CHARACTERIZATION OF THE HYPERBOLIC STEP OF PARABOLIC FUNCTIONS

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Abstract. Let f be a parabolic self map of the upper halfplane of the complex plane. Under specific circumstances, Herglot'z Represantion Formula for positive harmonic functions can be used to obtain a representation of f in terms of a real number β and positive finite measure μ on $\mathbb{R}$. In this talk we will characterize the hyperbolic step of f in terms of β and μ on three different scenarios: using some integrability conditions of the identity function with respect to μ, supposing μ has a property of symmetry and also considering that μ is supported on a halfline. Some of these results are advances on a previous work by Jon Aaronson, who studied the case when μ has compact support.

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