

Meeting: 1001, Evanston, Illinois, SS 17A, Special Session on Geometric Aspects of the Langlands Program

1001-11-268 **Dennis Gaitsgory*** (gaitsgde@math.uchicago.edu), Dept. of Mathematics, The Univ. of Chicago, 5734 University ave., Chicago, IL 60614. *On de Jong's conjecture.*

Let X be a smooth complete curve over a finite field k and F_l another finite field, whose characteristic is coprime with that of k .

As was shown in the original paper of A.J. de Jong, his conjecture follows if one is able to associate to every n -dimensional local system E on X with coefficients in the field $F_l((t))$ a constructible complex S_E (also with coefficients in $F_l((t))$) on the moduli space $Bun_n(X)$ of rank n vector bundles on X , such that S_E is an "eigenvector" for Hecke functors, with eigenvalues given by E .

The assignment $E \mapsto S_E$ is a $F_l((t))$ -version of the geometric Langlands conjecture. In the talk we will indicate the main steps in the proof of this conjecture, following the approach of Frenkel-Gaitsgory-Vilonen. (Received August 29, 2004)