

# **The Role of Macroscopic & Microscopic Instabilities in Relativistic Jets**

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I first review the work done on Kelvin-Helmholtz and Current Driven Instabilities. These macroscopic MHD instabilities may be responsible for observed larger scale jet structures. In addition, I will review the progress made on two-stream and velocity shear plasma instabilities at smaller scales that can lead to magnetic field generation and particle acceleration. Finally, I will examine the role of these different instabilities on jet spatial scales from the central engine out to a few Kpc and when these different instabilities can be important.