

## Assoc. Prof. FATMA BERNA BENLİ

### Personal Information

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**Address:** Erciyes Üniv. Eğt.Fak. İlköğretim Matematik Öğr. KAYSERİ

### International Researcher IDs

ORCID: 0000-0003-3421-371X

Publons / Web Of Science ResearcherID: AAN-6156-2021

ScopusID: 56790456100

Yoksis Researcher ID: 100757

### Education Information

Doctorate, Erciyes University, Fen Bil. Ens., Matematik, Turkey 2001 - 2006

Postgraduate, Erciyes University, Fen Bil. Ens., Matematik, Turkey 1999 - 2001

Undergraduate, Erciyes University, Fen-Ed. Fak, Matematik, Turkey 1995 - 1999

### Foreign Languages

English, B2 Upper Intermediate

### Dissertations

Doctorate, Bulanık Sayı Dizilerinin Lambda İstatistiksel Yakınsaklığı, Erciyes Üniversitesi, Fen Bil. Enst., Matematik, 2006

Postgraduate, Toplanabilme Metotlarının Denklikleri, Erciyes Üniversitesi, Fen Bil. Enst., Matematik, 2001

### Research Areas

Mathematics, Sequences, Series, Summability, Functional Analysis, Natural Sciences

### Academic Titles / Tasks

Associate Professor, Erciyes University, Eğitim Fakültesi, Matematik ve Fen Bilimleri Eğitimi, 2022 - Continues

Assistant Professor, Erciyes University, Eğitim Fakültesi, Matematik Ve Fen Bilimleri Eğitimi, 2018 - 2022

Assistant Professor, Erciyes University, Eğitim Fakültesi, Matematik Ve Fen Bilimleri Eğitimi, 2007 - 2018

Research Assistant, Erciyes University, Eğitim Fakültesi, Matematik ve Fen Bilimleri Eğitimi, 2006 - 2007

Research Assistant, Erciyes University, Fen Fakültesi, Matematik, 2001 - 2006

### Academic and Administrative Experience

Assistant Director of the Institute, Erciyes University, Eğitim Bilimleri Enstitüsü, 2024 - Continues  
Komisyon Koordinatörlüğü, Erciyes University, Eğitim Fakültesi, Matematik Ve Fen Bilimleri Eğitimi, 2021 - Continues  
Deputy Director of the Center, Erciyes University, Eğitim Fakültesi, Matematik Ve Fen Bilimleri Eğitimi, 2022 - 2023  
Mezuniyet Komisyonu, Erciyes University, Eğitim Fakültesi, Matematik Ve Fen Bilimleri Eğitimi, 2017 - 2021  
Burs Komisyon(Üye/Başkan), Erciyes University, Eğitim Fakültesi, Matematik Ve Fen Bilimleri Eğitimi, 2007 - 2021  
Deputy Head of Department, Erciyes University, Eğitim Fakültesi, Matematik Ve Fen Bilimleri Eğitimi, 2013 - 2016

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

- I. **A SHORT SOLUTION OF THE LOCAL FRACTIONAL (2+1)-DIMENSIONAL DISPERSIVE LONG WATER WAVE SYSTEM**  
BENLİ F. B., Baskonus H. M., Gao W.  
FRACTALS-COMPLEX GEOMETRY PATTERNS AND SCALING IN NATURE AND SOCIETY, vol.32, no.4, 2024 (SCI-Expanded)
- II. **A deterministic approach to investigate nonlinear evolution equations for large balance numbers**  
Akbar M. A., Islam M. E., Berna Benli F., Alp İlhan O. A.  
PHYSICA SCRIPTA, vol.98, no.12, 2023 (SCI-Expanded)
- III. **Closed form soliton solutions to the space-time fractional foam drainage equation and coupled mKdV evolution equations**  
İLHAN O. A., BENLİ F. B., Islam M. N., Akbar M. A., Baskonus H. M.  
INTERNATIONAL JOURNAL OF NONLINEAR SCIENCES AND NUMERICAL SIMULATION, vol.24, no.3, pp.1037-1058, 2023 (SCI-Expanded)
- IV. **Analysis of fractional Klein-Gordon-Zakharov equations using efficient method**  
BENLİ F. B.  
NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS, vol.38, no.3, pp.525-539, 2022 (SCI-Expanded)
- V. **Wave propagation behavior in nonlinear media and resonant nonlinear interactions**  
Islam M. N., İlhan O. A., Akbar M. A., Benli F. B., Soybaş D.  
COMMUNICATIONS IN NONLINEAR SCIENCE AND NUMERICAL SIMULATION, vol.108, 2022 (SCI-Expanded)
- VI. **Modulational instability and multiple rogue wave solutions for the generalized CBS-BK equation**  
Gang W., Manafian J., BENLİ F. B., İLHAN O. A., Goldaran R.  
MODERN PHYSICS LETTERS B, vol.35, no.24, 2021 (SCI-Expanded)
- VII. **Analysis of fractional-order Schrodinger-Boussinesq and generalized Zakharov equations using efficient method**  
BENLİ F. B.  
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.44, no.7, pp.6178-6194, 2021 (SCI-Expanded)
- VIII. **A Multidimensional Analogue of the A. N. Tikhonov's Theorem on Calculating Values of a Function with Respect to Approximately Given Fourier Coefficients**  
Benli F. B., İlhan O. A., Kasimov S. G., Xaitboyev G. S.  
ANALYSIS MATHEMATICA, vol.46, no.4, pp.655-665, 2020 (SCI-Expanded)
- IX. **LAMBDA-statistical limit points of the sequences of fuzzy numbers " -statistical limit points of the sequences of fuzzy numbers**  
TUNCER A. N., BENLİ F. B.  
INFORMATION SCIENCES, vol.177, pp.3297-3304, 2007 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Fractional approach for multi-dimensional wave-like equations with variable coefficient using an efficient method**  
BENLİ F. B.

