ID de Contribution: **2** Type: **Non spécifié**

Exploring the Interior of N=1 Field Spaces

mercredi 29 novembre 2023 14:15 (30 minutes)

To study realistic vacua of string theory with minimal or no supersymmetry it is crucial to have a good understanding of the field space of such theories away from asymptotic boundaries where all supersymmetry breaking effects are diluted. In this talk I will focus on four-dimensional theories arising from F-theory compactifications on elliptically-fibered Calabi-Yau fourfolds X4: T2 —> B3. In this case all supersymmetry breaking effects are diluted in the limit of large volume for B3 where the field space is well-described by the classical expressions inherited from theories with N=2 supersymmetry. I will study corrections to the field space geometry away from such limits. A particular focus lies on regimes in field space where curves intersected by the anti-canonical class of B3 become small for which I show that the structure of the field space is significantly altered from the naive N=2 expectation due to genuine N=1 effects. Furthermore I will show that the mixing between Kahler and complex structure moduli is generically expected to significantly affect the field space structure in asymptotic limits in the complex structure field space of X4 for any finite value of the volume of B3.

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Classification de Session: :