

Geometry, Physics, and Representation Theory  
Northeastern University

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## **Spectral decomposition in Betti geometric Langlands.**

### **Abstract**

This is joint work with David Nadler, continuing a program initiated by Ben-Zvi and Nadler. We consider a variant of the geometric Langlands conjecture, which is expected to be of topological nature. It relates constructible sheaves on the moduli space of  $G$ -bundles on an algebraic curve (with an important condition on the singular support of the constructible sheaves) to quasi-coherent sheaves on certain character varieties of the dual group. We show that the latter category acts on the former, hence establishing a spectral decomposition of automorphic sheaves in this setting. There is an analogy of our result with Vincent Lafforgue's work on the classical Langlands correspondence over a function field.