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Irreducible Representations of Rational Cherednik Algebras in Positive Characteristic

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Rational Cherednik algebras are a class of associative non-commutative infinite dimensional algebras depending on a reflection group and several parameters. In this talk we will consider such an algebra over a field of positive characteristic and its Category O, explain how it differs from the corresponding category over complex numbers, and talk about some methods for finding explicit descriptions of irreducible representations in this category in terms of singular vectors and characters. The first half of the talk (setup) is old joint work with Harrison Chen, and the second half (type A computations) is recent joint work with Jordan Barnes.