

## **AN APPROACH TO STRONG HYPERGRAPH STABILITY**

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**Time: Thursday, Mar. 25th, 10:00 - 11:00**

**Zoom meeting ID: 858 1357 3322 Password: 121323**

**Link: <https://zoom.com.cn/j/85813573322>**

**Abstract:** I will talk about a method which provides a unified framework for many stability theorems that have been proved in graph and hypergraph theory. Our main result reduces stability for a large class of hypergraph problems to the simpler question of checking that a hypergraph  $\mathcal{H}$  with large minimum degree that omits the forbidden structures is vertex-extendable. This means that if  $v$  is a vertex of  $\mathcal{H}$  and  $\mathcal{H} - v$  is a subgraph of the extremal configuration(s), then  $\mathcal{H}$  is also a subgraph of the extremal configuration(s). In many cases vertex-extendability is quite easy to verify. Our method always yields an Andrásfai-Erdős-Sós type result, which says if  $\mathcal{H}$  has large minimum degree, then it must be a subgraph of one of the extremal configurations.

This is joint work with Dhruv Mubayi and Christian Reiher.