



DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

Colloquium

EXPONENTIAL SUMS, DIFFERENTIAL EQUATIONS AND
GEOMETRIC LANGLANDS CORRESPONDENCE

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ABSTRACT:

In 1970s, Dwork established a relationship between the Bessel differential equation and the Kloosterman sums. Such a relationship can be regarded as an instance of the geometric Langlands correspondence for GL_2 . In this talk, we will first review some classical results on exponential sums and differential equations, and then discuss some recent progress on generalizations of Dwork's result from the perspective of geometric Langlands correspondence. It is based on joint works with X. Zhu and Kamgarpour-L. Yi.

4 – 5pm

Wednesday, October 11, 2023

Room 204, Smith Hall