CURRICULUM VITAE AND PUBLICATIONS LIST

CURRICULUM VITAE

Name and Surname:	Aydın SEÇER
Date of Birth:	1979
Academic Title:	Professor Dr.
Work Address:	Kimya Metalürji Fakültesi- A243
Email:	asecer@biruni.edu.tr
Foreign Languages Known (Score and Year):	English, C2 Proficiency, 2024
Area of Expertise:	Computer Science Differential Equations General Mathematics

Degree	Department/Program	University	Year
Doctorate	Bilgisayar Bilimleri	Atatürk University	2011
Master's Degree	Uygulamalı Matematik	Atatürk University	2006
Bachelor's Degree	Matematik	Atatürk University	2001

PUBLICATIONS

A. Articles published in international peer-reviewed journals:

A1. "Investigating broadly dispersive solitons in optical couplers for metamaterials with nonlinear cubic-quintic-septic dynamics and white noise using distinct integration approaches", Physics Letters, Section A: General, Atomic and Solid State Physics, 2025.

A2. "Concatenation model: having the parabolic law in the presence of chromatic and spatio-temporal dispersion and investigation of multiplicative white noise effect via Itô calculus", European Physical Journal Plus, 2025.

A3. "Pure-Cubic Optical Soliton Solutions of the Nonlinear Schrödinger Equation Including Parabolic Law Nonlinearity in the Absence of the Group Velocity Dispersion", International Journal of Theoretical Physics, 2025.

A4. "Unveiling new quiescent dark and singular solitary solutions of the Fokas–Lenells equation", European Physical Journal Plus, 2025.

A5. "Perturbations of optical solitons in magneto-optic waveguides incorporating multiplicative white noise and sixth-order dispersion: a study of the Sasa–Satsuma equation", Pramana - Journal of Physics, 2025.

A6. "Retrieval of the optical soliton solutions of the perturbed Schrödinger–Hirota equation with generalized anti-cubic law nonlinearity having the spatio-temporal dispersion", Mathematical Methods in the Applied Sciences, 2025.

A7. "Highly dispersive gap solitons with the Kaup{Newell in ¯ber Bragg grating with white noise e®ects", Modern Physics Letters B, 2025.

A8. "Stochastic optical soliton perturbations in optical metamaterial couplers with parabolic nonlocal nonlinearity and advanced dispersion analysis", Journal of Nonlinear Optical Physics and Materials, 2025.

A9. "Chirped and chirp-free optical soliton solutions for stochastic long-short wave resonant equations with multiplicative white noise", Physica Scripta, 2025.

A10. "Investigating dispersive optical soliton dynamics in birefringent fibers with cubic nonlinearity through quintic-order concatenation model", Optical Fiber Technology, 2024.

A11. "Effects of white noise on straddle and soliton dynamics in birefringent fibers using the novel Kaup-Newell equation approach", European Physical Journal Plus, 2024.

A12. "Optical soliton solution of the perturbed Fokas–Lenells equation having the cubic–quintic–septic law of self-phase modulation in the presence of chromatic and spatiotemporal dispersions", European Physical Journal Plus, 2024.

A13. "Investigation of soliton solutions to the Peyrard-Bishop-Deoxyribo-Nucleic-Acid dynamic model with beta-derivative", Modern Physics Letters B, 2024.

A14. "Impact of high dispersion and cubic-quintic-septic nonlinearity on optical solitons perturbations of the resonant nonlinear Schrödinger equation with multiplicative white noise", Ain Shams Engineering Journal, 2024.

A15. "Optical soliton solutions of the nonlinear complex Ginzburg-Landau equation with the generalized quadratic-cubic law nonlinearity having the chromatic dispersion", Physica Scripta, 2024.

A16. "On Stochastic Pure-Cubic Optical Soliton Solutions of Nonlinear Schrödinger Equation Having Power Law of Self-Phase Modulation", International Journal of Theoretical Physics, 2024.

A17. "Optical soliton solution of the perturbed Biswas-Milovic equation having cubic-quintic-septic law nonlinearity in the presence of spatio-temporal and chromatic dispersion", Physica Scripta, 2024.

