Assoc. Prof. HÜLYA KODAL SEVİNDİR

Personal Information

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International Researcher IDs
ScholarID: pEfbLrkAAAAJ
ORCID: 0000-0003-1460-0608
Publons / Web Of Science ResearcherID: F-6010-2018
ScopusID: 55927739700
Yoksis Researcher ID: 17653

Education Information

Doctorate, City University of New York, Graduate Center, United States Of America 1997 - 2001
Postgraduate, Polytechnic University, Brooklyn Campus, Mathematics, United States Of America 1994 - 1997
Undergraduate, Yildiz Technical University, Faculty Of Arts & Science, Department Of Mathemeatics, Turkey 1988 - 1992

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, HOMOTOPIC RESIDUAL CORRECTION ALGORITHMS FOR GENERAL AND STRUCTURED MATRICES, City University Of New York, Graduate Center, 2001
Postgraduate, EXISTANCE OF A WEAK SOLUTION FOR MIXED TYPE SYSTEMS OF PDEs, Polytechnic University, Brooklyn Campus, Brooklyn Campus, 1997

Research Areas

Mathematics, Natural Sciences

Academic Titles / Tasks

Assistant Professor, Kocaeli University, Fen-Edebiyat Fakültesi, Matematik Bölümü, 2018 - Continues
Assistant Professor, Kocaeli University, Fen-Edebiyat Fakültesi, Matematik Bölümü, 2001 - 2018
Research Assistant, Kocaeli University, Fen-Edebiyat Fakültesi, Matematik Bölümü, 1993 - 2001

Academic and Administrative Experience

Vice Dean, Kocaeli University, Fen Edebiyat Fakültesi, 2017 - 2018
Erasmus Program Department Coordinator, Kocaeli University, Fen Edebiyat Fakültesi, Matematik, 2006 - 2018
Kocaeli Üniversitesi, Fen-Edebiyat Fakültesi, 2014 - 2017
Kocaeli Üniversitesi, Fen-Edebiyat Fakültesi, 2011 - 2014
Kocaeli Üniversitesi, Fen-Edebiyat Fakültesi, Matematik Bölümü, 2009 - 2012

Courses

Matematik II, Undergraduate, 2022 - 2023
Matematik 1, Undergraduate, 2023 - 2024
Diferansiyel Denklemler I, Undergraduate, 2023 - 2024
Diferansiyel Denklemler, Undergraduate, 2023 - 2024
Matematik II, Undergraduate, 2022 - 2023

Published journal articles indexed by SCI, SSCI, and AHCI

I. **On Effects of a New Method for Fractional Initial Value Problems**
   Kodal Sevindir H., Çetinkaya S., Demir A.
   ADVANCES IN MATHEMATICAL PHYSICS, vol.2021, pp.1-10, 2021 (SCI-Expanded)
II. **Solution of Space-Time-Fractional Problem by Shehu Variational Iteration Method**
   Çetinkaya S., Demir A., Kodal Sevindir H.
   ADVANCES IN MATHEMATICAL PHYSICS, vol.2021, 2021 (SCI-Expanded)
III. **The stability analysis of a system with two delays**
   Erman S., Sevindir H., Demir A.
   BOUNDARY VALUE PROBLEMS, 2018 (SCI-Expanded)
IV. **The Solution of Initial Boundary Value Problem with Time and Space-Fractional Diffusion Equation via a Novel Inner Product**
   Sevindir H., DEMİR A.
   ADVANCES IN MATHEMATICAL PHYSICS, vol.2018, 2018 (SCI-Expanded)
V. **Homotopic residual correction processes**
   Pan V., Kunin M., Rosholt R., Kodal H.
   MATHEMATICS OF COMPUTATION, vol.75, no.253, pp.345-368, 2006 (SCI-Expanded)

