



The Hong Kong Polytechnic University Department of Applied Mathematics

Seminar

Stability of shear flows in viscous fluids

By

Dr Weiren ZHAO New York University Abu Dhabi

Abstract

In this talk, Dr Zhao will present some recent progress in the asymptotic stability and instability results of shear flow in both inviscid and viscous fluids. Dr Zhao will mainly discuss three results:

1. The optimal (in)stability of Couette flow in critical space;

2. The asymptotic stability of monotonic shear flows;

3. The asymptotic stability of Couette flow in higher regularity spaces.

The inviscid damping and enhanced dissipation phenomenon are the main stability mechanisms for stabilizing the system, which will be discussed in the talk.

Date: 19 October 2023 (Thursday) Time: 16:00-17:00 (Hong Kong Standard Time GMT +8) Venue: M302 Speaker: Dr Weiren ZHAO, New York University Abu Dhabi Host: Prof. Tong YANG, The Hong Kong Polytechnic University

* * * ALL ARE WELCOME * * *