A18. "Obtaining analytical solutions of (2+1)-dimensional nonlinear Zoomeron equation by using modified F-expansion and modified generalized Kudryashov methods", Engineering Computations (Swansea, Wales), 2024.

A19. "On the analytical soliton solutions of (1 + 1)-dimensional complex coupled nonlinear Higgs field model", European Physical Journal: Special Topics, 2024.

A20. "Analytical solutions of simplified modified Camassa-Holm equation with conformable and M-truncated derivatives: A comparative study", Journal of Ocean Engineering and Science, 2024.

A21. "On the soliton solutions to some system of complex coupled nonlinear models and the effect of the coupling coefficients", Optical and Quantum Electronics, 2024.

A22. "Optical soliton solutions of complex Ginzburg–Landau equation with triple power law and modulation instability", Optical and Quantum Electronics, 2024.

A23. "Optical soliton solutions of the perturbed fourth-order nonlinear Schrödinger-Hirota equation with parabolic law nonlinearity of self-phase modulation", Physica Scripta, 2024.

A24. "On optical soliton solutions of the higher-order Lakshmanan-Porsezian-Daniel model having the cubic-quintic-septic law in the presence of spatio-temporal and chromatic dispersion", Physica Scripta, 2024.

A25. "Examination of optical soliton solutions for the perturbed Schrödinger–Hirota equation with anti-cubic law in the presence of spatiotemporal dispersion", European Physical Journal Plus, 2024.

A26. "Optical solitons of stochastic perturbed Radhakrishnan–Kundu–Lakshmanan model with Kerr law of self-phase-modulation", Modern Physics Letters B, 2024.

A27. "From Halley to Secant: Redefining root finding with memory-based methods including convergence and stability", Mathematical Methods in the Applied Sciences, 2024.

A28. "A comprehensive analysis of Fokas–Lenells equation using Lie symmetry method", Mathematical Methods in the Applied Sciences, 2024.

A29. "Bright soliton of the third-order nonlinear Schrödinger equation with power law of self-phase modulation in the absence of chromatic dispersion", Optical and Quantum Electronics, 2024.

A30. "Examining the (1 + 1)-dimensional Schrödinger–Hirota equation with Kerr effect under inter-modal dispersion using the invariance theory", Optical and Quantum Electronics, 2024.

A31. "Soliton solutions of the improved perturbed nonlinear Schrödinger equation having parabolic law with non-local nonlinearity in the presence of chromatic and spatio-temporal dispersion terms", Physica Scripta, 2024.

A32. "Investigation of the optical solitons for the Lakshmanan–Porsezian–Daniel equation having parabolic law", Optical and Quantum Electronics, 2024.

A33. "High dispersion and cubic–quintic–septic–nonic nonlinearity effects on optical solitons in the complex Ginzburg–Landau equation of eighth-order with multiplicative white noise in the Itô sense", Results in Physics, 2024.

A34. "On soliton solutions for higher-order nonlinear Schrödinger equation with cubic-quintic-septic law", International Journal of Geometric Methods in Modern Physics, 2024.

A35. "On obtaining optical solitons of the perturbed cubic-quartic model having the Kudryashov's law of refractive index", Optical and Quantum Electronics, 2024.

A36. "Davey-Stewartson system and investigation of the impacts of the nonlinearity", Optical and Quantum Electronics, 2024.

A37. "Nonlinear complex generalized zakharov dynamical system inconformal sense utilizing new kudryashov method", Physica Scripta, 2024.

A38. "Obtaining soliton solutions of the nonlinear (4+1)-dimensional Boiti–Leon–Manna–Pempinelli equation via two analytical techniques", International Journal of Modern Physics B, 2024.

A39. "Analyzing the influence of multiplicative white noise on optical solitons in birefringent fibers through the perturbed Gerdjikov-Ivanov model", OPTICAL AND QUANTUM ELECTRONICS, 2024.

