İSTANBUL ANALYSIS SEMINARS

BOUNDEDNESS OF COMPOSITION OPERATORS ON HARDY SPACES OF THE HALF-PLANE VIA REPRODUCING KERNELS

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Abstract: It is very well-known that every composition operator on Hardy spaces of the unit disc is bounded whereas the boundedness of composition operators on Hardy spaces of the half-plane is not always possible. In 1999 Matache characterized the boundedness of composition operators of the half-plane in terms of Carleson measures. In 2012 M. Jury and S. Elliott, using the theory of positive kernels, found a geometrical criterion in terms of the derivative of the inducing function at infinity for the boundedness of composition operators of the half-plane. In this talk we will survey the result of Jury and Elliott. I will give a brief introduction to the theory of positive kernels. We will also discuss the posibility of extending the method of Jury and Elliott to Hardy spaces of the poly-disc.

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