

Prof. FATMA FEN

Personal Information

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International Researcher IDs

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Education Information

Undergraduate, Anadolu University, Faculty Of Economics, Department Of Economics, Turkey 2006 - 2019

Doctorate, Ege University, Fen Bilimleri Enstitüsü, Analiz Ve Fonksiyonlar Teorisi (Dr), Turkey 2011 - 2014

Postgraduate, Ege University, Fen Bilimleri Enstitüsü, Analiz Ve Fonksiyonlar Teorisi (YI) (Tezli), Turkey 2009 - 2011

Undergraduate, Ege University, Faculty Of Science, Matematik Bölümü, Turkey 2005 - 2009

Dissertations

Doctorate, Zaman skalasında integral sınır koşullu impulsive sınır değer probleminin pozitif çözümleri, Ege University, Fen Bilimleri Enstitüsü, Analiz Ve Fonksiyonlar Teorisi (Dr), 2014

Postgraduate, Zaman skalasında bir boyutlu p-laplacian sınır değer problemlerinin pozitif çözümleri, Ege University, Fen Bilimleri Enstitüsü, Analiz Ve Fonksiyonlar Teorisi (YI) (Tezli), 2011

Research Areas

Mathematics, Differential Equations, Dynamic Systems and Ergodic Theory, Functional Analysis, Integral Equations

Academic Titles / Tasks

Professor, Gazi University, Fen Fakültesi, Matematik, 2023 - Continues

Associate Professor, Gazi University, Fen Fakültesi, Matematik, 2020 - 2023

Research Assistant, Gazi University, Fen Fakültesi, Matematik, 2014 - 2020

Expert, Georgia State University, Neuroscience Institute, 2014 - 2015

Courses

Araştırma Projesi II, Undergraduate, 2019 - 2020

Mathematics I, Undergraduate, 2017 - 2018

Fonksiyonel Analiz I, Undergraduate, 2017 - 2018

Differential Equations, Undergraduate, 2017 - 2018

Advanced Mathematics I, Undergraduate, 2017 - 2018

Diferansiyel Denklemler, Undergraduate, 2017 - 2018
Genel Matematik I, Undergraduate, 2017 - 2018
Genel Matematik II, Undergraduate, 2017 - 2018
Matematik I, Undergraduate, 2017 - 2018
Mathematics II, Undergraduate, 2017 - 2018
Engineering Mathematics, Undergraduate, 2017 - 2018

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Asymptotically unpredictable trajectories in semiflows**
Fen M. O., FEN F.
Communications in Nonlinear Science and Numerical Simulation, vol.134, 2024 (SCI-Expanded)
- II. **Unpredictability in Quasilinear Non-Autonomous Systems with Regular Moments of Impulses**
Fen M. O., Tokmak Fen F.
Mediterranean Journal of Mathematics, vol.20, no.4, 2023 (SCI-Expanded)
- III. **A novel criterion for unpredictable motions**
FEN F., Fen M. O., AKHMET M.
Filomat, vol.37, no.18, pp.6151-6160, 2023 (SCI-Expanded)
- IV. **Quasilinear systems with unpredictable relay perturbations**
Fen M. O., FEN F.
TURKISH JOURNAL OF MATHEMATICS, vol.46, pp.1369-1383, 2022 (SCI-Expanded)
- V. **Replication of Period-Doubling Route to Chaos in Coupled Systems with Delay**
Fen M. O., FEN F.
FILOMAT, vol.36, no.2, pp.599-613, 2022 (SCI-Expanded)
- VI. **Unpredictable oscillations of SICNNs with delay**
Fen M. O., FEN F.
NEUROCOMPUTING, vol.464, pp.119-129, 2021 (SCI-Expanded)
- VII. **Homoclinical Structure of Retarded SICNNs with Rectangular Input Currents**
Fen M. O., FEN F.
NEURAL PROCESSING LETTERS, vol.49, no.2, pp.521-538, 2019 (SCI-Expanded)
- VIII. **Replication of period-doubling route to chaos in impulsive systems**
Fen M. O., Fen F.
ELECTRONIC JOURNAL OF QUALITATIVE THEORY OF DIFFERENTIAL EQUATIONS, no.58, pp.1-20, 2019 (SCI-Expanded)
- IX. **ON THE SOLUTIONS OF A MULTI-POINT BVP FOR FRACTIONAL DIFFERENTIAL EQUATIONS WITH IMPULSES**
FEN F.
MISKOLC MATHEMATICAL NOTES, vol.19, no.2, pp.847-863, 2018 (SCI-Expanded)
- X. **Existence of positive solutions for fourth-order impulsive integral boundary value problems on time scales**
FEN F., Karaca I. Y.
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.40, no.16, pp.5727-5741, 2017 (SCI-Expanded)
- XI. **HOMOCLINIC AND HETEROCLINIC MOTIONS IN HYBRID SYSTEMS WITH IMPACTS**
Fen M. O., FEN F.
MATHEMATICA SLOVACA, vol.67, no.5, pp.1179-1188, 2017 (SCI-Expanded)
- XII. **SICNNs with Li-Yorke chaotic outputs on a time scale**
Fen M. O., FEN F.
NEUROCOMPUTING, vol.237, pp.158-165, 2017 (SCI-Expanded)
- XIII. **EXISTENCE OF POSITIVE SOLUTIONS FOR A NONLINEAR n TH-ORDER m -POINT p -LAPLACIAN IMPULSIVE BOUNDARY VALUE PROBLEM**

