



**CURRICULUM VITAE**

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Certificates Received: EĞİTİM SERTİFİKASI  
Area of Expertise: Engineering and Technology  
Natural Sciences

Degree	Department/Program	University	Year
Doctorate	Computer Science		1993
Bachelor's Degree	Matematik	Atatürk University	1986

Doctoral Thesis/Proficiency Study/Medical Specialization Thesis Title (abstract attached) and Supervisor(s):  
COMPUTER ALGEBRA APPROACH TO ENZYME KINETICS

Position Title	Workplace	Year
Professor Dr.	Biruni University	2019-Continues
Professor Dr.	İstanbul Gelişim University	2016-2018
Research Assistant		1988-1993
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Supervised Doctoral Theses/Proficiency Studies in Arts:

1. Sembolik ve nümerik metotlarla enzim kinetiği problemlerinin incelenmesi (2000)

**PUBLICATIONS**

**A. Articles published in international peer-reviewed journals:**

- A1.** Ahmed K. K., Ahmed H. M., Nofal T. A., Sulaiman T. A., Bayram M., "Exploration of fractional soliton structures in high-order nonlinear Schrödinger equation in an inhomogeneous optical fiber", *Modern Physics Letters B*, vol. 39, no. 34, 2025.
- A2.** Nazneen A., Ali N., Hussain S. M., Ahmad H., Nawaz R., Zada L., Irfan R., Guedri K., Almaliki A. H., Bayram M., "Fractional analysis of Benjamin-Bona-Mahony equation across natural transform iterative method: thermal engineering implementations", *Scientific Reports*, vol. 15, no. 1, 2025.
- A3.** Farman M., Talib A., Jamil K., Nisar K. S., Sambas A., Bayram M., Hafez M., "Monitoring and investigation to control the brain network disease under immunotherapy by using fractional operator", *Scientific Reports*, vol. 15, no. 1, 2025.

