

## Subword complexes and facet-ridge isomorphisms

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**Abstract:** In 1987, Blind and Mani showed that simplicial polytopes are uniquely determined by their facet-ridge graph. Kalai conjectured that simplicial spheres are uniquely determined by their facet-ridge graph. In 2004, Knutson and Miller asked if spherical subword complexes are the boundary of simplicial polytopes. In an effort to bring these worlds together, we show that spherical subword complexes of finite type are uniquely determined by their facet-ridge graph. This result supports the notion that subword complexes are the boundary of polytopes, especially in the case that Kalai's conjecture is actually false.