

Title:

Chow polynomials and Friends

Abstract:

The Chow polynomial of a matroid is the Hilbert series of its Chow ring. This notion extends to posets, where, for a large class of examples, the resulting polynomial exhibits classical combinatorial properties like palindromicity, unimodality, and gamma-positivity. The Chow polynomial arises as an evaluation of the extended ab-index, a polynomial introduced by Dorpalen-Barry, Maglione, and Stump. This connection links Chow polynomials to a larger family of polynomials, including the ab-index and the chain polynomial of a poset.

In this talk, I will explain how Chow polynomials fit into this wider combinatorial picture, focusing on their relation to the ab-index.

This talk includes joint work with Christian Stump and Lorenzo Vecchi, as well as results of others.