

\mathcal{D} -modules, Drinfeld coverings and admissible representations

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Let G be a p -adic reductive group. We explain how locally analytic G -representations can be described geometrically as equivariant arithmetic \mathcal{D} -modules on the rigid-analytic flag variety of G . As an application we give a local proof, in the case of $GL(2)$, that representations coming from equivariant bundles on Drinfeld's first étale covering of the p -adic upper half plane are admissible. This is joint work with Christine Huyghe, Deepam Patel and Matthias Strauch.