1112-11-316 **Matthias Strauch*** (mstrauch@indiana.edu), Indiana University, Department of Mathematics, 831 E. Third St, Bloomington, IN 47405. *Locally analytic representations and arithmetic differential operators.*

This talk is about locally analytic representations of p-adic reductive groups. If (π, V) is such a representation of a group G, then, for every $v \in V$, the orbit map $G \to V, g \mapsto \pi(g).v$, can be expanded locally as a V-valued power series on G. Examples of such representations are smooth representations and finite-dimensional algebraic representations, as well as tensor products of those. Moreover, given a locally analytic representation of a Levi subgroup of a given reductive group G, one can form the parabolically induced representation.

We will be presenting a result which says that the category of admissible locally analytic representations of a split p-adic reductive group G is (anti-)equivalent to a certain category of G-equivariant systems of sheaves of arithmetic D-modules on formal models of the flag variety of G. This builds on work of C. Huyghe who proved a version of the Beilinson-Bernstein localization theorem for arithmetic differential operators on smooth formal models of flag varieties. It is independent of but related to work of K. Ardakov and S. Wadsley on differential operators on rigid analytic spaces.

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