Flux Vacua, Asymptotic Periods, and Relatively Anosov Representations

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Abstract

Since the seminal work by Dine and Seiberg in '85, it has been understood that compactifications with N=1 or fewer supersymmetries suffer from control issues in the interior of their moduli spaces. In contrast, asymptotic regions of moduli spaces are better known, with significant advances emerging recently in the context of the Swampland program. It has been suggested (e.g. in 2405.04584) that asymptotic behaviours might be leveraged to overcome some of these difficulties and to extract global information about moduli spaces. In this talk, I will discuss how an existence criterion for classical flux vacua in F-theory compactifications on fourfolds with a single complex modulus can be obtained only from asymptotic data, through the use of relatively Anosov representations.

Keywords: Compactification, Fluxes, F theory, Moduli space, Vacuum, Anosov, Calabi Yau manifolds, Fermat sextic

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