Syzygies in algebraic geometry and geometric group theory

Abstract:
Determining the structure of the equations of an algebraic curve in its canonical embedding (given by its holomorphic forms) has been a central question in algebraic geometry from the beginning of the subject. In 1984 Mark Green put forward a very elegant conjecture linking the complexity of the curve in its moduli space to the structure of its equations (syzygies). I will discuss how novel ideas coming from geometric group theory led to a surprising solution of this conjecture for generic curves of arbitrary characteristic and what implications these methods have to important questions in topology.
Vor dem Vortrag (ab 16.30 Uhr) stehen im Raum 327 Kaffee und Tee bereit.