference on Mathematical Analysis, Differential Equations and their Applications, Baku, Azerbaijan, 8 - 13 September 2015, pp.114

## **Supported Projects**

BEKİRYAZICI Z., KESEMEN T., MERDAN M., HANALİOĞLU T., Project Supported by Higher Education Institutions, Zika Virüsü Yayılımının Matematiksel Modelinin Rastgele Koşullarda Analizi, 2019 - 2021

Bekiryazıcı Z., Kesemen T., Merdan M., Bektaş Kamışlık A., Oral P., Project Supported by Higher Education Institutions, Biyokimyasal Reaksiyon Modelinin Deterministik and Stokastik Kararlılık Analizi, 2016 - 2019

Bekiryazıcı Z., Merdan M., Karakullukçu A., Anaç H., Project Supported by Higher Education Institutions, Bağışıklık sisteminin CD8 T hücreleri ile tepkisinin matematik modelinin kararlılığı ve rastgele davranışları, 2017 - 2018

## Memberships / Tasks in Scientific Organizations

Society for Industrial and Applied Mathematics, Member, 2019 - Continues, United States Of America Matematikçiler Derneği, Member, 2016 - Continues, Turkey

#### Peer Reviews in Scientific Publications

PEERJ COMPUTER SCIENCE, Journal Indexed in SCI-E, January 2025 International Journal of Dynamics and Control, Journal Indexed in ESCI, December 2024 MATHEMATICAL AND COMPUTER MODELLING OF DYNAMICAL SYSTEMS, Journal Indexed in SCI-E, December 2023 MATHEMATICAL METHODS IN THE APPLIED SCIENCES, Journal Indexed in SCI-E, January 2023 QUALITATIVE THEORY OF DYNAMICAL SYSTEMS, Journal Indexed in SCI-E, September 2022 INTERNATIONAL JOURNAL OF BIOMATHEMATICS, Journal Indexed in SCI-E, May 2022 JOURNAL OF COMPUTATIONAL BIOLOGY, Journal Indexed in SCI-E, October 2021 SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES, Journal Indexed in ESCI, June 2021 International Journal of Nonlinear Analysis and Applications, Journal Indexed in ESCI, June 2021 SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES, Journal Indexed in ESCI, October 2020 MATHEMATICAL METHODS IN THE APPLIED SCIENCES, Journal Indexed in SCI-E, October 2020 MATHEMATICAL MODELLING OF NATURAL PHENOMENA, Journal Indexed in SCI-E, August 2020 ADVANCES IN DIFFERENCE EQUATIONS, Journal Indexed in SCI-E, May 2020 Gümüşhane Üniversitesi Fen Bilimleri Dergisi, Other Indexed Journal, April 2020 JOURNAL OF APPLIED PROBABILITY AND STATISTICS, Other Indexed Journal, April 2020 SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES, Journal Indexed in ESCI, April 2020 Iğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Other Indexed Journal, July 2019 INTERNATIONAL JOURNAL OF BIOMATHEMATICS, Journal Indexed in SCI-E, October 2018 Gümüşhane Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Other Indexed Journal, March 2018 INTERNATIONAL JOURNAL OF BIOMATHEMATICS, Journal Indexed in SCI-E, January 2018

## Scientific Research / Working Group Memberships

Computational Techniques For Tabletop Games Heritage (European Cooperation İn Science And Technology (Cost)
Action - Ca22145), Université Catholique de Louvain, Belgium, https://gametable.network/index.html, 2024 - Continues

### **Metrics**

Publication: 72 Citation (WoS): 40 Citation (Scopus): 54 H-Index (WoS): 3 H-Index (Scopus): 3

# **Congress and Symposium Activities**

12th International Conference on Applied Analysis and Mathematical Modeling, Attendee, İstanbul, Turkey, 2024 6th International Conference on Research in Applied Mathematics and Computer Science, Attendee, Marrakush, Morocco, 2024

7th International Conference on Mathematics: An Istanbul Meeting for World Mathematicians, Session Moderator, İstanbul, Turkey, 2023 2nd International E-Conference on Mathematical and Statistical Science: A Selcuk Meeting, Attendee, Konya, Turkey, 2023 5th International Conference on Research in Applied Mathematics and Computer Science, Attendee, Casablanca, Morocco, 2023

4th International Conference on Applied Engineering and Natural Sciences, Attendee, Konya, Turkey, 2022
8th International IFS and Contemporary Mathematics Conference, Attendee, Mersin, Turkey, 2022
International Online Conferences on Engineering and Natural Sciences, Attendee, Gümüşhane, Turkey, 2021
9th International Eurasian Conference on Mathematical Sciences and Applications, Attendee, Skopje, Macedonia, 2020
11th International Statistics Congress, Attendee, Muğla, Turkey, 2019

3rd International Conference on Advanced Engineering Technologies, Attendee, Bayburt, Turkey, 2019
7th International Eurasian Conference on Mathematical Sciences and Applications, Attendee, Kyyiv, Ukraine, 2018
International Conference on Mathematics: An Istanbul Meeting for World Mathematicians, Attendee, İstanbul, Turkey, 2018

International Conference on Mathematics and Mathematics Education, Attendee, Ordu, Turkey, 2018
International Conference on Applied Analysis and Mathematical Modeling, Attendee, İstanbul, Turkey, 2017
International Conference on Mathematics and Engineering, Attendee, İstanbul, Turkey, 2017
International Workshop on Mathematical Methods in Engineering, Attendee, Ankara, Turkey, 2017
Spring School: Probability in Mathematics and Physics, Attendee, Darmstadt, Germany, 2017
1st International Mediterranean Science and Engineering Congress, Attendee, Adana, Turkey, 2016
10th International Statistics Days Conference, Attendee, Giresun, Turkey, 2016
5th International Eurasian Conference on Mathematical Sciences and Applications, Attendee, Belgrade, Serbia, 2016
International Conference on Mathematics and Mathematics Education, Attendee, Elazığ, Turkey, 2016
7th International Conference of Mathematical Analysis, Differential Equations and their Applications, Attendee, Baku, Azerbaijan, 2015

Statistical Inference for Levy Processes, Attendee, Leiden, Netherlands, 2014