

A q -Nekrasov-Okounkov formula in type \tilde{C}

04.08**David Wahiche***(Université Claude Bernard Lyon 1, France)***Time:** Thursday 07.07., 16:30 – 16:55

Abstract: Between 2006 and 2008, using various methods coming from representation theory, gauge theory and combinatorics, several authors proved the so-called Nekrasov–Okounkov formula involving hook-lengths of integer partitions. Later Dehaye and Han proved an identity which can be reformulated as a q -analogue of the Nekrasov–Okounkov identity. This result was generalized by both Rains–Warnaar and Carlsson–Rodriguez-Villegas in 2018. In this talk, I will explain how we can use the Littlewood decomposition on partitions and its interpretation in terms of bi-infinite words, together with Macdonald’s formula for affine root system of type \tilde{C} , to derive a q -analogue of Pétréolle’s Nekrasov–Okounkov type formula for double distinct partitions.