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## Effects of heat transfer on fluid flow

Departments

In this paper, we study the hydrodynamic (MHD) flow of a fluid in a channel. Long wavelength approximation is used in comparison with the exact solution. The governing equations are linearized by Adomian decomposition method. The frictional force and the amplitude ratio and the characteristics and frictional force are obtained.

**Keywords:** Bingham fluid; heat transfer analysis; Adomian decomposition method.

## 1. Introduction

The word peristaltic stems from the Greek word *peristaltos* and compressing. The term peristalsis can be transported through the fluid and propagate progressively along the length of scientific and engineering applications.

The mechanics of peristalsis was first studied by Latham [4] was probably the first to study the mechanics of peristalsis.

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