- A4.** Zada L., Nawaz R., Ahmad H., Makhdoum B. M., Suoliman N. A. A., Almaliki A. H., Bayram M., "Influence of slip velocity and heat generation on magneto-nanofluid flow via divergent and convergent plates using perturbation technique", *Scientific Reports*, vol. 15, no. 1, 2025.
- A5.** Farman M., Nisar K. S., Sambas A., Bayram M., Hafez M., "Stability and chaos analysis of neurological disorder of complex network with fractional order comparative study", *Scientific Reports*, vol. 15, no. 1, 2025.
- A6.** Nikhila Sri D., Kottapalli R., Pavani A., Ganteda C., Gouthami E., Abd-elmonem A., Haroun S. A., Hussain S. M., Bayram M., Almaliki A. H., "Comparison between response surface methodology and Taguchi method for dyeing process parameters optimization in fabric manufacturing by empirical planning", *Scientific Reports*, vol. 15, no. 1, 2025.
- A7.** Ahmad H., Guedri K., Ahmad S., Ali K., Atta G., Hussain S. M., Bayram M., Abd-elmonem A., "Numerical and machine learning based evaluation of ethylene glycol based hybrid nano-structured (TiO<sub>2</sub>-SWCNTs) fluid flow", *Scientific Reports*, vol. 15, no. 1, 2025.
- A8.** Madadi M., Inc M., Bayram M., "Nonlinear wave behaviors for a combined Kadomtsev–Petviashvili–Boiti–Leon–Manna–Pempinelli equation in fluid dynamics, plasma physics and nonlinear optics", *Wave Motion*, vol. 139, 2025.
- A9.** Heydari M., Baleanu D., Bayram M., "Piecewise logarithmic Chebyshev cardinal functions: Application for nonlinear integral equations with a logarithmic singular kernel", *Applied Numerical Mathematics*, vol. 217, pp. 355-371, 2025.
- A10.** Farman M., Talib A., Nisar K. S., Sambas A., Bayram M., Hafez M., "Investigation of ABPV predict dynamics infection in honeybee colony production: Soft patterns multiscale modeling with fractional approach", *Ain Shams Engineering Journal*, vol. 16, no. 10, 2025.
- A11.** Arshad M., Shehzad K., Bayram M., Farman M., Sambas A., "Stability, soliton dynamics, and bifurcation analysis of the (3+1)-dimensional Sakovich equation in fluid dynamics", *Modeling Earth Systems and Environment*, vol. 11, no. 5, 2025.
- A12.** Afiatdoust F., Heydari M., Bayram M., Baleanu D., "A four-block scheme for nonlinear third-kind Volterra integral equations", *Computational and Applied Mathematics*, vol. 44, no. 7, 2025.
- A13.** Batoof F., Raza N., Anwar I., Bayram M., Bekir A., "Soliton dynamics related to the stochastic Gross–Pitaevskii equation in the presence of random fluctuations", *Pramana - Journal of Physics*, vol. 99, no. 3, 2025.
- A14.** Senfiazad P., Heydari M., Bayram M., Baleanu D., "A numerical method based on the shifted Jacobi polynomials for a class of tempered fractional quadratic integro-differential equations", *Results in Applied Mathematics*, vol. 27, 2025.
- A15.** Emmanuel S., Sathasivam S., Bayram M., Ogunniran M. O., Artes R. G., "A residual-based adaptive deep learning hybrid block algorithm for partial differential equations with singularities", *Ain Shams Engineering Journal*, vol. 16, no. 8, 2025.
- A16.** Shafeeque Ali A., Bayram M., Basim M., "Customized filamentation in nonlinear metamaterials", *Chinese Journal of Physics*, vol. 96, pp. 90-97, 2025.
- A17.** Zayed E. M. E., Hashemi M. S., Saad B. M. M., Murad M. A. S., Arnous A. H., Bayram M., "Analytical solutions of stochastic partial differential equations in nanobioscience: exploring multiplicative noise effects", *European Physical Journal Plus*, vol. 140, no. 7, 2025.
- A18.** Farman M., Nisar K. S., Jamil K., Akgül A., Sambas A., Bayram M., Habib M., Hassani M. K., "Chaos and proportional integral derivative (PID) control on cancer dynamics with fractal fractional operator", *Results in Engineering*, vol. 26, 2025.
- A19.** Asadullah M., Javid A., Bekir A., Raza N., Bayram M., "Dynamical analysis, chaos and multistability of the resonant third-order nonlinear Schrödinger equation through phase portraits", *Modern Physics Letters A*, vol. 40, 2025.
- A20.** Esen H., Seçer A., Ozisik M., Bayram M., "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*, vol. 140, no. 4, 2025.
- A21.** Ozisik M., Altun Durmus S., Seçer A., Bayram M., "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*, vol. 64, no. 4, 2025.
- A22.** Raza N., Rani B., Wong P. J. Y., Almalki Y., Bayram M., "Uncovering the soliton solutions and interaction aspects of combined CBS-nCBS model utilizing Bäcklund transform", *European Physical Journal Plus*, vol. 140, no. 3, 2025.
- A23.** Zayed E. M. E., Alurrfi K. A. E., Hasek A. M. M., Arnous A. H., Seçer A., Ozisik M., Bayram M., Kumar S., "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*, vol. 99, no. 1, 2025.
- A24.** Onder I., Seçer A., Ozisik M., Bayram M., "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*, vol. 48, no. 2, pp. 2164-2178, 2025.
- A25.** Hussain S. M., Arshad M., Qureshi M. A., Guedri K., Prasad K. V., Karthik K., Varun Kumar R., Bayram M., "Entropy analysis of Casson ternary hybrid nanofluid using convective cross diffusion model via spinning sphere based artificial neural network", *Proceedings of the Institution of Mechanical Engineers, Part N: Journal of Nanomaterials, Nanoengineering and Nanosystems*, 2025.
- A26.** Gurram D., Bejawada S. G., Qureshi M. A., Jamshed W., Hussain S. M., Mohd Nasir N. A. A., Ibrahim R. W., Bayram M., "Galerkin finite element for hall and ion influences of performed MHD micropolar fluid flow with convective boundary constraints", *Proceedings of the Institution of Mechanical Engineers, Part N: Journal of Nanomaterials, Nanoengineering and Nanosystems*, 2025.