A40. "Revealing optical soliton solutions of Schrödinger equation having parabolic law and anti-cubic law with weakly nonlocal nonlinearity", Journal of Taibah University for Science, 2024.

A41. "Retrieval of optical soliton solutions of stochastic perturbed Schrödinger-Hirota equation with Kerr law in the presence of spatio-temporal dispersion", Optical and Quantum Electronics, 2024.

A42. "On obtaining analytical soliton solutions of Drinfeld-Sokolov-Satsuma-Hirota equation via two efficient methods", Physica Scripta, 2024.

A43. "Soliton solutions of time-fractional modified Korteweg-de-Vries Zakharov-Kuznetsov equation and modulation instability analysis", Physica Scripta, 2024.

A44. "Optical solitons for the dispersive concatenation model with spatio-temporal dispersion having multiplicative white noise", Results in Physics, 2024.

A45. "Bright soliton of the perturbed Schrödinger–Hirota equation with cubic–quintic–septic law of self-phase modulation in the presence of spatiotemporal dispersion", European Physical Journal Plus, 2024.

A46. "Bright soliton of Stochastic perturbed Biswas-Milovic equation with cubic-quintic-septic law having multiplicative white noise", Revista Mexicana de Fisica, 2024.

A47. "Stochastic higher-order Lakshmanan-Porsezian-Daniel model with cubic-quintic law nonlinearities in the presence of spatio-temporal and chromatic dispersion terms", Journal of Nonlinear Optical Physics and Materials, 2024.

A48. "Optical soliton solutions of the third-order nonlinear Schrödinger equation in the absence of chromatic dispersion", Modern Physics Letters B, 2024.

A49. "On the optical soliton solutions of the perturbed Fokas{Lenells equation having parabolic law of self-phase modulation in the presence of spatio-temporal dispersion", Modern Physics Letters B, 2024.

A50. "Optical solitons of the (1 + 1)-dimensional perturbed complex Ginzburg{Landau equation having the Kerr law in the absence of the chromatic dispersion", Modern Physics Letters B, 2024.

A51. "Stochastic perturbed Fokas-Lenells equation having the polynomial law of self-phase modulation in the presence of spatio-temporal dispersion", Journal of Optics (India), 2024.

A52. "Highly dispersive optical solitons in fiber Bragg gratings for stochastic Lakshmanan–Porsezian–Daniel equation with spatio-temporal dispersion and multiplicative white noise", Results in Physics, 2023.

A53. "Optical solitons of a cubic-quartic nonlinear Schrödinger equation with parabolic law nonlinearity in optical metamaterials", International Journal of Geometric Methods in Modern Physics, 2023.

A54. "Investigating of the pure-cubic optical solitons in the presence of spatio-temporal and inter-modal dispersions", European Physical Journal Plus, 2023.

A55. "Optical soliton solutions of the nonlinear Schrödinger equation in the presence of chromatic dispersion with cubic-quintic-septic-nonicnonlinearities", Physica Scripta, 2023.

A56. "On the soliton solutions to the density-dependent space time fractional reaction–diffusion equation with conformable and M-truncated derivatives", Optical and Quantum Electronics, 2023.

A57. "Resonant NLSE in the presence of spatio-temporal and intermodal dispersion is dominated by a myriad of nonlinearities", Physica Scripta, 2023.

A58. "On solution of Schrödinger–Hirota equation with Kerr law via Lie symmetry reduction", Nonlinear Dynamics, 2023.

A59. "Soliton solutions of the (2 + 1)-dimensional Kadomtsev-Petviashvili equation via two different integration schemes", International Journal of Modern Physics B, 2023.

A60. "Discovering optical soliton solutions in the Biswas–Milovic equation through five innovative approaches", Optik, 2023.

A61. "Stochastic optical solitons of the perturbed nonlinear Schrödinger equation with Kerr law via Ito calculus", European Physical Journal Plus, 2023.

A62. "Soliton solutions of Heisenberg spin chain equation with parabolic law nonlinearity", Optical and Quantum Electronics, 2023.

