Maarten Solleveld: *Bernstein components for p-adic groups*

Suppose that one has a supercuspidal representation of a Levi subgroup of some reductive p-adic group G. Bernstein associated to this a block $\mathrm{Rep}(G)^s$ in the category of smooth G-representations. We address the question: what does $\mathrm{Rep}(G)^s$ look like? Usually this is investigated with Bushnell–Kutzko types, but those are not always available. Instead, we approach it via the endomorphism algebra of a progenerator of $\mathrm{Rep}(G)^s$. We will show that $\mathrm{Rep}(G)^s$ is "almost" equivalent with the module category of an affine Hecke algebra – a statement that will be made precise in several ways. In the end, this leads to a classification of the irreducible representations in $\mathrm{Rep}(G)^s$ in terms of the complex torus and the finite groups that are canonically associated to this Bernstein component.