

Lower bound cluster algebras generated by projective

Alireza Nasr-Isfahani

University of Isfahan

nasr@ipm.ir

The lower bound cluster algebra is a subalgebra of cluster algebra with the better behavior. It is known that the lower bound cluster algebra $\mathcal{L}(\Sigma)$ is equal to the cluster algebra $\mathcal{A}(\Sigma)$ if and only if Σ is acyclic. In this talk we define the lower bound cluster algebra generated by projective cluster variables. We show that for a totally mutable acyclic seed $\Sigma = (\mathbf{x}, \mathbf{p}, B)$, the lower bound cluster algebra generated by projective cluster variables $\mathcal{L}_P(\Sigma)$ and the cluster algebra $\mathcal{A}(\Sigma)$ are coincide. Also if Σ is of type A_n we show that $\mathcal{L}_P(\Sigma)$ and $\mathcal{A}(\Sigma)$ are coincide. This talk is based on a joint project with Karin Baur.