

## Res. Asst. İsmail ÖNDER

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: AAZ-4533-2020

ScopusID: 57224858882

Yoksis Researcher ID: 316417

### Education Information

Doctorate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Mathematical Engineering, Turkey 2021 - Continues

Postgraduate, Yildiz Technical University, Faculty Of Chemical And Metallurgical Engineering, Department Of Mathematics Engineering, Turkey 2019 - 2021

Undergraduate, Yildiz Technical University, Faculty Of Chemical And Metallurgical Engineering, Department Of Mathematics Engineering, Turkey 2014 - 2019

### Foreign Languages

English, B1 Intermediate

French, A2 Elementary

### Dissertations

Postgraduate, Solutions of linear and non linear systems of ordinary differential equations with sinc-galerkin method, Yildiz Technical University, Faculty Of Chemical And Metallurgical Engineering, Department Of Mathematics Engineering, 2021

### Research Areas

algorithms, Artificial Intelligence, Computer Learning and Pattern Recognition, Software, Differential Equations, Partial Differential Equations

### Academic Titles / Tasks

Research Assistant, Yildiz Technical University, Faculty Of Chemical And Metallurgical Engineering, Department Of Mathematics Engineering, 2020 - Continues

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **On Stochastic Pure-Cubic Optical Soliton Solutions of Nonlinear Schrödinger Equation Having Power Law of Self-Phase Modulation**  
SEÇER A., ÖNDER İ., ESEN H., ÖZDEMİR N., ÇINAR M., Cakicioglu H., Durmus S., ÖZİŞİK M., BAYRAM M.  
International Journal of Theoretical Physics, vol.63, no.9, 2024 (SCI-Expanded)
- II. **Optical soliton solutions of complex Ginzburg–Landau equation with triple power law and modulation instability**  
ÖNDER İ., ESEN H., ÖZİŞİK M., SEÇER A., BAYRAM M.  
Optical and Quantum Electronics, vol.56, no.6, 2024 (SCI-Expanded)
- III. **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**  
ESEN H., ÖNDER İ., SEÇER A., ÖZİŞİK M., BAYRAM M.  
Physica Scripta, vol.99, no.4, 2024 (SCI-Expanded)
- IV. **Davey–Stewartson system and investigation of the impacts of the nonlinearity**  
ESEN H., ÖNDER İ., SEÇER A., ÖZİŞİK M., BAYRAM M.  
Optical and Quantum Electronics, vol.56, no.2, 2024 (SCI-Expanded)
- V. **On soliton solutions for higher-order nonlinear Schrödinger equation with cubic-quintic-septic law**  
ESEN H., ÖNDER İ., SEÇER A., BAYRAM M.  
International Journal of Geometric Methods in Modern Physics, vol.21, no.2, 2024 (SCI-Expanded)
- VI. **Nonlinear complex generalized zakharov dynamical system inconformal sense utilizing new kudryashov method**  
SEÇER A., BAYRAM M., ÖZDEMİR N., ÖNDER İ., ESEN H., ÇINAR M., Aydın H.  
Physica Scripta, vol.99, no.2, 2024 (SCI-Expanded)
- VII. **Soliton solutions of time-fractional modified Korteweg-de-Vries Zakharov-Kuznetsov equation and modulation instability analysis**  
ÖNDER İ., SEÇER A., BAYRAM M.  
Physica Scripta, vol.99, no.1, 2024 (SCI-Expanded)
- VIII. **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**  
ÖNDER İ., ÖZİŞİK M., SEÇER A., BAYRAM M.  
Modern Physics Letters B, 2024 (SCI-Expanded)
- IX. **Retrieval of the optical soliton solutions of the perturbed Schrödinger–Hirota equation with generalized anti-cubic law nonlinearity having the spatio-temporal dispersion**  
ÖNDER İ., SEÇER A., ÖZİŞİK M., BAYRAM M.  
Mathematical Methods in the Applied Sciences, 2024 (SCI-Expanded)
- X. **Investigating of the pure-cubic optical solitons in the presence of spatio-temporal and inter-modal dispersions**  
ESEN H., ÖNDER İ., SEÇER A., ÖZİŞİK M., BAYRAM M.  
European Physical Journal Plus, vol.138, no.11, 2023 (SCI-Expanded)
- XI. **On solution of Schrödinger–Hirota equation with Kerr law via Lie symmetry reduction**  
ÖNDER İ., SEÇER A., Hashemi M. S., ÖZİŞİK M., Bayram M.  
Nonlinear Dynamics, vol.111, no.20, pp.19315-19327, 2023 (SCI-Expanded)
- XII. **Stochastic optical solitons of the perturbed nonlinear Schrödinger equation with Kerr law via Ito calculus**  
ÖNDER İ., ESEN H., SEÇER A., ÖZİŞİK M., BAYRAM M., Qureshi S.  
European Physical Journal Plus, vol.138, no.9, 2023 (SCI-Expanded)
- XIII. **Optical soliton solutions of dispersive Schrödinger–Hirota equation with chromatic and inter-modal dispersion in a couple of law medium**  
ÖNDER İ., ESEN H., SEÇER A., ÖZİŞİK M., BAYRAM M.  
Optical and Quantum Electronics, vol.55, no.8, 2023 (SCI-Expanded)

