

## ÖZGEÇMİŞ

1. **Adı Soyadı** : Yakup Yıldırım
2. **Doğum Tarihi** : 01.01.1990
3. **Unvanı** : DR
4. **Öğrenim Durumu** : Matematik (DR)
5. **Çalıştığı Kurum** :

Derece	Alan	Üniversite	Yıl
Lisans	Matematik	Eskişehir Osmangazi Üniversitesi	2007-2011
Y. Lisans	Uygulamalı Matematik	Bursa Uludağ Üniversitesi	2012-2015
Doktora	Uygulamalı Matematik	Bursa Uludağ Üniversitesi	2015-2019

### 5. Akademik Unvanlar

- Yardımcı Doçentlik Tarihi :  
Doçentlik Tarihi :  
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### 6. Yönetilen Yüksek Lisans ve Doktora Tezleri

- 6.1. Yüksek Lisans Tezleri  
6.2. Doktora Tezleri

### 7. Yayınlar

#### 7.1. Uluslararası hakemli dergilerde yayınlanan makaleler (SCI,SSCI,Arts and Humanities)

1. Triki, H., Zhou, Q., Biswas, A., Liu, W., Yıldırım, Y., Alshehri, H. M., & Belic, M. R. (2022). Localized pulses in optical fibers governed by perturbed Fokas–Lenells equation. *Physics Letters A*, 421, 127782.
2. Muniyappan, A., Sahasraari, L. N., Anitha, S., Ilakiya, S., Biswas, A., Yıldırım, Y., ... & Belic, M. R. (2022). Family of optical solitons for perturbed Fokas–Lenells equation. *Optik*, 249, 168224.
3. Triki, H., Zhou, Q., Liu, W., Biswas, A., Moraru, L., Yıldırım, Y., ... & Belic, M. R. (2022). Chirped optical soliton propagation in birefringent fibers modeled by coupled Fokas–Lenells system. *Chaos, Solitons & Fractals*, 155, 111751.
4. Al-Qarni, A. A., Bakodah, H. O., Alshaery, A. A., Biswas, A., Yıldırım, Y., Moraru, L., & Moldovanu, S. (2022). Numerical simulation of cubic-quartic optical solitons with perturbed Fokas–Lenells equation using improved Adomian decomposition algorithm. *Mathematics*, 10(1), 138.
5. Arnous, A. H., Zhou, Q., Biswas, A., Guggilla, P., Khan, S., Yıldırım, Y., ... & Alshehri, H. M. (2022). Optical solitons in fiber Bragg gratings with cubic–quartic dispersive reflectivity by enhanced Kudryashov's approach. *Physics Letters A*, 422, 127797.
6. Elsherbeny, A. M., El–Barkouky, R., Ahmed, H. M., El–Hassani, R. M., Arnous, A. H., Biswas, A., ... & Alshehri, H. M. (2022). Cubic–quartic optical solitons in fiber Bragg gratings with anti–cubic nonlinearity using the modified extended direct algebraic method. *Optik*, 169347.
7. Zayed, E. M., Alngar, M. E., Shohib, R. M., Biswas, A., Khan, S., Yıldırım, Y., ... & Alshomrani, A. S. (2022). Cubic–quartic solitons in couplers with optical metamaterials having quadratic–cubic law of nonlinearity. *Optik*, 249, 168065.
8. Zayed, E. M., Alngar, M. E., Shohib, R. M., Biswas, A., Dakova, A., Yıldırım, Y., ... & Belic, M. R. (2022). Cubic–quartic solitons in couplers with

