

Given a  $d$ -dimensional lattice polytope  $P$ , we say that  $P$  has the orthant-lattice property (OLP) if the subpolytope obtained by restriction to any orthant is a lattice polytope. While this property feels somewhat contrived, it can actually be quite useful in verification of discrete geometric properties of  $P$ . In this talk, we will discuss a number of results for the existence of triangulation and the integer decomposition property for reflexive OLP polytopes. One such polytope which fits into the program is a type-B analogue of the Birkhoff polytope and its dual polytope, the investigation of which led to interest in this property.

This is based on joint work with Florian Kohl (Aalto University).