A63. "Optical soliton solutions of dispersive Schrödinger–Hirota equation with chromatic and inter-modal dispersion in a couple of law medium", Optical and Quantum Electronics, 2023.

A64. "On soliton solutions of the modified equal width equation", Engineering Computations (Swansea, Wales), 2023.

A65. "Optical solitons of improved perturbed nonlinear Schrödinger equation with cubic-quintic-septic and triple-power laws in optical metamaterials", Physica Scripta, 2023.

A66. "On the investigation of chiral solitons via modified new Kudryashov method", International Journal of Geometric Methods in Modern Physics, 2023.

A67. "Optical solitons for the dispersive Schrödinger–Hirota equation in the presence of spatio-temporal dispersion with parabolic law", European Physical Journal Plus, 2023.

A68. "Optical soliton solutions of Schrödinger–Hirota equation with parabolic law nonlinearity via generalized Kudryashov algorithm", Optical and Quantum Electronics, 2023.

A69. "Optical solitons for Kundu–Mukherjee–Naskar equation via enhanced modified extended tanh method", Optical and Quantum Electronics, 2023.

A70. "Stochastic dispersive Schrödinger–Hirota equation having parabolic law nonlinearity with multiplicative white noise via Ito calculus", Optik, 2023.

A71. "Kink Soliton Dynamic of the (2+1)-Dimensional Integro-Differential Jaulent–Miodek Equation via a Couple of Integration Techniques", Symmetry, 2023.

A72. "Generalized Gegenbauer–Humbert wavelets for solving fractional partial differential equations", Engineering with Computers, 2023.

A73. "Extraction of soliton waves from the longitudinal wave equation with local M-truncated derivatives", Optical and Quantum Electronics, 2023.

A74. "Traveling wave structures of some fourth-order nonlinear partial differential equations", Journal of Ocean Engineering and Science, 2023.

A75. "On solitary wave solutions for the extended nonlinear Schrödinger equation via the modified F-expansion method", Optical and Quantum Electronics, 2023.

A76. "(3+1)-dimensional Sasa–Satsuma equation under the effect of group velocity dispersion, self-frequency shift and self-steepening", Optik, 2023.

A77. "Soliton solutions of coupled resonant Davey-Stewartson system and modulation instability analysis", Physica Scripta, 2023.

A78. "Retrieval of Optical Solitons with Anti-Cubic Nonlinearity", Mathematics, 2023.

A79. "On the investigation of optical soliton solutions of cubic–quartic Fokas–Lenells and Schrödinger–Hirota equations", Optik, 2023.

A80. "Solitons in dual-core optical fibers with chromatic dispersion", Optical and Quantum Electronics, 2023.

A81. "On the optical soliton solutions of time-fractional Biswas–Arshed equation including the beta or M-truncated derivatives", Optical and Quantum Electronics, 2023.

A82. "Investigation of optical soliton solutions for the perturbed Gerdjikov-Ivanov equation with full-nonlinearity", Heliyon, 2023.

A83. "Optical soliton solutions of (1 + 1)-and (2 + 1)-dimensional generalized Sasa-Satsuma equations using new Kudryashov method", International Journal of Geometric Methods in Modern Physics, 2023.

A84. "Optical soliton solutions of time-fractional coupled nonlinear Schrödinger system via Kudryashov-based methods", Optik, 2023.

A85. "COMPLEX MATHEMATICAL MODELING FOR ADVANCED FRACTAL-FRACTIONAL DIFFERENTIAL OPERATORS WITHIN SYMMETRY", Fractals, 2023.

A86. "Pure-Cubic Optical Solitons and Stability Analysis with Kerr Law Nonlinearity", Contemporary Mathematics (Singapore), 2023.

A87. "Soliton and other solutions of the (2+1)-dimensional Date-Jimbo-Kashiwara-Miwa equation with conformable derivative", Physica Scripta, 2023.

A88. "Obtaining the soliton solutions of local M-fractional magneto-electro-elastic media", Heliyon, 2023.

A89. "Soliton Waves with the (3+1)-Dimensional Kadomtsev–Petviashvili–Boussinesq Equation in Water Wave Dynamics", Symmetry, 2023.