- optical metamaterials having triple-power law nonlinearity (sequel to polynomial law). *Optik*, 250, 168264.
9. Zayed, E. M., Gepreel, K. A., El-Horbaty, M., & Yıldırım, Y. (2022). Optical solitons in birefringent fibers with Kaup–Newell equation using two integration schemes. *Optik*, 251, 167992.
  10. Zayed, E. M., Gepreel, K. A., El-Horbaty, M., & Yıldırım, Y. (2022). Cubic–quartic optical solitons in birefringent fibers with Kaup–Newell equation using different arithmetic algorithms. *Optik*, 255, 168686.
  11. Zayed, E. M., Shohib, R., Alngar, M. E., Biswas, A., Yıldırım, Y., Dakova, A., ... & Belic, M. R. (2022). Optical solitons in the Sasa–Satsuma model with multiplicative noise via Itô calculus. *Ukrainian Journal of Physical Optics*, 23(1).
  12. Zayed, E. M., Alngar, M. E., Shohib, R. M., Biswas, A., Triki, H., Yıldırım, Y., ... & Alshehri, H. M. (2022). Cubic–quartic optical solitons in birefringent fibers with Sasa–Satsuma equation. *Optik*, 261, 169230.
  13. Arnous, A. H., Biswas, A., Yıldırım, Y., Zhou, Q., Liu, W., Alshomrani, A. S., & Alshehri, H. M. (2022). Cubic–quartic optical soliton perturbation with complex Ginzburg–Landau equation by the enhanced Kudryashov’s method. *Chaos, Solitons & Fractals*, 155, 111748.
  14. Arnous, A. H., Biswas, A., Kara, A. H., Milovic, D., Yıldırım, Y., & Alshehri, H. M. (2022). Sequel to “cubic-quartic optical soliton perturbation with complex Ginzburg–Landau equation by the enhanced Kudryashov's method”. *IET Optoelectronics*.
  15. Biswas, A., Berkemeyer, T., Khan, S., Moraru, L., Yıldırım, Y., & Alshehri, H. M. (2022). Highly Dispersive Optical Soliton Perturbation, with Maximum Intensity, for the Complex Ginzburg–Landau Equation by Semi-Inverse Variation. *Mathematics*, 10(6), 987.
  16. BISWAS, A., KARA, A. H., KHAN, S., YIDIRIM, Y., MAHMOOD, M., ALSHEHRI, H. M., & BELIC, M. R. (2022). Conservation laws for cubic–quartic optical solitons with complex Ginzburg–Landau equation having five nonlinear refractive index structures. *Optoelectronics and Advanced Materials-Rapid Communications*, 16(March-April 2022), 137-141.
  17. Kumar, S., Biswas, A., Yıldırım, Y., Moraru, L., Moldovanu, S., Alshehri, H. M., ... & Al-Bogami, D. H. (2022). Cubic–Quartic Optical Soliton Perturbation with Differential Group Delay for the Lakshmanan–Porsezian–Daniel Model by Lie Symmetry. *Symmetry*, 14(2), 224.
  18. Muniyappan, A., Hemamalini, D., Akila, E., Elakkiya, V., Anitha, S., Devadharshini, S., ... & Alshehri, H. M. (2022). Bright solitons with anti-cubic and generalized anti-cubic nonlinearities in an optical fiber. *Optik*, 254, 168612.
  19. Muniyappan, A., Amirthani, S., Chandrika, P., Biswas, A., Yıldırım, Y., Alshehri, H. M., ... & Al-Bogami, D. H. (2022). Dark solitons with anti-cubic and generalized anti-cubic nonlinearities in an optical fiber. *Optik*, 255, 168641.
  20. Ayela, A. M., Edah, G., Biswas, A., Zhou, Q., Yildirim, Y., Khan, S., ... & Belic, M. R. (2022). Dynamical system of optical soliton parameters for anti-cubic and generalized anti-cubic nonlinearities with super-Gaussian and super-sech pulses. *Optica Applicata*, 52(1).
  21. Zayed, E. M., Shohib, R. M., Alngar, M. E., Biswas, A., Yıldırım, Y., Alshomrani, A. S., & Alshehri, H. M. (2022). Optical solitons with generalized anti–cubic nonlinearity having multiplicative white noise by Itô Calculus. *Optik*, 169262.
  22. Triki, H., Sun, Y., Biswas, A., Zhou, Q., Yıldırım, Y., Zhong, Y., & Alshehri, H. M. (2022). On the existence of chirped algebraic solitary waves in optical fibers governed by Kundu–Eckhaus equation. *Results in Physics*, 34, 105272.

23. Adem, A. R., Ntsime, B. P., Biswas, A., Dakova, A., Ekici, M., Yidirim, Y., & Alshehri, H. M. (2022). Stationary optical solitons with Kudryashov's self-phase modulation and nonlinear chromatic dispersion. *Optoelectronics and Advanced Materials-Rapid Communications*, 16(January-February 2022), 58-60.
24. Zayed, E. M., Alngar, M. E., Shohib, R. M., Biswas, A., Yıldırım, Y., Alshomrani, A. S., & Alshehri, H. M. (2022). Optical solitons having Kudryashov's self-phase modulation with multiplicative white noise via Itô calculus using new mapping approach. *Optik*, 169369.
25. Arnous, A. H., Biswas, A., Kara, A. H., Yıldırım, Y., Alshehri, H. M., & Belic, M. R. (2022). Highly dispersive optical solitons and conservation laws in absence of self-phase modulation with new Kudryashov's approach. *Physics Letters A*, 431, 128001.
26. González-Gaxiola, O., Biswas, A., Yildirim, Y., & Alshehri, H. M. (2022). Highly dispersive optical solitons in birefringent fibers having Kerr law of refractive index by Laplace-Adomian decomposition. *Optik*, 257, 168788.
27. Gonzalez-Gaxiola, O., Biswas, A., Yıldırım, Y., & Alshehri, H. M. (2022). Highly dispersive optical solitons in birefringent fibres with non-local form of nonlinear refractive index: Laplace-Adomian decomposition. *Ukrainian Journal of Physical Optics*, 23(2), 68-76.
28. González-Gaxiola, O., Biswas, A., Yıldırım, Y., & Moraru, L. (2022). Highly Dispersive Optical Solitons in Birefringent Fibers with Polynomial Law of Nonlinear Refractive Index by Laplace-Adomian Decomposition. *Mathematics*, 10(9), 1589.
29. Biswas, A., Coleman, N., Kara, A. H., Khan, S., Moraru, L., Moldovanu, S., ... & Yıldırım, Y. (2022). Shallow Water Waves and Conservation Laws with Dispersion Triplet. *Applied Sciences*, 12(7), 3647.
30. Zayed, E. M., Shohib, R. M., Alngar, M. E., Gepreel, K. A., Nofal, T. A., & Yıldırım, Y. (2022). Optical solitons for Biswas-Arshed equation with multiplicative noise via Itô calculus using three integration algorithms. *Optik*, 258, 168847.
31. Zayed, E. M., Shohib, R. M., Alngar, M. E., Nofal, T. A., Gepreel, K. A., & Yıldırım, Y. (2022). Cubic-quartic optical solitons in magneto-optic waveguides for Biswas-Milovic equation with Kudryashov's law of arbitrary refractive index. *Optik*, 259, 168911.
32. Zayed, E. M., Shohib, R. M., Alngar, M. E., Nofal, T. A., Gepreel, K. A., & Yıldırım, Y. (2022). Cubic-quartic optical solitons of perturbed Biswas-Milovic equation having Kudryashov's nonlinear form and two generalized non-local laws. *Optik*, 259, 168919.
33. Mecelti, A., Triki, H., Azzouzi, F., Wei, X., Biswas, A., Yıldırım, Y., ... & Zhou, Q. (2022). New chirped gray and kink self-similar waves in presence of quintic nonlinearity and self-steepening effect. *Physics Letters A*, 437, 128104.
34. Zayed, E. M., Shohib, R. M., Alngar, M. E., Biswas, A., Yıldırım, Y., Alshomrani, A. S., & Alshehri, H. M. (2022). Optical solitons with Manakov equation having multiplicative white noise by Itô Calculus. *Optik*, 169233.
35. Zayed, E. M., Shohib, R. M., Alngar, M. E., Nofal, T. A., Gepreel, K. A., & Yıldırım, Y. (2022). Cubic-quartic optical solitons with Biswas-Milovic equation having dual-power law nonlinearity using two integration algorithms. *Optik*, 169453.
36. Zayed, E. M., Shohib, R. M., Alngar, M. E., Biswas, A., Moraru, L., Khan, S., ... & Belic, M. R. (2022). Dispersive optical solitons with Schrödinger-Hirota model having multiplicative white noise via Itô calculus. *Physics Letters A*, 128268.

