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Line operators and BPS algebras

BPS algebras are important invariants of 4d N=2 SCFTs. Recently, Gaiotto-Grygoryev-Li proposed that the category of 1/2-BPS line operators of the theory is controlled by the category of bimodules of the corresponding BPS algebra. However, their proposal was incomplete as the category of bimodules lack the structure of a spectral braiding. In this talk, I will explain that by considering a more refined category of bimodules, one can obtain a spectral braiding between objects. We propose this refined category to be the category of 1/2-BPS line operators. We give credence to this proposal by showing that when the BPS algebra is associated to a type A quiver, the corresponding category is equivalent to representations of type-A Yangians. This is based on joint work in preparation with S. DeHority and A. Latyntsev.