

# Prof. Sezgin AKBULUT

## Personal Information

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## International Researcher IDs

ScholarID: ToH5voAAAAJ

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Yoksis Researcher ID: 1163

## Education Information

Doctorate, Ataturk University, Fen Bilimleri Enstitüsü, Matematik, Turkey 1991 - 1994

Postgraduate, Ataturk University, Fen Bilimleri Enstitüsü, Matematik, Turkey 1988 - 1991

Undergraduate, Ataturk University, Fen Fakültesi, Matematik, Turkey 1984 - 1988

## Foreign Languages

English, B2 Upper Intermediate

## Dissertations

Doctorate, Konform Tasvir ve Cebirsel Karakterizasyon, Atatürk Üniversitesi, Fen Bilimleri, Matematik, 1994

Postgraduate, Doğrusal Denklem Sistemlerinin Çözümü için Etkin Bir Algoritma, Atatürk Üniversitesi, Fen Bilimleri, Matematik, 1991

## Research Areas

Mathematics, Functional Analysis, Natural Sciences

## Academic Titles / Tasks

Professor, Ataturk University, Fen Fakültesi, Matematik, 2011 - Continues

Associate Professor, Ataturk University, Fen Fakültesi, Matematik, 2006 - 2011

Assistant Professor, Ataturk University, Fen Fakültesi, Matematik, 1995 - 2006

Research Assistant, Ataturk University, Fen Fakültesi, Matematik, 1989 - 1995

## Academic and Administrative Experience

Member of the Senate, Ataturk University, Fen Fakültesi, Matematik, 2016 - 2019

Director of Vocational School, Bayburt University, School Of Physical Education And Sports, 2013 - 2016

Dean, Bayburt University, Bayburt Faculty Of Education, 2015 - 2015

Bayburt Üniversitesi, 2014 - 2015

Fakülte Yönetim Kurulu Üyesi, Bayburt University, Bayburt Faculty Of Education, 2014 - 2015

Fakülte Yönetim Kurulu Üyesi, Bayburt University, Faculty Of Engineering, 2014 - 2015

Bayburt Üniversitesi, 2013 - 2015

Bayburt Üniversitesi, 2013 - 2015

University Executive Board Member, Bayburt University, 2013 - 2015

Üniversitelerarası Kurul, Bayburt Üniversitesi, 2013 - 2015

Dean, Bayburt University, Faculty Of Economics And Administrative Sciences, 2013 - 2013

## Courses

Matematik-II İ.Ö., Undergraduate, 2023 - 2024

Reel Analiz, Undergraduate, 2023 - 2024

Matematik-II D, Undergraduate, 2023 - 2024

Analiz-II (Fizik), Undergraduate, 2023 - 2024

İleri Analiz-I, Postgraduate, 2023 - 2024

Diferansiyel Denklemler, Undergraduate, 2023 - 2024

Matematik-I D, Undergraduate, 2023 - 2024

Analiz-I, Undergraduate, 2023 - 2024

Fonksiyonel Analiz, Undergraduate, 2023 - 2024

Analiz-I, Undergraduate, 2022 - 2023

Advanced Functional Analysis-I, Doctorate, 2021 - 2022

ANALİZ-II, Undergraduate, 2021 - 2022

İleri Fonksiyonel Analiz-II, Undergraduate, 2022 - 2023

Diferansiyel Denklemler, Undergraduate, 2022 - 2023

ANALİZ-II, Undergraduate, 2021 - 2022

Analiz-I, Undergraduate, 2022 - 2023

Fixed Point Theory-I, Postgraduate, 2021 - 2022

Matematik-II, Undergraduate, 2021 - 2022

Analysis-I, Undergraduate, 2021 - 2022

Analiz-I, Undergraduate, 2021 - 2022

## Advising Theses

Akbulut S.,  $p(\cdot)$ -laplacian içeren eliptik tip standart olmayan büyüme koşullu problemlerin çözümlerinin araştırılması,