Articles Published in Other Journals

I. **The Analytic Solution of Sequential Space-Time Fractional Diffusion Equation Including Periodic Boundary Conditions**
   Çetinkaya S., Demir A., Kodal Sevindir H.
   JOURNAL OF MATHEMATICAL ANALYSIS, vol.11, no.1, pp.17-28, 2020 (ESCI)
II. **THE ANALYTIC SOLUTION OF INITIAL BOUNDARY VALUE PROBLEM INCLUDING TIME FRACTIONAL DIFFUSION EQUATION**
   Çetinkaya S., Demir A., Kodal Sevindir H.
   FACTA UNIVERSITATIS-SERIES MATHEMATICS AND INFORMATICS, vol.35, no.1, pp.243-252, 2020 (ESCI)
III. **The Analytic Solution of Initial Periodic Boundary Value Problem Including Sequential Time Fractional Diffusion Equation**
   Çetinkaya S., Demir A., Kodal Sevindir H.

COMMUNICATIONS IN MATHEMATICS AND APPLICATIONS, vol.11, pp.173-179, 2020 (ESCI)

IV. **Dalgacık Dönüşümü Tabanlı Görsel Kriptoloji**
Kodal Sevindir H., Sayın N.
Afyon Kocatepe Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.18, no.3, pp.888-894, 2018 (Peer-Reviewed Journal)

V. **On Numerical Solutions of Fuzzy Differential Equations**
Kodal Sevindir H., Çetinkaya S., Tabak G.
International Journal of Development Research, vol.8, no.9, pp.22971-22979, 2018 (Peer-Reviewed Journal)

VI. **Makine öğrenmesi algoritmaları ve dalgacık dönüşümü ile EKG sinyalinden özellik çıkarımı**
Kodal Sevindir H., Çetinkaya S., Yazıcı C.
Journal of Balikesir University Institute of Science and Technology, vol.20, no.1, pp.94-109, 2018 (Peer-Reviewed Journal)

VII. **Asymptotic Analysis of an Affine Transformation in the Supply of Missing Data**
Kodal Sevindir H., Yazıcı C., Çetinkaya S.
SAKARYA UNIVERSITY JOURNAL OF SCIENCE, vol.22, no.6, 2018 (Peer-Reviewed Journal)

VIII. **Comparison of Wavelet and Shearlet Transforms for Medical Images**
Kodal Sevindir H., Yazıcı C.
APPLIED MATHEMATICS AND INFORMATION SCIENCES, vol.10, no.4, pp.1447-1452, 2016 (Scopus)

IX. **A Wavelet-based Energetic Approach for the Analysis of Electroencephalogram**
Siddiqi A. H., Kodal Sevindir H.
SQU Journal for Science, vol.17, no.2, pp.232-244, 2012 (Peer-Reviewed Journal)

X. **Spectral Analysis Of EEG Signals By Using Wavelet And Harmonic Transforms**
SIDDIQI A. B. H., KODAL SEVİNDİR H., YAZICI C., KUTLU A., ASLAN Z.
İstanbul Aydın Üniversitesi Fen Bilimleri Enstitüsü Dergisi, 2012 (Peer-Reviewed Journal)

Books & Book Chapters

I. **Algorithmic Approaches for ECG Analysis**
KODAL SEVİNDİR H., YAZICI C., ÇETİNKAYA S.
in: Mathematical Modeling of Real World Problems: Interdisciplinary Studies in Applied Mathematics, , Editor, NOVA Science Publishers, pp.143-197, 2019

II. **RELEVANCE OF WAVELETS AND INVERSE PROBLEMS TO BRAIN**
Sıddıqı A. H., Kodal Sevindir H., Aslan Z., Yazıcı C.
in: MATHEMATICS IN SCIENCE AND TECHNOLOGY Mathematical Methods Models and Algorithms in Science and Technology, A.H.SIDDIQI,R.C.SINGH,P.MANCHANDA, Editor, World Scientific Publishing , Singapore, pp.402-429, 2011

Refereed Congress / Symposium Publications in Proceedings

I. **Detection of Parkinson's Disease via J48 Algorithm (Özet)**
Çetinkaya S., Demir A., Kodal Sevindir H.
10th International Conference on Image Processing, Wavelet and Applications (IWW2019), Kocaeli, Turkey, 18 - 20 October 2019, pp.58

II. **Performance Evaluation of Adaboost and Naive Bayes Algorithms for the Detection of Heart Attack (Özet)**
Çetinkaya S., Demir A., Kodal Sevindir H.
10th International Conference on Image Processing, Wavelet and Applications (IWW2019), Kocaeli, Turkey, 18 - 20 October 2019, pp.59

III. **Determination of Amyotrophic Lateral Sclerosis Disease Using K Nearest Neighborhood Algorithm**

Çetinkaya S., Demir A., Kodal Sevindir H.