BAUN Fen Bil. Enst. Dergisi, vol.23, no.2, pp.490-514, 2021 (Peer-Reviewed Journal)

- II. **An Allee Threshold Model for a Glioblastoma(GB)-Immune System(IS) Interaction with Fuzzy Initial Values**  
BENLİ F. B., İLHAN O. A., Keskin O.  
APPLIED MATHEMATICS AND NONLINEAR SCIENCES, vol.5, no.1, pp.499-508, 2020 (ESCI)
- III. **Relations between Lambda Statistical Limit Inferior and Limit Superior for Sequences of Fuzzy Numbers**  
BENLİ F. B.  
International Journal of Modeling and Optimization, vol.4, no.4, pp.321-325, 2014 (Peer-Reviewed Journal)
- IV. **Lambda statistically monotonic and lambda statistically bounded sequences of fuzzy numbers**  
BENLİ F. B.  
International Journal of Mathematics and Computation, 2014 (Peer-Reviewed Journal)
- V. **Lambda statistical Limit Inferior and Limit Superior for Sequences of Fuzzy Numbers**  
BENLİ F. B.  
International Journal Of Modeling and Optimization, vol.3, no.3, pp.307-310, 2013 (Peer-Reviewed Journal)
- VI. **A different approach to the set of fuzzy numbers**  
SOYBAŞ D., BENLİ F. B.  
Scientific Research And Essays, vol.7, no.2, pp.128-133, 2012 (Peer-Reviewed Journal)
- VII. **On Embedding Fuzzy Numbers into a Banach Space**  
BENLİ F. B., SOYBAŞ D.  
J. Of Math. Sci. Advances and Appl, no.5, pp.103-112, 2010 (Peer-Reviewed Journal)
- VIII. **A Note On Lambda Statistically Cauchy Sequences**  
TUNCER A. N., BENLİ F. B.  
International Journal of Pure and Applied Mathematics, vol.31, no.1, pp.91-96, 2006 (Peer-Reviewed Journal)

## **Refereed Congress / Symposium Publications in Proceedings**

- I. **An Early Detection Model for a Brain Tumor-Is (Immune System) Interaction**  
BENLİ F. B., İLHAN O. A.  
4th International Conference on Computational Mathematics and Engineering Sciences (CMES-2019) Antalya, 20 April 2019
- II. **An Early Detection Model for a Brain Tumor-Is (Immune System) Interaction with Fuzzy Initial Values**  
BENLİ F. B., İLHAN O. A.  
4th International Conference on Computational Mathematics and Engineering Sciences (CMES), Antalya, Turkey, 20 - 22 April 2019, vol.1111, pp.111-120
- III. **A New Analysis with Fuzzy Initial Condition for a Tumor and Immune System Interaction Model**  
BENLİ F. B.  
2ND INTERNATIONAL CONGRESS ON APPLIED BIOLOGICAL SCIENCES, Saray Bosna, Bosnia And Herzegovina, 27 - 31 May 2016
- IV. **A Tumor Macrophage Interaction Model with Fuzzy Initial Values**  
BENLİ F. B., KESKİN Ö.  
International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2014), Rodos, 22 - 28 September 2014
- V. **An Algorithm for the Solution of Second Order Fuzzy Boundary Value Problems**  
BENLİ F. B.  
International Science and Technology Conference (ISTEC 2014), Qatar, 18 - 20 December 2014
- VI. **Relations Between Lambda Statistical Limit Inferior and Limit Superior for Sequences of Fuzzy Numbers**  
BENLİ F. B.

3rd International Conference on Pure and Applied Mathematics (ICPAM 2014), Madrid, 18 - 19 July 2014

**VII. Levelwise Lambda Statistical Cluster and Limit Points of a Sequence of Fuzzy Numbers**

BENLİ F. B.

2nd International Eurasian Conference on Mathematical Sciences and Applications (IECMSA 2013), Bosnia and Herzegovina, 26 - 29 August 2013

**VIII. Lambda Statistical Limit Inferior and Limit Superior for Sequences of Fuzzy Numbers**

BENLİ F. B.

