

BERNOULLIS TAFELRUNDE

GRADUATE STUDENT SEMINAR

Thursday, 18 May 2017, 13:15-14:00
Seminarraum 00.003, Spiegelgasse 1

KATHARINA BARTH

Johannes Gutenberg-Universität Mainz

A Family of 65-Nodal Sextics

ABSTRACT

Barth's sextic is known for having the highest number of nodes a sextic surface can have in \mathbb{P}^3 , which is 65. In 1998 Pettersen constructed a three-parameter family of sextic surfaces with 65 nodes containing Barth's sextic. He does so by using 42-nodal determinantal hyperquartics in \mathbb{P}^4 . The projection from one of its nodes sends a hyperquartic to a double covering of \mathbb{P}^3 . The image in \mathbb{P}^3 of the ramification of this mapping is a sextic. The hyperquartics in \mathbb{P}^4 in turn are constructed by blowing up \mathbb{P}^3 along curves of degree 10. We will investigate this procedure and try to find a parametrization of the 65-nodal sextics.