

İSTANBUL ANALYSIS SEMINARS

BEURLING-TYPE INVARIANT SUBSPACES IN THE POLYDISC

Beyaz Başak KOCA

İstanbul University
Department of Mathematics

Abstract: It is well-known, by Beurling's theorem, that all invariant subspaces for the multiplication operator by the independent variable on the Hardy space $H^2(\mathbb{D})$ in the unit disk are of Beurling-type, i.e., they are of the form $fH^2(\mathbb{D})$, where f is an inner function in $H^2(\mathbb{D})$. However, the structure of the invariant subspaces of the Hardy space in the polydisc cannot be characterized in such a simple form. Although it is quite clear that the Beurling-type subspaces are invariant, it is known that not all invariant subspaces are of this form. In this talk, we will characterize the Beurling-type invariant subspaces of the Hardy space in the polydisc by using the classical Lax–Halmos Theorem.

Date: February 26, 2016

Time: 15:40

Place: Sabancı University, Karaköy Communication Center
Bankalar Caddesi 2, Karaköy 34420, İstanbul