**Salvatore Stella:** Kac-Moody groups, generalized minors, and quiver representations

**Abstract:** Both the representation theories of Kac-Moody groups and quivers, in the non-finite types, present a tripartite structure. Representations of a Kac-Moody group $G$ come naturally in three classes (positive, zero, and negative level representations) according to the scalar by which the center of $G$ acts. Indecomposable representation of a quiver $Q$ are either preprojective, postinjective, or regular depending on where they sit in the associated Auslander-Reiten quiver. We connect these two tripartities using cluster algebras. By identifying the ring of coordinates of an appropriate double Bruhat cell of $G$ as a cluster algebra we show how cluster variables coming from preprojective (resp. postinjective and regular) representations of $Q$ can be interpreted as generalized minors of $G$ arising from positive level (resp. negative level and 0 level) representations. No prior knowledge of cluster algebras will be assumed and only simple notions of representation theory will be used.