



Speaker: Adam Boocher
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Wednesday, October 14, 2015
3:00 PM
258 Hurley Hall

Title: Deviations of Graded Algebras

Abstract:

The deviations of a graded algebra are a sequence of integers that determine the Poincare series of its residue field and arise as the number of generators of certain DG algebras. In a sense, deviations measure how far the ring is from being a complete intersection. We study extremal deviations among those of algebras with a fixed Hilbert series. We prove that, like the Betti numbers, deviations do not decrease when passing to initial and lex-segment ideals. We also prove that deviations grow exponentially for Golod rings and for algebras presented by certain edge ideals. Combinatorial considerations, including some open questions will be discussed.