Doctorate, E.AKKOYUNLU(Student), 2020

Akbulut S., S-Godunova-Levin fonksiyonu ve integral eşitsizlikleri, Postgraduate, L.YOLCU(Student), 2018

Akbulut S., Hiperbolik uzaylarda bazı dönüşüm sınıfları için yeni sabit nokta yaklaşım metotları, Doctorate,

O.ALAGÖZ(Student), 2018

Akbulut S., Gradient içeren  $p(x)$  Laplacian denklemi için Dirichlet probleminin Mountain Pass ve iterasyon teknikleri ile çözümü, Postgraduate, E.AKKOYUNLU(Student), 2017

Akbulut S., Hiperbolik Uzaylarda Özel Dönüşüm Sınıflarının Ortak Sabit Noktalarına İterativ Yaklaşımlar, Doctorate,

B.Gündüz(Student), 2014

Akbulut S., Üzerine Olmayan Asimptotik Genişlemeyen Üç Dönüşüm İçin Yeni Bir Yaklaşım Metodu, Postgraduate,

E.Diyarbakırlı(Student), 2012

Akbulut S., Total Asimptotik I-Genişlemeyen Dönüşümler İçin Yeni Yaklaşım Metotları, Postgraduate, B.Gündüz(Student), 2011

AKBULUT S., Zamfrescu Operatörlerinin Sınıfında Bazı İterasyon Yöntemlerinin Yakınsama Hızları, Postgraduate,

M.Kaplan(Student), 2009

AKBULUT S., Genişlemeyen Dönüşümlerin Sabit Noktalarının İterasyon Metotlarıyla Elde Edilmesi, Doctorate, H.Kızıltunç(Student), 2007  
AKBULUT S., Ünivalent Fonksiyonların Logaritmik Katsayıları, Postgraduate, H.Kızıltunç(Student), 2002

## Jury Memberships

Associate Professor Exam, Associate Professor Exam, Atatürk Üniversitesi, November, 2022  
Associate Professor Exam, Associate Professor Exam, Ataturk University, June, 2022

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

- I. **Existence and multiplicity of solutions for  $p(\cdot)$ -Kirchhoff-type equations**  
Ayazoğlu R., AKBULUT S., AKKOYUNLU E.  
TURKISH JOURNAL OF MATHEMATICS, vol.46, no.4, pp.1342-1359, 2022 (SCI-Expanded)
- II. **Existence of multiple solutions of Schrodinger-Kirchhoff-type equations involving the  $p(\cdot)$  -Laplacian in  $R-N$**   
AYAZOĞLU R., AKBULUT S., AKKOYUNLU E.  
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.43, no.17, pp.9598-9614, 2020 (SCI-Expanded)
- III. **Uniform Boundedness of Kantorovich Operators in Variable Exponent Lebesgue Spaces**  
AYAZOĞLU R., AKBULUT S., AKKOYUNLU E.  
FILOMAT, vol.33, no.18, pp.5755-5765, 2019 (SCI-Expanded)
- IV. **FIXED POINT OF CONTINUOUS MAPPINGS DEFINED ON AN ARBITRARY INTERVAL**  
ALAGÖZ O., Gunduz B., AKBULUT S.  
MISKOLC MATHEMATICAL NOTES, vol.20, no.2, pp.719-728, 2019 (SCI-Expanded)
- V. **A One-Step-Two-Mappings Iterative Scheme for Multi-Valued Maps in  $W$ -Hyperbolic Spaces**  
Gunduz B., AKBULUT S.  
FILOMAT, vol.32, no.4, pp.1403-1411, 2018 (SCI-Expanded)
- VI. **Convergence Theorems of a Faster Iteration Process Including Multivalued Mappings with Analytical and Numerical Examples**  
GÜNDÜZ B., ALAGÖZ O., AKBULUT S.  
FILOMAT, vol.32, no.16, pp.5665-5677, 2018 (SCI-Expanded)
- VII. **Convergence Theorems for a Finite Family of  $I$ -asymptotically Nonexpansive Mappings in Banach Spaces**  
GÜNDÜZ B., AKBULUT S.  
Chiang Mai Journal Of Science, vol.44, pp.1144-1153, 2017 (SCI-Expanded)
- VIII. **Convergence theorems for a family of multivalued nonexpansive mappings in hyperbolic spaces**  
Alagoz O., Gunduz B., AKBULUT S.  
OPEN MATHEMATICS, vol.14, pp.1065-1073, 2016 (SCI-Expanded)
- IX. **A one-step implicit iterative process for a finite family of  $I$ -nonexpansive mappings in Kohlenbach hyperbolic spaces**  
Gunduz B., AKBULUT S.  
MATHEMATICAL SCIENCES, vol.10, pp.55-61, 2016 (SCI-Expanded)
- X. **Solving nonlinear  $\phi$ -strongly accretive operator equations by a one-step-two-mappings iterative scheme**  
Khan S. H., Gunduz B., AKBULUT S.  
JOURNAL OF NONLINEAR SCIENCES AND APPLICATIONS, vol.8, no.5, pp.837-846, 2015 (SCI-Expanded)
- XI. **On convergence of an implicit iterative algorithm for non self asymptotically non expansive mappings**  
GÜNDÜZ B., Khan S. H., AKBULUT S.

- HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.43, no.3, pp.399-411, 2014 (SCI-Expanded)
- XII. **STRONG CONVERGENCE OF AN EXPLICIT ITERATION PROCESS FOR A FINITE FAMILY OF ASYMPTOTICALLY QUASI-NONEXPANSIVE MAPPINGS IN CONVEX METRIC SPACES**  
Gunduz B., AKBULUT S.  
MISKOLC MATHEMATICAL NOTES, vol.14, no.3, pp.905-913, 2013 (SCI-Expanded)
- XIII. **STRONG AND Delta-CONVERGENCE THEOREMS IN HYPERBOLIC SPACES**  
GÜNDÜZ B., AKBULUT S.  
MISKOLC MATHEMATICAL NOTES, vol.14, no.3, pp.915-925, 2013 (SCI-Expanded)
- XIV. **Picard Iteration Converges faster than Noor Iteration for a Class of Quasi-Contractive Operators**  
AKBULUT S., ÖZDEMİR M.  
CHIANG MAI JOURNAL OF SCIENCE, vol.39, no.4, pp.688-692, 2012 (SCI-Expanded)
- XV. **An iteration process for common fixed points of two nonself asymptotically nonexpansive mappings**  
AKBULUT S., Khan S. H., ÖZDEMİR M.  
ANALELE STIINTIFICE ALE UNIVERSITATII OVIDIUS CONSTANTA-SERIA MATEMATICA, vol.20, no.1, pp.15-30, 2012 (SCI-Expanded)
- XVI. **COMMON FIXED POINTS FOR TWO NONEXPANSIVE NONSELF-MAPPINGS WITH ERRORS IN BANACH SPACES**  
KIZILTUNÇ H., ÖZDEMİR M., AKBULUT S.  
ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, vol.35, pp.215-224, 2010 (SCI-Expanded)
- XVII. **Convergence Theorems on a New Iteration Process for Two Asymptotically Nonexpansive Nonself-Mappings with Errors in Banach Spaces**  
ÖZDEMİR M., AKBULUT S., KIZILTUNÇ H.  
DISCRETE DYNAMICS IN NATURE AND SOCIETY, 2010 (SCI-Expanded)
- XVIII. **On Common Fixed Points of Two Non self Nonexpansive Mappings in Banach Spaces**  
KIZILTUNÇ H., ÖZDEMİR M., AKBULUT S.  
Chiang Mai Journal Of Science, vol.34, pp.281-288, 2007 (SCI-Expanded)
- XIX. **A fixed point theorem for multivalued maps in hyperconvex spaces**  
Ozdemir M., Akbulut S.  
APPLIED MATHEMATICS AND COMPUTATION, vol.157, no.3, pp.637-642, 2004 (SCI-Expanded)
- XX. **On the subclass of p-valently functions**  
AKBULUT S., KADIOĞLU E., ÖZDEMİR M.  
Applied Mathematics and Computation, vol.147, no.1, pp.89-96, 2004 (SCI-Expanded)
- XXI. **On a subclass of certain convex functions with negative coefficients**  
KAMALI M., AKBULUT S.  
Applied Mathematics and Computation, vol.145, pp.341-350, 2003 (SCI-Expanded)
- XXII. **Diagonal Lift in the Cotangent Bundle and its Applications**  
AKBULUT S., ÖZDEMİR M., SALİMOV A. A.  
Turkish Journal Of Mathematics, vol.25, pp.491-502, 2001 (SCI-Expanded)