- Karaca I. Y., FEN F.
 MATHEMATICA SLOVACA, vol.67, no.2, pp.467-482, 2017 (SCI-Expanded)
- XIV. **Positive Solutions of Boundary Value Problems for p-Laplacian Fractional Differential Equations**
 FEN F., Karaca I. Y., ÖZEN Ö.
 FILOMAT, vol.31, no.5, pp.1265-1277, 2017 (SCI-Expanded)
- XV. **POSITIVE SOLUTIONS OF nTH-ORDER m-POINT BOUNDARY VALUE PROBLEMS**
 Karaca I. Y., Fen F.
 BULLETIN OF THE IRANIAN MATHEMATICAL SOCIETY, vol.42, no.6, pp.1429-1439, 2016 (SCI-Expanded)
- XVI. **On Positive Solutions of Nonlinear Third-Order Impulsive Boundary Value Problems on Time Scales**
 Karaca I. Y., FEN F.
 MEDITERRANEAN JOURNAL OF MATHEMATICS, vol.13, no.6, pp.4447-4461, 2016 (SCI-Expanded)
- XVII. **EXISTENCE OF POSITIVE SOLUTIONS FOR NONLINEAR THIRD-ORDER m-POINT IMPULSIVE BOUNDARY-VALUE PROBLEMS ON TIME SCALES**
 Karaca I. Y., Fen F.
 UKRAINIAN MATHEMATICAL JOURNAL, vol.68, no.3, pp.458-474, 2016 (SCI-Expanded)
- XVIII. **On the Solvability of a System of Multi-Point Second Order Boundary Value Problem**
 Cerdiki T. S., Karaca I. Y., Sinanoglu A., FEN F.
 JOURNAL OF COMPUTATIONAL ANALYSIS AND APPLICATIONS, vol.20, no.4, pp.666-673, 2016 (SCI-Expanded)
- XIX. **Existence of Positive Solutions for Nonlinear Second-Order Impulsive Boundary Value Problems on Time Scales**
 FEN F., Karaca I. Y.
 MEDITERRANEAN JOURNAL OF MATHEMATICS, vol.13, no.1, pp.191-204, 2016 (SCI-Expanded)
- XX. **Positive solutions of nth-order impulsive differential equations with integral boundary conditions**
 FEN F., Karaca I. Y.
 ANALELE STIINTIFICE ALE UNIVERSITATII OVIDIUS CONSTANTA-SERIA MATEMATICA, vol.24, no.1, pp.243-261, 2016 (SCI-Expanded)
- XXI. **EXISTENCE OF POSITIVE SOLUTIONS TO nTH ORDER p-LAPLACIAN BOUNDARY VALUE PROBLEMS WITH INTEGRAL BOUNDARY CONDITIONS**
 Karaca I. Y., FEN F.
 MISKOLC MATHEMATICAL NOTES, vol.17, no.1, pp.381-397, 2016 (SCI-Expanded)
- XXII. **On positive solutions of m-point boundary value problems for p-Laplacian impulsive dynamic equations on time scales**
 FEN F., Karaca I. Y.
 INDIAN JOURNAL OF PURE & APPLIED MATHEMATICS, vol.46, no.5, pp.723-738, 2015 (SCI-Expanded)
- XXIII. **Positive solutions of nth-order m-point impulsive boundary value problems**
 Karaca I. Y., FEN F.
 GEORGIAN MATHEMATICAL JOURNAL, vol.22, no.3, pp.373-384, 2015 (SCI-Expanded)
- XXIV. **Positive Solutions of nth-Order Boundary Value Problems with Integral Boundary Conditions**
 Karaca I. Y., FEN F.
 MATHEMATICAL MODELLING AND ANALYSIS, vol.20, no.2, pp.188-204, 2015 (SCI-Expanded)
- XXV. **Multiple Positive Solutions for Nonlinear Second-Order m-Point Impulsive Boundary Value Problems on Time Scales**
 Karaca I. Y., FEN F.
 FILOMAT, vol.29, no.4, pp.817-827, 2015 (SCI-Expanded)
- XXVI. **Existence of positive solutions for boundary value problems of p-Laplacian difference equations**
 FEN F., Karaca I. Y.
 ADVANCES IN DIFFERENCE EQUATIONS, 2014 (SCI-Expanded)
- XXVII. **Existence of positive solutions for p-Laplacian impulsive boundary value problems on time scales**
 Tokmak F., Karaca I. Y.
 JOURNAL OF INEQUALITIES AND APPLICATIONS, 2014 (SCI-Expanded)
- XXVIII. **Existence of three symmetric positive solutions for a second-order multi-point boundary value**

