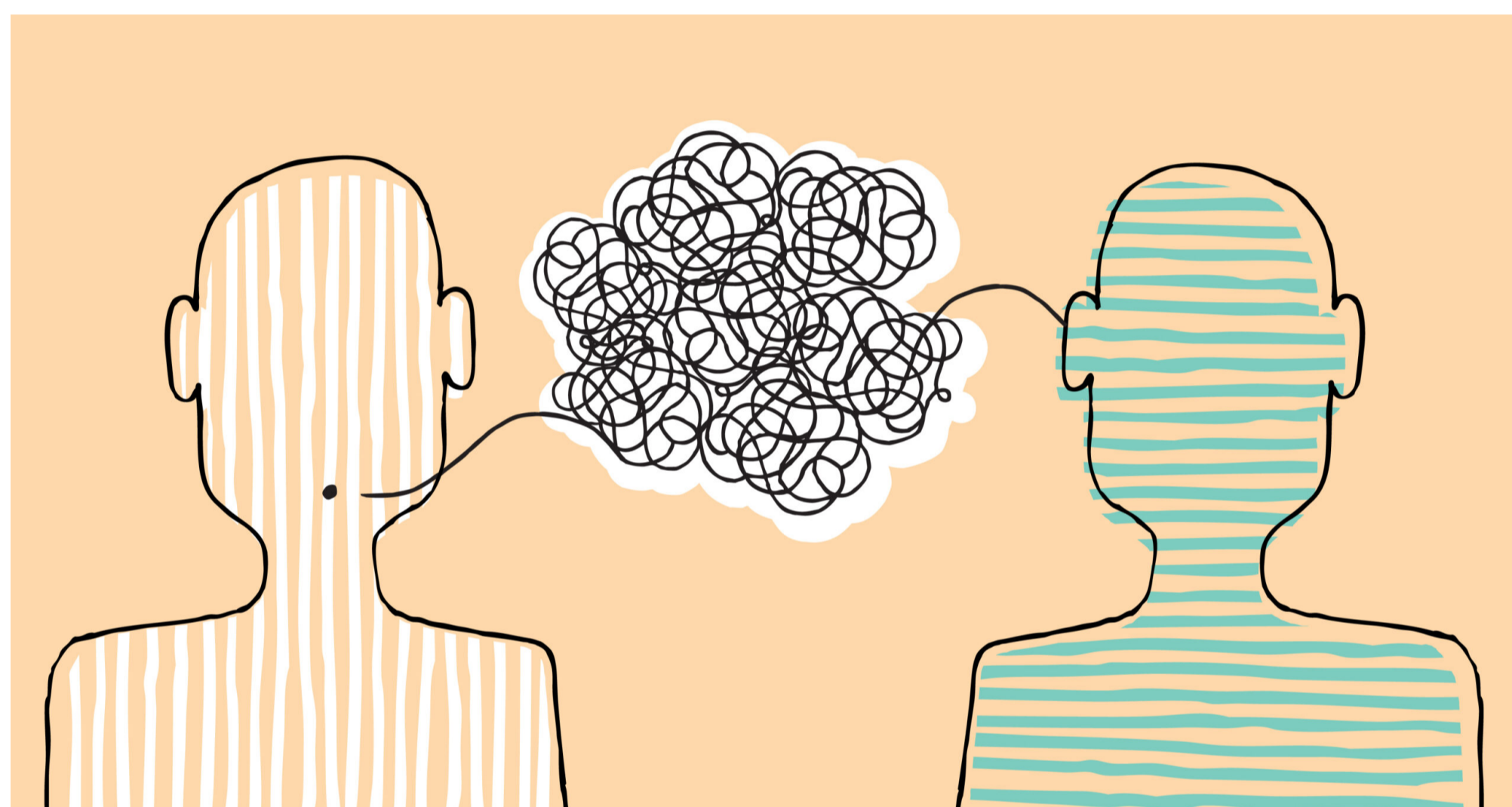# Seminar Invitation: New traveling wave solutions for generalized Sasa-Satsuma equation via two integrating techniques

Speaker: **Hira Shadab** from Department of Mathematics, University of the Punjab, Lahore

Speakers' Brief Introduction

Ms. Hira Shadab 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

The main aim of the presented paper is to obtain the exact solutions of the generalized Sasa-Satsuma equation using two different methods, the modified auxiliary equation method, and the $(G'/G, 1/G)$-expansion method. As a result of these methods, new soliton solutions of the given model are extracted. These solutions include rational solutions, hyperbolic solutions, and periodic solutions. The necessary constraint conditions for the existence and validity of the constructed solutions are also been provided. Moreover, for appropriate parametric values, acquired findings are displayed via contour, 2D and 3D graphics that show the physical relevance and dynamical behaviors of the proposed equation. The dynamics of constructed solutions of the proposed methods help a lot in describing the propagation of the femtosecond pulses in the systems of optical fiber transmission.

