

Large standard examples in posets of high dimension

Csaba Bíró, Louisville University

(joint work with Péter Hamburger and Attila Pór)

A classic theorem by Hiraguchi states that the dimension of a partially ordered set of n elements is not more than $n/2$. Bogart and Trotter proved that if the dimension is exactly $n/2$, then the poset is isomorphic to one specific poset called the "standard example". A natural question is the following: if the dimension is slightly less than $n/2$, is the poset largely similar to a standard example? We study several questions in the area, and we get positive and negative answers depending on the setting.