

VIRTUAL EAST-WEST SCV SEMINAR

February 2, 2021

Emil J. STRAUBE
Texas A&M University

A SUFFICIENT CONDITION FOR COMPACTNESS OF HANKEL OPERATORS

Let Ω be a bounded convex domain in \mathbb{C}^n . We show that if $\varphi \in C^1(\overline{\Omega})$ is holomorphic along analytic varieties in $b\Omega$, then H_φ^q , the Hankel operator with symbol φ , is compact. We have shown the converse earlier, so that we obtain a characterization of compactness of these operators in terms of the behavior of the symbol relative to analytic structure in the boundary. A corollary is that Toeplitz operators with such a symbol that is moreover nonvanishing on the boundary are Fredholm (of index zero). This is joint work with Memet Çelik and Sönmez Şahutoğlu.