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. We proudly acknowledge and celebrate the remarkable contribution of Prof. Dr. Muhammad Sharif in introducing this seminar series back in 2005. 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. Through these seminars, we aim to cultivate an environment of intellectual curiosity, stimulating meaningful discussions, and fostering interdisciplinary collaborations.
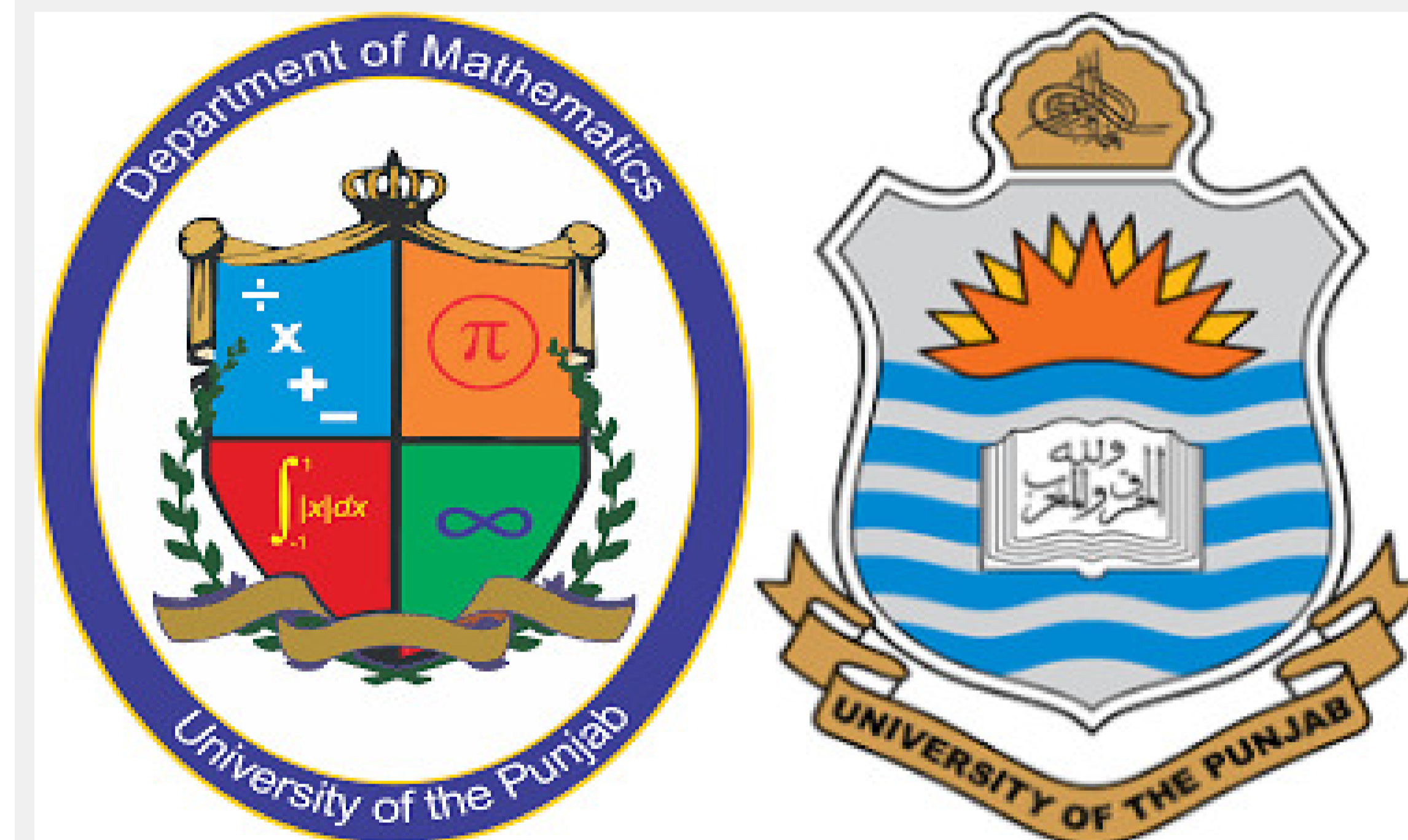

Please join us for this Presentation

When: Friday 7th July 2023; 02:00PM- 02:15PM
Where: Computer Lab, Department of Mathematics, University of the Punjab, Lahore
Note: All the faculty members and research scholars (MPhil/PhD) are invited to the 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. It is our collective responsibility to create an ecosystem that encourages and facilitates research pursuits.

Coordinator Departmental Seminar Series

Dr. Zeeshan Yousaf
Associate Professor
Department of Mathematics, University of the Punjab, Lahore