1126-17-93 **Kailash C Misra*** (misra@ncsu.edu), Department of Mathematics, North Carolina State University, Raleigh, NC 27695-8205. *Affine Geometric Crystal of $A_n^{(1)}$ and Limit of Kirillov-Reshetikhin Perfect Crystals.*

Consider the affine Lie algebra $g = A_n^{(1)}$ with index set $I = \{0, 1, 2, \cdots, n\}$. Then the Langlands dual $g^L = g$. In 2008 it was conjectured by Kashiwara, Nakashima and Okado that for each $k \in I \setminus \{0\}$ the affine Lie algebra g has a positive geometric crystal whose ultra-discretization is isomorphic to the limit of certain coherent family of perfect crystals for g^L. Motivated by this conjecture we construct a positive geometric crystal for the affine Lie algebra g for each Dynkin index $k \in I \setminus \{0\}$ and show that its ultra-discretization is isomorphic to the limit of a certain coherent family of perfect crystals for $g = A_n^{(1)}$. This is joint work with Toshiki Nakashima. (Received January 06, 2017)