- XIV. **On soliton solutions of the modified equal width equation**  
 ÖNDER İ., ÇINAR M., SEÇER A., BAYRAM M.  
 Engineering Computations (Swansea, Wales), vol.40, no.5, pp.1063-1083, 2023 (SCI-Expanded)
- XV. **Investigation of optical soliton solutions of higher-order nonlinear Schrödinger equation having Kudryashov nonlinear refractive index**  
 ÖZİŞİK M., SEÇER A., Bayram M., ÇINAR M., ÖZDEMİR N., ESEN H., ÖNDER İ.  
 Optik, vol.274, 2023 (SCI-Expanded)
- XVI. **Soliton solutions of coupled resonant Davey-Stewartson system and modulation instability analysis**  
 ÖNDER İ., SEÇER A., Bayram M.  
 Physica Scripta, vol.98, no.3, 2023 (SCI-Expanded)
- XVII. **Investigation of optical soliton solutions for the perturbed Gerdjikov-Ivanov equation with full-nonlinearity**  
 ÖNDER İ., SEÇER A., ÖZİŞİK M., Bayram M.  
 Heliyon, vol.9, no.2, 2023 (SCI-Expanded)
- XVIII. **On the investigation of optical soliton solutions of cubic-quartic Fokas-Lenells and Schrödinger-Hirota equations**  
 ÖZİŞİK M., ÖNDER İ., ESEN H., ÇINAR M., Ozdemir N., SEÇER A., Bayram M.  
 Optik, vol.272, 2023 (SCI-Expanded)
- XIX. **Optical soliton solutions of time-fractional coupled nonlinear Schrödinger system via Kudryashov-based methods**  
 ÖNDER İ., SEÇER A., Bayram M.  
 Optik, vol.272, 2023 (SCI-Expanded)
- XX. **Obtaining optical soliton solutions of the cubic-quartic Fokas-Lenells equation via three different analytical methods**  
 Önder İ., Secer A., Ozisik M., Bayram M.  
 OPTICAL AND QUANTUM ELECTRONICS, vol.54, no.12, 2022 (SCI-Expanded)
- XXI. **Exact solutions of Wazwaz-Benjamin-Bona-Mahony equation with conformable and  $M$ - $N$  truncated derivatives: A comparative study**  
 Önder İ., Çınar M., Seçer A., Bayram M.  
 EUROPEAN PHYSICAL JOURNAL PLUS, vol.3, no.6, pp.30-40, 2022 (SCI-Expanded)
- XXII. **Comparative analysis for the nonlinear mathematical equation with new wave structures**  
 Onder İ., Cinar M., Secer A., Yusuf A., Bayram M., Sulaiman T. A.  
 European Physical Journal Plus, vol.137, no.10, 2022 (SCI-Expanded)
- XXIII. **On the optical soliton solutions of Kundu-Mukherjee-Naskar equation via two different analytical methods**  
 ÖNDER İ., SEÇER A., ÖZİŞİK M., Bayram M.  
 Optik, vol.257, 2022 (SCI-Expanded)
- XXIV. **Solving the fractional Jaulent-Miodek system via a modified Laplace decomposition method**  
 ÇINAR M., ÖNDER İ., SEÇER A., Bayram M., Sulaiman T. A., Yusuf A.  
 WAVES IN RANDOM AND COMPLEX MEDIA, 2022 (SCI-Expanded)
- XXV. **A comparison of analytical solutions of nonlinear complex generalized Zakharov dynamical system for various definitions of the differential operator**  
 ÇINAR M., ÖNDER İ., SEÇER A., Bayram M., Yusuf A., Sulaiman T. A.  
 Electronic Research Archive, vol.30, no.1, pp.335-361, 2022 (SCI-Expanded)
- XXVI. **Optical solitons of the  $(2+1)$ -dimensional Biswas-Milovic equation using modified extended tanh-function method**  
 Çınar M., Önder İ., Seçer A., Sulaiman T. A., Yusuf A., Bayram M.  
 OPTIK, vol.245, 2021 (SCI-Expanded)
- XXVII. **The analytical solutions of Zoomeron equation via extended rational sin-cos and sinh-cosh methods**  
 ÇINAR M., ÖNDER İ., SEÇER A., Yusuf A., Abdulkadir Sulaiman T., Bayram M., Aydin H.  
