

Geometry, Physics, and Representation Theory
Northeastern University

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**GKZ-Hypergeometric Systems and Twisted Projective Modules
in Hypertoric Category \mathcal{O}**

Abstract. In "Morse theory and tilting sheaves" Nadler defined a geometric construction of tilting modules in BGG category \mathcal{O} by taking "Morse kernels" on the flag variety and flowing them along a \mathbb{C}^* -action whose ascending manifold stratification coincides with the Schubert stratification. In this talk I will describe a generalization of this result to hypertoric category \mathcal{O} . The analogues of Morse kernels will be certain GKZ-hypergeometric systems. This result arose out of joint work with Bullimore, Dimofte, and Gaiotto on the physical origins of symplectic duality.