1106-05-742

Anne Schilling (anne@math.ucdavis.edu), Department Of Mathematics, One Shields Ave, Davis, CA 95616, and Travis Scrimshaw* (tscrim@ucdavis.edu), Department of Mathematics, One Shields Ave, Davis, CA 95616. Crystal structure for rigged configurations and the filling map.

Rigged configurations are combinatorial objects which arise from statistical mechanics and Kerov, Kirillov and Reshetikhin gave a bijection between rigged configurations and semistandard tableaux in type $A_n^{(1)}$. Schilling has shown that there exists a classical crystal structure on rigged configurations in simply-laced affine type. In this setting the Kerov, Kirillov, Reshetikhin rigged configurations are highest weight elements. Conjecturally for general types, rigged configurations are in bijection with elements of tensor product of certain finite-dimensional affine crystals called Kirillov-Reshetikhin crystals (proven in certain cases). In this talk, I will present a classical crystal structure on rigged configurations for all affine types using virtual crystals. Furthermore I will present an extension of the so-called "filling map," introduced in recent work by Okado, Sakamoto, and Schilling for type $D_n^{(1)}$, to all non-exceptional affine types. (Received September 05, 2014)