### Articles Published in Other Journals

- I. **Convergence Theorems with a Faster Iteration Process for Suzuki's Generalized Non-expansive Mapping with Numerical Examples**  
ALAGÖZ O., GÜNDÜZ B., AKBULUT S.  
Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.13, pp.162-174, 2020 (Peer-Reviewed Journal)
- II. **Doç. Dr. Birol GÜNDÜZ\2019ün Hayatı ve Bilim Dünyasına Katkıları (1986-2019)**  
Akbulut S.  
Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.13, pp.1-6, 2020 (Peer-Reviewed Journal)
- III. **ON THE SUB-SUPERSOLUTION PRINCIPLE FOR  $p(x)$ -LAPLACIAN EQUATIONS**  
AYAZOĞLU R., AKBULUT S., AKKOYUNLU E.

- Gulf Journal of Mathematics, vol.6, pp.78-90, 2018 (Peer-Reviewed Journal)
- IV. **NUMERICAL RECKONING FIXED POINTS FOR BERINDEMAPPINGS VIA A FASTER ITERATION PROCESS**  
ALAGÖZ O., GÜNDÜZ B., AKBULUT S.  
Facta Universitatis, Series: Mathematics and Informatics, vol.33, pp.295-305, 2018 (ESCI)
- V. **STANDART OLMAYAN BÜYÜME KOŞULLU DENKLEMLERİN MÜHENDİSLİKTEKİ UYGULAMALARI**  
AYAZOĞLU R., AKBULUT S., AKKOYUNLU E.  
Engineering Sciences, vol.13, pp.167-179, 2018 (Peer-Reviewed Journal)
- VI. **Common Fixed Points of a Finite Family of I-Asymptotically Nonexpansive Mappings by S-Iteration Process in Banach Spaces**  
GÜNDÜZ B., AKBULUT S.  
THAI JOURNAL OF MATHEMATICS, vol.15, pp.673-687, 2017 (Scopus)
- VII. **SOLUTIONS FOR THE P(X)-LAPLACIAN WITH DEPENDENCE ON THE GRADIENT**  
AYAZOĞLU R., AKBULUT S., AKKOYUNLU E.  
Acta Universitatis Apulensis, vol.52, pp.71-88, 2017 (Peer-Reviewed Journal)
- VIII. **ON THE CONVERGENCE OF AN ITERATION PROCESS FOR TOTALLY ASYMPTOTICALLY I NONEXPANSIVE MAPPINGS**  
GÜNDÜZ B., AKBULUT S.  
Journal of Nonlinear Analysis and Optimization, vol.7, pp.17-30, 2016 (Peer-Reviewed Journal)
- IX. **Convergence Theorems of a New Three-Step Iteration for Nonself Asymptotically Nonexpansive Mappings**  
GÜNDÜZ B., AKBULUT S.  
THAI JOURNAL OF MATHEMATICS, vol.13, no.2, pp.465-480, 2015 (ESCI)
- X. **On Weak and Strong Convergence Theorems for a Finite Family of Nonself I asymptotically Nonexpansive Mappings**  
GÜNDÜZ B., AKBULUT S.  
Mathematica Moravica, vol.19, pp.49-64, 2015 (Peer-Reviewed Journal)
- XI. **STRONG AND CONVERGENCE OF A FASTER ITERATION PROCESS IN HYPERBOLIC SPACE**  
AKBULUT S., GÜNDÜZ B.  
Commun. Korean Math. Soc., vol.30, pp.209-219, 2015 (Peer-Reviewed Journal)
- XII. **STRONG AND Delta-CONVERGENCE OF A FASTER ITERATION PROCESS IN HYPERBOLIC SPACE**  
