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**Matthew Hogancamp** and **Shotaro Makisumi\*** (makisumi@math.columbia.edu), New York, NY 10027. *Ext-enhanced monoidal Koszul duality for  $GL_2$ .*

The Hecke category participates in a monoidal Koszul duality exchanging it with (Langlands-dual) “free-monodromic tilting sheaves.” Motivated by a recent conjecture of Gorsky–Hogancamp on HOMFLYPT link invariants, I propose to enhance this monoidal Koszul duality with an additional grading. I will provide some evidence for this enhancement for  $GL_2$ , working in the language of my joint work with Achar, Riche, and Williamson. (Joint with Matthew Hogancamp.) (Received January 28, 2019)