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### PERSONAL

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| <b>Date of Birth</b>  | 04.01.1975       |
| <b>Place of Birth</b> | İstanbul, Turkey |

### EDUCATION

|           |  |
|-----------|--|
| 2000-2006 | Middle East Technical University, Mathematics, Ph.D. |
| 1997-2000 | Middle East Technical University, Mathematics, M.S.  |
| 1991-1996 | Middle East Technical University, Mathematics, B.S.  |

### ACADEMIC POSITIONS

|                        |   |
|------------------------|---|
| <b>02/2015-</b>        | Associate Professor, Department of Mathematics, Atılım University, Turkey               |
| <b>11/2007-02/2015</b> | Assistant Professor, Department of Mathematics, Atılım University, Turkey               |
| <b>09/2004-11/2007</b> | Instructor, Department of Mathematics, Atılım University, Turkey                        |
| <b>06/1998-09/2004</b> | Research Assistant, Department of Mathematics, Middle East Technical University, Turkey |

### ADMINISTRATIVE DUTIES

|                |  |
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| <b>04/2019</b> | Vice Chair of the Department of Mathematics, Atılım University |
| <b>06/2019</b> | Member of the Faculty Board, Atılım University                 |

### HONORS&AWARDS

|          |  |
|----------|--|
| <b>1</b> | (2008) "Best PhD. Thesis Award of the Year 2006-2007", Middle East Technical University.   |
| <b>2</b> | (2007) Best Scientific Paper Award, Ministry of Education and Science of Georgia and Georgia National Science Foundation, Tbilisi, Georgia |

### RESEARCH INTERESTS

|          |   |
|----------|---|
| <b>1</b> | Complex partial differential equations, boundary value problems   |
| <b>2</b> | Mathematical Finance  |
| <b>3</b> | Applications in fixed point theory. Stochastic dynamic equations. |

## PROFESSIONAL SERVICE

|   |  |
|---|--|
| 1 | Associate Editor, Advances in the Theory of Nonlinear Analysis and its application |
| 2 | Associate Editor, Results in Nonlinear Analysis                                    |

## PUBLICATIONS

|    |   |
|----|---|
| 1  | Ü. Aksoy, H. Begehr, A.O. Celebi, Schwarz problem for higher-order complex partial differential equations in the upper half plane, <i>Mathematische Nachrichten</i> , 292(2019), 1183-1193.                                     |
| 2  | Ü. Aksoy, H. Begehr, A.O. Çelebi, A.V. Bitsadze's observation on bianalytic functions and the Schwarz problem, <i>Complex Var. Elliptic Equ.</i> , 64(2019), 1257-1274.   |
| 3  | U. Aksoy, Dirichlet Problem for Poisson and bi-Poisson equations in Clifford analysis, In: Rogosin S. A. Çelebi (eds), <i>Analysis as a Life. Trends in Mathematics</i> , Birkhauser, Cham, 2019, 19-37.                        |
| 4  | Ü. Aksoy, E. Karapinar, İ. M. Erhan, Vladimir Rakocevic, Meir-Keeler type contractions on modular metric spaces", <i>Filomat</i> , 32, no.10 (2018).  |
| 5  | B. Aydoğan, Ü. Aksoy. Ö. Uğur, On the methods of pricing American options: case study, <i>Ann. Oper. Res.</i> 260, no.1-2 (2018), 79-94.  |
| 6  | Ü. Aksoy, A.O. Çelebi, Schwarz problem for higher order linear equations in a polydisc, <i>Complex Var. Elliptic Equ.</i> , 62, no.10 (2017), 1558-1569.  |
| 7  | Ü. Aksoy, S. Ostrovska, A.Y. Özban, Polynomial logistic distribution associated with a cubic polynomial, <i>Comm. Statist. Theory Methods</i> , 46, no:14, (2017), 7007-7019.   |
| 8  | Ü. Aksoy, E. Karapinar, İ. M. Erhan, Fixed point theorems in complete modular metric spaces and an application to anti-periodic boundary value problems, 31, no.17 (2017), 5475-5488.   |
| 9  | E. Karapinar, İ. M. Erhan, Ü. Aksoy, Fixed points of generalized alpha-admissible contractions on b-metric spaces with an application to boundary value problems, <i>J. Nonlinear Convex Analysis</i> , 17 6 (2016), 1095-1108. |
| 10 | Ü. Aksoy, A.O. Çelebi, Polyharmonic Robin problem for complex linear partial differential equations, <i>Complex Var. Elliptic Equ.</i> , 59, no.12 (2014), 1679-1695.   |
| 11 | Ü. Aksoy, A. O. Çelebi, Dirichlet problem for a generalized inhomogeneous polyharmonic equation in an annular domain, <i>Complex Variables and Elliptic Equations</i> , 57(2012), 229-241.                                      |
| 12 | Ü. Aksoy, A. O. Çelebi, A hierarchy of singular integral operators for mixed boundary value problems, <i>Proceedings of A. Razmadze Mathematical Institute</i> , 156(2011), 1-15.   |
| 13 | Ü. Aksoy, A. O. Çelebi, Mixed boundary value problems for higher-order complex partial differential equations, <i>Analysis (Munich)</i> , 30(2010), 157-169.  |
| 14 | Ü. Aksoy, A. O. Çelebi, A survey on boundary value problems for complex partial differential equations, <i>Advances in Dynamical Systems and Applications</i> , 5(2010) 133-158.  |
| 15 | Ü. Aksoy, A. O. Çelebi, Neumann problem for generalized n-Poisson equation, <i>J. Math. Anal Appl.</i> , 357(2009), 438-446.  |
| 16 | Ü. Aksoy, A. O. Çelebi, Calderon-Zygmund type singular integral operators and the Schwarz problem for higher order partial complex differential equations, <i>Appl. Math. Inform. Mech.</i> 13(2008) 3-12.                      |
| 17 | Ü. Aksoy, A. O. Çelebi, Schwarz problem for higher-order elliptic complex partial differential equations, <i>Integral Transforms and Special Functions</i> , 19(2008), 413-428.   |
| 18 | Ü. Aksoy, A. O. Çelebi, Norm estimates of a class of Calderon-Zygmund type strongly singular integral operators, <i>Integral Transforms and Special Functions</i> , 18(2007), 87-93.  |