AKBULUT S., Gunduz B.  
COMMUNICATIONS OF THE KOREAN MATHEMATICAL SOCIETY, vol.30, no.3, pp.209-219, 2015 (ESCI)
- XIII. **COMMON FIXED POINTS OF TWO FINITE FAMILIES OF NONEXPANSIVE MAPPINGS IN KOHLENBACH HYPERBOLIC SPACES**  
GÜNDÜZ B., Khan S. H., AKBULUT S.  
JOURNAL OF NONLINEAR FUNCTIONAL ANALYSIS, 2015 (ESCI)
- XIV. **Some common fixed point results for nonself asymptotically quasi nonexpansive mappings by a two step iterative process**  
KHAN S. H., ÖZDEMİR M., AKBULUT S.  
Indian Journal of Mathematics Special Volume Dedicated to Professor Billy E. Rhoades, vol.56, pp.169-188, 2014 (Peer-Reviewed Journal)
- XV. **A New Two Step Iterative Process with Errors for Common Fixed Points in Banach Spaces**  
TÜRKMEN E., ÖZDEMİR M., AKBULUT S.  
Selçuk Journal of Applied Mathematics, vol.12, pp.3-19, 2011 (Peer-Reviewed Journal)
- XVI. **Some Subclasses of Close to Convex and Quasi Convex Functions with Respect to k Symmetric Points**  
WANG Z. G., CHUN Y. G., ORHAN H., AKBULUT S.  
General Mathematics, vol.15, pp.107-119, 2007 (Peer-Reviewed Journal)
- XVII. **On the Equivalence of Some Fixed Point Iterations**  
ÖZDEMİR M., AKBULUT S.  
Kyungpook Math. J., vol.46, pp.211-217, 2006 (Peer-Reviewed Journal)
- XVIII. **A Majorization Problem for the Subclass of p Valently Analytic Functions of Complex Order**

- AKBULUT S.  
Australian Jour. of Math. Analysis and App., vol.1, pp.1-5, 2004 (Peer-Reviewed Journal)
- XIX. **Some Fractional Calculus for the Subclass of Starlike Functions with Negative Coefficients**  
AKBULUT S.  
Chiang Mai J., vol.31, pp.197-203, 2004 (Peer-Reviewed Journal)
- XX. **On the Generalized Whitney Sum of the Sheaves of the Fundamental Groups**  
ÖZDEMİR M., AKBULUT S.  
Int. Jour. of Applied Math, vol.7, pp.91-99, 2001 (Peer-Reviewed Journal)
- XXI. **the Characterization of the Lune Domains**  
AKBULUT S., BAYRAKTAR M.  
Commun. Fac. Sci. Univ. Ank., vol.48, pp.33-37, 1999 (Peer-Reviewed Journal)
- XXII. **On the Subsheaves of the Sheaf of the Homology Groups**  
ÖZDEMİR M., AKBULUT S.  
J. Indian.Aced. Math., vol.19, pp.99-107, 1997 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Türev**  
AKBULUT S.  
in: Matematik 1, Halit ORHAN, Editor, Atatürk Üniversitesi Açık Öğretim Fakültesi, 2016
- II. **Limit ve Süreklilik**  
AKBULUT S.  
in: Matematik I, Halit ORHAN, Editor, Atatürk Üniversitesi Açık Öğretim Fakültesi, 2016

