Séminaire d'algèbre, topologie et géométrie
Jeudi 24 avril à 14h
Salle I

Andrea D'Agnolo

Padoue

Riemann-Hilbert correspondence
for irregular holonomic D-modules

The classical Riemann-Hilbert correspondence establishes an equivalence between the triangulated category of regular holonomic D-modules and that of constructible sheaves.

In a recent joint work with Masaki Kashiwara, we prove a Riemann-Hilbert correspondence for holonomic D-modules which are not necessarily regular. The construction of our target category is based on the theory of ind-sheaves by Kashiwara-Schapira and influenced by Tamarkin's work. Among the main ingredients of our proof is the description of the structure of flat meromorphic connections due to Mochizuki and Kedlaya.

I will present an overview of the classical correspondence and the main ideas underlying our construction, sweeping under the carpet the more technical points.