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Mathematische Institute der WWU – Kolloquium Wilhelm Killing

On a theorem of Hirzebruch

Professor Stefan Müller-Stach (Universität Mainz)
24.11.2011, 16:30 Uhr, Hörsaal M 5

In this talk we discuss compact curves on special algebraic surfaces, i.e., 2-dimensional complex manifolds defined by polynomial equations. We present some introductory examples and explain in particular the self-intersection numbers of curves on surfaces. F. Hirzebruch used self-intersection numbers to formulate the numerical "relative proportionality inequality" for arbitrary curves on Hilbert or Picard modular surfaces in the 1970s. In the case of equality the curves necessarily are modular curves, i.e., have some arithmetic quality. Hence, a numerical equation detects modular curves on modular surfaces. In the talk we explain the original inequality and indicate briefly several generalizations and their applications to the Andre-Oort problem and the recent disproof of the bounded negativity conjecture.

Tee wird ab 16:00 Uhr im Sitzungszimmer SR 0 des Mathematischen Instituts serviert.

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