

Hilbert and multivariate polynomial rings
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Year 2012 is the 150th anniversary of David Hilbert's birth. His name is inevitable in the algorithms for multivariate polynomials ever since 1888, when he published the first proof of the famous basis theorem. Since that time, the research of multivariate polynomials has followed another, nonconstructive direction, until 1965, when Bruno Buchberger has introduced the so-called Gröbner bases in his PhD thesis. As it is widely known, the Buchberger's algorithm depends on the so called monomial orderings in the set of multivariate monomials. The talk will be dedicated to Hilbert and his contributions to the theory of multivariate polynomials and proof theory, and also to some facts about monomial orderings.