# Double affine Hecke algebras and affine Springer fibers

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In this talk, we will review the geometric construction of the double affine Hecke algebra via affine Spinger fibers. Special attention will be given to type $A$ and the link with quantum affine Schur algebras. Applications (conjectural) to representation theory of $p$-adic groups in positive (non residual) characteristic will be explained. Finally, we will recall some analogies with punctual Hilbert schemes in type $A$.