



# 偏微分方程及其应用中心

## 学术报告

**报告题目:** Spectral instability of Electronic Euler-Poisson System

**报告人:** Changzhen Sun (Besançon, France)

**时间:** 2023年11月15日(星期三) 4:00 pm

**地点:** 腾讯会议号: 821-683-212

**摘要:** The focus of this presentation is the spectral (in-)stability of periodic waves for the electronic Euler-Poisson system, a hydrodynamical model for understanding electron dynamics in plasmas. It is found that even small-amplitude periodic traveling waves in this system exhibit spectral instability, which is neither modulation nor co-periodic, necessitating an unusual spectral analysis approach. In this talk, we will explain the fundamental tools employed to investigate the stability of periodic waves, including Bloch-Floquet theory, Kato's perturbation theory, while outlining the primary proof strategy.