International Marmara Science and Social Sciences Congress, Kocaeli, Turkey, 26 - 28 April 2019, pp.1470-1474

IV.   **Heart Attack Prediction by Using Support Vector Machine**

Çetinkaya S., Demir A., Kodal Sevindir H.

International Marmara Science and Social Sciences Congress, Kocaeli, Turkey, 26 - 28 April 2019, pp.1579-1583

V.   **Destek Vektör Makineleri ile Aritmi Sınıflandırılması**

Çetinkaya S., Demir A., Kodal Sevindir H.

International Marmara Science and Social Sciences Congress , Kocaeli, Turkey, 23 - 25 November 2018, pp.1629-1633

VI.   **On Applications of Multidimensional Affine Transform in the Supply of Missing Data**

Yazıcı C., Çetinkaya S., Kodal Sevindir H.

The International Conference on Analysis and its Applications, Kırşehir, Turkey, 11 - 14 September 2018, pp.1-6

VII.   **QRS Detection via Machine Learning Algorithms (Özet)**

Kodal Sevindir H., Çetinkaya S., Yazıcı C.

International Conference on Mathematics: An Istanbul Meeting for World Mathematicians, İstanbul, Turkey, 3 - 06 July 2018

VIII.   **Comparison of Kernel Functions in Arrhythmia Classification**

Çetinkaya S., Kodal Sevindir H., Yazıcı C.

International Conference on Mathematics: An Istanbul Meeting For World Mathematicians, İstanbul, Turkey, 3 - 06 July 2018, pp.256-261

IX.   **Decision Tree Based ArrhythmiaClassification (Özet)**

Çetinkaya S., Kodal Sevindir H., Yazıcı C.

International Conference on Applied Analysis and Mathematical Modeling, İstanbul, Turkey, 20 - 24 June 2018

X.   **On Wavelet Selection for Inpainting Problem (Özet)**

Yazıcı C., Kodal Sevindir H., Çetinkaya S.

International Conference on Applied Analysis and Mathematical Modeling, İstanbul, Turkey, 20 - 24 June 2018

XI.   **İkinci Mertebeden Bulanık Başlangıç Değer Probleminin Homotopi Analiz Metodu ile Çözümü (Özet)**

Bayrak M. A., Tabak G., Çetinkaya S., Kodal Sevindir H.

UMTEB 3.Uluslararası Mesleki ve Teknik Bilimler Kongresi, Gaziantep, Turkey, 02 June 2018

XII.   **Bulanık Cauchy Problemlerinin Sayısal Çözümü (Özet)**

Kodal Sevindir H., Çetinkaya S., Tabak G., Bayrak M. A.

UMTEB 3.Uluslararası Mesleki ve Teknik Bilimler Kongresi, Gaziantep, Turkey, 2 - 03 June 2018

XIII.   **On Applications of Image Inpainting with Elliptic Masking for Medical Images (Özet)**

Kodal Sevindir H., Yazıcı C., Çetinkaya S.

9th International Conference on Image Processing, Wavelet and Applications, Kars, Turkey, 5 - 08 November 2017

XIV.   **Usage of Wavelets for Hiding Binary Images (Özet)**

Kodal Sevindir H., Sayın N.

9th International Conference on Image Processing, Kars, Turkey, 5 - 08 November 2017

XV.   **Comparison among Wavelets for Preprocessing of ECG Signal (Özet)**

Kodal Sevindir H., Çetinkaya S., Yazıcı C.

9th International Conference on Image Processing, Wavelet and Applications, Kars, Turkey, 5 - 08 November 2017

XVI.   **On Choosing a Suitable Wavelet for ECG Artefact Reduction (Özet)**

Kodal Sevindir H., Çetinkaya S., Yazıcı C.

