

Du  
04  
NOV.  
2022

16h30

-  
18h00

## ÉQUATIONS DIFFÉRENTIELLES MOTIVIQUES ET AU-DELÀ

### Spectral data for higher direct images of parabolic Higgs bundles

IHP  
11, rue Pierre et Marie Curie

INSCRIPTION

Mochizuki's Kobayashi-Hitchin correspondence allows us to represent local systems on quasiprojective varieties by parabolic logarithmic Higgs bundles. The Sabbah-Mochizuki theory generalizing Saito's mixed Hodge modules then provides a framework for the 6-functor

formalism on these objects. However, this setup involves working with lambda-connections for

all values of lambda. In our work with Donagi and Pantev, we made explicit the formula for the higher direct image, looking solely at the Dolbeault fiber ( $\lambda = 0$ ) of Higgs bundles. In generic cases this yields a nice formula for the spectral variety of the higher direct image Higgs bundle. We'll then look at how this applies to the question of calculating Hecke correspondences in the Donagi-Pantev program for constructing

Hecke eigensheaves in geometric Langlands.



## **INSTITUT HENRI POINCARÉ - UAR839**

Sorbonne Université / CNRS  
11 rue Pierre et Marie Curie  
75231 Paris Cedex 05

### **HORAIRES**

L'institut :

- lundi au vendredi de 8h30 à 18h,
- fermé les jours fériés.

Le musée - Maison Poincaré :

- lundi, mardi, jeudi et vendredi de 9h30 à 17h30,
- samedi de 10h à 18h,
- fermé le mercredi et le dimanche.