A90. "Acquiring the solitons of inhomogeneous Murnaghan's rod using extended Kudryashov method with Bernoulli-Riccati approach", International Journal of Modern Physics B, 2022.

A91. "Obtaining optical soliton solutions of the cubic–quartic Fokas–Lenells equation via three different analytical methods", Optical and Quantum Electronics, 2022.

A92. "Optical soliton solutions of the Chen–Lee–Liu equation in the presence of perturbation and the effect of the inter-modal dispersion, self-steepening and nonlinear dispersion", Optical and Quantum Electronics, 2022.

A93. "Optical solitons for Biswas–Milovic equation using the new Kudryashov's scheme", Optik, 2022.

A94. "Soliton solutions to the nonlinear higher dimensional Kadomtsev-Petviashvili equation through the new Kudryashov's technique", Physica Scripta, 2022.

A95. "Two Analytical Schemes for the Optical Soliton Solution of the (2 + 1) Hirota–Maccari System Observed in Single-Mode Fibers", Universe, 2022.

A96. "Soliton solutions of the Boussinesq equation via an efficient analytical technique", Modern Physics Letters B, 2022.

A97. "Stochastic optical solitons with multiplicative white noise via Itô calculus", Optik, 2022.

A98. "Optical soliton perturbation with Fokas–Lenells equation via enhanced modified extended tanh-expansion approach", Optik, 2022.

A99. "The bell-shaped perturbed dispersive optical solitons of Biswas–Arshed equation using the new Kudryashov's approach", Optik, 2022.

A100. "On the examination of optical soliton pulses of Manakov system with auxiliary equation technique", Optik, 2022.

A101. "Comparative analysis for the nonlinear mathematical equation with new wave structures", European Physical Journal Plus, 2022.

A102. "Dispersive optical solitons of Biswas–Arshed equation with a couple of novel approaches", Optik, 2022.

A103. "Perturbation of dispersive optical solitons with Schrödinger–Hirota equation with Kerr law and spatio-temporal dispersion", Optik, 2022.

A104. "An encyclopedia of Kudryashov's integrability approaches applicable to optoelectronic devices", Optik, 2022.

A105. "Optical solitons to the (1+2)-dimensional Chiral non-linear Schrödinger equation", Optical and Quantum Electronics, 2022.

A106. "Analytical solutions of (2+1)-dimensional Calogero-Bogoyavlenskii-Schiff equation in fluid mechanics/plasma physics using the New Kudryashov method", Physica Scripta, 2022.

A107. "Analytical soliton solutions of the higher order cubic-quintic nonlinear Schrödinger equation and the influence of the model's parameters", Journal of Applied Physics, 2022.

A108. "Dark, bright and singular optical solutions of the Kaup–Newell model with two analytical integration schemes", Optik, 2022.

A109. "Optical solitons with Kudryashov's sextic power-law nonlinearity", Optik, 2022.

A110. "Derivation of optical solitons of dimensionless Fokas-Lenells equation with perturbation term using Sardar sub-equation method", Optical and Quantum Electronics, 2022.

A111. "On the analytical optical soliton solutions of perturbed Radhakrishnan–Kundu–Lakshmanan model with Kerr law nonlinearity", Optical and Quantum Electronics, 2022.

A112. "On the optical soliton solutions of Kundu–Mukherjee–Naskar equation via two different analytical methods", Optik, 2022.

A113. "Novel soliton solutions of Sasa-Satsuma model with local derivative via an analytical technique", Journal of Laser Applications, 2022.

A114. "Optical solitons and other solutions to the Hirota-Maccari system with conformable, M-truncated and beta derivatives", Modern Physics Letters B, 2022.

A115. "A comparison of analytical solutions of nonlinear complex generalized Zakharov dynamical system for various definitions of the differential operator", Electronic Research Archive, 2022.

A116. "Solving the fractional Jaulent–Miodek system via a modified Laplace decomposition method", Waves in Random and Complex Media, 2022.