37. Yıldırım Y., Biswas A., Khan S., Mahmood M. F. & Alshehri H. M. (2022). Highly dispersive optical soliton perturbation with Kudryashov's sextic-power law of nonlinear refractive index. *Ukr. J. Phys. Opt.* 23(1).
38. Yıldırım, Y., Biswas, A., & Alshehri, H. M. (2022). Cubic–quartic optical soliton perturbation with Fokas–Lenells equation having maximum intensity. *Optik*, 169336.
39. Yıldırım, Y., Biswas, A., Alshehri, H. M. & Belic, M. Cubic–quartic optical soliton perturbation with Gerdjikov–Ivanov equation by sine–Gordon equation approach. *Optoelectronics and Advanced Materials – Rapid Communications*, 16(5-6), 236-242.
40. Yıldırım Y., Biswas, A., Guggilla P., Khan S., Ekici, M., Moraru, L., Triki H., Zayed, E. M. E., Alzahrani A. K., & Belic, M. R. Solitons in nonlinear directional couplers with optical metamaterials by sine–Gordon equation approach. *Nonlinear Optics, Quantum Optics*, 56, 317–370.
41. Zayed, E. M., Gepreel, K. A., Shohib, R. M., Alngar, M. E., & Yıldırım, Y. (2021). Optical solitons for the perturbed Biswas-Milovic equation with Kudryashov's law of refractive index by the unified auxiliary equation method. *Optik*, 230, 166286.
42. Zayed, E. M., Alngar, M. E., Biswas, A., Yıldırım, Y., Khan, S., Alzahrani, A. K., & Belic, M. R. (2021). Cubic–quartic optical soliton perturbation in polarization-preserving fibers with Fokas–Lenells equation. *Optik*, 234, 166543.
43. Zayed, E. M., Alngar, M. E., El-Horbaty, M. M., Biswas, A., Kara, A. H., Yıldırım, Y., ... & Belic, M. R. (2021). Cubic–quartic polarized optical solitons and conservation laws for perturbed Fokas–Lenells model. *Journal of Nonlinear Optical Physics & Materials*, 30(03n04), 2150005.
44. Zayed, E. M., Shohib, R. M., Alngar, M. E., Biswas, A., Khan, S., Yıldırım, Y., ... & Belic, M. R. (2021). Cubic–quartic optical solitons with Kudryashov's arbitrary form of nonlinear refractive index. *Optik*, 238, 166747.
45. Elsherbeny, A. M., El-Barkouky, R., Ahmed, H. M., Arnous, A. H., El-Hassani, R. M., Biswas, A., ... & Alshomrani, A. S. (2021). Optical soliton perturbation with Kudryashov's generalized nonlinear refractive index. *Optik*, 240, 166620.
46. Gepreel, K. A., Zayed, E. M., Alngar, M. E., Biswas, A., Guggilla, P., Khan, S., ... & Belic, M. R. (2021). Optical solitons with Kudryashov's arbitrary form of refractive index and generalized non-local nonlinearity. *Optik*, 243, 166723.
47. Triki, H., Benlalli, A., Zhou, Q., Biswas, A., Yıldırım, Y., Alzahrani, A. K., & Belic, M. R. (2021). Gray optical dips of Kundu-Mukherjee-Naskar model. *Physics Letters A*, 401, 127341.
48. Zayed, E. M., Alngar, M. E., Biswas, A., Yıldırım, Y., Guggilla, P., Khan, S., ... & Belic, M. R. (2021). Cubic–quartic optical soliton perturbation with Lakshmanan–Porsezian–Daniel model. *Optik*, 233, 166385.
49. Kumar, S., Biswas, A., Zhou, Q., Yıldırım, Y., Alshehri, H. M., & Belic, M. R. (2021). Straddled optical solitons for cubic–quartic Lakshmanan–Porsezian–Daniel model by Lie symmetry. *Physics Letters A*, 417, 127706.
50. Zayed, E. M., Shohib, R. M., Alngar, M. E., & Yıldırım, Y. (2021). Optical solitons in fiber Bragg gratings with Radhakrishnan–Kundu–Lakshmanan equation using two integration schemes. *Optik*, 245, 167635.
51. Zayed, E. M., Shohib, R., Alngar, M. E., & Yıldırım, Y. (2021). Solitons and Other Solutions for the Nonlinear Convection–Diffusion–Reaction Equation with Power-Law Nonlinearity by the Extended Simplest Equation Method. *Computational Mathematics and Modeling*, 32(2), 235-252.

