

Seminar Invitation: Solutions of (3+1)-dimensional extended quantum Nonlinear Zakharov-Kuznetsov equation using the Generalized Kudryashov method and the Modified Khater method

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Speakers' Brief Introduction

Ms. Adeena Khan is an MPhil Scholar working under the supervision of Dr. Saima Arshed. The field of research of a student is Computational Mathematics, specializing in Solutions of Nonlinear Evolution Equations.



Abstract

This talk presents the study of the extraction of solutions of the (3+1)-dimensional nonlinear extended quantum Zakharov-Kuznetsov equation using the generalized Kudryashov method and the modified Khater method. This model is used for ion-acoustic waves in a magnetized plasma containing cold ions and hot isothermal electrons. By the application of the proposed methods, trigonometric, hyperbolic and rational solutions have been obtained. The obtained solutions can be further classified as Kink solitons, dark solitons, singular solitons, and periodic solutions. Moreover, the constraint conditions for the validity of the solutions have also been provided. A comparative discussion between the results obtained by the proposed techniques and the results obtained by the previous techniques is also presented.

Departmental Seminar Series

The Seminar Series serves as a platform to showcase and celebrate the remarkable work carried out by our researchers, scholars, and experts. It provides an avenue for knowledge dissemination and collaboration, creating an environment that nurtures innovative ideas and drives groundbreaking research. The Seminar Series encompasses a wide range of topics, spanning various disciplines, ensuring that it caters to the diverse interests and expertise of our institute's community.



Please join us for this Presentation

When: Thursday 6th July 2023; 02:45PM- 03:00PM

Where: Computer Lab, Department of Mathematics, University of the Punjab, Lahore

Note: All faculty members and research scholars (MPhil/PhD) are invited to attend this seminar.

Chairman Message



It is my honor to witness the passion and dedication that our faculty and students bring to the study of this beautiful discipline. I encourage our faculty members to create a supportive environment that nurtures and promotes mathematical research. I urge each and every one of you, regardless of your level of experience, to actively participate in mathematical research and contribute to the growth of our research community.

Coordinator Departmental Seminar Series

Dr. Zeeshan Yousaf

Associate Professor

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