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Bounded Lecture Hall Tableaux

Lecture Hall partitions were introduced by Bousquet-Melou and Erickson as the inversion vectors of elements of the parabolic quotient \tilde{C}_n/C_n . In 2018, in collaboration with Jang Soo Kim, we showed that Lecture Hall partitions and compositions are the combinatorial interpretation of the coefficients of q -Jacobi polynomials. We then defined the Lecture Hall Tableaux that give the combinatorial interpretation of the expansion of multivariate q -Jacobi polynomials in the Schur basis. In this talk we study the bounded Lecture Hall tableaux of a given shape. This is ongoing work with Kim (SKKU), Greene (MSRI), Savage (NCSU), Keating (Berkeley) and Nicoletti (Berkeley).