

Geometry of arithmetically Gorenstein curves in \mathbb{P}^4

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The Hilbert scheme of arithmetically Gorenstein curves in \mathbb{P}^4 exhibits striking analogies to the Hilbert scheme of arithmetically Cohen-Macaulay curves in \mathbb{P}^3 . In this talk we discuss the possible Hilbert functions, as determined by their postulation character; the irreducible components; criteria for existence of smooth curves; ways of generating the curves; and questions of biliaison. The general results are illustrated by some interesting examples.