

Minimum modulus theorems in the quaternionic setting

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Abstract

The role of minimum modulus theorems for complex polynomials in the context of the surjectivity of linear constant coefficients differential operators is well known. Indeed, such theorems can also be proved for specific classes of entire functions, which allows the study of surjectivity of more delicate operators, such as infinite order differential operators or even convolution operators. In this talk I will present a few versions of a minimum modulus theorem for quaternionic polynomials. These results rely on the fine properties of the zero sets of such polynomials and have an intrinsic interest. However, it is also possible that they may lead to further insights into the surjectivity of differential operators acting on slide regular functions.