

THE HODGE–GUE CORRESPONDENCE

DI YANG

ABSTRACT. An explicit relationship between certain cubic Hodge integrals on the Deligne–Mumford moduli space of stable algebraic curves and connected GUE correlators of even valencies, called the Hodge–GUE correspondence, was recently discovered. In this talk, we prove this correspondence by using the Virasoro constraints and by deriving the Dubrovin–Zhang loop equation. The talk is based on a series of joint work with Boris Dubrovin, Si-Qi Liu and Youjin Zhang.