

Texas Tech University. Applied Mathematics Seminar.

# **OPTIMAL CONTROL OF A FLUID-STRUCTURE INTERACTION PROBLEM**

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ABSTRACT. In this presentation, I will introduce my current research problem: A fully coupled system of equations describing the interaction between a fluid and a structure in a one-dimensional setting. In analyzing such a system, we aim to develop an understanding of the optimal control strategies which can be extended to problems of higher dimension, and to identify their strengths and weaknesses. Additionally, a two-dimensional model of fluid-structure interaction may behave locally in such a way that a one-dimensional simplification is appropriate. This work is still under progress and the comments and suggestions from the audience will be highly appreciated.