

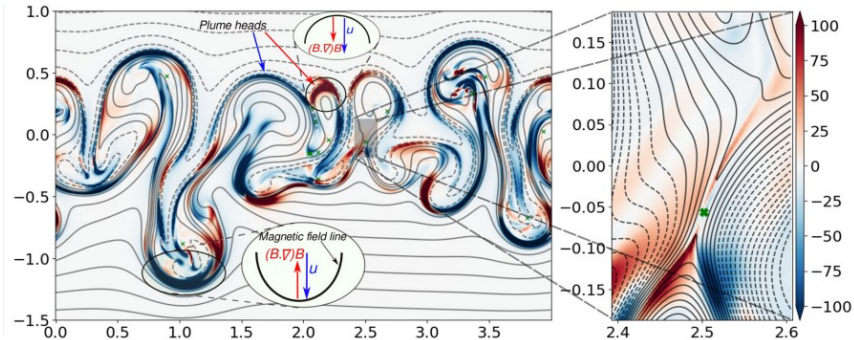
RTI and KHI in Weakly Collisional Plasmas Grasso-Kalluri

Project 1 — RTI Master students

Following Kalluri PoP 2026: *Quantifying reconnection and its dynamical role in 2D magnetic Rayleigh–Taylor turbulence*

Decreasing resistivity → plasmoid-mediated regime
→ assess changes in energy conversion

Changing the magnetic Prandtl number
→ impact on reconnection dynamics



Project 2 — KHI / Turbulence Cascade

Following Borgogno APJ 2022 (*Coexistence of Plasmoid and KH Instabilities in Collisionless Plasma Turbulence*) & preliminary results:

Study the effect of ion sound Larmor radius
on the turbulence cascade in collisionless systems

Preliminary work:

- Literature review (incl. Dong et al.) on prior work
- Test if Dedalus solves APJ 2022 equations efficiently
- Plan visit to Torino to launch collaboration