## CONFERENCE PRESENTATIONS

|    |   |
|----|---|
| 1  | Ü. Aksoy, Integral representations and some boundary value problems in Clifford analysis, 12 <sup>th</sup> ISAAC Congress, Aveiro, Portugal, July 29-August 2, 2019.  |
| 2  | Ü. Aksoy, İ. M. Erhan and E. Karapınar, Contraction mappings on modular metric spaces and applications, IWNAA, Granada, Spain, July 6-9, 2018.  |
| 3  | İ. M. Erhan, Ümit Aksoy, On some recent fixed point results on modular metric spaces, IWNAA, Granada, Spain, July 6-9, 2018.  |
| 4  | Svetlin G. Georgiev, Y. Yolcu Okur and Ü.Aksoy, Multidimensional Brownian Motion on Time Scales, 23rd ICDEA Conference, Timisoara, Romania, July 24 - 28, 2017.   |
| 5  | A.O. Çelebi, Ü.Aksoy, Schwarz problem for higher-order equations in a polydisc, International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2017), İzmir, Turkey, May 11-15, 2017.   |
| 6  | Ü. Aksoy, Existence and uniqueness of fixed points of maps satisfying C-condition in modular metric spaces, International Workshop on Mathematical Methods in Engineering, Ankara, Turkey, April 27 - 29, 2017.                                     |
| 7  | Ü.Aksoy, Y. Yolcu Okur, Generalized Feynman-Kac formula on time scales and Black Scholes Model, International Conference on Applied Mathematics and Applications in Memory of Prof. Gusein Sh. Guseinov, Ankara, Turkey, July 11-13, 2016.          |
| 8  | A.O. Çelebi, Ü.Aksoy, Schwarz problem for higher-order linear equations in $C^n$ , Boundary Value Problems, Functional Equations and Applications, Rzeszow Poland, 20-23 April 2016.  |
| 9  | Ü. Aksoy, İnci M. Erhan and E.Karapınar, Applications of fixed point theory results to ordinary and partial differential equations, VI Congress of Mathematicians of Macedonia, Ohrid, Macedonia, June 15-18, 2016.                                 |
| 10 | Ü. Aksoy, B. Aydoğan, Ö. Uğur, Methods for pricing American options: Case study for comparison, 55 <sup>th</sup> Meeting of the EWGCFM, METU IAM, Ankara, 14-16 Mayıs 2015.   |
| 11 | Ü. Aksoy, Dirichlet problem for higher-order Poisson equation in Clifford analysis, The 22 <sup>nd</sup> International Conference on Finite or Infinite Dimensional Complex Analysis and Applications, Gyeongju, South Korea, August 8-11, 2014.    |
| 12 | Ü. Aksoy, Neumann-type boundary value problem for second order partial differential equations on the unit ball in Clifford analysis, Second International Conference: Modern Problems in Applied Mathematics, Tbilisi-Georgia, September 4-7, 2013. |
| 13 | Ü.Aksoy, A.O. Çelebi, Robin problem for linear complex partial differential equations, 12 <sup>th</sup> International Workshop on Dynamical Systems and Applications, Ankara, Turkey, August 12-15, 2013  |
| 14 | Ü. Aksoy, On some boundary value problems for linear partial differential equations of second order in Clifford analysis, 9 <sup>th</sup> ISAAC Congress, Krakow-Poland, August 5-9, 2013.  |
| 15 | Ü. Aksoy, A.O. Çelebi, Dirichlet problem for a generalized Poisson equation in Clifford analysis, The 20th International Conference on Finite or Infinite Dimensional Complex Analysis and Applications, Hanoi-Vietnam, 29 July-3 August 2012.      |
| 16 | Ü. Aksoy, A.O. Çelebi, Dirichlet problem for a generalized inhomogeneous polyharmonic equation in an annular domain, 8 <sup>th</sup> ISAAC Congress, Moscow-Russia, August 22-27, 2011.   |
| 17 | Ü. Aksoy, A.O. Çelebi, Boundary value problems for linear elliptic complex differential equations in the upper half plane, 8 <sup>th</sup> ISAAC Congress, Moscow-Russia, August 22-27, 2011.   |
| 18 | Ü. Aksoy, A.O. Çelebi, On the hierarchy of polyharmonic kernels and the solvability of the iterated mixed problems, Workshop: Boundary value  |

