

The Tamari Block Lattice: An Order on Saturated Chains in the Tamari Lattice

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In this talk I will describe a nice realization of the Tamari lattice using special sequences I will call *scope sequences* which are slight variations on objects from Knuth and Pallo. Then I will define a partially-ordered set on equivalence classes of maximal chains of an interval of the Tamari lattice, called the *Tamari Block Lattice*. Finally, using scope sequences, I will prove this is a graded lattice, and define explicit maps between this lattice and the Higher Stasheff-Tamari order in dimension three.