52. Biswas, A., Vega–Guzman, J. M., Kara, A. H., Zhou, Q., Ekici, M., Yıldırım, Y., ... & Belic, M. R. (2021). Conservation laws for solitons in magneto–optic waveguides with dual–power law nonlinearity. *Physics Letters A*, 416, 127667.
53. Triki, H., Zhou, Q., Biswas, A., Liu, W., Yıldırım, Y., Alshehri, H. M., & Belic, M. R. (2021). Chirped optical solitons having polynomial law of nonlinear refractive index with self-steepening and nonlinear dispersion. *Physics Letters A*, 417, 127698.
54. Zayed, E. M., Alngar, M. E., Biswas, A., Yıldırım, Y., Ekici, M., Alshehri, H. M., & Belic, M. R. (2021). Cubic–quartic solitons in couplers with optical metamaterials having parabolic law nonlinearity. *Optik*, 247, 167960.
55. Zayed, E. M., Alngar, M. E., Biswas, A., Yıldırım, Y., Ekici, M., Alshehri, H. M., & Belic, M. R. (2021). Cubic–quartic solitons in couplers with optical metamaterials having dual-power law of nonlinearity. *Optik*, 247, 167969.
56. Zayed, E. M., Alngar, M. E., Shohib, R. M., Biswas, A., Yıldırım, Y., Dakova, A., ... & Belic, M. R. (2021). Cubic–quartic solitons in couplers with optical metamaterials having polynomial law of nonlinearity. *Optik*, 248, 168087.
57. Zayed, E. M., Alngar, M. E., Shohib, R. M., Biswas, A., Yıldırım, Y., Alshehri, H. M., & Belic, M. R. (2021). Cubic–quartic optical solitons with Bragg gratings having anti-cubic nonlinearity and dispersive reflectivity. *Optik*, 247, 167876.
58. Biswas, A., Kara, A. H., Sun, Y., Zhou, Q., Yıldırım, Y., Alshehri, H. M., & Belic, M. R. (2021). Conservation laws for pure-cubic optical solitons with complex Ginzburg–Landau equation having several refractive index structures. *Results in Physics*, 31, 104901.
59. Zayed, E. M., Gepreel, K. A., El-Horbaty, M., Biswas, A., Yıldırım, Y., & Alshehri, H. M. (2021). Highly dispersive optical solitons with complex Ginzburg–Landau equation having six nonlinear forms. *Mathematics*, 9(24), 3270.
60. Biswas, A., Yıldırım, Y., Ekici, M., Guggilla, P., Khan, S., González-Gaxiola, O., ... & Belic, M. R. (2021). Cubic–quartic optical soliton perturbation with complex Ginzburg–Landau equation. *Journal of Applied Science and Engineering*, 24(6), 937-1004.
61. Yıldırım, Y. (2021). Optical solitons with Biswas–Arshed equation by F-expansion method. *Optik*, 227, 165788.
62. Yıldırım, Y. (2021). Optical solitons in birefringent fibers with Biswas–Arshed equation by sine–Gordon equation method. *Optik*, 227, 165960.
63. Yıldırım, Y., Biswas, A., Ekici, M., Zayed, E. M., Alzahrani, A. K., & Belic, M. R. (2021). Optical soliton perturbation, with maximum intensity, having generalized Kudryashov's law of refractive index. *Optik*, 227, 165328.
64. Yıldırım, Y., Biswas, A., Kara, A. H., Guggilla, P., Khan, S., Alzahrani, A. K., & Belic, M. R. (2021). Optical soliton perturbation and conservation law with Kudryashov's refractive index having quadrupled power-law and dual form of generalized nonlocal nonlinearity. *Optik*, 240, 166966.
65. Yıldırım, Y., Biswas, A., Kara, A. H., Ekici, M., Zayed, E. M., Alzahrani, A. K., & Belic, M. R. (2021). Optical solitons and conservation law with Kudryashov's form of arbitrary refractive index. *Journal of Optics*, 50(4), 542-547.
66. Yıldırım, Y., Biswas, A., Ekici, M., Khan, S., Alzahrani, A. K., & Belic, M. R. (2021). Optical soliton perturbation with Kudryashov's law of arbitrary refractive index. *Journal of Optics*, 50(2), 245-252.
67. Yıldırım, Y., Biswas, A., Kara, A. H., Ekici, M. E. H. M. E. T., Khan, S., & Belic, M. R. (2021). Optical soliton perturbation and conservation law with Kudryashov's refractive index having quadrupled power-law and dual form of

