1139-32-319 **Loredana Lanzani***, Department of Mathematics, Syracuse University, Syracuse, NY 13224, and **Elias M. Stein**. *Harmonic analysis techniques in several complex variables.* Preliminary report.

I will give a survey of recent joint work with E. M. Stein (Princeton U.) concerning the analysis of a family of singular integral operators in complex Euclidean space for domains with minimal boundary regularity. In contrast with the situation in real Euclidean space, here we must require that the integral kernel be a holomorphic (analytic) function of the output variable. I will present positive results (boundedness in Lebesgue space) for the Szego projection and for a family of Cauchy-like singular integrals. I will then give counterexamples (unboundedness) that indicate the optimality of our assumptions. (Received February 15, 2018)