Abbes and Saito's construction for meromorphic connections

Let k be a perfect field of characteristic p and U the complement of a normal crossing divisor D in a smooth variety X over k.

In **[Sai09]**, **[AS11]**, Abbes and Saito defined a specialization procedure leading to a new geometric measure of wild ramification along D for smooth constructible ℓ-adic sheaves on U, where $\ell \neq p$.

In this talk, we will first explain how to translate their work in the context of meromorphic connections. Then, we will show that the main property of Abbes and Saito specialization -called *additivity* in *loc. it.*- also holds in this context. As an example, we will give an explicit formula computing Abbes and Saito's invariant for a differential module M over $K((x))$, for K any characteristic 0 field.

References

[AS11] A. Abbes and T. Saito, *Ramification and Cleanliness*, Tohoku Mathematical Journal **63** (2011).

[Sai09] T. Saito, *Wild ramification and the characteristic cycle of an ℓ-adic sheaf*, Journal de l'Institut de Mathématiques de Jussieu **8** (2009).