

Bio – Dr. Priyamvada Natarajan

Dr. Priyamvada Natarajan is a Professor in the Departments of Astronomy and Physics at Yale University. She is a theoretical astrophysicist interested in cosmology, gravitational lensing and black hole physics. Her research involves mapping the detailed distribution of dark matter in the universe exploiting the bending of light en-route to us from distant galaxies. In particular, she has focused on making dark matter maps of clusters of galaxies, the largest known repositories of dark matter. Gravitational lensing by clusters can also be utilized to constrain dark energy models and she has been developing the methodology and techniques to do so. Her work has demonstrated that cluster strong lensing offers a unique and potentially powerful laboratory to test evolving dark energy models. She is also actively engaged in deriving and understanding the mass assembly history of black holes over cosmic time. She is exploring a new channel for the formation of the first black holes and its observational consequences at high and low redshift.

In addition to her academic position at Yale, she also currently holds the Sophie and Tycho Brahe Professorship of the Dark Cosmology Center, Niels Bohr Institute, at the University of Copenhagen, Denmark. She has been recently elected to an Honorary Professorship for life at the University of Delhi, India.

Dr. Natarajan has undergraduate and graduate degrees from MIT. She did her graduate work in theoretical astrophysics at the Institute of Astronomy, University of Cambridge in the UK.