## Refereed Congress / Symposium Publications in Proceedings

- I. **Comparing Convergence Rate of  $\aleph$ -Iteration with Some Faster Iteration Processes**  
ALAGÖZ O., GÜNDÜZ B., AKBULUT S.  
INTERNATIONAL CONFERENCE ON MATHEMATICAL ADVANCES AND ITS APPLICATIONS, İstanbul, Turkey, 11 - 13 May 2018
- II. **Meslek Yüksekokullarında Matematik Eğitimi ve Matematik Ders İçeriklerinin Öğrenme Yeterliliklerine Etkilerinin İncelenmesi**  
AKKOYUNLU E., AYAZOĞLU R., AKBULUT S.  
ICQH 2017, 7 - 08 December 2017
- III. **Matematiğin Günlük Hayatta Kullanım Alanlarının Bilinmesinin Matematik Öğretimine Katkısı: "Belirli İntegral Örneği"**  
AYAZOĞLU R., AKKOYUNLU E., AKBULUT S.  
ICQH 2017, 7 - 08 December 2017
- IV. **Standart Olmayan Büyüme Koşullu Denklemlerin Mühendislikteki Uygulamaları**  
AYAZOĞLU R., AKBULUT S., AKKOYUNLU E.  
ICADET 2017, 21 - 23 September 2017
- V. **İmaj İyileştirme İşlemlerinde Değişken Üslü Uzayların Önemi**  
AYAZOĞLU R., AKBULUT S., AKKOYUNLU E.  
ICADET 2017, 21 - 23 September 2017
- VI. **Fixed point of continuous mappings defined on an arbitrary interval**  
ALAGÖZ O., GÜNDÜZ B., AKBULUT S.  
Caucasian Mathematics Conference CMC II, Van, Turkey, 22 - 24 August 2017
- VII. **Convergence Theorems for a Faster Iteration Process for Suzuki's Generalized Nonexpansive Mapping With Numerical Examples**

ALAGÖZ O., GÜNDÜZ B., AKBULUT S.

INTERNATIONAL CONFERENCE ON MATHEMATICS AND ENGINEERING, İstanbul, Turkey, 10 - 12 May 2017

VIII. **Convergence Theorems of a Faster Iteration Process Including Multivalued Mappings with Analytical and Numerical Examples**

GÜNDÜZ B., ALAGÖZ O., AKBULUT S.

INTERNATIONAL CONFERENCE ON MATHEMATICS AND ENGINEERING, İstanbul, Turkey, 10 - 12 May 2017

IX. **Convergence Theorems for a Family of Multivalued Nonexpansive Mappings in Hyperbolic Spaces**

ALAGÖZ O., GÜNDÜZ B., AKBULUT S.

ICAA2016, 12 - 15 June 2016

X. **Modüler Fonksiyon Uzaylarında Küme Değerli Dönüşümlerin Sabit Noktaları**

ALAGÖZ O., GÜNDÜZ B., AKBULUT S.

11.Ankara Matematik Günleri Sempozyumu, Turkey, 26 - 27 May 2016

XI. **Dirichlet Boundry problem for the  $p \times$  Laplacien Equations with Dependence on Gradient**

AYAZOĞLU R., AKBULUT S., AKKOYUNLU E.

ICMME-2016, 12 - 14 May 2016

XII. **Convergence of Picard Mann Hybrit iterative process in hyperbolic spaces**

GÜNDÜZ B., TÜRKMEN E., AKBULUT S.

international conference on advancement in mathematical sciences, Antalya, Turkey, 5 - 07 November 2015

## Metrics

Publication: 59

Citation (WoS): 28

Citation (Scopus): 68

H-Index (WoS): 4

H-Index (Scopus): 5