

# **Prof. ÖZKAN ÖCALAN**

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## **International Researcher IDs**

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## **Education Information**

Doctorate, Ankara University, Fen Bilimleri, Turkey 1998 - 2003

Postgraduate, Afyon Kocatepe University, Institute of Science, Matematik, Turkey 1996 - 1998

Undergraduate, Ankara University, Dijital Fabrika Teknolojileri Programı, Matematik, Turkey 1990 - 1995

## **Research Areas**

Mathematics, Differential Equations, Functional Equations, Natural Sciences

## **Academic Titles / Tasks**

Professor, Akdeniz University, Faculty of Science, Matematik, 2015 - Continues

Associate Professor, Afyon Kocatepe University, Fen Edebiyat Fakültesi, Matematik, 2009 - 2015

Assistant Professor, Afyon Kocatepe University, Fen Edebiyat Fakültesi, Matematik, 2003 - 2009

Research Assistant, Ankara University, Dijital Fabrika Teknolojileri Programı, Matematik, 1998 - 2003

Research Assistant, Afyon Kocatepe University, Fen Edebiyat Fakültesi, Matematik, 1995 - 1998

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

- I. **A NEW OSCILLATION RESULT FOR NONLINEAR DIFFERENTIAL EQUATIONS WITH NONMONOTONE DELAY**  
Kilic N., ÖCALAN Ö.  
Miskolc Mathematical Notes, vol.24, no.2, pp.841-851, 2023 (SCI-Expanded)
- II. **Upper and lower limit oscillation conditions for first-order difference equations**  
ÖCALAN Ö.  
Proceedings of the Edinburgh Mathematical Society, vol.65, no.3, pp.618-631, 2022 (SCI-Expanded)
- III. **Oscillation criteria for first-order dynamic equations with nonmonotone delays**  
Kilic N., ÖCALAN Ö.  
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.50, no.2, pp.318-325, 2021 (SCI-Expanded)
- IV. **An improved oscillation criteria for first order dynamic equations**  
ÖCALAN Ö.  
TURKISH JOURNAL OF MATHEMATICS, vol.45, no.1, pp.487-495, 2021 (SCI-Expanded)
- V. **Solutions to Conjectures on a Nonlinear Recursive Equation**  
ÖCALAN Ö., Duman O.

- CZECHOSLOVAK MATHEMATICAL JOURNAL, vol.70, no.3, pp.867-880, 2020 (SCI-Expanded)
- VI. **Oscillation of first-order dynamic equations with nonmonotone delay**  
 ÖCALAN Ö.  
 MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.43, no.7, pp.3954-3964, 2020 (SCI-Expanded)
- VII. **Oscillatory Behavior of Advanced Difference Equations with General Arguments**  
 ÖCALAN S., ÖCALAN Ö, Yildiz M. K.  
 FILOMAT, vol.34, no.12, pp.4161-4169, 2020 (SCI-Expanded)
- VIII. **Oscillation analysis for nonlinear difference equation with non-monotone arguments**  
 Ocalan O., ÖZKAN U. M., YILDIZ M. K.  
 ADVANCES IN DIFFERENCE EQUATIONS, vol.2018, 2018 (SCI-Expanded)
- IX. **An improved oscillation criterion for first order difference equations**  
 ÖCALAN Ö.  
 BULLETIN MATHEMATIQUE DE LA SOCIETE DES SCIENCES MATHEMATIQUES DE ROUMANIE, vol.59, no.1, pp.65-73, 2016 (SCI-Expanded)
- X. **New oscillation tests and some refinements for first-order delay dynamic equations**  
 KARPUZ B., ÖCALAN Ö.  
 TURKISH JOURNAL OF MATHEMATICS, vol.40, no.4, pp.850-863, 2016 (SCI-Expanded)
- XI. **Oscillation of differential equations with non-monotone retarded arguments**  
 CHATZARAKIS G. E., ÖCALAN Ö.  
 LMS JOURNAL OF COMPUTATION AND MATHEMATICS, vol.19, no.1, pp.98-104, 2016 (SCI-Expanded)
- XII. **An Oscillation Criterion for First Order Difference Equations**  
 Ocalan O., Ozturk S. S.  
 RESULTS IN MATHEMATICS, vol.68, no.1-2, pp.105-116, 2015 (SCI-Expanded)
- XIII. **Oscillations of difference equations with non-monotone retarded arguments**  
 CHATZARAKIS G. E., Ocalan O.  
 APPLIED MATHEMATICS AND COMPUTATION, vol.258, pp.60-66, 2015 (SCI-Expanded)
- XIV. **Oscillations of differential equations with several non-monotone advanced arguments**  
 CHATZARAKIS G. E., Ocalan O.  
 DYNAMICAL SYSTEMS-AN INTERNATIONAL JOURNAL, vol.30, no.3, pp.310-323, 2015 (SCI-Expanded)
- XV. **Dynamics of the difference equation  $x(n+1) = p(n) + xn-kx(n)$  with a period-two coefficient**  
 Ocalan O.  
 APPLIED MATHEMATICS AND COMPUTATION, vol.228, pp.31-37, 2014 (SCI-Expanded)
- XVI. **Global Asymptotic Stability of a Nonautonomous Difference Equation**  
 Gumus M., Ocalan O.  
 JOURNAL OF APPLIED MATHEMATICS, vol.2014, 2014 (SCI-Expanded)
- XVII. **Some Notes on the Difference Equation  $x_{n+1} = \alpha + (x_{n-1}/x_n)(k)$**   
 Gumus M., Ocalan O.  
 DISCRETE DYNAMICS IN NATURE AND SOCIETY, vol.2012, 2012 (SCI-Expanded)
- XVIII. **On the Dynamics of the Recursive Sequence  $x_{n+1} = \alpha + x_n - k(p)/x_n(q)$**   
 Gumus M., Ocalan O., Felah N. B.  
 DISCRETE DYNAMICS IN NATURE AND SOCIETY, vol.2012, 2012 (SCI-Expanded)
- XIX. **COMPARISON CRITERIA FOR THE OSCILLATION OF MIXED-TYPE IMPULSIVE DIFFERENCE EQUATIONS WITH CONTINUOUS ARGUMENTS**  
 KARPUZ B., Ocalan O., Ozturk S.  
 HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.40, no.2, pp.265-272, 2011 (SCI-Expanded)
- XX. **Oscillation of first-order impulsive difference equations with continuous arguments**  
 KARPUZ B., Ocalan O., Ozturk S.  
 JOURNAL OF COMPUTATIONAL ANALYSIS AND APPLICATIONS, vol.12, no.2, pp.539-543, 2010 (SCI-Expanded)
- XXI. **COMPARISON THEOREMS ON THE OSCILLATION OF A CLASS OF NEUTRAL DIFFERENCE EQUATIONS WITH CONTINUOUS VARIABLES**  
 KARPUZ B., Ocalan O.

