

1164-14-96

**Jeremy Usatine\*** ([jeremy\\_usatine@brown.edu](mailto:jeremy_usatine@brown.edu)), Brown University, Box 1917, 151 Thayer St, Providence, RI 02912. *Stringy invariants and toric Artin stacks*.

Stringy Hodge numbers are certain generalizations, to the singular setting, of Hodge numbers. Unlike usual Hodge numbers, stringy Hodge numbers are not defined as dimensions of cohomology groups. Nonetheless, an open conjecture of Batyrev's predicts that stringy Hodge numbers are nonnegative. In the special case of varieties with only quotient singularities, Yasuda proved Batyrev's conjecture by showing that the stringy Hodge numbers are given by orbifold cohomology. For more general singularities, a similar cohomological interpretation remains elusive. I will discuss a conjectural framework, proven in the toric case, that relates stringy Hodge numbers to motivic integration for Artin stacks, and I will explain how this framework applies to the search for a cohomological interpretation for stringy Hodge numbers. This talk is based on joint work with Matthew Satriano. (Received January 14, 2021)