QUASI-POLYNOMIAL GROWTH OF BETTI SEQUENCES

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Abstract. We formally define an invariant for local rings called quadratic codimension and relate this invariant to the growth of Betti sequences over complete intersections. In the main theorem, we prove a bound on the degree of the difference of a the polynomials governing a finitely generated module's even and odd Betti sequences.

This project is ongoing work that started with my dissertation. We currently have a rough draft of a paper that is not yet ready for submission. We would like to extend our results to modules of finite complete intersection dimension in the final draft. This is joint work with my doctoral advisors, Luchezar Avramov (University of Nebraska-Lincoln) and Mark Walker (University of Nebraska - Lincoln).