- A27.** Hashemi M., Bayram M., "Numerical treatment on fractional differential-algebraic equations by an optimization technique", *International Journal of Computer Mathematics*, 2025.
- A28.** Heydari M., Baleanu D., Bayram M., "Piecewise second kind Chebyshev functions for a class of piecewise fractional nonlinear reaction–diffusion equations with variable coefficients", *Alexandria Engineering Journal*, vol. 112, pp. 319-326, 2025.
- A29.** Butt A. R., Rana Z., Baleanu D., Bayram M., "EXPLORATION OF FRACTIONAL EFFECTS AND MULTI-STABILITY IN THE NONLINEAR (2+1)-DIMENSIONAL DAVEY-STEWARTSON FOKAS SYSTEM", *Journal of Applied Analysis and Computation*, vol. 15, no. 6, pp. 3345-3368, 2025.
- A30.** Mohammed W. W., Ozdemir N., Seçer A., Ozisik M., Bayram M., Radwan T., Ahmed K. K., "Modulation instability and soliton families of the complex Ginzburg-Landau equation having the parabolic with nonlocal law of self-phase modulation", *AIMS Mathematics*, vol. 10, no. 8, pp. 18321-18336, 2025.
- A31.** Zayed E. M. E., Gepreel K. A., El-horbaty M., Hashemi M. S., Arnous A. H., Seçer A., Ozisik M., Bayram M., "Investigating the effects of multiplicative white noise on solitons in birefringent fibers through the perturbed Kundu-Eckhaus equation with high dispersion", *Indian Journal of Physics*, 2025.
- A32.** Ozisik M., Ozdemir N., Seçer A., Bayram M., Cakicioglu H., "On the soliton solutions of the stochastic Schrödinger-Hirota equation with Kerr law and spatio-temporal dispersion", *International Journal of Geometric Methods in Modern Physics*, 2025.
- A33.** Onder I., Seçer A., Ozisik M., Bayram M., "On the optical soliton solutions of the concatenation model having parabolic law with nonlocal nonlinearity and modulation instability", *EUROPEAN PHYSICAL JOURNAL PLUS*, vol. 140, no. 7, 2025.
- A34.** Menni Y., Kaid N., Alkhafaji M., Bayram M., Ikumapayi O., Chamkha A., "Enhancing heat transfer performance: A comprehensive review of perforated obstacles", *Revista Mexicana de Fisica*, vol. 71, no. 3, 2025.
- A35.** Hussain S. M., Aamir N., Qureshi M. A., Khan N. Z., Haroon M., Jamshed W., Bayram M., "Significance of Soret and Dufour effects on the flow of non-Newtonian fluid past over a slendering stretchable surface with multiple slip conditions: A thermodynamics investigation", *Proceedings of the Institution of Mechanical Engineers, Part N: Journal of Nanomaterials, Nanoengineering and Nanosystems*, 2025.
- A36.** Yasin M. W., Baber M. Z., Butt A., Saeed I., Sulaiman T. A., Yusuf A., Bayram M., Salahshour S., "Visualization of the impact of noise of the closed-form solitary wave solutions for the stochastic Zhiber{Shabat model", *Modern Physics Letters A*, 2025.
- A37.** Sankari M. S., Rao M. E., Ahmad H., Jamshed W., Eid M. R., Hussain S. M., Bayram M., "Analysis of Gyrotactic Microorganism-Induced Bioconvective Transport and Flow Dynamics in Micropolar Nanofluids over an Exponentially Expanding Surface with Thermal and Solutal Effects", *Proceedings of the Institution of Mechanical Engineers, Part N: Journal of Nanomaterials, Nanoengineering and Nanosystems*, 2025.