International Conference on Applied Analysis and Mathematical Modeling ICAAMM17, İstanbul, Turkey, 3 - 07 July 2017

XVII.   **Image Inpainting Asymptotic Analysis for Horizontal Mask (Özet)**

Kodal Sevindir H., Yazıcı C., Çetinkaya S.

International Conference on Applied Analysis and Mathematical Modeling ICAAMM17, İstanbul, Turkey, 3 - 07 July 2017

XVIII.   **On Problems of ECG Feature Extraction (Özet)**

Kodal Sevindir H., Çetinkaya S., Yazıcı C.

International Conference on Applied Analysis and Mathematical Modeling ICAAMM17, İstanbul, Turkey, 3 - 07 July 2017

XIX. **Image Inpainting by Shearlets and Wavelets via Elliptic Masking (Özet)**
Kodal Sevindir H., Yazıcı C., Çetinkaya S.
International Conference on Applied Analysis and Mathematical Modeling ICAAMM17, İstanbul, Turkey, 3 - 07 July 2017

XX. **QRS Detection Based on Wavelet Transform (Özet)**
Kodal Sevindir H., Çetinkaya S., Yazıcı C.
The 8th International conference on Image Processing, Wavelet and Applications (IWW2016), İstanbul, Turkey, 22 - 24 September 2016

XXI. **Colour Visual Cryptography Based on Discrete Wavelet Transform (Özet)**
Kodal Sevindir H., Yazıcı C., Çetinkaya S.
8th International conference on Image Processing, Wavelet and Applications (IWW2016), İstanbul, Turkey, 22 - 24 September 2016

XXII. **Wavelet transform based noise removal from ECG signal for accurate heart rate detection using ECG**
Kodal Sevindir H., Çetinkaya S., Şayli Ö.
Tıp Teknolojileri Ulusal Kongresi, TIPTEKNO'15, Muğla, Turkey, 15 - 18 October 2015

XXIII. **Image Inpainting via Shearlets**
Kodal Sevindir H.
Recent Advances in Circuits, Systems and Automatic Control, Konya, Turkey, 20 - 22 May 2015, pp.74-78

XXIV. **Image Inpainting by Shearlets and Wavelets (Özet)**
Kodal Sevindir H., Yazıcı C.
Applied Mathematics & Approximation Theory - AMAT 2015, Ankara, Turkey, 28 - 31 May 2015

XXV. **A Study on Physical Exercise Habit**
Kodal Sevindir H., Yazıcı C., Çetinkaya S.
Educational Researches and Publications Associations Congress, İstanbul, Turkey, 6 - 08 June 2014

XXVI. **Mathematics anxiety: A case study for Kocaeli University**
Kodal Sevindir H., Yazıcı C., Yazici V.
ERPA International Congress on Education (ERPA), İstanbul, Turkey, 6 - 08 June 2014, vol.152, pp.637-641

XXVII. **Examining the factors affecting the selection of mathematics profession: A case study**
Kodal Sevindir H., Yazıcı C.
ERPA International Congress on Education (ERPA), İstanbul, Turkey, 6 - 08 June 2014, vol.152, pp.642-647

XXVIII. **Mathematicsanxiety of secondaryschoolstudents:A casestudyfor Kocaeli area**
Kodal Sevindir H., Yazıcı C., Yazici V.
ERPA International Congress on Education (ERPA), İstanbul, Turkey, 6 - 08 June 2014, vol.152, pp.630-636

XXIX. **On analysis of electroencephalogram by multiresolution-based energetic approach**
Kodal Sevindir H., Yazıcı C., Siddiqi A., Aslan Z.
11th International Conference of Numerical Analysis and Applied Mathematics 2013, ICNAAM 2013, Rhodes, Greece, 21 - 27 September 2013, vol.1558, pp.2482-2485

XXX. **An image denoising application using shearlets**
Sevindir H., Yazıcı C.
11th International Conference of Numerical Analysis and Applied Mathematics 2013, ICNAAM 2013, Rhodes, Greece, 21 - 27 September 2013, vol.1558, pp.2478-2481