- BULLETIN OF THE KOREAN MATHEMATICAL SOCIETY, vol.47, no.2, pp.401-409, 2010 (SCI-Expanded)
- XXII. COMPARISON THEOREMS ON THE OSCILLATION AND ASYMPTOTIC BEHAVIOUR OF HIGHER-ORDER NEUTRAL DIFFERENTIAL EQUATIONS**  
 KARPUZ B., Ocalan O., Ozturk S.  
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- XXIII. Further oscillation criteria for partial difference equations with variable coefficients**  
 KARPUZ B., Ocalan O.  
 COMPUTERS & MATHEMATICS WITH APPLICATIONS, vol.59, no.1, pp.55-63, 2010 (SCI-Expanded)
- XXIV. Necessary and sufficient conditions on asymptotic behaviour of solutions of forced neutral delay dynamic equations**  
 KARPUZ B., Ocalan O.  
 NONLINEAR ANALYSIS-THEORY METHODS & APPLICATIONS, vol.71, no.7-8, pp.3063-3071, 2009 (SCI-Expanded)
- XXV. OSCILLATION AND NONOSCILLATION OF FIRST-ORDER DYNAMIC EQUATIONS WITH POSITIVE AND NEGATIVE COEFFICIENTS**  
 KARPUZ B., Ocalan O.  
 DYNAMIC SYSTEMS AND APPLICATIONS, vol.18, no.3-4, pp.363-374, 2009 (SCI-Expanded)
- XXVI. Oscillation criteria for a class of second-order neutral delay differential equations**  
 KARPUZ B., Manojlovic J. V., Ocalan O., Shoukaku Y.  
 APPLIED MATHEMATICS AND COMPUTATION, vol.210, no.2, pp.303-312, 2009 (SCI-Expanded)
- XXVII. Oscillation of a class of difference equations of second order**  
 KARPUZ B., Ocalan O., Yildiz M. K.  
 MATHEMATICAL AND COMPUTER MODELLING, vol.49, no.5-6, pp.912-917, 2009 (SCI-Expanded)
- XXVIII. NECESSARY AND SUFFICIENT CONDITIONS FOR THE OSCILLATORY AND ASYMPTOTIC BEHAVIOUR OF SOLUTIONS TO NEUTRAL DELAY DYNAMIC EQUATIONS**  
 KARPUZ B., Ocalan O., RATH R.  
 ELECTRONIC JOURNAL OF DIFFERENTIAL EQUATIONS, vol.2009, pp.1-15, 2009 (SCI-Expanded)
- XXIX. Oscillation analysis of neutral difference equations with delays**  
 Ocalan O., Duman O.  
 CHAOS SOLITONS & FRACTALS, vol.39, no.1, pp.261-270, 2009 (SCI-Expanded)
- XXX. Oscillation of higher-order nonlinear delay differential equations with oscillatory coefficients**  
 KARPUZ B., Ocalan O., Yildiz M. K.  
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- XXXI. Oscillation of nonlinear neutral delay differential equations of second-order with positive and negative coefficients**  
 Yildiz M. K., KARPUZ B., Ocalan O.  
 TURKISH JOURNAL OF MATHEMATICS, vol.33, no.4, pp.341-350, 2009 (SCI-Expanded)
- XXXII. Existence of positive solutions for a neutral differential equation with positive and negative coefficients**  
 Ocalan O.  
 APPLIED MATHEMATICS LETTERS, vol.22, no.1, pp.84-90, 2009 (SCI-Expanded)
- XXXIII. Iterated Oscillation Criteria for Delay Dynamic Equations of First Order**  
 BOHNER M., KARPUZ B., Ocalan O.  
 ADVANCES IN DIFFERENCE EQUATIONS, vol.2008, 2008 (SCI-Expanded)
- XXXIV. ON THE OSCILLATION OF NONLINEAR NEUTRAL DIFFERENTIAL EQUATION WITH POSITIVE AND NEGATIVE COEFFICIENTS**  
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- XXXV. Oscillation of forced neutral differential equations with positive and negative coefficients**  
 Ocalan O.  
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- XXXVI. Oscillation of neutral differential equation with positive and negative coefficients**

