ARZU COŞKUN
ASSOC. PROF.

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International Researcher IDs
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Learning Knowledge

Post Doctorate 2012 - 2012	The University of Leeds, United Kingdom
Doctorate 2005 - 2010	Kocaeli University, Fen-Edebiyat Fakültesi, Matematik Bölümü, Turkey

Foreign Languages

English, B2 Upper Intermediate

Academic Titles / Tasks

Assistant Professor 2012 - 2012	University of Leeds, Mathematics And Physical Sciences, Applied Mathematics
Assistant Professor 2011 - 2012	Kocaeli University, Fen Edebiyat Fakültesi, Matematik
Expert 2003 - 2011	Kocaeli University, Fen Edebiyat Fakültesi, Matematik

Published journal articles indexed by SCI, SSCI, and AHCI

1. **An Inverse Problem in Estimating the Time Dependent Source Term and Initial Temperature Simultaneously by the Polynomial Regression and Conjugate Gradient Method**
   Coskun A.
   FILOMAT, vol.34, no.10, pp.3507-3516, 2020 (SCI-Expanded)
2. **The Use of Soft Matrices on Soft Multisets and their Applications in Optimal Decision Process**
   Coskun A., Aras Ç., Sonmez A.
   FILOMAT, vol.32, no.3, pp.1055-1067, 2018 (SCI-Expanded)

3. **A numerical method based on the polynomial regression for the inverse diffusion problem**
   Erdem A.
   INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.92, no.9, pp.1883-1894, 2015 (SCI-Expanded)
4. **A simultaneous approach to inverse source problem by Green's function**
   Erdem A.
   MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.38, no.7, pp.1393-1404, 2015 (SCI-Expanded)
5. **Simultaneous reconstruction of the source term and the surface heat transfer coefficient**
   Kaya M., Erdem A.
   MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.38, no.3, pp.517-526, 2015 (SCI-Expanded)
6. **An adaptive algorithm for determination of source terms in a linear parabolic problem**
   Erdem A.
   JOURNAL OF INVERSE AND ILL-POSED PROBLEMS, vol.22, no.4, pp.569-592, 2014 (SCI-Expanded)
7. **Identification of a spacewise dependent heat source**
   ERDEM A., Lesnic D., Hasanov A.
   APPLIED MATHEMATICAL MODELLING, vol.37, no.24, pp.10231-10244, 2013 (SCI-Expanded)
8. **Stability for determining the principal coefficient of parabolic equation**
   Demir A., Erdem A.
   APPLIED MATHEMATICS AND COMPUTATION, vol.219, no.8, pp.3826-3830, 2012 (SCI-Expanded)
9. **Comparative analysis of inverse coefficient problems for parabolic equations. Part I: adjoint problem approach**
   Hasanov A., Pektas B., Erdem A.
   INVERSE PROBLEMS IN SCIENCE AND ENGINEERING, vol.19, no.5, pp.599-615, 2011 (SCI-Expanded)
10. **5th International Conference Inverse Problems: Modeling and Simulation**
    Hasanoglu A., Pektaş B., ERDEM A.
    Journal of Inverse and Ill-Posed Problems, vol.17, no.6, pp.631-637, 2009 (SCI-Expanded)
11. **Determination of unknown coefficient in a non-linear elliptic problem related to the elastoplastic torsion of a bar**
    HASANOV A., Erdem A.
    IMA JOURNAL OF APPLIED MATHEMATICS, vol.73, no.4, pp.579-591, 2008 (SCI-Expanded)
12. **Relationship between current response and time in ion transport problem including diffusion and convection. 2. Numerical approach**
    HASANOGLU S., Erdem A.
    JOURNAL OF MATHEMATICAL CHEMISTRY, vol.43, no.4, pp.1458-1469, 2008 (SCI-Expanded)
13. **The Fourth International Conference Inverse Problems: Modeling and Simulatino**
    Hasanoglu A. H., ERDEM A.
    Journal of Inverse and Ill-Posed Problems, vol.15, no.6, pp.641-643, 2007 (SCI-Expanded)
14. **Monotonicity of input-output mappings in inverse coefficient and source problems for parabolic equations**
    HASANOV A., Demir A., Erdem A.
    JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS, vol.335, no.2, pp.1434-1451, 2007 (SCI-Expanded)
15. **The method of lines for the numerical solution of a mathematical model for capillary formation: The role of endothelial cells in the capillary**
    Pamuk S., ERDEM A.
    APPLIED MATHEMATICS AND COMPUTATION, vol.186, no.1, pp.831-835, 2007 (SCI-Expanded)
16. **The method of lines for the numerical solution of a mathematical model for capillary formation: The role of tumor angiogenic factor in the extra-cellular matrix**
    ERDEM A., Pamuk S.
    APPLIED MATHEMATICS AND COMPUTATION, vol.186, no.1, pp.891-897, 2007 (SCI-Expanded)