A117. "An application of Genocchi wavelets for solving the fractional Rosenau-Hyman equation☆", Alexandria Engineering Journal, 2021.

A118. "Optical solitons of the (2+1)-dimensional Biswas–Milovic equation using modified extended tanh-function method", Optik, 2021.

A119. "On solitary wave solutions for the perturbed Chen–Lee–Liu equation via an analytical approach", Optik, 2021.

A120. "Optical Soliton Solutions to Chen Lee Liu model by the modified extended tanh expansion scheme", Optik, 2021.

A121. "An algorithm for numerical solution of some nonlinear multi-dimensional parabolic partial differential equations[Formula presented]", Journal of Computational Science, 2021.

A122. "Solitary wave solutions of chiral nonlinear Schrödinger equations", Modern Physics Letters B, 2021.

A123. "Optical solitons and other solutions to the Radhakrishnan-Kundu-Lakshmanan equation", Optik, 2021.

A124. "The analytical solutions of Zoomeron equation via extended rational sin-cos and sinh-cosh methods", Physica Scripta, 2021.

A125. "An improved bees algorithm for training deep recurrent networks for sentiment classification", Symmetry, 2021.

A126. "A new operational matrix of fractional derivative based on the generalized Gegenbauer–Humbert polynomials to solve fractional differential equations", Alexandria Engineering Journal, 2021.

A127. "Sinc-Galerkin method for solving system of singular perturbed reaction-diffusion problems", Sigma Journal of Engineering and Natural Sciences, 2021.

A128. "MS-TR: A Morphologically enriched sentiment Treebank and recursive deep models for compositional semantics in Turkish", Cogent Engineering, 2021.

A129. "The asymptotic behavior of solutions of discrete nonlinear fractional equations", Fractional Calculus and Applied Analysis, 2020.

A130. "A JACOBI WAVELET COLLOCATION METHOD FOR FRACTIONAL FISHER'S EQUATION IN TIME", Thermal Science, 2020.

A131. "THE GENERALIZED GEGENBAUER-HUMBERTS WAVELET FOR SOLVING FRACTIONAL DIFFERENTIAL EQUATIONS", Thermal Science, 2020.

A132. "An effective computational approach based on Gegenbauer wavelets for solving the time-fractional Kdv-Burgers-Kuramoto equation", Advances in Difference Equations, 2019.

A133. "The Gegenbauer wavelets-based computational methods for the coupled system of Burgers' equations with time-fractional derivative", Mathematics, 2019.

A134. "A reliable analytical approach for a fractional model of advection-dispersion equation", Nonlinear Engineering, 2019.

A135. "Chebyshev wavelet collocation method for Ginzburg-Landau equation", Thermal Science, 2019.

A136. "Modified laguerre wavelet based galerkin method for fractional and fractional-order delay differential equations", Thermal Science, 2019.

A137. "Legendre wavelet operational matrix method for solving fractional differential equations in some special conditions", Thermal Science, 2019.

A138. "Oscillation properties of solutions of fractional difference equations", Thermal Science, 2019.

A139. "A hermite polynomial approach for solving the SIR model of epidemics", Mathematics, 2018.

A140. "A new operational matrix of fractional derivatives to solve systems of fractional differential equations via Legendre wavelets", Mathematics, 2018.

A141. "A new numerical approach for solving high-order linear and non-linear differantial equations", Thermal Science, 2018.

A142. "An efficient scheme for solving a system of fractional differential equations with boundary conditions", Advances in Difference Equations, 2017.

A143. "Oscillation criteria for nonlinear fractional differential equation with damping term", Open Physics, 2016.

A144. "An efficient algorithm for solving fractional differential equations with boundary conditions", Open Physics, 2016.

A145. "Application of sinc-galerkin method for solving space-fractional boundary value problems", Mathematical Problems in Engineering, 2015.

A146. "Solution of nonlinear fractional boundary value problems with nonhomogeneous boundary conditions", Applied and Computational Mathematics, 2015.

A147. "On generalized fractional kinetic equations involving generalized bessel function of the first kind", Mathematical Problems in Engineering, 2015.