XXXI. **A correction for computing matrix-valued Nevanlinna-Pick interpolation problem**
Yazıcı C., Sevindir H.
11th International Conference of Numerical Analysis and Applied Mathematics 2013, ICNAAM 2013, Rhodes, Greece, 21 - 27 September 2013, vol.1558, pp.2474-2477

XXXII. **A Study on Secondary School Students Mathematics Anxiety in Terms of Demographic Factors (Özet)**
Kodal Sevindir H., Yazıcı C., Budak H., Meral T.
6th International Image Processing and Wavelet on Real World Applications Conference (IWW 2012), İstanbul, Turkey, 28 - 29 September 2012

XXXIII. **Wavelets in Medical Imaging**
Zahra N. E., Kodal Sevindir H., Aslan Z., Siddiqi A. H.
7th International Congress on Industrial and Applied Mathematics (ICIAM 2011), Vancouver, Canada, 18 - 22 July 2011, vol.1463

XXXIV. **Wavelet Methods in the Study of Brain (Özet)**
Sıddıqı A. H., Kodal Sevindir H.
7th International Congress on Industrial and Applied Mathematics (ICIAM 2011), Vancouver, Canada, 18 - 22 July 2011, pp.436

XXXV. **Spectral Analysis of EEG Signals by Using Wavelet and Harmonic Transforms (Özet)**
Siddiqi A. H., Kodal Sevindir H., Yazıcı C., Aslan Z.
International Congress on Mathematicians, New Delhi, India, 14 - 17 August 2010, pp.194

XXXVI. **On Analysis of Brain Signals Using Wavelet Transform (Özet)**
Kodal Sevindir H., Yazıcı C.
XXIII. Ulusal Matematik Sempozyumu, Kayseri, Turkey, 4 - 07 August 2010, pp.164

XXXVII. **An Effective Algorithm for Matrix Valued Interpolation Problem**
Kodal Sevindir H., Yazıcı C.
4th International Workshop On Applications of Wavelets to Real World Problems , Kocaeli, Turkey, 29 - 30 May 2009, pp.276-297

XXXVIII. **On Applications of the Nevanlinna-Pick Interpolation Problems**
Kodal Sevindir H.
4th International Workshop On Applications of Wavelets to Real World Problems, Kocaeli, Turkey, 29 - 30 May 2009, pp.284-297

XXXIX. **On Displacement Operator Approach for Superfast Algorithm Design**
Kodal Sevindir H., Yazıcı C.
The 6th International Symposium on Intelligent and Manufacturing Systems, Sakarya, Turkey, 8 - 10 October 2008, pp.278-288

XL. **Yapılı Matrisler için Yer Değiştirme Operatörleri (Özet)**
Kodal Sevindir H., Yazıcı C.
III. Ankara Matematik Günleri Sempozyumu, Ankara, Turkey, 22 - 23 May 2008

XLI. **Matrix-Vector Product for Confluent Cauchy-like Matrices and A Superfast Algorithm for Confluent Rational Tangential Interpolation Problem (Özet)**
Kodal Sevindir H.
III. Ankara Matematik Günleri Sempozyumu, Ankara, Turkey, 22 - 23 May 2008, pp.65

Supported Projects

KODAL SEVİNDİR H., Project Supported by Higher Education Institutions, EEG SİNYALLERİNİN SPEKTRAL ANALİZİNDE DALGACIK VE FOURİER DÖNÜŞÜMLERİ, 2010 - 2011

Tasks In Event Organizations

Kodal Sevindir H., The 9th International Conference on Image Processing, Wavelet and Applications , Scientific Congress, Kars, Turkey, Kasım 2017
Kodal Sevindir H., The 8th International Conference on Image Processing, Wavelet and Applications , Scientific Congress, İstanbul, Turkey, Eylül 2016

Metrics

Publication: 63
Citation (WoS): 41
Citation (Scopus): 30
H-Index (WoS): 4
H-Index (Scopus): 3

Non Academic Experience

ÖLÇME, SEÇME VE YERLEŞTİRME MERKEZİ BAŞKANLIĞI