
FREE BOUNDARY MINIMAL ANNULI IN THE BALL

Isabel Fernández

Universidad de Sevilla

April 7, 2025

The theory of free boundary minimal surfaces in the unit ball of \mathbb{R}^3 is closely related to the Steklov problem. Utilizing this connection, Fraser and Schoen established new properties and introduced new examples of such surfaces in 2016, sparking renewed interest in the field. Since then, numerous results have been obtained by various researchers.

In this talk, we will review some of these recent developments, focusing on free boundary minimal annuli and the **Critical Catenoid Conjecture**, one of the most significant open problems in the theory.