

Session 35: F-theory with hyperelliptic fibrations

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I will discuss an extension of F-theory in the presence of hyperelliptically fibred surfaces. According to the position of a hyperelliptically fibred surface inside a Calabi–Yau fourfold, there are 2 cases to be considered, and the main cofrresponding issues are: 1. Upstairs: Which hyperellitic curves satisfy the property that the determinant of their period matrices transform as the axio-dilaton? 2. Downstairs: What is the required number of branes to guarantee that tadpole anomalies will be cancelled? I will show how we have solved both issues (Ballico, Gasparim, Garcia del Moral, Las Heras 2025).

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