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*Lattices from pointed building sets*

We introduce a novel combinatorial structure called a *pointed building set*, which can be viewed as a family of lattices equipped with compatibility relations. To each pointed building set  $\mathbf{B}$ , we associate a complete lattice  $\mathbb{O}(\mathbf{B})$ , referred to as the *ornamentation lattice* of  $\mathbf{B}$ .

This construction has already been proven useful in understanding the structure of three families of lattices: operahedron lattices, the affine tamari lattice, and hypergraphic posets of tree intervals.

We examine several natural classes of pointed building sets which recover classical lattices such as the Tamari lattice, the lattice of topologies ordered by refinement, and the lattice of naturally labeled partial orders. Furthermore, several theoretical directions are explored including inverse limits and group actions. Notably, this leads to a straightforward construction of inverse limits of Tamari lattices, yielding infinite analogs of the Tamari lattice.