

From BPS crystals to BPS algebras: constructions, representations, and applications

I will explain how to construct BPS algebras for string theory on general toric Calabi-Yau threefolds, based on the crystal melting description of the BPS sectors. The resulting quiver Yangians, together with their trigonometric and elliptic versions, unify various known results and generalize them to a much larger class. I will then explain how to describe their representations using subcrystals and how they can be translated to the framings of the quivers. Time permitting, I will also discuss some applications.

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