

Department of Mathematics, BGU

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# AGNT

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*On Monday, June ,5 2023*

*At 12:10 – 13:10*

*In 101-*

Hongjie Yu (Weizmann)

will talk about

## **l-Adic local systems and Higgs bundles**

Abstract: In ,1981 Drinfeld enumerated the number of irreducible l-adic local systems of rank two on a projective smooth curve in positive characteristic fixed by the Frobenius endomorphism. Interestingly, this number bears resemblance to the number of points on a variety over a finite field. Deligne proposed conjectures to extend and comprehend Drinfeld's result. In this talk, I will present Deligne's conjectures and discuss some mysterious phenomena that have emerged in various cases where this number is related to the number of stable Higgs bundles.