Articles Published in Other Journals

1. **A NOTE ON BIPOLAR SOFT SUPRA TOPOLOGICAL SPACES**
   Coşkun A.
   JOURNAL OF THE KOREAN SOCIETY OF MATHEMATICAL EDUCATION SERIES B-PURE AND APPLIED MATHEMATICS, vol.30, no.4, pp.357-375, 2023 (ESCI)
2. **A NOTE ON BIPOLAR SOFT SUPRA TOPOLOGICAL SPACES**
   GÜNDÜZ Ç., Bayramov S., ERDEM A.
   JOURNAL OF THE KOREAN SOCIETY OF MATHEMATICAL EDUCATION SERIES B-PURE AND APPLIED MATHEMATICS, vol.30, no.4, pp.357-375, 2023 (ESCI)
3. **DETERMINATION OF A COEFFICIENT IN A SECOND-ORDERHYPERBOLIC PROBLEM**
   Erdem A.
   Journal of Mathematical Analysis, vol.11, no.2, pp.102-112, 2020 (ESCI)
4. **ON THE EXISTENCE AND UNIQUENESS OF SOLUTIONS FORA FIRST AND SECOND-ORDER DISCRETE BOUNDARYVALUE PROBLEM**
   ERDEM A., DEMİR A.
   Journal of Mathematical Analysis, vol.11, no.2, 2020 (ESCI)
5. **DETERMINATION OF A COEFFICIENT IN A SECOND-ORDER HYPERBOLIC PROBLEM**
   Coskun A.
   JOURNAL OF MATHEMATICAL ANALYSIS, vol.11, no.2, pp.102-112, 2020 (ESCI)
6. **ON THE EXISTENCE AND UNIQUENESS OF SOLUTIONS FOR A FIRST AND SECOND-ORDER DISCRETE BOUNDARY VALUE PROBLEM**
   Coskun A., Demir A.
   JOURNAL OF MATHEMATICAL ANALYSIS, vol.11, no.2, pp.86-101, 2020 (ESCI)
7. **Comparative Analysis of the Modified SOR and BGC Methods Applied to the Poleness Conservative Finite Difference Scheme**
   ERDEM A.
   EUROPEAN JOURNAL OF PURE AND APPLIED MATHEMATICS, vol.6, pp.30-43, 2013 (ESCI)
8. **Iteratively regularized gradient method for determination of source terms in a linear parabolic problem**
   ERDEM A.
   American Journal of Computational and Applied Mathematics, vol.3, pp.13-22, 2013 (Non Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

1. **Part I. A probabilistic soft set approach to decision making problems**
   Coşkun A.
   3RD ICAENS 2022, Konya, Turkey, 20 July 2022, pp.745
2. **Part 2. A probabilistic soft multiset approach to group decision making problems**
   Coşkun A.
   3rdInternational Conference on Applied Engineering and Natural Sciences, Konya, Turkey, 20 July 2022, pp.849
3. **AN INVERSE PROBLEM WITH THE NONLOCAL DIRICHLET BOUNDARY CONDITION**
   Coşkun A.
   1st INTERNATIONAL LOTFI A.ZADEH CONFERENCE: FUZZY LOGIC AND APPLICATIONS, Baku, Azerbaijan, 20 December 2021, pp.62
4. **ON A PROBABILISTIC SOFT MULTISET AND ITS APPLICATION IN MATRIX**
   Coşkun A.
   1st INTERNATIONAL LOTFI A.ZADEH CONFERENCE: FUZZY LOGIC AND APPLICATIONS, Baku, Azerbaijan, 20 December 2021, pp.61
5. **MEDICAL DIAGNOSIS PROBLEM BY USING NEUTROSOPHIC SOFT SET**

Coşkun A.
1st INTERNATIONAL LOTFI A.ZADEH CONFERENCE: FUZZY LOGIC AND APPLICATIONS, Baku, Azerbaijan, 20 - 21 December 2021, pp.16-17