- A38.** M. E. Zayed E., M. M. Saad B., Arnous A. H., Seçer A., Esen H., Bayram M., "Chirped and chirp-free optical soliton solutions for stochastic long-short wave resonant equations with multiplicative white noise", *Physica Scripta*, vol. 100, no. 1, 2025.
- A39.** Partal T., Bayram M., "Stochastic Gompertzian Model for Parathyroid Tumor Growth", *Mathematical Methods in the Applied Sciences*, 2025.
- A40.** Badaoui A., Menni Y., Hanoon F. H., Bayram M., Ikumapayi O. M., "Rh<sub>2</sub>MnGa full Heusler alloy: Unravelling physical properties and strain-induced magnetic moment using DFT", *International Journal of Modern Physics C*, 2025.
- A41.** Shankar Goud B., Jamshed W., Ahmad H., Safdar R., Isa S. S. P. M., Hussain S. M., Bayram M., Dharmiah G., "Thermal Diffusion Effect Analysis of Micropolar Nanofluid Flowing on Inclined Surface: A Chemical Engineering Case Study", *Heat Transfer*, 2025.
- A42.** Kiliçli M., Erol K. F., Akdeniz E., Toker Ö. S., Törnük F., Bayram M., "Production of sorbet with persimmon using green pea aquafaba: physicochemical characterization and bioaccessibility of bioactive compounds", *Journal of Food Science and Technology*, 2025.
- A43.** Heydari M., Baleanu D., Bayram M., "A cardinal-based approximation approach for a family of nonlinear fractional integro-differential equations involving Caputo tempered derivative", *Journal of Applied Mathematics and Computing*, 2025.
- A44.** Zayed E. M., Gepreel K. A., El-horbaty M., Arnous A. H., Seçer A., Ozisik M., Bayram M., "Investigating dispersive optical soliton dynamics in birefringent fibers with cubic nonlinearity through quintic-order concatenation model", *Optical Fiber Technology*, vol. 88, 2024.
- A45.** Alomair A., Al Naim A. S., Bayram M., "Qualitative Analysis and Novel Exact Soliton Solutions to the Compound Korteweg–De Vries–Burgers Equation", *Fractal and Fractional*, vol. 8, no. 12, 2024.
- A46.** Zahir H., Akram J., Bayram M., Shakeel M., Fatima R., Rezapour S., Inc M., "Entropy generation in Johnson–Segalman peristaltic flow with magnetic field and activation energy", *ZAMM Zeitschrift für Angewandte Mathematik und Mechanik*, vol. 104, no. 10, 2024.
- A47.** Hussein H. H., Ahmed H. M., Rabie W. B., Ahmed K. K., Hashemi M. S., Bayram M., "Multiple soliton solutions and other travelling wave solutions to new structured (2+1)-dimensional integro-partial differential equation using efficient technique", *Physica Scripta*, vol. 99, no. 10, 2024.
- A48.** Uçar M. F., Ozisik M., Seçer A., Bayram M., "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*, vol. 139, no. 10, 2024.
- A49.** Seçer A., Ozisik M., Bayram M., Ozdemir N., Cinar M., "Investigation of soliton solutions to the Peyrard-Bishop-Deoxyribo-Nucleic-Acid dynamic model with beta-derivative", *Modern Physics Letters B*, vol. 38, no. 27, 2024.

