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Akihiro Higashitani* (higashitani@ist.osaka-u.ac.jp), 1-5, Yamadaoka, Suita, Osaka, 565-0871, Japan. *Combinatorial mutation equivalence of poset polytopes.*

Combinatorial mutations of polytopes were introduced by Akhtar-Coates-Galkin-Kasprzyk in the context of mirror symmetry for Fano varieties. It is known that if two lattice polytopes are related by a sequence of combinatorial mutations, then those have the same Ehrhart polynomials. On the other hand, order polytopes and chain polytopes were introduced by Stanley. It is proved that those have the same Ehrhart polynomials. Its proof is based on the transfer map, which is a piecewise linear bijection between order polytopes and chain polytopes. In this talk, after an explanation about combinatorial mutations of polytopes, we apply it to poset polytopes. More concretely, we express the transfer map as a composition of combinatorial mutations. If time allows, we also discuss "marked" poset polytopes version of those stories. (Received February 18, 2021)