USING EDGE-INDUCED AND VERTEX-INDUCED SUBHYPERGRAPH POLYNOMIALS

YOHANNES TADESSE

For a hypergraph $\mathcal{H}$, we consider the edge-induced and vertex-induced subhypergraph polynomials and study their relation. We use this relation to prove that both polynomials are reconstructible, and to prove a theorem relating the Hilbert series of the Stanley-Reisner ring of the independent complex of $\mathcal{H}$ and the edge-induced subhypergraph polynomial. We also consider reconstruction of some algebraic invariants of $\mathcal{H}$.

MATEMATISKA INSTITUTIONEN, UPPSALA UNIVERSITET, BOX 480, 751 06 UPPSALA, SWEDEN
E-mail address: yohannes.tadesse@math.uu.se