- A50.** Hashemi M. S., Arnous A. H., Bayram M., El Din S. M., Shah N. A., "Schrödinger-Hirota equation in birefringent fibers with cubic-quantum nonlinearity and multiplicative white noise in the Ito sense: Nucci's reductions and soliton solutions", *Physica Scripta*, vol. 99, no. 9, 2024.
- A51.** Esen H., Seçer A., Ozisik M., Bayram M., "Optical soliton solutions of the nonlinear complex Ginzburg-Landau equation with the generalized quadratic-cubic law nonlinearity having the chromatic dispersion", *Physica Scripta*, vol. 99, no. 9, 2024.
- A52.** Seçer A., Onder I., Esen H., Ozdemir N., Cinar M., Cakicioglu H., Durmus S., Ozisik M., Bayram M., "On Stochastic Pure-Cubic Optical Soliton Solutions of Nonlinear Schrödinger Equation Having Power Law of Self-Phase Modulation", *International Journal of Theoretical Physics*, vol. 63, no. 9, 2024.
- A53.** Qawaqneh H., Hakami K. H., Altalbe A., Bayram M., "The Discovery of Truncated M-Fractional Exact Solitons and a Qualitative Analysis of the Generalized Bretherton Model", *Mathematics*, vol. 12, no. 17, 2024.
- A54.** Esen H., Seçer A., Ozisik M., Bayram M., "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*, vol. 99, no. 8, 2024.
- A55.** Khalifa A. S., Rabie W. B., Badra N. M., Ahmed H. M., Mirzazadeh M., Hashemi M. S., Bayram M., "Discovering novel optical solitons of two CNLSEs with coherent and incoherent nonlinear coupling in birefringent optical fibers", *Optical and Quantum Electronics*, vol. 56, no. 8, 2024.
- A56.** Ozisik M., Seçer A., Bayram M., "Obtaining analytical solutions of (2+1)-dimensional nonlinear Zoomeron equation by using modified F-expansion and modified generalized Kudryashov methods", *Engineering Computations (Swansea, Wales)*, vol. 41, no. 5, pp. 1105-1120, 2024.
- A57.** Ozisik M., Bayram M., Seçer A., Cinar M., "On the analytical soliton solutions of (1 + 1)-dimensional complex coupled nonlinear Higgs field model", *European Physical Journal: Special Topics*, vol. 233, no. 6, pp. 1331-1340, 2024.
- A58.** Soliman M., Samir I., Ahmed H. M., Badra N., Hashemi M. S., Bayram M., "Dispersive perturbations of solitons for conformable fractional complex Ginzburg-Landau equation with polynomial law of nonlinearity using improved modified extended tanh-function method", *Optical and Quantum Electronics*, vol. 56, no. 7, 2024.
- A59.** Onder I., Cinar M., Seçer A., Bayram M., "Analytical solutions of simplified modified Camassa-Holm equation with conformable and M-truncated derivatives: A comparative study", *Journal of Ocean Engineering and Science*, vol. 9, no. 3, pp. 240-250, 2024.
- A60.** Elsherbey A. M., Elsonbaty N. M., Badra N. M., Ahmed H. M., Mirzazadeh M., Eslami M., Hashemi M., Bayram M., "Optical solitons of higher order mathematical model with refractive index using Kudryashov method", *Optical and Quantum Electronics*, vol. 56, no. 6, 2024.
