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Curriculum Vitae

Education

2018–2022 **Ph.D (Mathematics)**
- Thesis Advisor Prof. Dr. Jingli Ren
- School of Mathematics and Statistics
- Zhengzhou University, Henan Province, China

Ph.D Thesis

Title **Stability analysis and exact soliton solutions to nonlinear dynamical systems**

Work experience

October 2023 to date **Post Doctoral Fellowship** at Department of Mathematics, College of Science, Shanghai University, Shanghai, P. R. China.

Research interests

- Nonlinear integrable systems, Neural networks, Exact solutions, Fractional calculus, Stochastic differential equations, Hirota and Darboux transformation, Bifurcation & Choas theory, Senstive analysis, Nonlinear partial differential equations

Computing skills

Software
- Mathematica
- Maple
- Matlab
- MS Office
- Python
- LaTeX

Personal information

- Name: Usman Younas
- Date of Birth: 15-02-1987
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Research excellence and Academic achievements

- Ranked in top 2 percent of Scientists for the year 2023, 2024 and 2025.
- 13 highly cited research articles (ESI).
- Outstanding PhD Thesis: Ranked among the 3 percent in the field of Natural and Engineering Sciences, evaluated by the degree and graduate education development center of the Ministry of education, China.
- Citations 3270, h-index 36, i10-index 92

Guest Editor

- Special Issues:
- 1: Exploring the Optical Solitons in Fiber Optics: Fundamental Concepts, Computational Approaches, and Broad Applications
- Photonics, Impact Factor 2.1
- $https://www.mdpi.com/journal/photonics/special_issues/J6NZ1I31WO$
- 2: Advanced analysis of discrete fractional operators with computational and neural networking approaches
- Mathematical and Computational Applications, Impact Factor 2.1
- $https://www.mdpi.com/journal/mca/special_issues/495960WGQ3$
- 3: New trends by discrete fractional operators with numerical and neural networking techniques
- Contemporary Mathematics, Impact Factor 2.5
- https://ojs.wiserpub.com/index.php/CM/announcement/view/553

Publications

First and Co-author

[1] Murad MAS, **Younas U**, Emadifar H, Iqbal M, Mohammed WW, Ahmed K. Diverse soliton solutions to the conformable Ivancevic option pricing model via the modified generalized Riccati equation mapping method, Mathematics and Computers in Simulation, 2026

[2] Murad MAS, **Younas U**, Hussain E, Alshammari FS. Analysis of soliton profiles of the generalized P-type equation with conformable derivative via two distinct approaches, Fractals, 2026, https:doi.org/10.1142/S0218348X26500544

[3] **Younas U**, Muhammad J, Ismael HF, Sulaiman TA, Emadifar H, Ahmed KK. The new combined Kairat-II-X differential equation: Diversity of solitary wave structures via new techniques, Journal of Nonlinear Mathematical Physics, 2025:32:55.

[4] **Younas U**, Muhammad J, Sulaiman TA, Ismael HF, Emadifar H, Mohammed WW, Ahmed KK. Estevez-Mansfield-Clarkson equation: Investigation of Breathers, two waves, and solitary wave solutions in shallow water phenomena and engineering fluid dynamics, Case Studies in Thermal Engineering, 2025:74:106723.

[5] **Younas U**, Muhammad J, Ismael HF, Sulaiman TA, Ali MR, Aymen F. Investigating the wave profiles to the linear quadratic model in mathematical biology, Scientific Reports, 2025:15:27899.

[6] **Younas U**, Sulaiman TA, Ismael HF, Muke PZ. Exploring the generalized fifth-order (2 + 1)-dimensional KdV equation: The lump structures and collision phenomena to the shallow water under gravity and nonlinear lattice, High Energy Density Physics, 2025:55:101186.

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waves with the Kadomtsev–Petviashvili–Benjamin–Bona–Mahony and Benney–Luke integrable models. Open Physics. 2021:19(1):808-18.
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Reviewer of the international journals

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- Modern Physics Letters B
- International Journal of Theoretical Physics
- Qualitative Theory of Dynamical Systems
- International journal of Modern Physics B
- Scientific Reports
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- Results in Physics
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- Archives of Computational Methods in Engineering
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- Results in Engineering
- Optical and Quantum Electronics
- Engineering Applications of Computational Fluid Mechanics
- Engineering Computations
- Aims Mathematics
- Chaos, Solitons & Fractals

Conferences Attended & Talks

[1] A talk on the tittle "Dynamics of solitary wave solutions to the (3+1)-dimensional generalized shallow water wave equation", to the 7th International Conference on Computational Mathematics and Engineering Sciences, (CMES-2023), 20-21 May. 2023, Elazığ - Türkiye.

[2] Talks on "Diversty of wave structures to the conformable fractional dynamical model" and "Optical solitons to the generalized higher-order nonlinear Schrodinger equation arising in optical fiber" to the 6th International Conference on Computational Mathematics and Engineering Sciences, (CMES-2022), 20-22

May. 2022, Ordu – Turkey.

[3] Attended, 1st International Alumni's Mathematics UET Conference, organized by the Alumnus of Mathematics UET Lahore-Pakistan held on 26 February 2022.