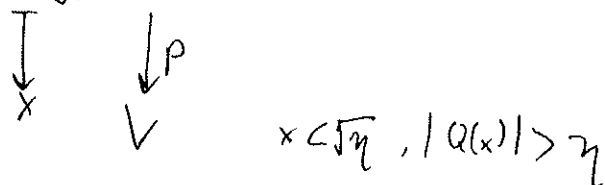


Towards an overconvergent Deligne-Kashiwara correspondence

1) $/\mathbb{Q}_q$ U defined by $\{y^2 = Q(x), \rho < |y| < \eta, |Q(x)| > \eta\}$

Want $H_{\text{dR}}^1(U)$

Consider $(x, y) \subset U$



$$p_* G_U = G_V \oplus \mathcal{K}$$

$$\Rightarrow H_{\text{dR}}^1(U) = H_{\text{dR}}^1(V) \oplus H_{\text{dR}}^1(V, \mathcal{K})$$

$$\begin{aligned} \mathcal{K} &= G_V \otimes \mathcal{O} \\ \nabla \mathcal{O} &= \frac{\mathcal{O} d \mathcal{O}}{2\mathbb{Q}} \end{aligned}$$

$$\Rightarrow \mathcal{K} \in \text{MIC}(V) \quad [\text{in fact, } \mathcal{K} \in M^+(\bar{V})]$$

2) $/\mathbb{C}$ X analytic manifold

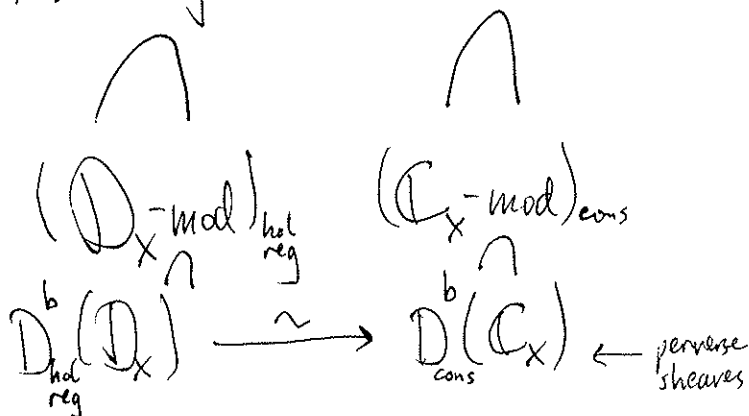
abelian comparison:

$$H_{\text{dR}}^i(X) \cong H_{\text{sing}}^i(X, \mathbb{C})$$

non-abelian comparison:

$$\text{MIC}(X) \cong \text{LOC}(X) = \text{Rep}_{\mathbb{C}} \pi_1(X(\mathbb{C}), *)$$

But these categories are not stable under, eg., f_* if $f: Y \rightarrow X$.



1) / 0