- generalized nonlocal nonlinearity. *Semicond. Phys. Quantum Electron. Optoelectron.*, 24(1), 64-70.
68. Yıldırım, Y., Biswas, A., Kara, A. H., Ekici, M., Alzahrani, A. K., & Belic, M. R. (2021). Cubic–quartic optical soliton perturbation and conservation laws with generalized Kudryashov’s form of refractive index. *Journal of Optics*, 50(3), 354-360.
  69. Yıldırım, Y., Biswas, A., Triki, H., EKİCİ, M., Guggilla, P., Khan, S., ... & Belic, M. (2021). Cubic-quartic optical soliton perturbation with Kudryashov's law of refractive index having quadrupled-power law and dual form of generalized nonlocal nonlinearity by sine-Gordon equation approach. *JOURNAL OF OPTICS-INDIA*.
  70. Yıldırım, Y., Biswas, A., Khan, S., Guggilla, P., Alzahrani, A. K., & Belic, M. R. (2021). Optical solitons in fiber Bragg gratings with dispersive reflectivity by sine-Gordon equation approach. *Optik*, 237, 166684.
  71. Yıldırım, Y., Biswas, A., Guggilla, P., Khan, S., Alshehri, H. M., & Belic, M. R. (2021). Optical solitons in fibre Bragg gratings with third-and fourth-order dispersive reflectivities. *Ukrainian Journal of Physical Optics*, 22(4), 239-254.
  72. Yıldırım, Y., Biswas, A., Kara, A. H., Guggilla, P., Khan, S., Alzahrani, A. K., & Belic, M. R. (2021). Highly dispersive optical solitons and conservation laws with Kudryashov’s sextic power-law of nonlinear refractive index. *Optik*, 240, 166915.
  73. Yıldırım, Y., Topkara, E., Biswas, A., Triki, H., Ekici, M., Guggilla, P., ... & Belic, M. R. (2021). Cubic–quartic optical soliton perturbation with Lakshmanan–Porsezian–Daniel model by sine-Gordon equation approach. *Journal of Optics*, 50(2), 322-329.
  74. Yıldırım, Y., Biswas, A., Dakova, A., Khan, S., Moshokoa, S. P., Alzahrani, A. K., & Belic, M. R. (2021). Cubic–quartic optical soliton perturbation with Fokas–Lenells equation by sine–Gordon equation approach. *Results in Physics*, 26, 104409.
  75. Yıldırım, Y., Biswas, A., Khan, S., & Belic, M. R. (2021). Embedded solitons with  $\chi(2)$  and  $\chi(3)$  nonlinear susceptibilities. *Semiconductor Physics, Quantum Electronics & Optoelectronics*, 24(2), 160-165.
  76. Yıldırım, Y., Biswas, A., Dakova, A., Guggilla, P., Khan, S., Alshehri, H. M., & Belic, M. R. (2021). Cubic–quartic optical solitons having quadratic–cubic nonlinearity by sine–Gordon equation approach. *Ukrainian Journal of Physical Optics*, 22(4).
  77. Yıldırım, Y., Topkara, E., Biswas, A., Triki, H., Ekici, M. E. H. M. E. T., Guggilla, P., ... & Belic, M. (2021). Optical soliton perturbation and polarization with quadratic-cubic nonlinearity by sine-Gordon equation approach. *Journal of Physical Studies*, 25(2).
  78. Zayed, E. M., Shohib, R. M., Biswas, A., González-Gaxiola, O., Yıldırım, Y., Alzahrani, A. K., & Belic, M. R. (2020). Optical solitons in fiber Bragg gratings with generalized anti-cubic nonlinearity by extended auxiliary equation. *Chinese Journal of Physics*, 65, 613-628.
  79. Zayed, E. M., Alngar, M. E., Biswas, A., Triki, H., Yıldırım, Y., & Alshomrani, A. S. (2020). Chirped and chirp-free optical solitons in fiber Bragg gratings with dispersive reflectivity having quadratic-cubic nonlinearity by sub-ODE approach. *Optik*, 203, 163993.
  80. Darwish, A., El-Dahab, E. A., Ahmed, H., Arnous, A. H., Ahmed, M. S., Biswas, A., ... & Belic, M. R. (2020). Optical solitons in fiber Bragg gratings via modified simple equation. *Optik*, 203, 163886.
  81. Kumar, S., Malik, S., Biswas, A., Yıldırım, Y., Alshomrani, A. S., & Belic, M. R. (2020). Optical solitons with generalized anti-cubic nonlinearity by Lie symmetry. *Optik*, 206, 163638.

82. Zayed, E. M., Alngar, M. E., El-Horbaty, M., Biswas, A., Yıldırım, Y., Alshomrani, A. S., & Belic, M. R. (2020). Chirped and chirp-free optical solitons having generalized anti-cubic nonlinearity with a few cutting-edge integration technologies. *Optik*, 206, 163745.
83. Zayed, E. M., Alngar, M. E., El-Horbaty, M., Biswas, A., Alshomrani, A. S., Ekici, M., ... & Belic, M. R. (2020). Optical solitons with complex Ginzburg-Landau equation having a plethora of nonlinear forms with a couple of improved integration norms. *Optik*, 207, 163804.
84. Zayed, E. M., Shohib, R. M., El-Horbaty, M. M., Biswas, A., Yıldırım, Y., Alshomrani, A. S., & Belic, M. R. (2020). Optical solitons in birefringent fibers with quadratic-cubic refractive index by  $\phi_6$ -model expansion. *Optik*, 202, 163620.
85. Kohl, R. W., Biswas, A., Ekici, M., Yıldırım, Y., Triki, H., Alshomrani, A. S., & Belic, M. R. (2020). Highly dispersive optical soliton perturbation with quadratic-cubic refractive index by semi-inverse variational principle. *Optik*, 206, 163621.
86. Yıldırım, Y., Biswas, A., Guggilla, P., Mallawi, F., & Belic, M. R. (2020). Cubic-quartic optical solitons in birefringent fibers with four forms of nonlinear refractive index. *Optik*, 203, 163885.
87. Yıldırım, Y., Biswas, A., Jawad, A. J. A. M., Ekici, M., Zhou, Q., Khan, S., ... & Belic, M. R. (2020). Cubic-quartic optical solitons in birefringent fibers with four forms of nonlinear refractive index by exp-function expansion. *Results in Physics*, 16, 102913.
88. Yıldırım, Y., Biswas, A., Jawad, A. J. A. M., Ekici, M., Zhou, Q., Alzahrani, A. K., & Belic, M. R. (2020). Optical solitons with differential group delay for complex Ginzburg-Landau equation. *Results in Physics*, 16, 102888.
89. Yıldırım, Y., Biswas, A., Khan, S., Alshomrani, A. S., & Belic, M. R. (2020). Optical solitons with differential group delay for complex Ginzburg-Landau equation having Kerr and parabolic laws of refractive index. *Optik*, 202, 163737.
90. Yıldırım, Y., Biswas, A., Guggilla, P., González-Gaxiola, O., Ekici, M., Alzahrani, A. K., & Belic, M. R. (2020). Exhibit of highly dispersive optical solitons in birefringent fibers with four forms of nonlinear refractive index by exp-function expansion. *Optik*, 208, 164471.
91. Yıldırım, Y., Biswas, A., Ekici, M., Zayed, E. M., Khan, S., Moraru, L., ... & Belic, M. R. (2020). Highly dispersive optical solitons in birefringent fibers with four forms of nonlinear refractive index by three prolific integration schemes. *Optik*, 220, 165039.
92. Yıldırım, Y., Biswas, A., Zhou, Q., Alzahrani, A. K., & Belic, M. R. (2020). Optical solitons in birefringent fibers with Radhakrishnan-Kundu-Lakshmanan equation by a couple of strategically sound integration architectures. *Chinese Journal of Physics*, 65, 341-354.
93. Yıldırım, Y., Biswas, A., Ekici, M., Triki, H., Gonzalez-Gaxiola, O., Alzahrani, A. K., & Belic, M. R. (2020). Optical solitons in birefringent fibers for Radhakrishnan-Kundu-Lakshmanan equation with five prolific integration norms. *Optik*, 208, 164550.
94. Yıldırım, Y., Biswas, A., Ekici, M., Gonzalez-Gaxiola, O., Khan, S., Triki, H., ... & Belic, M. R. (2020). Optical solitons with Kudryashov's model by a range of integration norms. *Chinese Journal of Physics*, 66, 660-672.
95. Yıldırım, Y., Biswas, A., Kara, A. H., Ekici, M., Zayed, E. M., Alzahrani, A. K., & Belic, M. R. (2020). Cubic-quartic optical soliton perturbation and conservation laws with Kudryashov's law of refractive index. *Physics Letters A*, 384(34), 126884.

