

Different viewpoints about Hilbert's 16th problem

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In Hilbert's 16th problem the main goal is to get (good) upper and lower bounds, for the number of limit cycles of a planar polynomial differential system in terms of its degree. In this talk we face the same question but in terms of the number of monomials of the planar polynomial differential equation. This number of monomials can be counted either in the usual real notation or in the complex notation, $\dot{z} = F(z, \bar{z})$, and both points of view are, not at all, equivalent.