- Ocalan O.  
JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS, vol.331, no.1, pp.644-654, 2007 (SCI-Expanded)
- XXXVII. **Oscillation results for higher order nonlinear neutral delay difference equations**  
YILDIZ M. K., Ocalan O.  
APPLIED MATHEMATICS LETTERS, vol.20, no.3, pp.243-247, 2007 (SCI-Expanded)
- XXXVIII. **Oscillation of difference equations with variable coefficients**  
ÖCALAN Ö.  
Portugaliae Mathematica, vol.63, no.4, pp.407-414, 2006 (SCI-Expanded)
- XXXIX. **Oscillations of higher-order of systems of difference equations**  
Ocalan O., AKIN O.  
INDIAN JOURNAL OF PURE & APPLIED MATHEMATICS, vol.36, no.7, pp.349-360, 2005 (SCI-Expanded)
- XL. **Oscillations of the system of linear nonautonomous difference equations**  
Ocalan O., AKIN O.  
JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS, vol.283, no.1, pp.213-218, 2003 (SCI-Expanded)

### Articles Published in Other Journals

- I. **Sufficient oscillation conditions for dynamic equations with nonmonotone delays**  
ÖCALAN Ö., KILIÇ N.  
Journal of Applied Mathematics and Informatics, vol.40, pp.843-856, 2022 (Scopus)
- II. **An improvement for oscillation of first order difference equations**  
ÖCALAN Ö.  
Palestine Journal of Mathematics, vol.11, no.3, pp.455-461, 2022 (Scopus)
- III. **OSCILLATION RESULTS FOR SYSTEM OF DIFFERENTIAL EQUATIONS WITH SEVERAL DELAY TERMS**  
ÖCALAN Ö.  
Electronic Journal of Mathematical Analysis and Applications, vol.9, no.2, pp.99-105, 2021 (Peer-Reviewed Journal)
- IV. **Oscillation Tests For Nonlinear Differential Equations With Several Nonmonotone Advanced Arguments**  
Kilic N., ÖCALAN Ö., ÖZKAN U. M.  
APPLIED MATHEMATICS E-NOTES, vol.21, pp.253-262, 2021 (ESCI)
- V. **Oscillatory behavior for nonlinear delay differential equation with several non-monotone arguments**  
ÖCALAN Ö., Kilic N., Ozkan U. M., Ozturk S.  
COMPUTATIONAL METHODS FOR DIFFERENTIAL EQUATIONS, vol.8, no.1, pp.14-27, 2020 (ESCI)
- VI. **Oscillation Criteria for Difference Equations with Several Arguments**  
Kiliç N., ÖCALAN Ö.  
INTERNATIONAL JOURNAL OF DIFFERENCE EQUATIONS, vol.15, no.1, pp.109-119, 2020 (Scopus)
- VII. **Oscillation analysis for higher order difference equation with non-monotone arguments**  
ÖCALAN Ö., ÖZKAN U. M.  
Journal Of Computational Analysis And Applications, vol.27, pp.781-789, 2019 (Scopus)
- VIII. **On solutions of the recursive equations  $x_{\{n\}}=x_{\{n-1\}}\{p\}/x_{\{n\}}\{p\}$  ( $p_0$ ) via Fibonacci-type sequences**  
ÖCALAN Ö., DUMAN O.  
Electron. J. Math. Anal. Appl., vol.7, no.1, pp.102-115, 2019 (Peer-Reviewed Journal)
- IX. **OSCILLATORY BEHAVIOR OF NONLINEAR ADVANCED DIFFERENTIAL EQUATIONS WITH A NON-MONOTONE ARGUMENT**  
Ocalan O., Kilic N., Ozkan U. M.  
ACTA MATHEMATICA UNIVERSITATIS COMENIANAE, vol.88, no.2, pp.239-246, 2019 (ESCI)
- X. **OSCILLATION CRITERIA FOR DELAY DYNAMIC EQUATIONS ON TIME SCALES**  
ÖCALAN Ö., ÖZTÜRK S.  
Electronic Journal of Mathematical Analysis and Applications, vol.6, no.2, pp.51-59, 2018 (Peer-Reviewed Journal)