 Physica Scripta, vol.96, no.9, 2021 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Analytical solutions of simplified modified Camassa-Holm equation with conformable and M-truncated derivatives: A comparative study**  
Onder İ., Cinar M., Secer A., Bayram M.  
Journal of Ocean Engineering and Science, vol.9, no.3, pp.240-250, 2024 (Scopus)
- II. **Soliton Solutions of Some Ocean Waves Supported by Physics Informed Neural Network Method**  
Önder İ., Şahiner A., Seçer A., Bayram M.  
Artificial Intelligence and Applications, no.1, pp.1-16, 2024 (Peer-Reviewed Journal)
- III. **On the revealing of optical soliton solutions of the stochastic perturbed nonlinear Schrödinger equation in the presence of the Kerr law of self-phase modulation**  
Önder İ., Özişik M., Seçer A., Bayram M.  
New Trends in Mathematical Sciences, vol.11, no.4, pp.12-16, 2023 (Conference Book)
- IV. **The soliton solutions of (2+1)-dimensional nonlinear two-coupled Maccari equation with complex structure via new Kudryashov scheme**  
Önder İ., Özişik M., Seçer A.  
New Trends in Mathematical Sciences, vol.10, no.1, pp.82-89, 2022 (Conference Book)
- V. **Soliton Solutions of (2 + 1) Dimensional Heisenberg Ferromagnetic Spin Equation by the Extended Rational sine- cosine and sinh- cosh Method**  
ÇINAR M., ÖNDER İ., SEÇER A., Yusuf A., Sulaiman T. A., Bayram M., Aydin H.  
International Journal of Applied and Computational Mathematics, vol.7, no.4, 2021 (Scopus)
- VI. **Sinc-Galerkin method for solving system of singular perturbed reaction-diffusion problems**  
SEÇER A., ÖNDER İ., ÖZİŞİK M.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.39, no.2, pp.203-212, 2021 (ESCI)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Optical Soliton Solutions of Stochastic Nonlinear Schrödinger Equation with Kerr Law Nonlinearity**  
Önder İ., Esen H., Özişik M., Seçer A., Bayram M.  
(hybrid ) International Conference on Nonlinear Science and Complexity (ICNSC23,) July 10-15, 2023, Istanbul-Turkey, İstanbul, Turkey, 10 - 15 July 2023, pp.99
- II. **On Soliton Solutions of Parabolic Law with Non-Local Nonlinearity for Improved Perturbed Nonlinear Schrödinger Equation**  
Esen H., Önder İ., Seçer A., Özişik M., Bayram M.  
(hybrid ) International Conference on Nonlinear Science and Complexity (ICNSC23,) July 10-15, 2023, Istanbul-Turkey, İstanbul, Turkey, 10 - 15 July 2023, pp.105
- III. **Soliton solutions for a nonlinear dynamical system in conformable sense**  
Seçer A., Bayram M., Çınar M., Esen H., Önder İ.  
International Conference on Analysis and Applied Mathematics, İstanbul, Turkey, 31 October - 06 November 2022, pp.133
- IV. **On the optical soliton solutions of a couple of equations with Kerr law nonlinearity**  
Önder İ., Çınar M., Esen H., Özişik M., Seçer A., Bayram M.  
International Conference on Analysis and Applied Mathematics, İstanbul, Turkey, 31 October - 06 November 2022, pp.134
- V. **Investigation of optical soliton solutions of higher order nonlinear Schrödinger equations with Kudryashov nonlinear refractive index**  
ÇINAR M., ÖNDER İ., ÖZDEMİR N., ESEN H., ÖZİŞİK M., SEÇER A., BAYRAM M.  
Sixth International Conference on Analysis and Applied Mathematics - ICAAM 2022, İstanbul, Turkey, 31 October 2022, pp.131

