

Riccardo Comi. Mirror dualities for 3d $N=2$ theories

Tuesday, 10 September 2024 10:00 (40 minutes)

Mirror duality in 3d $N=4$ theories have been studied for a long time and they proved to be very useful to study the dynamics of theories with eight supercharges. Mirror duality for 3d $N=2$ theories is an open topic with many puzzles that are yet to be solved. I will discuss a proposal for the mirror pair of various 3d $N=2$ theories, with chiral/non-chiral matter and zero/non-zero Chern-Simons level. I will argue that these mirror pairs can be conveniently constructed using improved bifundamentals that are strongly coupled SCFTs which generalize standard bifundamental hypermultiplets. I will also show how this proposal fits within the picture of Hanany-Witten brane setups with four supercharges.