A148. "Solving nonlinear boundary value problems by the Galerkin method with sinc functions", Open Physics, 2015.

A149. "The common solution for a generalized equilibrium problem, a variational inequality problem and a hierarchical fixed point problem", Journal of Inequalities and Applications, 2015.

A150. "Stability, synchronization control and numerical solution of fractional Shimizu-Morioka dynamical system", Applied Mathematics and Information Sciences, 2014.

A151. "Numerical solution of fractional benney equation", Applied Mathematics and Information Sciences, 2014.

A152. "Theory, methods, and applications of fractional calculus", Scientific World Journal, 2014.

A153. "Majorization for a class of analytic functions defined by q -differentiation", Mathematical Problems in Engineering, 2014.

A154. "A generalized q-Grüss inequality involving the Riemann-Liouville fractional q-integrals", Journal of Applied Mathematics, 2014.

A155. "Numerical solution and simulation of second-order parabolic pdes with sinc-galerkin method using maple", Abstract and Applied Analysis, 2013.

A156. "A novel matching of MR images using gabor wavelets", IETE Technical Review (Institution of Electronics and Telecommunication Engineers, India), 2013.

A157. "Sinc-Galerkin method for approximate solutions of fractional order boundary value problems", Boundary Value Problems, 2013.

A158. "Efficient solutions of systems of fractional PDEs by the differential transform method", Advances in Difference Equations, 2012.

A159. "Approximate analytic solution of fractional heat-like and wave-like equations with variable coefficients using the differential transforms method", Advances in Difference Equations, 2012.

A160. "Curvature-driven diffusion-based mathematical image registration models", Advances in Difference Equations, 2012.

A161. "The sinc-Galerkin method and its applications on singular Dirichlet-type boundary value problems", Boundary Value Problems, 2012.

A162. "A computational method using multiresolution for volumetric data integration", Boundary Value Problems, 2012.

A163. "An efficient computer application of the sinc-Galerkin approximation for nonlinear boundary value problems", Boundary Value Problems, 2012.

B. Papers presented at international scientific meetings and published in proceedings:

B1. "An Efficient Legendre Wavelet-Galerkin Based Approximation for the One-Dimensional Heat Equation", International Conference on Computational Methods in Applied Sciences, 2019.

B2. "Numerical Approaches for solving the Coupled System of Burgers' Equations with Time-Fractional Derivative using Gegenbauer wavelet", International Conference on Computational Methods in Applied Sciences, 2019.

B3. "Oscillation theorems for q-fractional difference equations", 7th International Conference on Applied Analysis and Mathematical Modeling, 2018.

B4. "Estimating Enzyme Kinetic Parameters using Computer Algebra Techniques", 4th International Conference on Pure and Applied Sciences, 2017.

B5. "On the oscillation of fractional nonlinear difference equations", 4nd International Conference on Pure Applied Science: Renewable Energy, 2017.

B6. "Some Oscillation Theorems for Second Order Neutral Delay Differential Equations", 4nd International Conference on Pure Applied Science: Renewable Energy, 2017.

B7. "Oscillation Behavior of Solution of Nonlinear Fractional Neutral Differential Equations", International Conference on Applied Analysis and Mathematical Modeling, 2017.

B8. "Oscillation Properties of Second-Order Neutral Functional Dynamic Equations on Time Scales", International Conference on Applied Analysis and Mathematical Modeling, 2017.

B9. "Oscillation Results for Fractional Partial Differential Equations", International Conference on Applied Analysis and Mathematical Modeling, 2017.

B10. "Application of Sinc-Galerkin Method for Solving Fractional Partial Differential Equations", International Conference on Applied Analysis and Mathematical Modeling, 2017.

B11. "Application of Wavelet-Galerkin Approximation Techniques on the Partial Differential Equations via Maple", International Conference on Applied Analysis and Mathematical Modeling, 2017.

B12. "The Legendre Wavelet Operational Matrix Method and Its Applications on High Order Non-Linear Differantial Equations", International Conference on Applied Analysis and Mathematical Modeling, 2017.