96. Yıldırım, Y., Biswas, A., Asma, M., Ekici, M., Ntsime, B. P., Zayed, E. M., ... & Belic, M. R. (2020). Optical soliton perturbation with Chen–Lee–Liu equation. *Optik*, 220, 165177.
97. Yıldırım, Y., & Mirzazadeh, M. (2020). Optical pulses with Kundu–Mukherjee–Naskar model in fiber communication systems. *Chinese Journal of Physics*, 64, 183-193.
98. Yıldırım, Y. (2020). Optical soliton molecules of Lakshmanan–Porsezian–Daniel model in birefringent fibers by trial equation technique. *Optik*, 203, 162690.
99. Yıldırım, Y. (2020). Optical solitons with Biswas–Arshed equation by sine–Gordon equation method. *Optik*, 223, 165622.
100. Yıldırım, Y., Biswas, A., Asma, M., Ekici, M., Triki, H., Zayed, E. M. E., ... & Belic, M. R. (2020). Optical solitons with Sasa–Satsuma equation. *Optik*, 219, 165183.
101. Yıldırım, Y., Biswas, A., Asma, M., Guggilla, P., Khan, S., Ekici, M., ... & Belic, M. R. (2020). Pure-cubic optical soliton perturbation with full nonlinearity. *Optik*, 222, 165394.
102. Zayed, E. M., Shohib, R. M., Biswas, A., Yıldırım, Y., Mallawi, F., & Belic, M. R. (2019). Chirped and chirp-free solitons in optical fiber Bragg gratings with dispersive reflectivity having parabolic law nonlinearity by Jacobi's elliptic function. *Results in Physics*, 15, 102784.
103. Zayed, E. M., Shohib, R. M., El-Horbaty, M. M., Biswas, A., Yıldırım, Y., Khan, S., ... & Belic, M. R. (2019). Optical dromions in cascaded systems with a couple of integration norms. *Results in Physics*, 15, 102781.
104. Yıldırım, Y., Biswas, A., Zhou, Q., Alshomrani, A. S., & Belic, M. R. (2019). Sub pico-second optical pulses in birefringent fibers for Kaup–Newell equation with cutting-edge integration technologies. *Results in Physics*, 15, 102660.
105. Biswas, A., Yıldırım, Y., Yasar, E., Triki, H., Alshomrani, A. S., Ullah, M. Z., ... & Belic, M. (2018). Optical soliton perturbation with complex Ginzburg–Landau equation using trial solution approach. *Optik*, 160, 44-60.
106. Biswas, A., Yıldırım, Y., Yaşar, E., & Alqahtani, R. T. (2018). Optical solitons for Lakshmanan–Porsezian–Daniel model with dual-dispersion by trial equation method. *Optik*, 168, 432-439.
107. Biswas, A., Yıldırım, Y., Yaşar, E., Zhou, Q., Moshokoa, S. P., & Belic, M. (2018). Optical soliton solutions to Fokas–Lenells equation using some different methods. *Optik*, 173, 21-31.
108. Biswas, A., Yıldırım, Y., Yaşar, E., Zhou, Q., Moshokoa, S. P., & Belic, M. (2018). Sub pico-second pulses in mono-mode optical fibers with Kaup–Newell equation by a couple of integration schemes. *Optik*, 167, 121-128.
109. Biswas, A., Yıldırım, Y., Yasar, E., Zhou, Q., Moshokoa, S. P., & Belic, M. (2018). Chiral solitons with Bohm potential by modified simple equation method and trial equation scheme. *Acta Phys. Pol. A*, 134(6), 1120-1125.
110. Biswas, A., Yıldırım, Y., Yasar, E., Triki, H., Alshomrani, A. S., Ullah, M. Z., ... & Belic, M. (2018). Optical soliton perturbation for complex Ginzburg–Landau equation with modified simple equation method. *Optik*, 158, 399-415.
111. Biswas, A., Yıldırım, Y., Yasar, E., Zhou, Q., Moshokoa, S. P., & Belic, M. (2018). Optical solitons for Lakshmanan–Porsezian–Daniel model by modified simple equation method. *Optik*, 160, 24-32.
112. Biswas, A., Yıldırım, Y., Yasar, E., Zhou, Q., Mahmood, M. F., Moshokoa, S. P., & Belic, M. (2018). Optical solitons with differential group



