

Speaker: Dr. Min-Kai Lin (Associate Research Fellow, ASIAA)

Date/Time: April 14, 2022 14:30

Title: Hopes and challenges in modern planet formation

Host: Frédéric Deschamps / Research Fellow

Abstract

With thousands of planets discovered beyond the solar system, it is clear that planet formation is ubiquitous in the universe. However, the growth from small dust grains to planets is still far from clear. Planets are formed in rotating flows of gas and dust around young stars -- protoplanetary disks -- and their properties strongly influence all stages of planet formation. I will present our group's recent work on understanding the dust and gas dynamics in modern models of protoplanetary disks that account for turbulence, stratification, and magnetic fields. I will discuss the role of these effects on the formation of planetesimals -- the building blocks of planets. I will describe new difficulties, but also new paths to planet formation under these more realistic conditions.