

# Constructing Gorenstein curves in codimension four

Patience Ablett

## Abstract

Projectively (or arithmetically) Gorenstein varieties are a frequently occurring subset of projective varieties, whose coordinate rings are Gorenstein. Whilst there exist concrete structure theorems for such varieties in codimension three and below, the picture is less clear for codimension four. Recent work of Schenck, Stillman and Yuan outlines all possible Betti tables describing the minimal free resolution of the coordinate ring for Gorenstein varieties of codimension and Castelnuovo-Mumford regularity four. We explain how to interpret these Betti tables as a recipe book for constructing Gorenstein curves in  $\mathbb{P}^5$ , and give an example construction utilising the Tom and Jerry matrix formats of Brown, Kerber and Reid.

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**Location:** B3.02

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