- XI. **THE QUALITATIVE ANALYSIS OF A RATIONAL SYSTEM OF DIFFERENCE EQUATIONS**  
 GÜMÜŞ M., ÖCALAN Ö.  
*Journal of Fractional Calculus and Applications*, vol.9, no.2, pp.113-126, 2018 (Peer-Reviewed Journal)
- XII. **Oscillation of Nonlinear Delay Differential Equation with Non-Monotone Arguments**  
 ÖCALAN Ö., KILIÇ N., ÖZTÜRK S., ÖZKAN U. M.  
*INTERNATIONAL JOURNAL OF ANALYSIS AND APPLICATIONS*, vol.14, no.2, pp.147-154, 2017 (ESCI)
- XIII. **Dynamical Behavior of a Third-Order Difference Equation with Arbitrary Powers**  
 GUMUS M., ABO-ZEID R., ÖCALAN Ö.  
*KYUNGPOOK MATHEMATICAL JOURNAL*, vol.57, no.2, pp.251-263, 2017 (ESCI)
- XIV. **Global analysis of a non autonomous difference equation with bounded coefficient**  
 ÖCALAN Ö., GÜMÜŞ M.  
*Electron. J. Math. Anal. Appl.*, vol.4, no.1, pp.184-191, 2016 (Peer-Reviewed Journal)
- XV. **Oscillations of dynamic equations on time scales with advanced arguments**  
 ÖCALAN Ö., Ozkan U. M.  
*INTERNATIONAL JOURNAL OF DYNAMICAL SYSTEMS AND DIFFERENTIAL EQUATIONS*, vol.6, no.4, pp.275-284, 2016 (ESCI)
- XVI. **Oscillations for differential equations with several deviating arguments**  
 CHATZARAKIS G. E., ÖCALAN Ö., ÖZTÜRK S.  
*Pacific Journal of Applied Mathematics*, vol.7, pp.119-131, 2015 (Peer-Reviewed Journal)
- XVII. **Iterated oscillation criteria for delay partial difference equations**  
 KARPUZ B., ÖCALAN Ö.  
*MATHEMATICA BOHEMICA*, vol.139, no.3, pp.437-450, 2014 (Scopus)
- XVIII. **Global behavior test for a nonlinear difference equation with a period-two coefficient**  
 ÖCALAN Ö., ÖĞÜNMEZ H., GÜMÜŞ M.  
*Dyn. Contin. Discrete Impuls. Syst. Ser. A Math. Anal.*, vol.21, no.3-4, pp.307-316, 2014 (Peer-Reviewed Journal)
- XIX. **Global dynamics of a non autonomous rational difference equation**  
 ÖCALAN Ö.  
*JOURNAL OF APPLIED MATHEMATICS & INFORMATICS*, vol.32, no.5-6, pp.843-848, 2014 (Peer-Reviewed Journal)
- XX. **Oscillation of delay dynamic equations with oscillating coefficients**  
 KARPUZ B., ÖCALAN Ö.  
*Differential Equations & Applications*, vol.5, no.3, pp.331-339, 2013 (ESCI)
- XXI. **Oscillation of Higher Order Systems of Differential Equations**  
 ÖĞÜNMEZ H., ÖCALAN Ö.  
*International Journal of Mathematical Analysis*, vol.7, no.15, pp.735-740, 2013 (Peer-Reviewed Journal)
- XXII. **Oscillation Results for Odd Order Difference Equations**  
 ÖĞÜNMEZ H., ÖCALAN Ö.  
*Global Journal of Pure and Applied Mathematics*, vol.9, pp.205-214, 2013 (Peer-Reviewed Journal)
- XXIII. **New Oscillation Criteria for System of Difference Equations**  
 ÖĞÜNMEZ H., ÖCALAN Ö.  
*Far East Journal of Mathematical Sciences*, vol.72, no.1, pp.109-116, 2013 (Peer-Reviewed Journal)
- XXIV. **Oscillation of difference equations with several positive and negative coefficients**  
 ÖĞÜNMEZ H., ÖCALAN Ö.  
*Fasciculi Mathematici*, vol.51, pp.115-122, 2013 (Peer-Reviewed Journal)
- XXV. **Oscillation of neutral differential equations with distributed deviating arguments**  
 CANDAN T., KARPUZ B., ÖCALAN Ö.  
*Journal of Mathematical Sciences*, vol.187, no.4, pp.444-457, 2012 (Scopus)
- XXVI. **Oscillation criteria for a class of first order forced differential equations under impulse effects**  
 KARPUZ B., ÖCALAN Ö.  
*Advances in Dynamical Systems and Applications*, vol.7, pp.205-218, 2012 (Scopus)
- XXVII. **Asymptotic behavior of a higher order recursive sequence**  
 ÖCALAN Ö.

