

## **Jet Morphology and Dynamics of Twin Radio Galaxy TRG J104454+354055**

*Santanu Mondal*

*Indian Institute of Astrophysics*

Twin radio galaxies (TRGs) are rare interacting galaxy pairs where both supermassive black holes (SMBHs) host kiloparsec-scale radio jets. So far, three such systems have been confirmed after the advancement of high-resolution radio telescopes. The third one was discovered only recently using upgraded GMRT data. Due to both the extreme paucity and complexity of such systems, the launching of their jets as well as their mutual interaction during propagation through the ambient medium are not well understood. However, feeding and evolution mechanisms of the SMBH and the environment of the host galaxy/cluster may play pivotal roles in shaping their jet morphology. In this talk, I will discuss the physical mechanisms that can launch and shape the observed twin bipolar jets in merger systems through numerical simulation.