

October 24, 2012: Koornwinder polynomials $K_\lambda(z_1, \dots, z_n; q, t; t_0, \dots, t_3)$ are a 6-parameter BC_n -symmetric family of Laurent polynomials indexed by partitions, from which Macdonald polynomials can be recovered in suitable limits of the parameters. As in the Macdonald polynomial case, standard constructions via difference operators do not allow one to directly control these polynomials at $q = 0$. We provide an explicit construction for these polynomials in this limit, using the defining properties of Koornwinder polynomials. We use a similar technique to solve the analogous problem on the nonsymmetric side; an extra ingredient in this case is the action of the affine Hecke algebra of type BC . We will also discuss how these methods yield direct proofs for the constant term evaluations and norms in this limit.