- VI. **An investigation on nonlinear higher order Schrödinger equation having refractive indices and chromatic dispersion**  
 Özişik M., Seçer A., Bayram M., Çınar M., Esen H., Önder İ.  
 Online International Conference on Applied Analysis and Mathematical Modeling, İstanbul, Turkey, 1 - 03 July 2022, pp.61-62
- VII. **Soliton solutions of Fokas system in monomode optical media**  
 Önder İ., Seçer A., Özişik M.  
 Online International Conference on Applied Analysis and Mathematical Modeling, İstanbul, Turkey, 1 - 03 July 2022, pp.63
- VIII. **Optical soliton solutions of nonlinear Schrödinger-Hirota model involving nonlinear chromatic dispersion**  
 Özişik M., Seçer A., Bayram M., Çınar M., Esen H., Önder İ.  
 Online International Conference on Applied Analysis and Mathematical Modeling, İstanbul, Turkey, 1 - 03 July 2022, pp.34-35
- IX. **Optical soliton solutions of nonlinear Schrödinger-Hirota model involving nonlinear chromatic dispersion**  
 ÖZİŞİK M., SEÇER A., BAYRAM M., ÖZDEMİR N., ÇINAR M., ESEN H., ÖNDER İ.  
 10th (Online) International Conference on Applied Analysis and Mathematical Modeling (ICAAMM22), İstanbul, Turkey, 1 - 03 July 2022, pp.34-35
- X. **An investigation on nonlinear higher order Schrödinger equation having refractive indices and chromatic dispersion**  
 ÖZİŞİK M., SEÇER A., BAYRAM M., ÖZDEMİR N., ÇINAR M., ESEN H., ÖNDER İ.  
 10th (Online) International Conference on Applied Analysis and Mathematical Modeling (ICAAMM22), İstanbul, Turkey, 1 - 03 July 2022, pp.60
- XI. **The soliton solutions of (2+1)-dimensional nonlinear two-coupled Maccari equation with complex structure via new Kudryashov scheme**  
 Önder İ., Seçer A., Özişik M.  
 Online International Symposium on Applied Mathematics and Engineering (ISAME22), İstanbul, Turkey, 21 - 23 January 2022, vol.10, no.1, pp.82-88
- XII. **The Soliton Solutions of (2+1)-Dimensional Nonlinear Two-Coupled Maccari Equation with Complex Structure via New Kudryashov Scheme**  
 Önder İ., Seçer A., Özişik M.  
 Online International Symposium on Applied Mathematics Engineering, İstanbul, Turkey, 21 - 23 January 2022, pp.97
- XIII. **The Soliton Solutions of (2+1)-Dimensional Nonlinear Two-Coupled Maccari Equation with Complex Structure via New Kudryashov Scheme**  
 ÖNDER İ., SEÇER A., ÖZİŞİK M.  
 International Symposium on Applied Mathematics and Engineering (ISAME2022), İstanbul, Turkey, 21 January 2022, pp.97
- XIV. **Application of Extended Rational Sin-Cos and Sinh-Cosh Method for the System of Nonlinear Partial Differential Equations**  
 Önder İ., Seçer A., Özişik M., Bayram M.  
 Online International Conference on Applied Analysis and Mathematical Modeling, 2021, İstanbul, Turkey, 11 - 13 June 2021, pp.36
- XV. **Numerical Solution of Fractional Order Partial Differential Equation via Modified Laplace Method**  
 Önder İ., Seçer A., Özişik M., Bayram M.  
 Online International Conference on Applied Analysis and Mathematical Modeling, 2021, İstanbul, Turkey, 11 - 13 June 2021, pp.39

