

A criterion for the explicit reconstruction of a holomorphic function from its restrictions on lines

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Abstract

We deal with a problem of the explicit reconstruction of any holomorphic function f on \mathbb{C}^2 from its restrictions on a union of complex lines. The validity of such a reconstruction essentially depends on the mutual repartition of these lines, condition that can be analytically described. The motivation of this problem comes also from possible applications in mathematical economics and medical imaging.