- Int. J. Difference Equ., vol.7, no.2, pp.175-180, 2012 (Scopus)
- XXVIII. Oscillation and nonoscillation in neutral delay dynamic equations with positive and negative coefficients**  
 KARPUZ B., ÖCALAN Ö.  
 Communications in Applied Analysis, vol.16, pp.113-129, 2012 (Peer-Reviewed Journal)
- XXIX. Oscillation results of higher order nonlinear neutral delay differential equations**  
 YILDIZ M. K., ÖCALAN Ö.  
 SELÇUK JOURNAL OF APPLIED MATHEMATICS, vol.11, pp.55-62, 2010 (Peer-Reviewed Journal)
- XXX. A generalization of Opial's inequality and applications to second order dynamic equations**  
 KARPUZ B., KAYMAKÇALAN B., ÖCALAN Ö.  
 Differential Equations and Dynamical Systems, vol.18, pp.11-18, 2010 (Scopus)
- XXXI. Linearized oscillation of nonlinear difference equations with advanced arguments**  
 ÖCALAN Ö.  
 Archivum Mathematicum, vol.45, no.3, pp.203-212, 2009 (Scopus)
- XXXII. Oscillation for higher order sublinear delay difference equation**  
 YILDIZ M. K., ÖCALAN Ö.  
 Applied Mathematics E-Notes, vol.9, pp.63-71, 2009 (Scopus)
- XXXIII. Oscillation criteria for some classes of linear delay differential equations of first order**  
 KARPUZ B., ÖCALAN Ö.  
 Bull. Inst. Math. Acad. Sin. (N.S.), vol.3, pp.293-314, 2008 (Peer-Reviewed Journal)
- XXXIV. Discrete approach on oscillation of difference equations with continuous variable**  
 KARPUZ B., ÖCALAN Ö.  
 Advances in Dynamical Systems and Applications, vol.3, pp.283-290, 2008 (Scopus)
- XXXV. Oscillation of higher order of system of difference equations with continuous arguments**  
 ÖCALAN Ö., ÖZKAN U. M.  
 Selçuk J. Appl. Math., vol.9, no.1, pp.23-29, 2008 (Peer-Reviewed Journal)
- XXXVI. Oscillation of nonlinear difference equations with several coefficients**  
 ÖCALAN Ö.  
 Commun. Math. Anal., vol.4, no.1, pp.35-44, 2008 (Peer-Reviewed Journal)
- XXXVII. Oscillation properties for advanced difference equations**  
 ÖCALAN Ö., AKIN Ö.  
 Novi Sad Journal of Mathematics, vol.37, no.1, pp.39-47, 2007 (Scopus)
- XXXVIII. Oscillation criteria for systems of difference equations with variable coefficients**  
 ÖCALAN Ö.  
 Appl. Math. E-Notes, vol.6, no.2006, pp.119-125, 2006 (Scopus)
- XXXIX. Oscillations of difference equations with several terms**  
 ÖCALAN Ö.  
 KYUNGPOOK MATHEMATICAL JOURNAL, vol.46, no.4, pp.573-580, 2006 (ESCI)

## Metrics

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