Stanford Department of Mathematics Number Theory Seminar

Moduli spaces of shtukas over the projective line

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Abstract

There are two notions of modularity of an elliptic curve E defined over a function field: analytic modularity (the L-function of E agrees with that of an automorphic form), and geometric modularity (under mild conditions on the conductor of E, there is a uniformization from a Drinfeld modular curve).

We will describe a conjectured geometric modularity statement involving moduli spaces of Drinfeld shtukas, along with some explicit descriptions of moduli spaces of shtukas over the projective line which might help to check certain cases of the modularity statement.