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|----|---|
|    | problems, Functional Equations and their Applications 2, Krakow-Poland, April 14-17, 2010.  |
| 19 | Ü. Aksoy, A.O. Çelebi, A hierarchy of polyharmonic kernel functions and the related integral operators, 7 <sup>th</sup> ISAAC Congress, London UK, July 13-18, 2009   |
| 20 | Ü. Aksoy, A.O. Çelebi, Complex Partial Differential Equations with Mixed-Type Boundary Conditions, 7 <sup>th</sup> ISAAC Congress, London UK, July 13-18, 2009.   |
| 21 | Ü. Aksoy, A.O. Çelebi, Some classes of integral operators related to mixed boundary value problems, Pre-ICM International Convention on Mathematical Sciences, Delhi-India, December 18-20, 2008.   |
| 22 | Ü. Aksoy, A.O. Çelebi, Mixed boundary value problems for higher-order complex partial differential equations, Pre-ICM International Convention on Mathematical Sciences, Delhi-India, December, 18-20, 2008.  |
| 23 | Ü. Aksoy, A.O. Çelebi, On a boundary value problem for higher-order elliptic complex partial differential equations, ISAAC conference for I. N. Vekua's 100 <sup>th</sup> birthday, I. Vekua Institute of Applied Mathematics, Tbilisi, Georgia, April 23-27, 2007.   |
| 24 | Ü. Aksoy, A Boundary Value Problem for a Special Class of Generalized Analytic Functions and Its Applications to Second Order Differential Equations, Workshop on functional-analytic and complex methods, their interaction, and applications to partial differential equations, Graz-Austria, February 12-15, 2001. |

## CITATIONS

|   |    |
|---|----|
| Sum of times cited without self-citations (ISI Web of Science): | 59 |
| H-index (ISI Web of Science):                                   | 5  |

## COURSES GIVEN

|    |  |
|----|--|
| 1  | Introduction to Calculus I (MATH101)                     |
| 2  | Calculus for Management and Economics Students (MATH102) |
| 3  | Analize Giriş I (MATH105)                                |
| 4  | İşletme ve Ekonomi Öğrencileri için Analiz (MATH106)     |
| 5  | Ticari ve Mali Matematik (MATH110)                       |
| 6  | Discrete Mathematics and Combinatorics (MATH112)         |
| 7  | Analytic Geometry II (MATH122)                           |
| 8  | Mathematical Analysis I (MATH135)                        |
| 9  | Mathematical Analysis II (MATH136)                       |
| 10 | Calculus I (MATH151)                                     |
| 11 | Calculus II (MATH152)                                    |
| 12 | Extended Calculus I (MATH157)                            |
| 13 | Extended Calculus II (MATH158)                           |
| 14 | Differential Equations (MATH276)                         |

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| 15 | Introduction to Probability and Statistics I (MATH291)  |
| 16 | Introduction to Probability and Statistics II (MATH292) |
| 17 | Olasılık ve İstatistiğe Giriş I (MATH293)               |
| 18 | Olasılık ve İstatistiğe Giriş II (MATH294)              |
| 19 | Introduction to Mathematical Finance (MATH313)          |
| 20 | Mathematics of Financial Mathematics (MATH316)          |
| 21 | Probability Theory and Statistics (MATH392)             |
| 22 | Seminar Studies (MATH411)                               |
| 23 | Computational Methods of Mathematical Finance (MATH417) |
| 24 | Functional Analysis (MATH557) (Graduate Course)         |

### **THESES SUPERVISED**

|   |  |
|---|--|
| 1 | MS Thesis, B. Aydoğar, "Computational Methods for Pricing American Options", Atılım University, 2014.                      |
| 2 | MS Thesis, F. Omar, "Exponential Finite Difference Methods for Nonlinear Black-Scholes Equation", Atılım University, 2017. |