

## Crystal Operators on Cluster Algebras (Remote)

*Tuesday, November 30, 2021 2:50 PM (50 minutes)*

Crystal operators on canonical bases as introduced by Kashiwara/Lusztig provide in particular a toolbox to compute within the category of finite dimensional representations of finite dimensional simple Lie algebras. Motivated by this we introduce certain operators on the lattice of tropical points of mirror dual  $A$ - and  $X$ -cluster spaces. In particular, this yields a crystal-like structure on the canonical basis due to Gross-Hacking-Keel-Kontsevich. We expect these operators to have a wider range of applications in the theory of cluster algebras and in physics. This is partially based on joint work with Gleb Koshevoy and Bea Schumann.

**Presenter:** GENZ, Volker (IBS CGP)