problem on time scales

Sinanoglu A., Karaca I. Y., Tokmak F., Senlik T.

ADVANCES IN DIFFERENCE EQUATIONS, 2014 (SCI-Expanded)

- XXIX. **Eigenvalues for iterative systems of nonlinear m-point boundary value problems on time scales**
Karaca I. Y., Tokmak F.
BOUNDARY VALUE PROBLEMS, 2014 (SCI-Expanded)
- XXX. **Existence of Solutions for Nonlinear Impulsive Fractional Differential Equations with p-Laplacian Operator**
Karaca I. Y., Tokmak F.
MATHEMATICAL PROBLEMS IN ENGINEERING, vol.2014, 2014 (SCI-Expanded)
- XXXI. **Multiple positive solutions of boundary value problems for p-laplacian impulsive dynamic equations on time scales**
Karaca I. Y., Ozen O. B., Tokmak F.
Fixed Point Theory, vol.15, no.2, pp.475-486, 2014 (SCI-Expanded)
- XXXII. **Existence of positive solutions for nonlinear third-order m-point boundary value problems on time scales**
Karaca I. Y., Tokmak F.
Filomat, vol.28, no.5, pp.925-935, 2014 (SCI-Expanded)
- XXXIII. **Existence of symmetric positive solutions for a multipoint boundary value problem with sign-changing nonlinearity on time scales**
Tokmak F., Karaca I. Y.
Boundary Value Problems, vol.2013, 2013 (SCI-Expanded)
- XXXIV. **Existence of positive solutions for third-order boundary value problems with integral boundary conditions on time scales**
Karaca I. Y., Tokmak F.
Journal of Inequalities and Applications, vol.2013, 2013 (SCI-Expanded)
- XXXV. **Existence of positive solutions for third-order m -point boundary value problems with sign-changing nonlinearity on time scales**
Tokmak F., Karaca I. Y.
Abstract and Applied Analysis, vol.2012, 2012 (SCI-Expanded)
- XXXVI. **Existence of three positive solutions for M-point time scale boundary value problems on infinite intervals**
Ilkay Y. K., Tokmak F.
Dynamic Systems and Applications, vol.20, no.2-3, pp.355-368, 2011 (SCI-Expanded)

Articles Published in Other Journals

- I. **Generation of Synchronous Unpredictable Oscillations by Coupled Hopfield Neural Networks**
Fen M. O., FEN F.
Journal of Applied Nonlinear Dynamics, vol.13, no.3, pp.591-602, 2024 (ESCI)
- II. **Modulo periodic Poisson stable solutions of dynamic equations on a time scale**
FEN F., FEN M. O.
COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS, vol.72, no.4, pp.907-920, 2023 (ESCI)
- III. **Nonlinear Four-point Impulsive Fractional Differential Equations with p-Laplacian Operator**
Fen F., Karaca İ.
Discontinuity, Nonlinearity, and Complexity, vol.4, no.4, pp.467-486, 2015 (Scopus)
- IV. **EIGENVALUES FOR ITERATIVE SYSTEMS OF DYNAMIC EQUATIONS WITH INTEGRAL BOUNDARY CONDITIONS**
Karaca I. Y., FEN F.

COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS, vol.64, no.1, pp.87-97, 2015 (ESCI)

- V. **Existence of Positive Solutions for a Second Order Eigenvalue Boundary Value Problem with Impulse on Time Scales**
FEN F., KARACA İ.
Journal of Advanced Research in Applied Mathematics, vol.6, no.2, pp.32-49, 2014 (Peer-Reviewed Journal)
- VI. **Positive Solutions of Boundary Value Problems for Second order p Laplacian Difference Equations**
FEN F., KARACA İ.
International Journal of Difference Equations, vol.9, no.2, pp.243-269, 2014 (Scopus)
- VII. **Positive solutions for second order multi point boundary value problems**
FEN F., KARACA İ.
Chaotic Modeling and Simulation, vol.3, pp.463-471, 2013 (Peer-Reviewed Journal)
- VIII. **Positive solutions of an impulsive second order boundary value problem on time scales**
FEN F., KARACA İ.
Dynamics Of Continuous Discrete And Impulsive Systems-Series A-Mathematical Analysis, vol.20, no.1, pp.695-708, 2013 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

- I. **Unpredictability in Retarded Shunting Inhibitory Cellular Neural Networks**
Fen F., Fen M. O.
IV International Conference on Mathematics and its Applications in Science and Engineering (ICMASE 2023), Madrid, Spain, 12 - 14 July 2023, pp.77
- II. **Zaman Skalası Üzerindeki Sınır Değer Problemlerinin Pozitif Çözümleri**
KARACA İ., FEN F.
14. Ankara Matematik Günleri, Ankara, Turkey, 28 - 29 June 2019
- III. **Retarded SICNNs with Homoclinic and Heteroclinic Outputs**
FEN F., FEN M. O.
International Conference on Mathematical Studies and Applications 2018 (ICMSA 2018), 4 - 06 October 2018
- IV. **Period-doubling Route to Chaos in Systems with Impulsive Effects**
FEN F., FEN M. O.
International Conference on Applied Mathematics in Engineering (ICAME18), 27 - 29 June 2018
- V. **Third Order Impulsive Boundary Value Problems on Time Scales with Positive Solutions**
KARACA İ., FEN F.
International Conference on Applied Mathematics in Engineering (ICAME18), Balıkesir, Turkey, 27 - 29 June 2018
- VI. **Eigenvalues for iterative systems of nonlinear boundary value problems**
KARACA İ., FEN F.
International Conference on Nonlinear Differential and Difference Equations: Recent Developments and Applications (ICNDDE 2014), Antalya, Turkey, 27 - 30 May 2014
- VII. **Chaotic Dynamics of SICNNs on a Time Scale**
FEN F., FEN M. O.
International Workshop on Mathematical Methods in Engineering (MME2017), 27 - 29 April 2017
- VIII. **Positive Solutions for a Fourth-Order Multipoint Impulsive BVP with p -Laplacian on Time Scales**
FEN F., KARACA İ.
THE SEVENTH INTERNATIONAL CONFERENCE ON DYNAMIC SYSTEMS AND APPLICATIONS THE FIFTH INTERNATIONAL CONFERENCE ON NEURAL, PARALLEL, AND SCIENTIFIC COMPUTATIONS, Atlanta, United States Of America, 27 - 30 May 2015, vol.7, pp.83-89
- IX. **Hücreyel Sınır Ağları Modellerinde Homoklinik ve Heteroklinik Yörüngeler**
FEN M. O., FEN F.
11. Ankara Matematik Günleri, Ankara, Turkey, 26 - 27 May 2016