- A61.** Ozisik M., Esen H., Seçer A., Bayram M., "On the soliton solutions to some system of complex coupled nonlinear models and the effect of the coupling coefficients", *Optical and Quantum Electronics*, vol. 56, no. 6, 2024.
- A62.** Onder I., Esen H., Ozisik M., Seçer A., Bayram M., "Optical soliton solutions of complex Ginzburg-Landau equation with triple power law and modulation instability", *Optical and Quantum Electronics*, vol. 56, no. 6, 2024.
- A63.** Hussain S., Iqbal M. S., Bayram M., Ashraf R., Inc M., Rezapour S., Tarar M. A., "Optical soliton solutions in a distinctive class of nonlinear Schrödinger's equation with cubic, quintic, septic, and nonic nonlinearities", *Optical and Quantum Electronics*, vol. 56, no. 6, 2024.
- A64.** Altun S., Seçer A., Ozisik M., Bayram M., "Optical soliton solutions of the perturbed fourth-order nonlinear Schrödinger-Hirota equation with parabolic law nonlinearity of self-phase modulation", *Physica Scripta*, vol. 99, no. 6, 2024.
- A65.** Ozdemir N., Seçer A., Ozisik M., Bayram M., Yuce S., "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*, vol. 99, no. 6, 2024.
- A66.** Durmus S. A., Ozdemir N., Seçer A., Ozisik M., Bayram M., "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*, vol. 139, no. 6, 2024.
- A67.** Kaid N., Benyamina L., Menni Y., Alkhafaji M. A., Bayram M., Alshammari B. M., Kolsi L., "Unveiling hemodynamic pulsatile flow dynamics in carotid artery stenosis: Insights from computational fluid dynamics", *AIP Advances*, vol. 14, no. 6, 2024.
- A68.** Albayrak P., Ozisik M., Seçer A., Bayram M., Das S. E., "Optical solitons of stochastic perturbed Radhakrishnan-Kundu-Lakshmanan model with Kerr law of self-phase-modulation", *Modern Physics Letters B*, vol. 38, no. 15, 2024.
- A69.** Cinar M., Seçer A., Sajjad Hashemi M., Ozisik M., Bayram M., "A comprehensive analysis of Fokas-Lenells equation using Lie symmetry method", *Mathematical Methods in the Applied Sciences*, vol. 47, no. 7, pp. 5819-5830, 2024.
- A70.** Bayram M., "Optical soliton solutions of stochastic the third-order nonlinear Schrödinger equation with multiplicative white noise via Itô calculus", *Optical and Quantum Electronics*, vol. 56, no. 5, 2024.
- A71.** Durmus S. A., Ozdemir N., Seçer A., Ozisik M., Bayram M., "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*, vol. 56, no. 5, 2024.
- A72.** Zayed E. M. E., Alurrfi K. A. E., Arnous A. H., Hashemi M. S., Bayram M., "Effects of high dispersion and generalized non-local laws on optical soliton perturbations in magneto-optic waveguides with sextic-power law refractive index", *Nonlinear Dynamics*, vol. 112, no. 10, pp. 8507-8525, 2024.

