Analysis Seminar

The Fokas method for linear PDEs

By

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Abstract: In almost every textbook for Partial Differential Equations(PDEs), solutions of linear PDEs for specific initial and boundary value problems (IBVPs) are presented. Many of these problems are considered classical, since they provide a paradigm of how the several methods for solving linear PDEs are applied. In this talk we revisit some of these classical problems using the Unified Transform
(UT) method, also known as the Fokas method. Our goal is twofold: (a) show some major limitations of the classical transform methods (b) give the outline of a new unified methodology which overcomes these limitations and provides effective pathways for the relevant analytical and numerical solutions. This talk is also appropriate for undergraduate students with basic knowledge in Complex Analysis and PDEs.

Date: Thursday, April 14, 2022
Time: 18:00-19:00, GMT+3
Place: ZOOM
To request the event link, please send a message to goncha@fen.bilkent.edu.tr