- delay for coupled Fokas–Lenells equation using two integration schemes. *Optik*, 165, 74-86.
113. Biswas, A., Yildirim, Y., Yasar, E., Mahmood, M. F., Alshomrani, A. S., Zhou, Q., ... & Belic, M. (2018). Optical soliton perturbation for Radhakrishnan–Kundu–Lakshmanan equation with a couple of integration schemes. *Optik*, 163, 126-136.
  114. Biswas, A., Yildirim, Y., Yaşar, E., Zhou, Q., Moshokoa, S. P., & Belic, M. (2018). Optical soliton perturbation with quadratic-cubic nonlinearity using a couple of strategic algorithms. *Chinese journal of physics*, 56(5), 1990-1998.
  115. Yildirim, Y., Yaşar, E. M. R. U. L. L. A. H., Triki, H., Zhou, Q., Moshokoa, S. P., Ullah, M. Z., ... & Belic, M. (2018). Lie symmetry analysis and exact solutions to N-coupled non-linear Schrödinger's equations with kerr and parabolic law nonlinearities. *Romanian journal of physics*, 63(1-2).
  116. Biswas, A., Yildirim, Y., Yasar, E., Zhou, Q., Alshomrani, A. S., Moshokoa, S. P., & Belic, M. (2018). Dispersive optical solitons with Schrödinger–Hirota model by trial equation method. *Optik*, 162, 35-41.
  117. Biswas, A., Yildirim, Y., Yasar, E., Zhou, Q., Moshokoa, S. P., & Belic, M. (2018). Optical soliton perturbation with resonant nonlinear Schrödinger's equation having full nonlinearity by modified simple equation method. *Optik*, 160, 33-43.
  118. Biswas, A., Yildirim, Y., Yaşar, E., & Babatin, M. M. (2017). Conservation laws for Gerdjikov-Ivanov equation in nonlinear fiber optics and PCF. *Optik*, 148, 209-214.
  119. Biswas, A., Yildirim, Y., Yasar, E., Triki, H., Alshomrani, A. S., Ullah, M. Z., ... & Belic, M. (2018). Optical soliton perturbation with full nonlinearity for Gerdjikov–Ivanov equation by trial equation method. *Optik*, 157, 1214-1218.
  120. Biswas, A., Yildirim, Y., Yasar, E., Zhou, Q., Alshomrani, A. S., Moshokoa, S. P., & Belic, M. (2018). Dispersive optical solitons with differential group delay by a couple of integration schemes. *Optik*, 162, 108-120.
  121. Biswas, A., Yildirim, Y., Yasar, E., Zhou, Q., Moraru, L., Alshomrani, A. S., & Belic, M. R. (2019). Resonant optical soliton perturbation with full nonlinearity and time-dependent coefficients by trial equation method. *Journal of Optoelectronics and Advanced Materials*, 21(3-4), 213-221.
  122. Yaşar, E., Yildirim, Y., & Yaşar, E. (2018). New optical solitons of space-time conformable fractional perturbed Gerdjikov-Ivanov equation by sine-Gordon equation method. *Results in Physics*, 9, 1666-1672.
  123. Biswas, A., Yildirim, Y., Yasar, E., Triki, H., Alshomrani, A. S., Ullah, M. Z., ... & Belic, M. (2018). Optical soliton perturbation with Gerdjikov–Ivanov equation by modified simple equation method. *Optik*, 157, 1235-1240.
  124. Biswas, A., Yildirim, Y., Yaşar, E., Zhou, Q., Alshomrani, A. S., Moshokoa, S. P., & Belic, M. (2018). Solitons for perturbed Gerdjikov–Ivanov equation in optical fibers and PCF by extended Kudryashov's method. *Optical and Quantum Electronics*, 50(3), 1-13.
  125. Biswas, A., Yildirim, Y., Yaşar, E., Zhou, Q., Moshokoa, S. P., Alfiras, M., & Belic, M. (2019). Optical solitons in birefringent fibers with weak non-local nonlinearity using two forms of integration architecture. *Optik*, 178, 669-680.
  126. Biswas, A., Yildirim, Y., Yaşar, E., Zhou, Q., Khan, S., Adesanya, S., ... & Belic, M. (2019). Optical soliton molecules in birefringent fibers having

