

The Coulomb Branch Formula for Quiver Moduli Spaces

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The semi-classical description of BPS bound states of 4d $N=2$ supersymmetric theories naturally gives rise to a $N=4$ quiver quantum mechanics (QQM). The regime where the constituents of the bound states have a finite spatial separation corresponds to the Coulomb branch of the QQM. I will explain in this talk how the bound state perspective leads to the Coulomb Branch Formula. This is an explicit formula for the computation of the BPS index of BPS bound states in terms of a set of invariants associated to ‘single-centered’ or ‘pure Higgs’ states. Suitable specialization of the Coulomb Branch Formula gives topological invariants of the quiver moduli space, which parametrizes semi-stable quiver representations

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