

M-theoretic Emergence

Thursday, 27 June 2024 16:45 (15 minutes)

In its original version, the Emergence Proposal states that the kinetic terms of all fields in the low-energy effective action arise from integrating out towers of states becoming light in asymptotic corners of the moduli space. In my talk I want to motivate why the natural home of the Emergence Proposal should be M-theory. I will discuss this idea in the context of a well-known setup, namely the vector multiplet moduli space of type IIA $N=2$ vacua in four dimensions. For the M-theory limit, one can setup an emergence computation for certain topological quantities thanks to the seminal work of Gopakumar and Vafa. I will demonstrate the computation of the genus-one free energy for the (non-compact) resolved conifold.

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Session Classification: Parallel session