1176-33-204   **Siddhartha Sahi*** (`sahi@math.rutgers.edu`), **Jasper Stokman** and **Vidya Venkateswaran**.
Quasi-polynomial representations of double affine Hecke algebras and a generalization of Macdonald polynomials.

Macdonald polynomials are a remarkable family of functions. They are a common generalization of many different families of special functions arising in the representation theory of reductive groups, including spherical functions and Whittaker functions.

In turn, Macdonald polynomials can be understood in terms of a certain representation of Cherednik's double affine Hecke algebra (DAHA), acting on polynomial functions on a torus.

Whittaker functions admit a natural generalization to the setting of metaplectic covers of reductive p-adic groups, which play a key role in the theory of Weyl group multiple Dirichlet series.

It turns out that Macdonald polynomials also admit a corresponding generalization, which can be understood in terms of a representation of the DAHA on the space of quasi-polynomial functions on a torus. (Received January 23, 2022)