- A73.** Rabie W. B., Ahmed H. M., Hashemi M. S., Mirzazadeh M., Bayram M., "Generating optical solitons in the extended (3 + 1)-dimensional nonlinear Kudryashov's equation using the extended F-expansion method", *Optical and Quantum Electronics*, vol. 56, no. 5, 2024.
- A74.** Esen H., Seçer A., Hashemi M. S., Ozisik M., Bayram M., "Examining the (1 + 1)-dimensional Schrödinger–Hirota equation with Kerr effect under inter-modal dispersion using the invariance theory", *Optical and Quantum Electronics*, vol. 56, no. 5, 2024.
- A75.** Sulaiman T. A., Yusuf A., Abdeljabbar A., Bayram M., "New lump interaction complexitons to the (2+1)-dimensional Korteweg-de Vries equation with electrostatic wave potential in plasmas", *Journal of Ocean Engineering and Science*, vol. 9, no. 2, pp. 173-177, 2024.
- A76.** Esen H., Onder I., Seçer A., Ozisik M., Bayram M., "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*, vol. 99, no. 4, 2024.
- A77.** Zayed E. M., Arnous A. H., Seçer A., Ozisik M., Bayram M., Shah N. A., Chung J. D., "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*, vol. 58, 2024.
- A78.** Esen H., Onder I., Seçer A., Bayram M., "On soliton solutions for higher-order nonlinear Schrödinger equation with cubic–quintic–septic law", *International Journal of Geometric Methods in Modern Physics*, vol. 21, no. 2, 2024.
- A79.** Cinar M., Cakicioglu H., Seçer A., Ozisik M., Bayram M., "On obtaining optical solitons of the perturbed cubic–quartic model having the Kudryashov's law of refractive index", *Optical and Quantum Electronics*, vol. 56, no. 2, 2024.
- A80.** Liaqat M. I., Akgül A., Bayram M., "Series and closed form solution of Caputo time–fractional wave and heat problems with the variable coefficients by a novel approach", *Optical and Quantum Electronics*, vol. 56, no. 2, 2024.
- A81.** Esen H., Onder I., Seçer A., Ozisik M., Bayram M., "Davey–Stewartson system and investigation of the impacts of the nonlinearity", *Optical and Quantum Electronics*, vol. 56, no. 2, 2024.
- A82.** Seçer A., Bayram M., Ozdemir N., Onder I., Esen H., Cinar M., Aydın H., "Nonlinear complex generalized zakharov dynamical system inconformal sense utilizing new kudryashov method", *Physica Scripta*, vol. 99, no. 2, 2024.
- A83.** Esen H., Seçer A., Ozisik M., Bayram M., "Obtaining soliton solutions of the nonlinear (4+1)-dimensional Boiti–Leon–Manna–Pempinelli equation via two analytical techniques", *International Journal of Modern Physics B*, vol. 38, no. 1, 2024.
- A84.** Ozdemir N., Altun S., Seçer A., Ozisik M., Bayram M., "Revealing optical soliton solutions of Schrödinger equation having parabolic law and anti-cubic law with weakly nonlocal nonlinearity", *Journal of Taibah University for Science*, vol. 18, no. 1, 2024.
- A85.** Ozisik M., Seçer A., Bayram M., "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*, vol. 56, no. 1, 2024.
- A86.** Cakicioglu H., Cinar M., Seçer A., Ozisik M., Bayram M., "On obtaining analytical soliton solutions of Drinfeld–Sokolov–Satsuma–Hirota equation via two efficient methods", *Physica Scripta*, vol. 99, no. 1, 2024.
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- A90.** Zayed E. M. E., Al-nowehy A., Arnous A. H., Hashemi M. S., Murad M. A. S., Bayram M., "Investigating the generalized Kudryashov's equation in magneto-optic waveguide through the use of a couple integration techniques", *Journal of Optics (India)*, 2024.
- A91.** Benaissa M., Bouchaour M., Merad L., Maloufi N., Abdelkader H. S., Bayram M., Ghani R. H., Alhassan M. S., Menni Y., "Unveiling ductile, rare-earth-free structural materials: A DFT exploration of MnTi and MnZr", *Modern Physics Letters B*, vol. 39, no. 3, 2024.
- A92.** Bounoua N., Belhouari M., Menni Y., Alkhafaji M. A., Bayram M., Ikumapayi O. M., Chamkha A. J., "Three-Dimensional Finite Element Analysis of Cement-Cup Junction in Total Hip Prosthesis: Mechanical Stress Distribution, Crack Initiation and Rupture Dynamics", *Nano*, 2024.
- A93.** Rabie W. B., Ahmed H. M., Mirzazadeh M., Hashemi M. S., Bayram M., "Retrieval solitons and other wave solutions to kudryashov's equation with generalized anti-cubic nonlinearity and local fractional derivative using an efficient technique", *Journal of Optics (India)*, 2024.
- A94.** Ozdemir N., Altun S., Seçer A., Ozisik M., Bayram M., "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*, vol. 139, no. 1, 2024.
- A95.** Ozdemir N., Altun S., Ozisik M., Seçer A., Bayram M., "Bright soliton of Stochastic perturbed Biswas–Milovic equation with cubic–quintic–septic law having multiplicative white noise", *Revista Mexicana de Fisica*, vol. 70, no. 2, 2024.
- A96.** Seçer A., Bayram M., Ozisik M., "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.

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- B25.** Seer A., Bayram M., Application of Wavelet-Galerkin Approximation Techniques on the Partial Differential Equations via Maple, In: *International Conference on Applied Analysis and Mathematical Modeling*, İstanbul, Turkey, 2017.
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### **C1. National/international books written:**

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## **D. Articles published in national peer-reviewed journals:**

- D1.** Jhangeer A., Fatima S., Raza N., Rafiq M. H., Shah N. A., Bayram M., "Numerical analysis of a novel mathematical model of measles-pneumonia co-infection with treated-vaccinated compartment", *Ain Shams Engineering Journal*, 2025.
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