

---

**AARON SLOBODIN**, Quest University Canada  
*Betti table stabilization of homogeneous monomial ideals*

Given an homogenous monomial ideal  $I$ , we provide a question and example based investigation on the stabilization patterns of the Betti tables shapes of  $I^d$  as we vary  $d$ . We build off Whieldon's definition of the stabilization index of  $I$ ,  $\text{Stab}(I)$ , to define the stabilization sequence of  $I$ ,  $\text{StabSeq}(I)$ , and use it to explore changes in the shapes of the Betti tables of  $I^d$  as we vary  $d$ . We also present the stabilization indexes and sequences of the collection of ideals  $\{I_n\}$  where  $I_n = (a^{2n}b^{2n}c^{2n}, b^{4n}c^{2n}, a^{3n}c^{3n}, a^{6n-1}b) \subseteq \mathbb{k}[a, b, c]$ .