B13. "Numerical Solution of Fractional Bagley-Torvik Equation by the Legendre Wavelet Operational Matrix Method", International Conference on Applied Analysis and Mathematical Modeling, 2017.

B14. "Wavelet-petrov-galerkin method for numerical solution of boussinesq equation", 2nd International Conference on Chemical, Mechanical and Materials Engineering, CMME 2013, 2013.

C. National/international books written or chapters in books:

C1. National/international books written:

C1.1. "Diferensiyel Denklemler", Aktif Yayınları, 2022.

D. Articles published in national peer-reviewed journals:

D1. "Optical soliton solutions of the stochastic perturbed Fokas-Lenells equation having the parabolic law of self-phase modulation in the presence of spatio-temporal dispersion with multiplicative white noise", Modern Physics Letters A, 2025.

D2. "Investigating the potential of optical metamaterials with highly dispersive solitons in twin couplers with stochastic perturbations and white noise effects", Ain Shams Engineering Journal, 2024.

D3. "Computational method to solve Davey-Stewartson model and Maccari’s system", Sigma Journal of Engineering and Natural Sciences, 2024.

D4. "Soliton Solutions of Some Ocean Waves Supported by Physics Informed Neural Network Method", Artificial Intelligence and Applications, 2024.

D5. "Investigating dispersive optical solitons with the generalized stochastic perturbed Schrödinger–Hirota equation incorporating power-law nonlinearity and multiplicative white noise", Optik, 2024.

D6. "Optical solitons of (2+1)-dimensional Biswas–Milovic model with Kerr and parabolic laws of self-phase modulation", Optik, 2023.

D7. "Retrieval of optical solitons: Complex cubic–quintic Ginzburg–Landau equation augmented with the anti-cubic law", Optik, 2023.

D8. "Investigation of optical soliton solutions of higher-order nonlinear Schrödinger equation having Kudryashov nonlinear refractive index", Optik, 2023.

D9. "Wavelet-based Numerical Approaches for Solving the Korteweg-de Vries (KdV) Equation", Turkish Journal of Mathematics and Computer Science, 2022.

D10. "Soliton Solutions of (2 + 1) Dimensional Heisenberg Ferromagnetic Spin Equation by the Extended Rational sine- cosine and sinh- cosh Method", International Journal of Applied and Computational Mathematics, 2021.

D11. "A NUMERICAL ALGORITHM BASED ON ULTRASPHERICAL WAVELETS FOR SOLUTION OF LINEAR AND NONLINEAR KLEIN-GORDON EQUATIONS", Sigma Journal of Engineering and Natural Sciences, 2020.

D12. "Sinc-Galerkin method for solving hyperbolic partial differential equations", International Journal of Optimization and Control: Theories and Applications, 2018.

D13. "Oscillatory behavior of solutions of differential equations with fractional order", Applied Mathematics and Information Sciences, 2017.

D14. "Oscillation of solutions for a class of nonlinear fractional difference equations", Journal of Nonlinear Science and Applications, 2016.

D15. "Convexity of certain q -integral operators of p -valent functions", Abstract and Applied Analysis, 2014.

D16. "A note on fractional order derivatives and table of fractional derivatives of some special functions", Abstract and Applied Analysis, 2013.

D17. "A Fast and Efficient 3D Medical Image Registration Method", PRZEGLAD ELEKTROTECHNICZNY, 2013.

D18. "The time-fractional coupled-Korteweg-de-Vries equations", Abstract and Applied Analysis, 2013.

D19. "A fast and efficient 3D medical image registration method Szybka i efektywna metoda rejestracji obrazu medycznego 3D", Przeglad Elektrotechniczny, 2013.

D20. "A new approximate analytical solution of kuramoto-Sivashinsky equation using homotopy analysis method", Applied Mathematics and Information Sciences, 2013.

D21. "Efficient variational approaches for deformable registration of images", Abstract and Applied Analysis, 2012.

D22. "Ontology mapping using bipartite graph", International Journal of Physical Sciences, 2011.