

February 22: Xinwen Zhu (Harvard), “Every flat bundle on the punctured disc has an oper structure.” Followed by dinner.

Let G be a complex reductive group. A G -oper on a complex curve is a G -(de Rham) local system on it with a reduction of the underlying G -bundle to the Borel satisfying certain conditions. It is known that not every G -local system on a complete curve has an oper structure. I will show, on the contrary, that every G -local system on the punctured disc admits an oper structure. This result plays an important role in a version of local geometrical Langlands correspondence proposal by Frenkel and Gaitsgory. This is a joint work with Edward Frenkel.