- X. **Homoclinical Structure of Hybrid Systems with Impacts**
FEN M. O., FEN F.
3rd International Conference on Recent Advances in Pure and Applied Mathematics, 19 - 23 May 2016
- XI. **Impulsive Boundary Value Problem for Nonlinear Differential Equations of Fractional Order 2 3**
KARACA İ., FEN F.
4th International Eurasian Conference on Mathematical Sciences and Applications (IECMSA-2015), Atina, Greece, 31 August - 03 September 2015
- XII. **On the Solutions of a Multi Point BVP for Impulsive Fractional Differential Equations**
FEN F.
Carolina Dynamics Symposium 2015, Atlanta, United States Of America, 24 - 26 April 2015
- XIII. **Nonlinear Second Order Impulsive Boundary Value Problems**
FEN F., KARACA İ.
2015 Georgia Scientific Computing Symposium, Atlanta, United States Of America, 28 February 2015
- XIV. **Nonlinear four point impulsive fractional differential equations with p Laplacian operator**
FEN F., KARACA İ.
5th International Conference on Nonlinear Science and Complexity, Xi'xxan, China, 4 - 09 August 2014
- XV. **Existence of Positive Solutions for Non Homogeneous BVPs of p Laplacian Difference Equations**
FEN F., KARACA İ.
International Congress in Honour of Professor Ravi P. Agarwal, Bursa, Turkey, 23 - 26 June 2014
- XVI. **Existence Results for Nonlinear Impulsive Fractional Differential Equations with p Laplacian Operator**
KARACA İ., FEN F.
International Congress in Honour of Professor Ravi P. Agarwal, Bursa, Turkey, 23 - 26 June 2014
- XVII. **Existence of positive solutions for p Laplacian impulsive boundary value problems**
FEN F., KARACA İ.
International Conference on Nonlinear Differential and Difference Equations: Recent Developments and Applications (ICNDDE 2014), Antalya, Turkey, 27 - 30 May 2014
- XVIII. **Positive Solutions of Boundary Value Problems for Second Order p Laplacian Difference Equations**
FEN F., KARACA İ.
The International Workshop on Progress in Difference Equations, İzmir, Turkey, 21 - 24 May 2014
- XIX. **Existence of positive solutions for nonlinear third order m point boundary value problems on time scales**
KARACA İ., FEN F.
The Algerian-Turkish International Days on Mathematics 2013, İstanbul, Turkey, 12 - 14 September 2013
- XX. **On the Solvability of a System of Multi Point Second Order Boundary Value Problem**
Şenlik T., KARACA İ., Sinanoğlu A., FEN F.
2nd International Eurasian Conference on Mathematical Sciences and Applications (IECMSA-2013), Saraybosna, Bosnia And Herzegovina, 26 - 29 August 2013
- XXI. **The Existence of Symmetric Positive Solutions for a Nonlinear Multi Point Boundary Value Problem on Time Scales**
FEN F., KARACA İ., Senlik T., Sinanoglu A.
2nd International Eurasian Conference on Mathematical Sciences and Applications, Saraybosna, Bosnia And Herzegovina, 26 - 29 August 2013
- XXII. **Existence of Three Symmetric Positive Solutions for a Second Order Multi Point Boundary Value Problem on Time Scales**
Sinanoğlu A., KARACA İ., FEN F., Şenlik T.
2nd International Eurasian Conference on Mathematical Sciences and Applications (IECMSA-2013), Saraybosna, Bosnia And Herzegovina, 26 - 29 August 2013
- XXIII. **Existence of Positive Solutions for Third Order Boundary Value Problems with Integral Boundary Conditions on Time Scales**
KARACA İ., FEN F.

Anatolian Communications in Nonlinear Analysis, Bolu, Turkey, 3 - 06 July 2013

XXIV. **Eigenvalues for Iterative Systems of Nonlinear m point Boundary Value Problems on Time Scales**
KARACA İ., FEN F.

International Conference on Applied Analysis and Mathematical Modelling, İstanbul, Turkey, 2 - 05 June 2013

XXV. **Existence of Positive Solutions for p Laplacian Impulsive Boundary Value Problems on Time Scales**
FEN F., KARACA İ.

International Conference on Applied Analysis and Mathematical Modelling, İstanbul, Turkey, 2 - 05 June 2013

XXVI. **Positive Solutions For Second Order Impulsive Boundary Value Problems on Time Scales**
FEN F., KARACA İ.

The 11th International Workshop on Dynamical Systems and Applications, Ankara, Turkey, 26 - 28 June 2012

XXVII. **Existence of Symmetric Positive Solutions for m point Boundary Value Problem with Sign Changing Nonlinearity on Time Scales**
FEN F., KARACA İ.

International Conference on Applied Analysis and Algebra 2012, İstanbul, Turkey, 20 - 24 June 2012

XXVIII. **Triple positive solutions of m point time scale BVPs with p Laplacian on infinite intervals**
KARACA İ., FEN F.

Sixth International Conference on Dynamic Systems and Applications, Atlanta, United States Of America, 25 - 28 May 2011, vol.6, pp.205-212

Metrics

Publication: 77

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H-Index (Scopus): 6

Non Academic Experience

Neuroscience Institute, Georgia State University, Atlanta, Georgia, Amerika Birleşik Devletleri