6. **The determination of the right hand side in a semilinear heat conduction problem with the nonlocal Dirichlet boundary condition**
ERDEM A.
the 3 international conference of operators in general morrey type spaces and applications, 16 - 20 July 2019
7. **Fuzzy soft expert set**
ERDEM A., GÜNDÜZ Ç.
2nd International Conference on Life and Engineering Sciences, 27 - 29 June 2019
8. **A decision making problem by using neutrosophic soft set**
ERDEM A., GÜNDÜZ Ç.
2nd International Conference on Life and Engineering Sciences, 27 - 29 June 2019
9. **Determination of a coefficient in a second-order hyperbolic problem**
ERDEM A.
5ThINTERNATIONAL CONFERENCE ON RECENT ADVANCES IN PURE AND APPLIEDMATHEMATICS (ICRAPAM 2018), 23 - 27 July 2018
10. **On The Existence And Uniqueness Of Solutions For A First And Second-Order Discrete Boundary ValueProblem**
ERDEM A., DEMİR A.
5Th INTERNATIONAL CONFERENCE ON RECENTADVANCES IN PURE AND APPLIED MATHEMATICS (ICRAPAM 2018), 23 - 27 July 2018
11. **Soft matrices on soft multisets in an optimal decision process**
Coskun A., Aras C. G., Cakalli H., Sonmez A.
3rd International Conference on Analysis and Applied Mathematics (ICAAM), Almaty, Kazakhstan, 7 - 10 September 2016, vol.1759
12. **Probabilistic Soft MultiSet Theory**
ERDEM A., TÜRKMEN G.
International MathematicsSymposium, International Mathematics Symposium, 11 - 13 July 2014
13. **Experimental study for characterization of time dependent source term and initial temperature**
ERDEM A.
The 7th International Conference "Inverse Problems: Modeling and Simulation, 26 - 31 May 2014
14. **On the Existence and Uniqueness of Solutions for Discrete Boundary Value Problems**
ERDEM A., DEMİR A.
Nonlinear Phenomena in Complex System, II International Seminar Nonlinear PhenomenologyAdvances, 1 - 05 October 2013
15. **A simultaneous approach to inverse source problem by Green'xxs function**
ERDEM A.
Algerian-Turkish International Days on Mathematics 2013, 12 - 14 September 2013
16. **Soft Path Connectedness on Soft Topological Spaces**
BAYRAMOV S., GÜNDÜZ Ç., ERDEM A.
Proceedings of the 13th International Conference on Computational and Mathematical Methods in Science andEngineering, 24 - 27 July 2013
17. **A numerical method based on the polynomial regression for the inverse diffusion problem**
ERDEM A.
Proceedings of the 13th International Conference on Computational and Mathematical Methods in Science andEngineering, 24 - 27 July 2013
18. **Comparative numerical analysis of coarse-fine mesh and gradient methods ininverse coefficient problems for parabolic equations**
ERDEM A., HASANOV A., PEKTAŞ B.
The Fifth International Conference "Inverse Problems:Modeling and Simulation", 24 - 29 May 2010

19. **Reconstruction algorithms for parabolic coefficient identification problems based on adjoint approach**
    ERDEM A.
    TheFifth International Conference Algorithmic Analysis of Unstable Problems, 2 June - 06 September 2008
20. **Numerical analysis of ill-posedness of parabolic coefficient identificationproblems based on adjoint problem approach**
    ERDEM A., HASANOV A., PEKTAŞ B.
    The Fifth International Conference Algorithmic Analysis ofUnstable Problems, 2 - 06 September 2008
21. **Monotonicity of input-output mappings and Lipschitz continuity of related auxiliary3functionals in inverse coefficient problems**
    ERDEM A., HASANOV A.
    The Fifth International Conference Algorithmic Analysis ofUnstable Problems, Russia, 2 - 06 September 2008
22. **Monotonicity of input-output mappings and Frechet differentiability and Lipschitzcontinuity of related auxiliary functionals in inverse problems for parabolic equations**
    ERDEM A., HASANOV A.
    The Fourth Int.Conference "Inverse Problems: Modeling and Simulation", 26 - 31 May 2008
23. **An adjoint problem approach for coefficient identification in a linear hyperbolic problem**
    ERDEM A.
    The ISAAC(International Society for Analysis, its Applications and Computation), 13 - 18 August 2007
24. **An analysis of the cost functional for parabolic inverse source problem**
    ERDEM A.
    Proceedings of The International Conference on Modeling and Simulation, 28 - 30 August 2006
25. **Differentiability and Lipschitz property of the cost function related to parabolic optimal control problems**
    ERDEM A.
    Pioneers Of Bulgarian Mathematics, 8 - 10 July 2006
26. **An analysis of the adjoint problem approach for parabolic inverse source problem with measured Dirichletdata**
    ERDEM A.
    The Third International Conference "Inverse Problems: Modeling and Simulation", 29 May - 02 June 2006

Courses

Matematik I, Undergraduate, 2023 - 2024
Diferansiyel Denklemler, Undergraduate, 2023 - 2024
Uygulamalı Sayısal Yöntemler I, Postgraduate, 2023 - 2024
Matematik II, Undergraduate, 2022 - 2023
Bilgisayar Programlama, Undergraduate, 2022 - 2023
MATLAB, Undergraduate, 2023 - 2024
Matematik I, Undergraduate, 2018 - 2019
Diferansiyel Denklemler, Undergraduate, 2018 - 2019
Lineer Cebir, Undergraduate, 2013 - 2014
Olasılık ve İstatistik, Undergraduate, 2013 - 2014
Bilgisayar Programlama, Undergraduate, 2013 - 2014
Lineer Operatörler, Postgraduate, 2012 - 2013
Sayısal Analiz, Undergraduate, 2012 - 2013
Uygulamalı Sayısal Yöntemler II, Postgraduate, 2012 - 2013
Kısmi Türevli Diferansiyel Denklemlerin Seçmeli Bölümleri, Doctorate, 2011 - 2012
Ters Problemler, Postgraduate, 2010 - 2011
Fortran, Undergraduate, 2010 - 2011

Metrics

Publication: 50
Citation (WoS): 126
Citation (Scopus): 129
H-Index (WoS): 6
H-Index (Scopus): 7

Research Areas

Mathematics, Functional Equations, Numerical Analysis, Natural Sciences

Non Academic Experience

University of Leeds
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Kocaeli Üniversitesi