## Supported Projects

ÖZİŞİK M., ESEN H., ÖNDER İ., ÇINAR M., SEÇER A., ÖZDEMİR N., BAYRAM M., ÇAKICIOĞLU H., DURMUŞ S., Project Supported by Higher Education Institutions, Doğrusal olmayan Schrödinger denklemi/pertürbe doğrusal olmayan Schrödinger denklemi ve bu denklemlerin farklı formlarına ait saf üçlü-dörtlü optik soliton çözümlerinin araştırılması, 2023 - Continues

SEÇER A., ÖZİŞİK M., ÇINAR M., BAYRAM M., ÖZDEMİR N., DURMUŞ S., ÇAKICIOĞLU H., ESEN H., ÖNDER İ., Project Supported by Higher Education Institutions, Grup Hız Dispersiyonu Yokluğunda Saf Üçlü-Dörtlü Doğrusal Olmayan Schrödinger Denkleminin Stokastik Modeli ve Optik Soliton Çözümlerinin Elde Edilmesi, 2023 - Continues

ÖZİŞİK M., DURMUŞ S., ESEN H., ÖNDER İ., ÇAKICIOĞLU H., SEÇER A., BAYRAM M., ÇINAR M., ÖZDEMİR N., Project Supported by Higher Education Institutions, Optik Soliton İletiminde Kerr Doğrusal Olmayan Yasası Etkisi ve Çeşitli Doğrusal Olmayan Schrödinger Modelleri Üzerinde İncelenmesi, 2023 - Continues

ÇINAR M., DURMUŞ S., ESEN H., BAYRAM M., ÇAKICIOĞLU H., ÖNDER İ., SEÇER A., ÖZİŞİK M., ÖZDEMİR N., Project Supported by Higher Education Institutions, Optik Ortamlarda Farklı Doğrusal Olmayan Yapılara Sahip Tedirgin Doğrusal Olmayan Schrödinger Denklemi ve Optik Soliton Çözümleri, 2023 - Continues

ÖZİŞİK M., ESEN H., BAYRAM M., ÖZDEMİR N., SEÇER A., ÇINAR M., ÖNDER İ., Project Supported by Higher Education Institutions, Optik fiberlerde soliton iletiminde düşük kromatik dağılım sayısı sorununun çözümüne dair Schrödinger-Hirota ve kübikkuartik Fokas-Lenells modelleri üzerinde bazı optik soliton çözümlerinin incelenmesi, 2022 - 2023

ÖZİŞİK M., ÖNDER İ., BAYRAM M., ÇINAR M., SEÇER A., ÖZDEMİR N., ESEN H., Project Supported by Higher Education Institutions, Optik fiberlerde yüksek mertebeden doğrusal olmayan Schrödinger denkleminin Kudryashov doğrusal olmayan kırılma indisi ile ilgili optik soliton çözümlerinin incelenmesi, 2022 - 2023

Seçer A., Bayram M., Çınar M., Esen H., Önder İ., Project Supported by Higher Education Institutions, Kesirli Mertebeden Kısmi Diferansiyel Denklem Sistemlerinin Yeni Analitik Çözümleri, 2021 - 2022

## Metrics

Publication: 48

Citation (WoS): 62

Citation (Scopus): 358

H-Index (WoS): 5

H-Index (Scopus): 12