- weak non-local nonlinearity and four-wave mixing with a couple of strategic integration architectures. *Optik*, 179, 927-940.
127. Mirzazadeh, M., Yıldırım, Y., Yaşar, E., Triki, H., Zhou, Q., Moshokoa, S. P., ... & Belic, M. (2018). Optical solitons and conservation law of Kundu–Eckhaus equation. *Optik*, 154, 551-557.
  128. Biswas, A., Yıldırım, Y., Yasar, E., Zhou, Q., Moshokoa, S. P., & Belic, M. (2018). Optical solitons with differential group delay by trial equation method. *Optik*, 160, 116-123.
  129. Biswas, A., Yıldırım, Y., Yaşar, E., Zhou, Q., Alshomrani, A. S., & Belic, M. (2019). Optical soliton perturbation in parabolic law medium having weak non-local nonlinearity by a couple of strategic integration architectures. *Results in Physics*, 13, 102334.
  130. Biswas, A., Yıldırım, Y., Yasar, E., Triki, H., Alshomrani, A. S., Ullah, M. Z., ... & Belic, M. (2018). Optical soliton perturbation with full nonlinearity for Kundu–Eckhaus equation by modified simple equation method. *Optik*, 157, 1376-1380.
  131. Biswas, A., Yıldırım, Y., Yasar, E., Zhou, Q., Moshokoa, S. P., & Belic, M. (2018). Optical solitons with differential group delay and four-wave mixing using two integration procedures. *Optik*, 167, 170-188.
  132. Biswas, A., Yıldırım, Y., Yasar, E., Triki, H., Zhou, Q., Moshokoa, S. P., ... & Belic, M. (2018). Optical soliton perturbation with full nonlinearity in polarization preserving fibers using trial equation method. *J. Optoelectron. Adv. Mater.*, 20(7–8), 385-402.
  133. Biswas, A., Yıldırım, Y., Yasar, E., Triki, H., Alshomrani, A. S., Ullah, M. Z., ... & Belic, M. (2018). Optical soliton perturbation with full nonlinearity by trial equation method. *Optik*, 157, 1366-1375.
  134. Yaşar, E., Yıldırım, Y., & Adem, A. R. (2018). Perturbed optical solitons with spatio-temporal dispersion in (2+ 1)-dimensions by extended Kudryashov method. *Optik*, 158, 1-14.
  135. Yaşar, E., Yıldırım, Y., Zhou, Q., Moshokoa, S. P., Ullah, M. Z., Triki, H., ... & Belic, M. (2017). Perturbed dark and singular optical solitons in polarization preserving fibers by modified simple equation method. *Superlattices and Microstructures*, 111, 487-498.
  136. Yıldırım, Y., Çelik, N., & Yaşar, E. (2017). Nonlinear Schrödinger equations with spatio-temporal dispersion in Kerr, parabolic, power and dual power law media: A novel extended Kudryashov's algorithm and soliton solutions. *Results in physics*, 7, 3116-3123.
  137. Biswas, A., Yaşar, E., Yıldırım, Y., Triki, H., Zhou, Q., Moshokoa, S. P., & Belic, M. (2018). Conservation laws for perturbed solitons in optical metamaterials. *Results in physics*, 8, 898-902.
  138. Yıldırım, Y., & Yaşar, E. (2017). Multiple exp-function method for soliton solutions of nonlinear evolution equations. *Chinese Physics B*, 26(7), 070201.
  139. Yıldırım, Y., Yasar, E., & Adem, A. R. (2017). A multiple exp-function method for the three model equations of shallow water waves. *Nonlinear Dynamics*, 89(3), 2291-2297.
  140. Yaşar, E., Yıldırım, Y., & Giresunlu, I. B. (2016). First integrals and analytical solutions of the nonlinear fin problem with temperature-dependent thermal conductivity and heat transfer coefficient. *Pramana*, 87(2), 1-9.
  141. Yaşar, E., Yıldırım, Y., & Adem, A. R. (2019). Extended transformed rational function method to nonlinear evolution equations. *International Journal of Nonlinear Sciences and Numerical Simulation*, 20(6), 691-701.
  142. Yıldırım, Y., & Yaşar, E. (2018). A (2+ 1)-dimensional breaking soliton equation: solutions and conservation laws. *Chaos, Solitons & Fractals*, 107, 146-155.

143. Yaşar, E., Yıldırım, Y., & Khaliq, C. M. (2016). Lie symmetry analysis, conservation laws and exact solutions of the seventh-order time fractional Sawada–Kotera–Ito equation. *Results in physics*, 6, 322-328.
144. Adem, A. R., Yıldırım, Y., & Yaşar, E. (2019). Soliton solutions to the non-local Boussinesq equation by multiple exp-function scheme and extended Kudryashov's approach. *Pramana*, 92(2), 1-11.
145. Yıldırım, Y., & Yaşar, E. (2017). An extended Korteweg–de Vries equation: multi-soliton solutions and conservation laws. *Nonlinear Dynamics*, 90(3), 1571-1579.
146. Yaşar, E., & Yıldırım, Y. (2015). A procedure on the first integrals of second-order nonlinear ordinary differential equations. *The European Physical Journal Plus*, 130(12), 1-5.
147. Adem, A. R., Yıldırım, Y., & Yaşar, E. (2019). Complexiton solutions and soliton solutions:  $(2+1)$ -dimensional Date–Jimbo–Kashiwara–Miwa equation. *Pramana*, 92(3), 1-12.

7.2. Uluslararası diğer hakemli dergilerde yayınlanan makaleler

7.3. Uluslararası bilimsel toplantılarda sunulan ve bildiri kitabında basılan bildiriler

7.4. Yazılan uluslararası kitaplar veya kitaplarda bölümler

7.5. Ulusal hakemli dergilerde yayınlanan makaleler

7.6. Ulusal bilimsel toplantılarda sunulan ve bildiri kitabında basılan bildiriler

7.7. Diğer yayınlar

- **Yüksek Lisans Tezi**

İkinci mertebeden adi diferensiyel denklemlerin ilk integralleri

(First integrals of second order ordinary differential equations)

Danışman: PROF. DR. EMRULLAH YAŞAR, 2015

- **Doktora Tezi**

Oluşum tipi lineer olmayan parça türevli diferensiyel denklemlerin tam çözümleri

(Exact solutions to evolution type nonlinear partial differential equations)

Danışman: PROF. DR. EMRULLAH YAŞAR, 2019

## 8. Projeler

- **Bilimsel araştırma projesi, Bursa Uludağ University, KUAP(F)-2019/11**

**Karbon nanotüplerin kanser tümörlerinin tedavisi üzerine bir matematiksel modeli ve analitik çözümleri**

## 9. İdari Görevler

**10. Bilimsel ve Mesleki Kuruluşlara Üyelikler**

**11. Ödüller**

- **Bursa Uludağ Üniversitesi, Fen Bilimleri Enstitüsü**  
**2019 yılı En iyi Doktora Tez Ödülü**

**12. Lisans ve lisansüstü düzeydeki verilen dersler.**