

Transversally intersecting 3d Mirror Symmetry

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Abstract: In this poster we discuss the reduction of the type IIB S-duality on 5d theories to 3d (non)-Abelian mirror symmetry of 3d $N=2$ gauge theories (and their intersection) at the level of partition functions. As an example, we employ the refined topological vertex to write down the full Nekrasov partition function of the 5d $U(1)$ gauge theory, and then apply the Higgsing procedure to extract the partition functions of 3d gauge theories (the worldvolume theories of intersecting codimension two defects) on transversally intersecting subspaces. The S-duality, i.e. the fiber-base duality, of the 5d theories can be reduced to 3d mirror symmetry of the 3d theories on the intersecting subspaces.