2nd International Conference on Pure and Applied Mathematics (ICPAM 2013), Moscow, 20 - 21 July 2013

**IX. Lambda Statistical Cluster and Extreme Limit Points of Sequences of Fuzzy Numbers**

BENLİ F. B.

International Conference on Applied Analysis and Mathematical Modeling (ICAAMM 2013), İstanbul, 2 - 05 June 2013

**X. Lambda Statistically Monotonic and Lambda Statistically Bounded Sequences of Fuzzy Numbers**

BENLİ F. B.

International Conference:Mathematical Science &Applications, Abu Dhabi, 26 - 30 December 2012

**XI. Matematiğin Doğadaki Sanatı Fraktallar**

BENLİ F. B., AKBULUT B.

8. Matematik Sempozyumu, Ankara, Turkey, 12 - 14 April 2009

## Supported Projects

BOZKURT YOUSEF F., ŞAHİN A., BENLİ F. B., Project Supported by Higher Education Institutions, Fark Denklem Sistemleri ve Kesirsel Mertebeden Diferansiyel Denklem Sistemleri Yardımıyla Beyin Tümörünün Modellenmesi ve Kararlılık Analizleri, 2016 - 2019

ŞAHİN A., BOZKURT F., BENLİ F. B., Project Supported by Higher Education Institutions, Malignant tümör popülasyonunun vücudun direnç sistemine ve popülasyon yoğunluğuna bağlı matematiksel modellenmesi ve kararlılık analizi, 2016 - 2019

ŞAHİN A., BOZKURT F., BENLİ F. B., KESKİN Ö., PEKER F., Project Supported by Higher Education Institutions, Göğüs kanserinin matematiksel modellemesi ve kararlılık analizi, 2014 - 2016

BOZKURT YOUSEF F., ATASOY S., BENLİ F. B., Project Supported by Higher Education Institutions, Impulsive Diferansiyel Denklemler ile Popülasyon Modellerinin Kararlılık Analizi, 2014 - 2016

BOZKURT YOUSEF F., BİRDAL H., BENLİ F. B., Project Supported by Higher Education Institutions, Av-Avcı Modellerinin Kesirsel Mertebeden Diferansiyel Denklemler Yardımıyla Kararlılık Analizi, 2014 - 2016

BENLİ F. B., DAŞBAŞI B., BOZKURT F., KESKİN Ö., Project Supported by Higher Education Institutions, Biyolojik Modellerin Fuzzy Başlangıç Değer Problemleri, 2014 - 2016

BOZKURT YOUSEF F., BENLİ F. B., KESKİN Ö., DAŞBAŞI B., ATASOY S., ŞAHİN A., Project Supported by Higher Education Institutions, Kesirsel Mertebeden Diferansiyel Denklemler Teorisi Yardımıyla Malignant Tümör Popülasyonların Kararlılık Analizi, 2014 - 2016

BENLİ F. B., KESKİN Ö., Project Supported by Higher Education Institutions, Bulanık sayıların bir biyomatematik problemi üzerine uygulanması, 2014 - 2015

BOZKURT YOUSEF F., PEKER F., BENLİ F. B., Abdeljawad T., Project Supported by Higher Education Institutions, Biyolojik Yapıların Matematiksel Modellenmesi ve Kararlılık Analizi, 2012 - 2013

## Memberships / Tasks in Scientific Organizations

Matematikçiler Derneği, Member, 2013 - Continues

SCIEI ( SCIENCE and ENGINEERING INSTITUTE), Member, 2013 - Continues

## **Metrics**

Publication: 29

Citation (WoS): 26

Citation (Scopus): 27

H-Index (WoS): 3

H-Index (Scopus): 3

## **Congress and Symposium Activities**

2ND INTERNATIONAL CONGRESS ON APPLIED BIOLOGICAL SCIENCES, Attendee, Sarajevo, Bosnia And Herzegovina, 2016

International Science and Technology Conference (ISTEC 2014), Attendee, Doha, Qatar, 2014

3rd International Conference on Pure and Applied Mathematics (ICPAM 2014], Attendee, Madrid, Spain, 2014

2nd International Eurasian Conference on Mathematical Sciences and Applications (IECMSA ),, Attendee, Sarajevo, Bosnia And Herzegovina, 2013

2nd International Conference on Pure and Applied Mathematics (ICPAM 2013], Attendee, Moskova, Russia, 2013

International Conference on Applied Analysis and Mathematical Modelling (ICAAMM 2013),, Attendee, İstanbul, Turkey, 2013

International Conferance: Mathematical Sciences & Applications, Attendee, Abu Dhabi, United Arab Emirates, 2012

8. Matematik Sempozyumu, Attendee, Ankara, Turkey, 2009

Palandöken Matematik Günleri, Attendee, Erzurum, Turkey, 2001