

# Prof. ÖZKAN ÖCALAN

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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. **An improved oscillation theorem for nonlinear delay differential equations**  
Kılıç N., ÖCALAN Ö., Yıldız M. K.  
Applied Mathematics and Computation, vol.478, 2024 (SCI-Expanded)
- II. **A NEW OSCILLATION RESULT FOR NONLINEAR DIFFERENTIAL EQUATIONS WITH NONMONOTONE DELAY**  
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Miskolc Mathematical Notes, vol.24, no.2, pp.841-851, 2023 (SCI-Expanded)
- III. **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)
- IV. **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)
- V. **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)

- VI. **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)
- VII. **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)
- VIII. **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)
- IX. **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)
- X. **An improved oscillation criterion for first order difference equations**  
ÖCALAN Ö.  
BULLETIN MATHEMATIQUE DE LA SOCIÉTÉ DES SCIENCES MATHÉMATIQUES DE ROUMANIE, vol.59, no.1, pp.65-73, 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. **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)
- XIII. **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)
- XIV. **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)
- XV. **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)
- XVI. **Dynamics of the difference equation  $x(n+1) = p(n) + x_n - kx(n)$  with a period-two coefficient**  
Ocalan O.  
APPLIED MATHEMATICS AND COMPUTATION, vol.228, pp.31-37, 2014 (SCI-Expanded)
- XVII. **Global Asymptotic Stability of a Nonautonomous Difference Equation**  
Gumus M., Ocalan O.  
JOURNAL OF APPLIED MATHEMATICS, vol.2014, 2014 (SCI-Expanded)
- XVIII. **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)
- XIX. **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)
- XX. **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)
- XXI. **Oscillation of first-order impulsive difference equations with continuous arguments**  
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JOURNAL OF COMPUTATIONAL ANALYSIS AND APPLICATIONS, vol.12, no.2, pp.539-543, 2010 (SCI-Expanded)

- XXII. **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)
- XXIII. **COMPARISON THEOREMS ON THE OSCILLATION AND ASYMPTOTIC BEHAVIOUR OF HIGHER-ORDER NEUTRAL DIFFERENTIAL EQUATIONS**  
KARPUZ B., Ocalan O., Ozturk S.  
GLASGOW MATHEMATICAL JOURNAL, vol.52, pp.107-114, 2010 (SCI-Expanded)
- XXIV. **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)
- XXV. **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)
- XXVI. **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)
- XXVII. **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)
- XXVIII. **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)
- XXIX. **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)
- XXX. **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)
- XXXI. **Oscillation of higher-order nonlinear delay differential equations with oscillatory coefficients**  
KARPUZ B., Ocalan O., Yildiz M. K.  
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- XXXII. **Oscillation of nonlinear neutral delay differential equations of second-order with positive and negative coefficients**  
Yildiz M. K., KARPUZ B., Ocalan O.  
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- XXXIII. **Oscillation analysis of neutral difference equations with delays**  
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- XXXIV. **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)
- XXXV. **ON THE OSCILLATION OF NONLINEAR NEUTRAL DIFFERENTIAL EQUATION WITH POSITIVE AND NEGATIVE COEFFICIENTS**  
Ocalan O., Yildiz M. K., KARPUZ B.  
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- XXXVI. **Oscillation of forced neutral differential equations with positive and negative coefficients**

- Ocalan O.  
COMPUTERS & MATHEMATICS WITH APPLICATIONS, vol.54, no.11-12, pp.1411-1421, 2007 (SCI-Expanded)
- XXXVII. **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)
- XXXVIII. **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)
- XXXIX. **Oscillation of difference equations with variable coefficients**  
ÖCALAN Ö.  
Portugaliae Mathematica, vol.63, no.4, pp.407-414, 2006 (SCI-Expanded)
- XL. **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)
- XLI. **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. **AN IMPROVED OSCILLATION THEOREM FOR NONLINEAR DIFFERENTIAL EQUATIONS OF ADVANCED TYPE**  
Kiliç N., ÖCALAN Ö., Yildiz M. K.  
Archivum Mathematicum, vol.60, no.3, pp.145-152, 2024 (ESCI)
- II. **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)
- III. **An improvement for oscillation of first order difference equations**  
ÖCALAN Ö.  
Palestine Journal of Mathematics, vol.11, no.3, pp.455-461, 2022 (Scopus)
- IV. **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)
- V. **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)
- VI. **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)
- VII. **Oscillation Criteria for Difference Equations with Several Arguments**  
Kılıç N., ÖCALAN Ö.  
INTERNATIONAL JOURNAL OF DIFFERENCE EQUATIONS, vol.15, no.1, pp.109-119, 2020 (Scopus)
- VIII. **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)
- IX. **On solutions of the recursive equations  $x_{n1}=x_{n-1}\{p\}/x_n\{p\}$  ( $p_0$ ) via Fibonacci-type sequences**  
ÖCALAN Ö., DUMAN O.  
Electron. J. Math. Anal. Appl., vol.7, no.1, pp.102-115, 2019 (Peer-Reviewed Journal)

- X. **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)
- 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 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)
- XIII. **Oscillation of Nonlinear Delay Differential Equation with Non-Monotone Arguments**  
ÖCALAN Ö., Kılıç N., ÖZTÜRK S., ÖZKAN U. M.  
INTERNATIONAL JOURNAL OF ANALYSIS AND APPLICATIONS, vol.14, no.2, pp.147-154, 2017 (ESCI)
- XIV. **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)
- 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. **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)
- XVII. **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)
- XVIII. **Iterated oscillation criteria for delay partial difference equations**  
KARPUZ B., ÖCALAN Ö.  
MATHEMATICA BOHEMICA, vol.139, no.3, pp.437-450, 2014 (Scopus)
- XIX. **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)
- XX. **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)
- XXI. **Oscillation of delay dynamic equations with oscillating coefficients**  
KARPUZ B., ÖCALAN Ö.  
Differential Equations & Applications, vol.5, no.3, pp.331-339, 2013 (ESCI)
- XXII. **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)
- XXIII. **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)
- XXIV. **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)
- XXV. **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)
- XXVI. **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)
- XXVII. **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)
- XXVIII. **Asymptotic behavior of a higher order recursive sequence**  
ÖCALAN Ö.  
Int. J. Difference Equ., vol.7, no.2, pp.175-180, 2012 (Scopus)
- XXIX. **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)
- XXX. **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)
- XXXI. **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)
- XXXII. **Linearized oscillation of nonlinear difference equations with advanced arguments**  
ÖCALAN Ö.  
Archivum Mathematicum, vol.45, no.3, pp.203-212, 2009 (Scopus)
- XXXIII. **Oscillation for higher order sublinear delay difference equation**  
YILDIZ M. K., ÖCALAN Ö.  
Applied Mathematics E-Notes, vol.9, pp.63-71, 2009 (Scopus)
- XXXIV. **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)
- XXXV. **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)
- XXXVI. **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)
- XXXVII. **Oscillation of nonlinear difference equations with several coefficients**  
ÖCALAN Ö.  
Commun. Math. Anal., vol.4, no.1, pp.35-44, 2008 (Peer-Reviewed Journal)
- XXXVIII. **Oscillation properties for advanced difference equations**  
ÖCALAN Ö., AKIN Ö.  
Novi Sad Journal of Mathematics, vol.37, no.1, pp.39-47, 2007 (Scopus)
- XXXIX. **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)
- XL. **Oscillations of difference equations with several terms**  
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## Metrics

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