

1116-VE-296 **Man Wai Cheung*** (m1cheung@ucsd.edu). *Theta basis and quiver representation*. Preliminary report.

Scattering diagrams were first developed by Kontsevich and Soibelman, later by Gross and Siebert, to solve problem in mirror symmetry. The original idea was to construct an order-by-order description of degeneration of Calabi-Yau manifold. Later on, it is found that the diagrams encodes information about cluster translation. While the canonical basis for cluster algebra is still unclear, Gross-Hacking-Keel-Kontsevich proposed a basis for cluster algebra constructed from scattering diagram. And they are able to solve one of the major conjecture in cluster algebra by using this construction. In the talk, we are going to describe this construction and show that this basis is the same as another proposed basis, greedy basis, in the cluster algebra world. (Received August 23, 2015)